MELSOFT

MITSUBISHI ELECTRIC

Engineering Software

GT Designer3 (GOT2000) Screen Design Manual

-SW1DND-GTWK3-E

SAFETY PRECAUTIONS

Always read the precautions before using this product.
Also read this manual and the relevant manuals mentioned in this manual carefully, and use the product properly while paying full attention to safety.
Note that the precautions in this manual apply only to this product.
The safety precautions are divided into the following levels: warnings and cautions.

⚠ WARNING	**Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.**
⚠ CAUTION	**Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.**

Note that failure to observe ⚠ CAUTION may lead to a serious accident depending on the circumstances.
Make sure to observe both warnings and cautions to ensure personal safety.
Ensure that this manual is easily accessible to all users of this product.

[Test Operation Precautions]

⚠ WARNING

●Before testing the operation of a user-created screen (such as turning on or off a bit device, changing the current value of a word device, changing the set value or current value of a timer or counter, and changing the current value of a buffer memory), thoroughly read the manual to fully understand the operating procedure.
During the test operation, never change the data of the devices which are used to perform significant operation for the system.
Doing so may cause an accident due to an incorrect output or malfunction.

[Precautions for Using a Data Storage]

⚠ WARNING

●Do not remove the SD card from drive A while the SD card is being accessed by the GOT, or the GOT may stop processing for about 20 seconds.
During this stop, you cannot operate the GOT, and the functions running in the background, including the screen refresh, alarm, logging, and script, also stop.
This stop may affect the system operation, causing an accident.
Before removing the SD card, check that the SD card access LED is off.

●Do not remove the data storage from the file server (drive N) that is being accessed by the GOT, or the system operation may be affected.
Before removing the data storage, check the relevant system signal to make sure that the data storage is not being accessed.

⚠ CAUTION

●Do not remove the data storage from the GOT while the data storage is being accessed by the GOT, or the data storage and files may be damaged.
Before removing the data storage, check the SD card access LED, relevant system signal, or others to make sure that the data storage is not being accessed.

[Precautions for Remote Control]

⚠WARNING

●Remote control is available through a network by using GOT functions, including the SoftGOT-GOT link function, the remote personal computer operation function, the VNC server function, and the GOT Mobile function.
If you remotely operate control equipment using such functions, the field operator may not notice the remote operation, leading to an accident.
In addition, a communication delay or interruption may occur depending on the network environment, and remote control of control equipment cannot be performed normally in some cases.
Before using the above functions to perform remote control, fully grasp the circumstances of the field site and ensure safety.

●When operating the server (GOT) of the GOT Mobile function to disconnect a client, notify the operator of the client about the disconnection beforehand.
Not doing so may cause an accident.

[Design Precautions]

⚠WARNING

●To maintain the security (confidentiality, integrity, and availability) of the GOT and the system against unauthorized access, DoS[*1] attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
Mitsubishi Electric shall have no responsibility or liability for any problems involving GOT trouble and system trouble by unauthorized access, DoS attacks, computer viruses, and other cyberattacks.
*1 DoS: A denial-of-service (DoS) attack disrupts services by overloading systems or exploiting vulnerabilities, resulting in a denial-of-service (DoS) state.

[Precautions for Exclusive Authorization Control]

⚠WARNING

●Before using the GOT network interaction function to prevent simultaneous operations from multiple pieces of equipment, make sure you understand the function.
You can enable or disable the exclusive authorization control of the GOT network interaction function for each screen. (For all screens, the exclusive authorization control is disabled by default.)
Properly determine the screens for which the exclusive authorization control is required, and set the control by screen.
A screen for which the exclusive authorization control is disabled is operable simultaneously from multiple pieces of equipment. Make sure to determine the operation period for each operator, fully grasp the circumstances of the field site, and ensure safety to perform operations.

CAUTIONS FOR USING THIS SOFTWARE

■1 Memory capacity and hard disk space of your personal computer

For the required memory capacity and hard disk space, refer to the following.

➟1.1.1 Operating environment

■2 Error message displayed at this software startup or during data editing

[Operation will be terminated because of insufficient memory. Would you like to stop?]
If the above message appears, exit some running applications or restart Windows to free up memory.

■3 Changing device types

If a word device and any bit of the device are specified, changing the device type from the bit data type to a word data type may display [??] as the device.
In such a case, specify the device again.
Example) D0.b0 → D0, D0.b5 → ??

■4 Windows settings

If you change the Windows font size from the default, the panes and other items in GT Designer3 will appear improperly.
Use this software with the default Windows font size.

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Warranty

Intellectual Property Rights

INTRODUCTION

Thank you for choosing Mitsubishi Electric Graphic Operation Terminal (GOT).
Before using the product, read this manual carefully and make sure you understand the functions and performance of the GOT for correct use.

How to Use Help . . . . . A - 28
Manuals for GT Works3 . . . . . A - 30
Abbreviations, Generic Terms, and Model Icons . . . . . A - 31
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How to Use Help

➟0 Displaying Help
0 Using Help

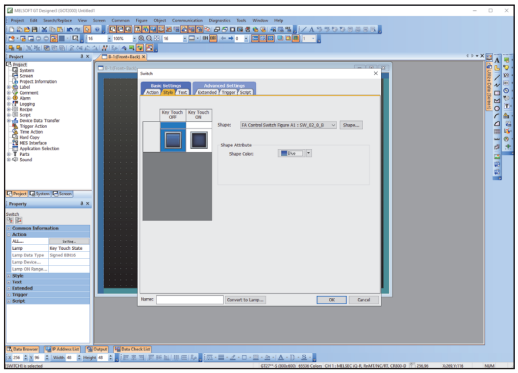
Displaying Help

■1 Displaying Help from the menu

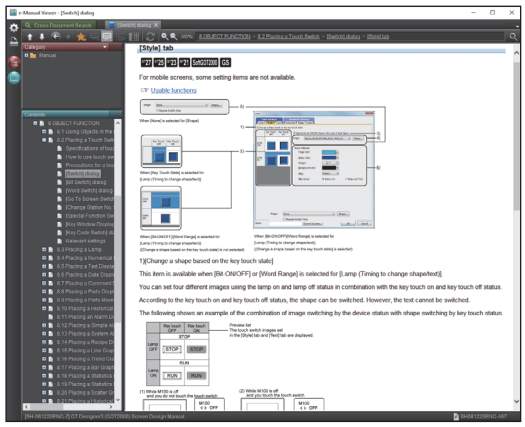
To display Help, select [Help] → [GT Designer3 Help] from the menu.

■2 Displaying the help page that corresponds to your current location within GT Designer3

To display the help page that corresponds to your current location within GT Designer3, press the [F1] key.



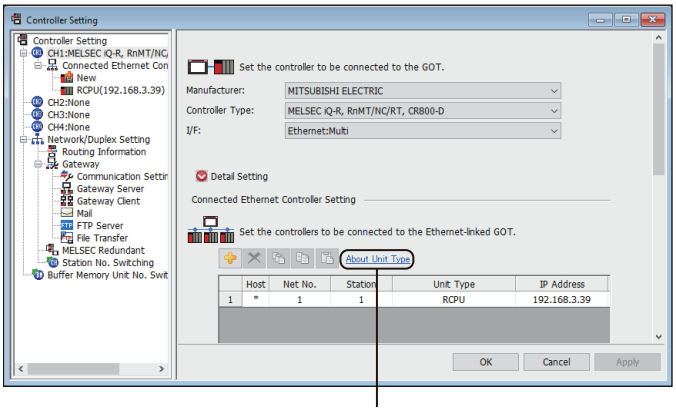
Press the [F1] key while the [Style] tab is open in the [Switch] dialog.



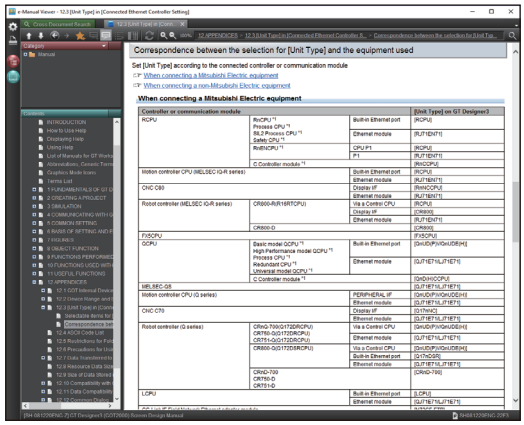
The help page that corresponds to the [Style] tab in the [Switch] dialog is displayed.

■3 Displaying a help page from a link

Click a link in a window or dialog to view the relevant help page.



Click the link.



The relevant help page is displayed.

■4 Precautions for displaying Help

(1) Relationship between a screen design software module and its Help

The GT Designer3 (GOT2000) module has its own Help.
To view Help for the GT Designer3 (GOT1000) module, change the screen design software module to GT Designer3 (GOT1000).
To change the module, perform one of the following operations.

- Create a project.
- Open a GOT1000 project.
- Select [Project] → [Start GT Designer3 (GOT1000)] from the menu.

(2) Changing the screen design software module while Help is displayed

While Help is displayed, changing the screen design software module cannot switch Help.
To switch Help, change the screen design software module and then display Help.

(3) Starting GT Designer3

Starting GT Designer3 activates the screen design software module used last time.
(The first startup of GT Designer3 activates GT Designer3 (GOT2000).)
To change the screen design software module, perform one of the following operations.

- Create a project.
- Open a GOT1000 project.
- Select [Project] → [Start GT Designer3 (GOT1000)] from the menu.

Using Help

Help is viewable using e-Manual Viewer.
For information on how to use e-Manual Viewer, refer to the following.

➟e-Manual Viewer Help

Manuals for GT Works3

The electronic manuals related to this product are installed together with the screen design software.
If you need the printed manuals, consult your local sales office.

■1 Manuals for GT Designer3 (GOT2000)

Point

e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.
e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to the engineering tool.

(1) Screen design software-related manuals

Manual name	Manual number	Format
GT Works3 Installation Instructions	BCN-P5999-0066	PDF
GT Designer3 (GOT2000) Screen Design Manual	SH-081220ENG	PDF e-Manual
GT Converter2 Version3 Operating Manual for GT Works3	SH-080862ENG	PDF e-Manual
GOT2000 Series MES Interface Function Manual for GT Works3 Version1	SH-081228ENG	PDF e-Manual

(2) Connection manuals

Manual name	Manual number	Format
GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1	SH-081197ENG	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1	SH-081198ENG	PDF e-Manual
GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 2) For GT Works3 Version1	SH-081199ENG	PDF e-Manual
GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1	SH-081200ENG	PDF e-Manual
GOT2000 Series Handy GOT Connection Manual For GT Works3 Version1	SH-081867ENG	PDF e-Manual
GOT2000 Series Connection Manual (α2 Connection) for GT Works3 Version1	JY997D52301	PDF e-Manual

(3) GT SoftGOT2000 manuals

Manual name	Manual number	Format
GT SoftGOT2000 Version1 Operating Manual	SH-081201ENG	PDF e-Manual
MELSOFT GT OPC UA Client Operating Manual	SH-082174ENG	PDF

(4) GOT2000 series user's manuals

Manual name	Manual number	Format
GOT2000 Series User's Manual (Hardware)	SH-081194ENG	PDF e-Manual
GOT2000 Series User's Manual (Utility)	SH-081195ENG	PDF e-Manual
GOT2000 Series User's Manual (Monitor)	SH-081196ENG	PDF e-Manual

(5) GOT SIMPLE series user's manuals

Manual name	Manual number	Format
GOT SIMPLE Series User's Manual	JY997D52901	PDF e-Manual

(6) Manuals related to GT Works3 add-on projects

Manual name	Manual number	Format
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Fundamentals)	SH-082072ENG	PDF e-Manual
GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data Manual (Screen Details)	SH-082074ENG	PDF e-Manual

■2 Manuals for GT Designer3 (GOT1000)

Refer to the Help and manuals for GT Designer3 (GOT1000).

Abbreviations, Generic Terms, and Model Icons

The following shows the abbreviations, generic terms, and model icons used in Help.

■1 GOT

(1) GOT2000 series

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
GT27	GT27-X	GT2715-X	GT2715-XTBA GT2715-XTBD		
	GT27-S	GT2712-S	GT2712-STBA GT2712-STWA GT2712-STBD GT2712-STWD		
		GT2710-S	GT2710-STBA GT2710-STBD		
		GT2708-S	GT2708-STBA GT2708-STBD		
	GT27-V	GT2710-V	GT2710-VTBA GT2710-VTWA GT2710-VTBD GT2710-VTWD		
		GT2708-V	GT2708-VTBA GT2708-VTBD		
		GT2705-V	GT2705-VTBD		

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
			All GT25 models		
GT25	GT25-W	GT2512-WX	GT2512-WXTBD GT2512-WXTSD		
		GT2510-WX	GT2510-WXTBD GT2510-WXTSD		
		GT2507-W	GT2507-WTBD GT2507-WTSD		
		GT2507T-W	GT2507T-WTSD		
	GT25-S	GT2512-S	GT2512-STBA GT2512-STBD		
		GT2512F-S	GT2512F-STNA GT2512F-STND		
	GT25-V	GT2510-V	GT2510-VTBA GT2510-VTWA GT2510-VTBD GT2510-VTWD		
		GT2510F-V	GT2510F-VTNA GT2510F-VTND		
		GT2508-V	GT2508-VTBA GT2508-VTWA GT2508-VTBD GT2508-VTWD		
		GT2508F-V	GT2508F-VTNA GT2508F-VTND		
		GT2505-V	GT2505-VTBD		
	GT25HS-V Handy GOT	GT2506HS-V	GT2506HS-VTBD		
		GT2505HS-V	GT2505HS-VTBD		
GT23	GT23-V	GT2310-V	GT2310-VTBA GT2310-VTBD		
		GT2308-V	GT2308-VTBA GT2308-VTBD		

Abbreviations and generic terms			Description	Meaning of icon	
				Available	Unavailable
GT21			All GT21 models		
	GT21-W	GT2107-W	GT2107-WTBD GT2107-WTSD		
	GT21-Q	GT2105-Q	GT2105-QTBDS GT2105-QMBDS		
	GT21-R	GT2104-R	GT2104-RTBD		
	GT21-P	GT2104-P	GT2104-PMBD		
			GT2104-PMBDS		
			GT2104-PMBDS2		
			GT2104-PMBLS		
		GT2103-P	GT2103-PMBD		
			GT2103-PMBDS		
			GT2103-PMBDS2		
			GT2103-PMBLS		
GT SoftGOT2000			GT SoftGOT2000 Version1		

(2) GOT SIMPLE series

Abbreviations and generic terms		Description	Meaning of icon	
			Available	Unavailable
GS25		GS2512-WXTBD		
GS21	GS21-W-N	GS2110-WTBD-N GS2107-WTBD-N		
	GS21-W	GS2110-WTBD GS2107-WTBD		

(3) GOT1000 series, GOT900 series, and GOT800 series

Abbreviations and generic terms	Description	Meaning of icon	
		Available	Unavailable
GOT1000 Series	GOT1000 Series	-	
GOT900 Series	GOT-A900 Series GOT-F900 Series	-	
GOT800 Series	GOT-800 Series	-	

■2 Communication unit

Abbreviations and generic terms	Description
Bus connection unit	GT15-QBUS GT15-QBUS2 GT15-ABUS GT15-ABUS2 GT15-75QBUSL GT15-75QBUS2L GT15-75ABUSL GT15-75ABUS2L
Serial communication unit	GT15-RS2-9P GT15-RS4-9S GT15-RS4-TE
MELSECNET/H communication unit	GT15-J71LP23-25 GT15-J71BR13
CC-Link IE TSN communication unit	GT25-J71GN13-T2
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX
CC-Link IE Field Network communication unit	GT15-J71GF13-T2
CC-Link communication unit	GT15-J61BT13
Wireless LAN communication unit	GT25-WLAN
Serial multi-drop connection unit	GT01-RS4-M
Connection conversion adapter	GT10-9PT5S
Field network adapter unit	GT25-FNADP
Ethernet communication unit	GT25-J71E71-100
RS-232/485 signal conversion adapter	GT14-RS2T4-9P

■3 Option unit

Abbreviations and generic terms	Description
Printer unit	GT15-PRN
Video input unit	GT27-V4-Z (A set of GT16M-V4-Z and GT27-IF1000)
RGB input unit	GT27-R2 GT27-R2-Z (A set of GT16M-R2-Z and GT27-IF1000)
Video/RGB input unit	GT27-V4R1-Z (A set of GT16M-V4R1-Z and GT27-IF1000)
RGB output unit	GT27-ROUT GT27-ROUT-Z (A set of GT16M-ROUT-Z and GT27-IF1000)
Digital video output unit	GT27-VHOUT
Multimedia unit	GT27-MMR-Z (A set of GT16M-MMR-Z and GT27-IF1000)
Video signal conversion unit	GT27-IF1000
External I/O unit	GT15-DIO GT15-DIOR
Sound output unit	GT15-SOUT
SD card unit	GT21-03SDCD

■4 Option

Abbreviations and generic terms	Description
SD card	NZ1MEM-2GBSD NZ1MEM-4GBSD NZ1MEM-8GBSD NZ1MEM-16GBSD L1MEM-2GBSD L1MEM-4GBSD
Battery	GT11-50BAT GT15-BAT

Abbreviations and generic terms	Description
Protective sheet	GT27-15PSGC GT25-12WPSGC GT25-12PSGC GT25-10WPSGC GT25-10PSGC GT25-08PSGC GT21-07WPSGC GT25T-07WPSVC GT25-05PSGC GT25-05PSGC-2 GT21-05PSGC GT21-04RPSGC-UC GT21-03PSGC-UC GT21-04PSGC-UC GT27-15PSCC GT25-12WPSCC GT25-12PSCC GT25-10WPSCC GT25-10PSCC GT25-08PSCC GT25-05PSCC GT25-05PSCC-2 GT25-12PSCC-UC GT25-10PSCC-UC GT25-08PSCC-UC GT21-07WPSCC GT21-05PSCC GT21-04RPSCC-UC GT21-04PSCC-UC GT21-03PSCC-UC GT16H-60PSC GT14H-50PSC
Antibacterial/antiviral protective sheet	GT25-12PSAC GT25-10PSAC GT25-08PSAC
Environmental protection sheet	GT25F-12ESGS GT25F-10ESGS GT25F-08ESGS
Protective cover for oil	GT20-15PCO GT20-12PCO GT20-10PCO GT20-08PCO GT21-12WPCO GT21-10WPCO GT21-07WPCO GT25T-07WPCO GT25-05PCO GT25-05PCO-2 GT05-50PCO GT21-04RPCO GT10-30PCO GT10-20PCO
USB environmental protection cover	GT25-UCOV GT25-05UCOV GT21-WUCOV
Stand	GT15-90STAND GT15-80STAND GT15-70STAND GT05-50STAND GT25-10WSTAND GT21-07WSTAND GT25T-07WSTAND

Abbreviations and generic terms	Description
Attachment	GT15-70ATT-98 GT15-70ATT-87 GT15-60ATT-97 GT15-60ATT-96 GT15-60ATT-87 GT15-60ATT-77 GT21-04RATT-40
Panel-mounted USB port extension	GT14-C10EXUSB-4S GT10-C10EXUSB-5S
Connector conversion box	GT16H-CNB-42S GT16H-CNB-37S GT11H-CNB-37S
Emergency stop switch guard cover	GT16H-60ESCOV GT14H-50ESCOV
Wall-mounting attachment	GT14H-50ATT

■5 Software

(1) Software related to GOT

Abbreviations and generic terms	Description
GT Works3	SW1DND-GTWK3-J, SW1DND-GTWK3-E, SW1DND-GTWK3-C
GT Designer3 Version1	Screen design software GT Designer3 for GOT2000 and GOT1000 series
GT Designer3	Screen design software for GOT2000 series included in GT Works3
GT Designer3 (GOT2000)	
GT Designer3 (GOT1000)	Screen design software for GOT1000 series included in GT Works3
Speech synthesis license	GT Works Text to Speech License (SW1DND-GTVO-M)
Add-on license	GT Works3 add-on license for GOT2000 enhanced drive control (servo) project data (SW1DND-GTSV-MZ)
GENESIS64 Advanced	GENESIS64 server application (GEN64-APP)
GENESIS64 Basic SCADA	GENESIS64 server application (GEN64-BASIC)
GENESIS64	Generic term of GENESIS64 Advanced and GENESIS64 Basic SCADA
GOT Mobile function license for GT SoftGOT2000	License required to use the GOT Mobile function with GT SoftGOT2000 (SGT2K-WEBSKEY-□)
GT Simulator3	Screen simulator GT Simulator3 for GOT2000, GOT1000, and GOT900 series
GT SoftGOT2000	GOT2000 compatible HMI software GT SoftGOT2000
GT OPC UA Client	MELSOFT GT OPC UA Client (SW1DNN-GTOUC-MD)
GT Converter2	Data conversion software GT Converter2 for GOT1000 and GOT900 series
GT Designer2 Classic	Screen design software GT Designer2 Classic for GOT900 series
GT Designer2	Screen design software GT Designer2 for GOT1000 and GOT900 series
DU/WIN	Screen design software FX-PCS-DU/WIN for GOT-F900 series

(2) Software related to iQ Works

Abbreviations and generic terms	Description
iQ Works	iQ Platform compatible engineering environment MELSOFT iQ Works
MELSOFT Navigator	Integrated development environment software included in SW□DND-IQWK (iQ Platform compatible engineering environment MELSOFT iQ Works) (□ represents a version.)
MELSOFT iQ AppPortal	SW□DND-IQAPL-M type integrated application management software (□ represents a version.)

(3) Other software

Abbreviations and generic terms	Description
GX Works3	SW□DND-GXW3-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)

Abbreviations and generic terms		Description
GX Works2		SW□DNC-GXW2-E (-EA, -EAZ) type programmable controller engineering software (□ represents a version.)
Controller simulator	GX Simulator3	Simulation function of GX Works3
	GX Simulator2	Simulation function of GX Works2
	GX Simulator	SW□D5C-LLT-E (-EV) type ladder logic test tool function software package (SW5D5C-LLT (-V) or later versions) (□ represents a version.)
GX Developer		SW□D5C-GPPW-E (-EV)/SW□D5F-GPPW (-V) type software package (□ represents a version.)
GX LogViewer		SW□DNN-VIEWER-E type software package (□ represents a version.)
MI Configurator		Configuration and monitor tool for Mitsubishi Electric industrial computers (SW□DNNMICONF-M) (□ represents a version.)
PX Developer		SW□D5C-FBDQ-E type FBD software package for process control (□ represents a version.)
MT Works2		Motion controller engineering environment MELSOFT MT Works2 (SW□DND-MTW2-E) (□ represents a version.)
MT Developer		SW□RNC-GSV type integrated start-up support software for motion controller Q series (□ represents a version.)
CW Configurator		Setting/monitoring tools for the C Controller module and MELSECWinCPU (SW□DND-RCCPU-E) (□ represents a version.)
MR Configurator2		SW□DNC-MRC2-E type servo configuration software (□ represents a version.)
MR Configurator		MRZJW□-SETUP type servo configuration software (□ represents a version.)
FR Configurator2		Inverter setup software (SW□DND-FRC2-E) (□ represents a version.)
FR Configurator		Inverter setup software (FR-SW□-SETUP-WE) (□ represents a version.)
NC Configurator2		CNC parameter setting support tool (FCSB1221)
NC Configurator		CNC parameter setting support tool
FX Configurator-FP		Parameter setting, monitoring, and testing software package for FX3U-20SSC-H (SW□D5CFXSSCE) (□ represents a version.)
FX Configurator-EN-L		FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-E)
FX Configurator-EN		FX3U-ENET type Ethernet module setting software (SW1D5C-FXENET-E)
RT ToolBox2		Robot program creation software (3D-11C-WINE)
RT ToolBox3		Robot program creation software (3F-14C-WINE)
MX Component		MX Component Version□ (SW□D5C-ACT-E, SW□D5C-ACT-EA) (□ represents a version.)
MX Sheet		MX Sheet Version□ (SW□D5C-SHEET-E, SW□D5C-SHEET-EA) (□ represents a version.)
CPU Module Logging Configuration Tool		CPU module logging configuration tool (SW1DNN-LLUTL-E)

■6 License key (for GT SoftGOT2000)

Abbreviations and generic terms	Description
License key	GT27-SGTKEY-U

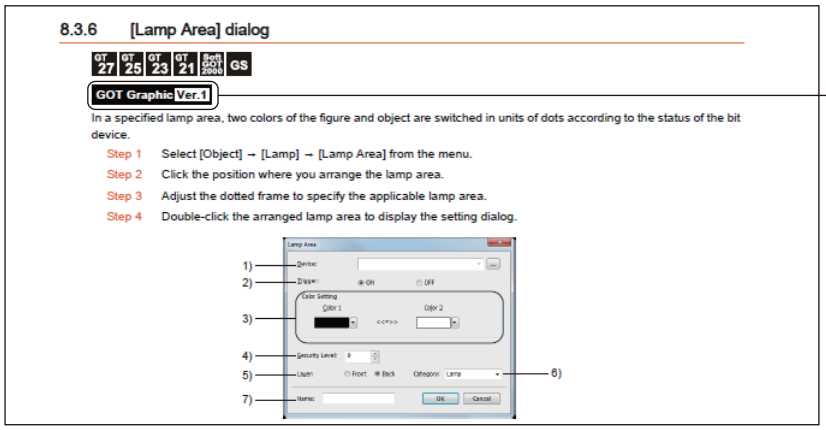
■7 Others

Abbreviations and generic terms	Description
IAI	IAI Corporation
AZBIL	Azbil Corporation
OMRON	OMRON Corporation
KEYENCE	KEYENCE CORPORATION
JTEKT ELECTRONICS (formerly KOYO EI)	JTEKT ELECTRONICS CORPORATION (formerly KOYO ELECTRONICS INDUSTRIES CO., LTD.)
JTEKT	JTEKT CORPORATION
SHARP	Sharp Corporation
SHINKO	Shinko Technos Co., Ltd.
CHINO	CHINO CORPORATION
TOSHIBA	TOSHIBA CORPORATION
SHIBAURA MACHINE	SHIBAURA MACHINE CO., LTD.
PANASONIC	Panasonic Corporation
PANASONIC IDS	Panasonic Industrial Devices SUNX Co., Ltd.
HITACHI IES	Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI	Hitachi, Ltd.
HIRATA	Hirata Corporation
FUJI	FUJI ELECTRIC CO., LTD.
MURATEC	Muratec products manufactured by Murata Machinery, Ltd.
YASKAWA	YASKAWA Electric Corporation
YOKOGAWA	Yokogawa Electric Corporation
RKC	RKC INSTRUMENT INC.
ALLEN-BRADLEY	Allen-Bradley products manufactured by Rockwell Automation, Inc.
CLPA	CC-Link Partner Association
GE	GE Intelligent Platforms, Inc.
HMS	HMS Industrial Networks
LS ELECTRIC (formerly LS IS)	LS ELECTRIC Co., Ltd (formerly LS Industrial Systems Co., Ltd.)
MITSUBISHI INDIA	Mitsubishi Electric India Pvt. Ltd.
ODVA	Open DeviceNet Vendor Association, Inc.
SCHNEIDER	Schneider Electric SA
SICK	SICK AG
SIEMENS	Siemens AG
SCHNEIDER EJH	Schneider Electric Japan Holdings Ltd.
PLC	Programmable controller manufactured by its respective company
Control equipment	Control equipment manufactured by its respective company
Temperature controller	Temperature controller manufactured by its respective company
Indicating controller	Indicating controller manufactured by its respective company
Controller	Controller manufactured by its respective company
Industrial switch (for CC-Link IE TSN Class B)	CC-Link IE TSN Class B (Synchronized Realtime Communication) hub certified by CC-Link Partner Association
Industrial switch (for CC-Link IE TSN Class A)	CC-Link IE TSN Class A (Realtime Communication) hub certified by CC-Link Partner Association
CC-Link IE TSN-equipped module	Generic term for the following CC-Link IE TSN master/local modules and CC-Link IE TSN Plus master/local module • RJ71GN11-T2 • RJ71GN11-EIP • FX5-CCLGN-MS

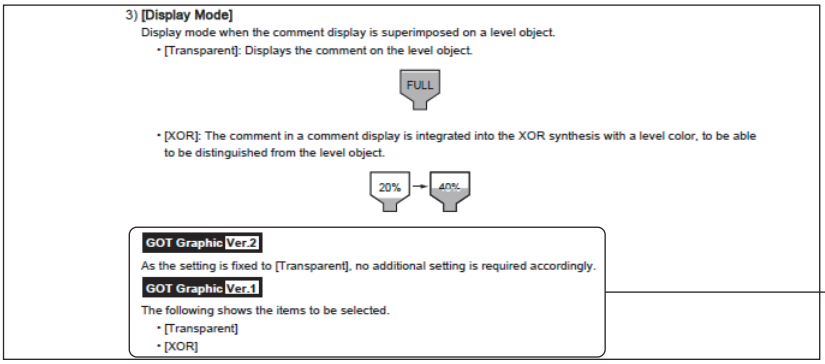
Graphics Mode Icons

The following explains the graphics mode icons used in this manual.

Example) To indicate the available graphics mode



Example) To indicate the difference between graphics modes



Icon	Description
Without graphics mode icons	Both GOT Graphic Ver.2 and GOT Graphic Ver.1 are available.
GOT Graphic Ver.2	GOT Graphic Ver.2 is available. Details of GOT Graphic Ver.2 are given under its icon.
GOT Graphic Ver.1	GOT Graphic Ver.1 is available. Details of GOT Graphic Ver.1 are given under its icon.

Terminology

The following shows the terms used in Help.

Term	Description
Object	Function that operates on the screen according to the value of the specified device
Input object	Touch switch object, numerical input object, text input object, or alarm display object
Attribute	Setting item of a figure or object Example) Monitor device, font, and text color
Label	System label, global label, or label (GT Designer3)
Window	Modeless window, which permits user operations on the other windows while it is open. Example) [Environmental Setting] window
Dialog	Modal window, which does not permit user operations on the other windows while it is open. Example) [Type Setting] dialog
Data storage	SD card, USB memory, CF card in a card reader, or other storage media
Ethernet interface	GOT interface for Ethernet communication: • Ethernet standard port • Ethernet standard port 1 • Ethernet standard port 2 • Ethernet extended port
GT SoftGOT2000 (Single channel)	GT SoftGOT2000 capable of monitoring channel No. 1 only
GT SoftGOT2000 (Multiple channels)	GT SoftGOT2000 capable of monitoring channels No. 1 to No. 4

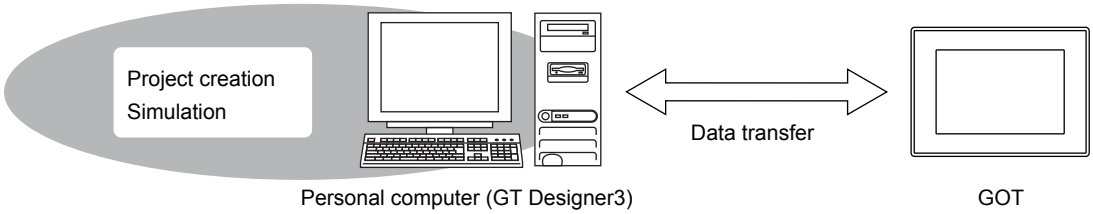
1. FUNDAMENTALS OF GT Designer3

1.1 Basic Description of GT Designer3. . . . . .1 - 2
1.2 Checking the Followings before Drawing . . . . . .1 - 13

1.1 Basic Description of GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GT Designer3 is software to create screens for GOT2000 series and GOT1000 series.
This software enables you to create and simulate a project, and transfer data between the GOT and a personal computer.



GT Designer3 consists of the following drawing software.

- GT Designer3(GOT2000): Drawing software for GOT2000 series
- GT Designer3(GOT1000): Drawing software for GOT1000 series

When operating a project that cannot be edited with the current drawing software, the supported drawing software will start.
The title bar of the window indicates which drawing software you are operating.

Each drawing software has own Help.
Pressing [F1] key will display Help for the drawing software you are operating.

■1 Project creation

GT Designer3 manages the data used to operate the GOT for each project.
Set screens to be displayed on the GOT and functions which operate with the GOT for the created project.

➟2. CREATING A PROJECT

■2 Simulation

You can simulate the operations of the GOT set in the project being created with GT Designer3 on a personal computer using GT Simulator3.
You can simulate the project created with GT Designer3 using only GT Simulator3.
Projects for GOT2000 series, GOT1000 series, and GOT-A900 series GOTs can be simulated using only GT Simulator3.

➟3. SIMULATION

■3 Data transfer

Created projects and the data required for operating the GOT are written into the GOT from GT Designer3.
The resource data stored in the GOT can be read from the GOT to GT Designer3.
For the data transfer between GT Designer3 and the GOT, use a communication cable, network, or the data storage.

➟4. COMMUNICATING WITH GOT

1.1.1 Operating environment

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the operating environment for GT Designer3.

Item	Description
Model	Personal computer that Windows runs on.
OS*1*2*3*4*5*6*7	• Microsoft Windows 11 Education (64 bit) • Microsoft Windows 11 Enterprise (64 bit) • Microsoft Windows 11 Pro (64 bit) • Microsoft Windows 11 Home (64 bit)
CPU	64 bit-compatible processor with dual-core or more or System on a Chip (SoC)*8
Memory	4 GB or more recommended
Display	Resolution XGA (1024 × 768 dots) or higher
Hard disk space	• For installation: 5 GB or more recommended • For execution: 512 MB or more recommended
Display color	High Color (16 bits) or higher
Other software	To use the simulation function on a personal computer, one of the following software applications must be installed. • GX Simulator3 (included in GX Works3 Version1.007H or later) • GX Simulator2 (included in GX Works2 Version1.12N or later) • GX Simulator Version5.00A or later • MT Simulator2 (included in MT Works2 Version1.70Y or later) The required software version depends on the controller to be simulated. ➥3. SIMULATION
	To import tag information of an OPC UA server to GT Designer3, the following software must be installed. • GT OPC UA Client
	To use the document display function, the following software must be installed. • Document Converter • Ghostscript GPL9.55 (Free software) To use the files of Microsoft Word, Microsoft Excel, or Microsoft PowerPoint, the following software also must be installed. • PostScript printer driver supplied with Windows • Microsoft Office 2003, Microsoft Office XP, Microsoft Office 2000 (Required only when the files of Microsoft Word, Microsoft Excel, or Microsoft PowerPoint are used)
	To use the remote personal computer operation function (Ethernet), the following software must be installed. • VNC server software For the applicable UltraVNC version, refer to the following Technical Bulletin. ➥List of VNC Servers Supporting the Remote Personal Computer Operation (Ethernet) Function Validated to Operate with the GOT2000 Series(GOT-A-0110) • Windows terminal server function (Windows Server 2003) • Terminal service function software (RDPGateway(rdp2vnc))
	To use the remote personal computer operation function (Serial), one of the following software must be installed. • Remote Personal Computer Operation Driver (DMT-DD) • Remote Personal Computer Operation Driver (TSC-DD) • Remote Personal Computer Operation Driver (MES_2X) Use the software compatible with the personal computer OS used for the remote personal computer operation function (Serial). ➥10.4.2 Specifications of the remote personal computer operation (Serial)
	To use the VNC server function, the following software must be installed. • VNC client software (UltraVNC 1.4.3.1, 1.3.8.1, 1.1.9.6, 1.0.9.6.2, or 1.0.8.2)
	To use the multimedia function, the following software must be installed. • Multimedia Interaction Tool • Multimedia Interaction FTP Service • Quick Time Player or QuickTime 7 Pro
	To display Help, the following software must be installed. • e-Manual Viewer
	To display PDF manuals, the following software must be installed. • Adobe Reader7 or later recommended

Item	Description
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD drive • For execution: mouse, keyboard • For printing: printer Use the following hardware when required. • For simulation (Only when outputting the buzzer sound): Sound card, speaker

*1 For installation, administrator privileges are required.
For startup, the standard user or administrator account is required.
To use GT Designer3 with another MELSOFT application that runs with administrator privileges, run GT Designer3 with administrator privileges.
If you change any setting of the personal computer while GT Designer3 is running, the change will not be applied to GT Designer3.

*2 The following functions are not supported.
- Application start in Windows compatibility mode
- Fast user switching
- Change your desktop themes (fonts)
- Remote desktop
- Setting the size of text and illustrations on the screen to any size other than [Small-100%]

*3 Operation is not supported in an environment with the text cursor indicator turned on.

*4 The touch feature is not supported.

*5 Operation in a virtual environment such as Hyper-V is not supported.

*6 Tablet mode is not supported.

*7 Unified Write Filter is not supported.

*8 ARM6 and ARM32 are not supported.

Point

Operating environment on iQ Works

When starting GT Designer3 from MELSOFT Navigator, the operating environment of GT Designer3 is same as that of MELSOFT Navigator.

➟iQ Works Installation Instructions

1.1.2 Supported models

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GT Designer3 is compatible with the following GOTs.

GOT	GOT type	Model
GT27	GT27**-X (1024x768)	GT2715-XTBA GT2715-XTBD
	GT27**-S (800x600)	GT2712-STBA GT2712-STWA GT2712-STBD GT2712-STWD GT2710-STBA GT2710-STBD GT2708-STBA GT2708-STBD
	GT27**-V (640x480)	GT2710-VTBA GT2710-VTWA GT2710-VTBD GT2710-VTWD GT2708-VTBA GT2708-VTBD
	GT2705-V (640x480)	GT2705-VTBD

GOT	GOT type	Model
GT25	GT25**-WX (1280x800)	GT2512-WXTBD GT2512-WXTSD GT2510-WXTBD GT2510-WXTSD
	GT25**-W (800x480)	GT2507-WTBD GT2507-WTSD GT2507T-WTSD
	GT25**-S (800x600)	GT2512-STBA GT2512-STBD GT2512F-STNA GT2512F-STND
	GT25**-V (640x480)	GT2510-VTBA GT2510-VTWA GT2510-VTBD GT2510-VTWD GT2510F-VTNA GT2510F-VTND GT2508-VTBA GT2508-VTWA GT2508-VTBD GT2508-VTWD GT2508F-VTNA GT2508F-VTND GT2506HS-VTBD
	GT2505-V (640x480)	GT2505-VTBD GT2505HS-VTBD
GT23	GT23**-V (640x480)	GT2310-VTBA GT2310-VTBD GT2308-VTBA GT2308-VTBD
GT21	GT2107-W (800x480)	GT2107-WTBD GT2107-WTSD
	GT2105-Q (320x240)	GT2105-QTBDS GT2105-QMBDS
	GT2104-R (480x272)	GT2104-RTBD
	GT2104-P (384x128)	GT2104-PMBD GT2104-PMBDS GT2104-PMBDS2 GT2104-PMBLS
	GT2103-P (320x128)	GT2103-PMBD GT2103-PMBDS GT2103-PMBDS2 GT2103-PMBLS
GS25	GS25**-WX (1280x800)	GS2512-WXTBD
GS21	GS21**-W-N (800x480)	GS2110-WTBD-N GS2107-WTBD-N
	GS21**-W (800x480)	GS2110-WTBD GS2107-WTBD
GT SoftGOT2000	GT SoftGOT2000	GT SoftGOT2000 Version1

1.1.3 List of the supported models for each function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the supported models for each function.

■1 Simulation

Function	Description	Supported models
Simulation	Simulates the project you are editing.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■2 Common setting

Function	Description	Supported models
Screen Switching	Switches the screen displayed on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Language Switching	Switches the language displayed on the GOT.	
Operation Log	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Logs the operation performed on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Kana-Kanji/Pinyin Conversion	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Converts texts to kanji or Chinese (Simplified) on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Startup Logo	Sets the logo displayed at the GOT startup.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
USB Mouse/Keyboard Function	Not available to GT25HS-V. Only available to GT2107-W for GT21. Operates the GOT with a USB mouse or USB keyboard.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Time Setting	Sets the GOT time setting method.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
FA Transparent Function	Transfers data between the personal computer and a PLC CPU via the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
SoftGOT-GOT Link Function	Monitors the GOT by using the personal computer (GT SoftGOT2000).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Station No. Switching	Switches the station number of the GOT monitoring target.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Buffer memory unit No. switching	Switches the buffer memory unit No. of the GOT monitoring target.	

Function	Description	Supported models
GOT Network Interaction	Controls pieces of equipment on the same network to prevent simultaneous operations.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Comment	Register a character string to be displayed on an object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Parts	Register a figure or image to be displayed on the object.	

■3 Figure

Function	Description	Supported models
Text	Draws a text. The drawn text is fixed.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Logo Text	Draws a logo text. The drawn text is fixed.	
Line	Draws a line.	
Line Freeform	Draws a freeform line.	
Rectangle	Draws a rectangle.	
Polygon	Draws a polygon.	
Circle	Draws a circle.	
Arc	Draws an arc.	
Sector	Draws a sector.	
Scale	Draws a scale.	
Piping	Draws a piping.	
Paint	Fills the framed area of the figure on the screen.	
Import Image	Imports an image file into the screen.	
Import DXF data	Imports a DXF data into the screen.	
Import IGES data	Imports an IGES data into the screen.	

■4 Object function

Function		Description	Supported models
Touch Switch	Switch	Touch switch with multiple functions	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Bit Switch	Touch switch to switch ON/OFF of a bit device	
	Word Switch	Touch switch to change the value of a word device	
	Go To Screen Switch	Touch switch to switch the screen	
	Change Station No. Switch	Touch switch to switch the station No. of the GOT monitor target	
	Special Function Switch	Touch switch to display the utility or the screen for the monitor function	
	Key window display switch	Touch switch to display a key window	
	Key Code Switch	Touch switch to enter a key code	
Lamp	Bit Lamp	Lamp controlled by the bit device	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word Lamp	Lamp controlled by the word device	
	Lamp Area	Lamp area controlled by the bit device	
Numerical Display/Input	Numerical Display	Object to display a device value (numeric value)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Numerical input	Object to input the device value (numeric value)	

Function		Description	Supported models
Text Display/Input	Text Display	Object to display the device value (text)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Text Input	Object to input the device value (text)	
Date/Time Display	Date Display	Object to display the date	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Time Display	Object to display the time	
Comment Display	Bit Comment	Object to display the comments The bit device controls the displayed comments.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word Comment	Object to display the comments The word device controls the displayed comments.	
	Simple Comment	Object to display the comments The displayed comments are fixed.	
Parts Display	Bit Parts	Object to display the parts The bit device controls the displayed parts.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word Parts	Object to display the parts The word device controls the displayed parts.	
	Fixed Parts	Object to display the parts The displayed parts are fixed.	
Parts Movement	Bit Parts	Object to move the parts The bit device controls the displayed parts.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word Parts	Object to move the parts The word device controls the displayed parts.	
	Fixed Parts	Object to move the parts The displayed parts are fixed.	
Historical Data List Display		Object to display the history of the device values collected by the logging function	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Alarm Display	Alarm Display (User)	Object to display the alarms collected by the user alarm observation. Set the monitored alarm per project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Alarm Display (System)	Object to display the alarms collected by the system alarm observation. Set the monitored alarm per project.	GT27 GT25 GT23 GS25 SoftGOT2000
	Simple Alarm Display	Object to display the alarms collected by monitoring the device Set the monitored alarm per object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	System Alarm Display	Object to display the alarms collected by monitoring the system Set the monitored alarm per object.	GT27 GT25 GT23 GS25 SoftGOT2000
Recipe Display (Record List)		Place an object to list the records of a recipe. This object must be used in combination with the recipe function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Function		Description	Supported models
Graph	Line Graph	Object to indicate the device values as a line graph.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Trend Graph	Object to indicate the device values in chronological order as a graph.	
	Bar Graph	Object to indicate the device values as a bar graph.	
	Statistics Bar Graph	Object to indicate the ratio of each device value compared to the total value of multiple devices as a bar graph.	
	Statistics Pie Graph	Object to indicate the ratio of each device value compared to the total value of multiple devices as a pie graph.	
	Scatter Graph	Object to indicate the device values as a scatter graph with the X and Y coordinates representing two devices, respectively.	
	Historical Trend Graph	Object to indicate, in chronological order as a graph, the device values collected by the logging function.	
Graphical Meter	Sector Meter	Place an object to display a device value on a sector meter.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Semicircle Meter	Place an object to display a device value on a semicircle meter.	
	Bar (Vertical) Meter	Place an object to display a device value on a vertical bar meter.	
	Bar (Horizontal) Meter	Place an object to display a device value on a horizontal bar meter.	
Meter	Level	Place an object to display a device value by filling the specified area.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Panelmeter	Place an object to display a device value on a meter.	
Slider		Object to specify the device value (numeric value) by sliding the knob along the bar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Document Display		Displays a document on the screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Video/RGB display object		Not available to GT2705-V. Displays an RGB image on the screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Script parts		Place an object to create a script. When the GOT displays the screen on which this object is placed, if the trigger condition for the created script is satisfied, the script runs.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Set Overlay Screen		Overlays a screen on another screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Window Position		Specifies the display position for overlap windows, superimpose windows, or key windows.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Key Window Object	Input Value Area Setting	Object to display the value you are inputting.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Input Range Area Setting	Object to display the available range for inputting values.	
	Input Maximum Value Area Setting	Object to display the available range for inputting the maximum value.	
	Input Minimum Value Area Setting	Object to display the available range for inputting the minimum value.	
	Previous Value Area Setting	Object to display the previous value.	

Function		Description	Supported models
Print	Numerical Print	Place an object to print a device value (numerical value).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Text Print	Place an object to print a device value (text).	
	Bit Comment Print	Place an object to print a comment. A bit device controls the comment to be printed.	
	Word Comment Print	Place an object to print a comment. A word device controls the comment to be printed.	
Hyperlink		Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000. Place an object to access a website or a file in the GOT public folder, or make a phone call.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■5 Functions performed on the background of the GOT

Function		Description	Supported models
Alarm	User Alarm Observation	Collects the alarms by monitoring the device.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	System Alarm Observation	Collects the alarms by monitoring the system.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Alarm Popup Display	Displays the collected alarms in a popup window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Logging		Collects device values.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Recipe		Executes the batch write or batch read on multiple devices.	
Device Data Transfer		Transfers data between devices.	
Trigger Action		Executes the selected action by using the set device or sampling cycle as a trigger.	
Time Action		Executes the selected action by using the set time as the trigger.	
Hard Copy		Captures the operating screen of the GOT.	
Script		Controls the set action by using the script.	

■6 Functions used with peripheral devices

Function	Description	Supported models
Barcode	Not available to GT25HS-V. Uses a barcode reader on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
RFID	Not available to GT25HS-V. Uses a RFID controller on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Remote Personal Computer Operation (Ethernet)	Operates the personal computer on the GOT via Ethernet.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Remote Personal Computer Operation (Serial)	Not available to GT2705-V. Operates the personal computer on the GOT by using the RGB display function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
VNC Server	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Monitors the GOT by using the personal computer.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Video Display	Not available to GT2705-V. Displays the images, which are taken with a video camera, on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
RGB Display	Not available to GT2705-V. Displays the images, which are sent from the personal computer, on the GOT.	
Multimedia	Not available to GT2705-V. Records or plays the images, which are taken with the video camera, on the GOT.	
External I/O function / Operation Panel function	Not available to GT25-W, GT2505-V, and GT25HS-V. Uses an external I/O device, or an operation panel on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Video output function	Not available to GT2705-V. Outputs the GOT screen or a specified overlap window to an external display.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Report function	Not available to GT25HS-V. Collects and prints device values.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Sound Output	Not available to GT2505-V and GT25HS-V. Outputs the sound on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Server / Client	Monitors the device of the controller, which the GOT is monitoring, by using other personal computers or the GOTs.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Function		Description	Supported models
Mail Send		Sends a mail from the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
FTP Server		Transfers a file between the GOT (FTP server) and the peripheral device (FTP client).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
File transfer function	FTP transfer	Not available to GT2105-Q. Transfers a file between the GOT (FTP client) and a peripheral (FTP server).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	GOT internal transfer	Copies or moves a file to another drive or folder within the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GOT Mobile function		It is recommended to use GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000. Monitors a controller through the GOT from tablets or other information devices.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
MES Interface function		Sends an SQL statement from the GOT to a personal computer database. ➟GOT2000 Series MES Interface Function Manual for GT Works3 Version1	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

1.2 Checking the Followings before Drawing

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟1.2.1 BootOS, CoreOS and package data
1.2.2 Project
1.2.3 Screen types and the specifications
1.2.4 Specifications of drawing
1.2.5 Font specifications
1.2.6 Character codes supported by the GOT
1.2.7 Specifications of available devices
1.2.8 Drive configuration of the target GOT for data transfer

1.2.1 BootOS, CoreOS and package data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To activate the GOT, the following data are required.

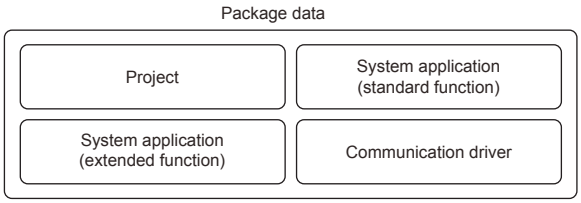
■1 BootOS and CoreOS

The BootOS and the CoreOS are used to activate the GOT.
They are installed on the GOT by factory default.
To use additional functions, upgrading the BootOS and the CoreOS are required.
For the additional functions mentioned above, refer to the following.

➟12.17 Upgraded Additional Function List

■2 Package data

The package data consists of a project, system applications (standard functions and extended functions), and communication drivers.



- Project
  Data of screens and settings that is configured with GT Designer3
  ➟1.2.2 Project
- System application (standard function)
  Application that is required for operating the GOT and displaying the utility
- System application (extended function)
  Application that is required for using some functions, such as the system monitor function and the logging function
- Communication driver
  Driver that is required for the GOT to communicate with controllers

1.2.2 Project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Project is the data of the screen and setting configured with GT Designer3.
Each created project is managed individually.
The project has two types: workspace format project, a single file format project.

➟■1 Workspace format project
■2 A single file format project

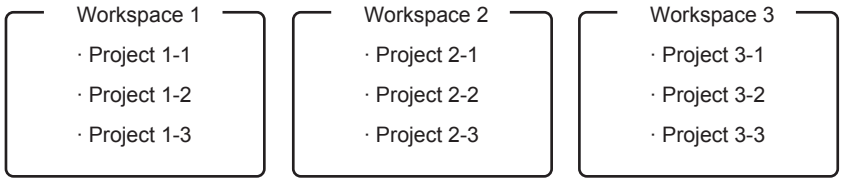
When you save the project on GT Designer3, select the format.
For the compatibility between GT Designer3 Version2 and other existing software, refer to the following.

➟12.13.1 Compatibility of projects

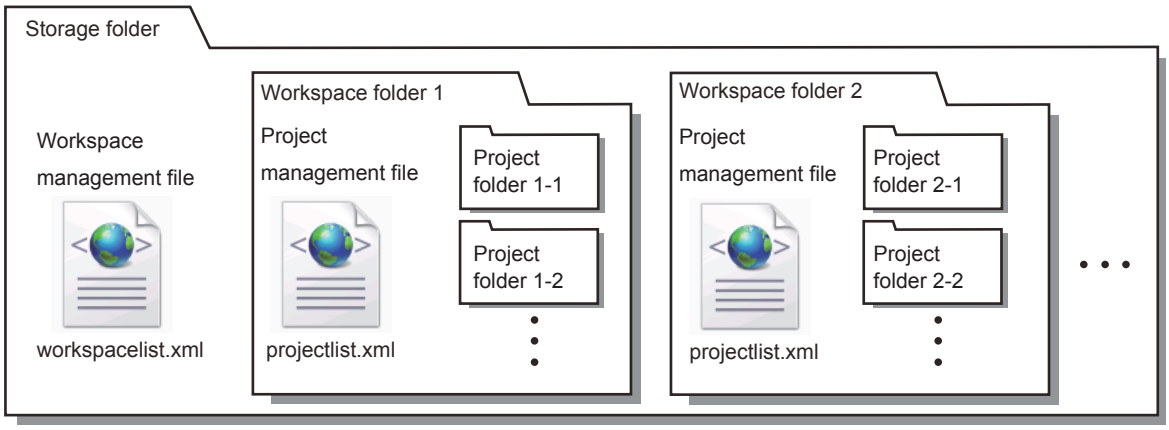
■1 Workspace format project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The workspace format project is the file format to manage multiple projects in the workspace.



The workspace format project consists of multiple folders and files as the figure below.



- Workspace management file (workspacelist.xml)
  This is the management information of the workspace in a storage folder.
- Project management file (projectlist.xml)
  This is the management information of the projects in the workspace.
- Project folder
  This folder stores the project.

Point

Migration, renaming, or deletion of the workspace format project

If you operate (migrate, rename, or delete) the folders or files in the workspace by using Windows Explorer or others, the project may not be opened.
Operate the project by using GT Designer3.

■2 A single file format project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A single file format project is the file format to manage the project as a single file.
Copy, migrate, or rename the files by using Windows Explorer or others.
A single file format project has the following extensions.

- GTX
  File format that the project only is stored in a single file.
- GTXS
  File format that the package data consisting of the project, the system applications and communication driver related to the project is stored in a single file.
  With the fixed version of the project, system applications, and communication driver, they can be used on the GOT without any downgrade of their functions which are set in the project, regardless of the old version of GT Designer3 which is used to transfer GTXS project to the GOT.
  This provides the convenience when you save the project as a completed data.
- G2
  File format which is used to store the project in the GOT or a data storage.
- GTCNV
  File format which is used to convert the GOT800 project and others into the GOT2000 project with GT Converter2.

1.2.3 Screen types and the specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Screen types
■2 Screen specifications
■3 Functions arrangeable on the screen

■1 Screen types

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the relation between the screens created by GT Designer3 and screens displayed on the GOT.

➥(1) Screens created with GT Designer3
(2) Display order
(3) Overlap-display specifications

(1) Screens created with GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

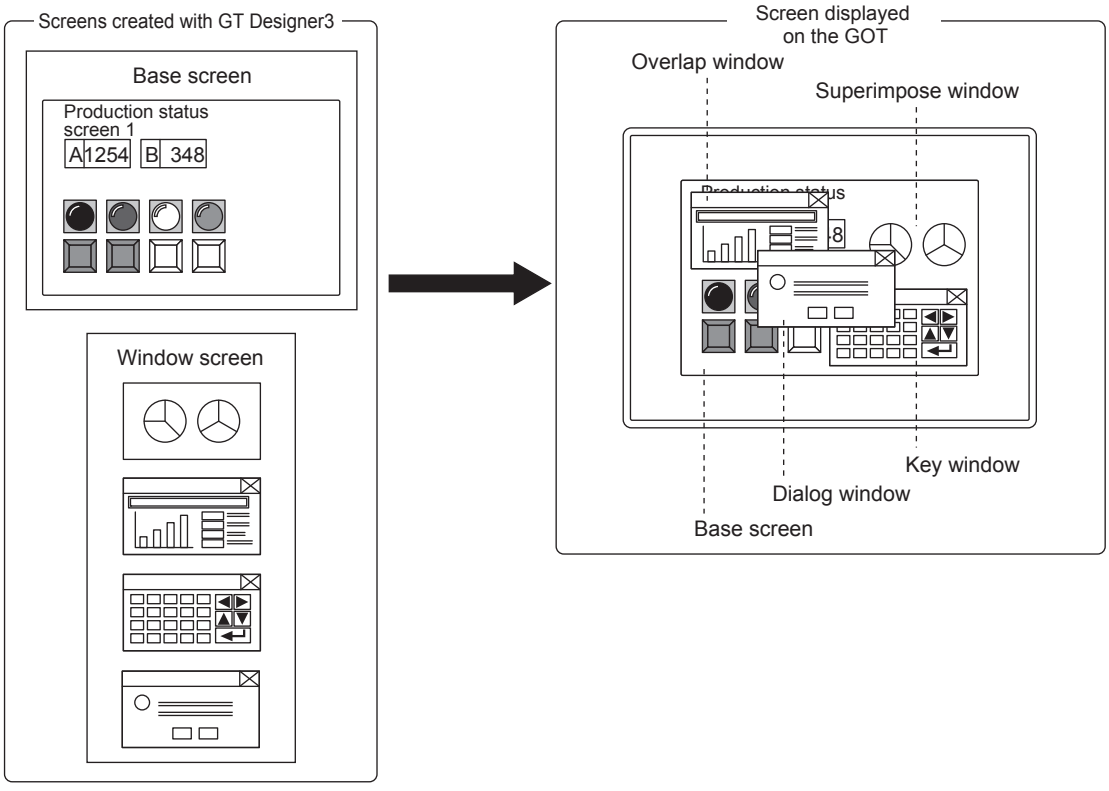
The following screen types can be created with GT Designer3.

(a) **Base screen**

A screen that becomes the base of the GOT screen display.
The control of displaying a base screen is performed with a screen switching device.

(b) **Window screen**

A screen displayed as an overlap window , superimpose window, a key window, and a dialog window on the GOT.



- Superimpose window
  A window superimposed on a base screen and displayed as a part of the base screen.
  Up to two superimpose windows (superimpose window 1 and 2) can be displayed simultaneously.
  The control of displaying the window screen is performed with a screen switching device.
- Overlap window
  A pop-up window displayed over a base screen.
  Up to five overlap windows (overlap window 1 to 5) can be displayed simultaneously.

(GT23, GT21, and GS21 can display up to two overlap windows (overlap window 1 and 2) simultaneously.)
The display position of an overlap window can be moved with a touch operation or a display position specification device.
The control of displaying the window screen is performed with a screen switching device.

- Key window
  A pop-up window displayed on a base screen for the input by the numerical input function.
  The display position of the key window can be moved by the touch operation.
  Two types of key windows are provided: standard key window and user-created key window.
- Dialog window
  A window displaying error or warning messages, and the GOT system messages in the foreground.
  While a dialog window is displayed, other screens cannot be operated.
  For GT21 and GS21, even while a dialog window is displayed, other screens are operable.
  The control of displaying the window screen is performed with a screen switching device.

(c) **Report screen**

A window for outputting the data by the report function.
This screen is not displayed on the GOT.

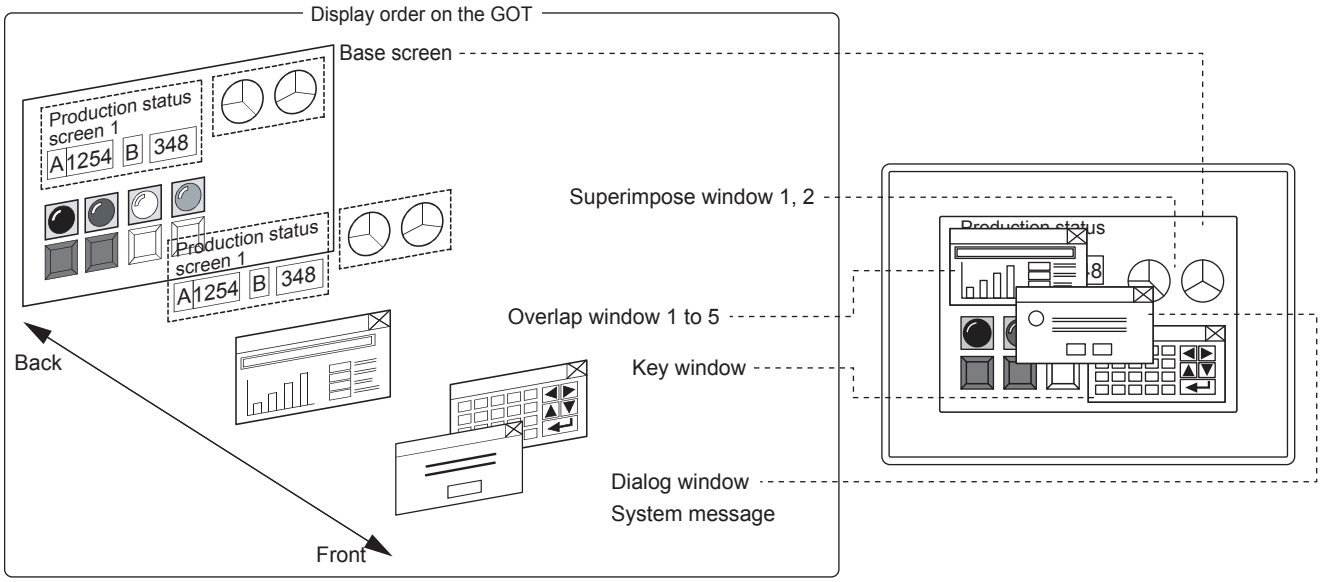
(d) **Mobile screen (GT27, GT25, GT SoftGOT2000, GS25)**

A screen to be displayed on information devices, such as a tablet, when the GOT Mobile function is used.
This screen is not displayed on the GOT.

(2) Display order

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the order of the screens displayed on the GOT.



- Base screen
  Displayed at the back.
- Superimpose window 1, 2
  Superimposed on a base screen and displayed as a part of the base screen.
- Overlap window 1 to 5
  Displayed on the front of a base screen.
  When multiple overlap windows are displayed, a later displayed or the last operated window is displayed on the front.
  The stacking order of overlap windows is settable in the [Environmental Setting] window ([Screen Switching/ Windows]) as well.
- Key window
  Displayed on the front of a base screen and an overlap window.
- Dialog window
  Displayed in the foreground of the displayed windows.

(3) Overlap-display specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Display order of overlapping figures and objects

Overlapping figures and objects are displayed according to the order of layers they belong to.
The display order of objects between a base screen and superimposed window depends on the settings.

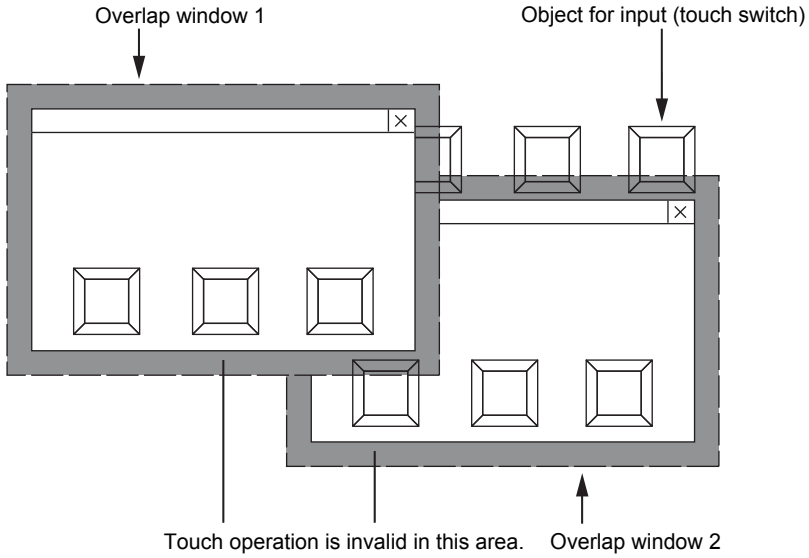
➡5.1.5 [Type Setting] dialog

(b) A base screen and a superimpose window

An input object on a base screen operates even when the object overlaps a superimpose window.
For GT21 and GS21, the input object that overlaps a superimpose window does not operate.
When input objects on a superimpose window and a base window overlap each other, both of the objects operate by touching.
(If you touch the input objects too quickly, only the input object on the superimpose window may operate.)

(c) An overlap window and a key window

- When hidden behind an overlap window or a key window, the figures and the objects are not displayed and the input objects do no work.
  To check or operate the figures and the objects behind the overlap window, close or move the overlap window.
- A touch operation is invalid in the surrounding area of 16 dots from an overlap window or a key window with a title bar displayed.
  When the title bar is hidden, the touch operation is valid in all the areas.
  For GT21 and GS21, the touch operation is valid in all the areas regardless of whether the title bar is displayed or hidden.



- The numerical input object, text input object, or special function switch ([Switch Action]: [Key Windows]) placed on the user-created key window does not operate.

■2 Screen specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the screens created with GT Designer3.

➡(1) Base screen specifications
(2) Window screen specifications
(3) Report screen specifications
(4) Mobile screen specifications
(5) Layer

(1) Base screen specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Model	Screen size (width × height) (dots)		Registrable number of screen	Registrable screen number
	Base screen size expansion disabled	Base screen size expansion enabled *1*2		
GT27**-X (1024x768)	Horizontal display: 1024 × 768 Vertical display: 768 × 1024	Horizontal display: 1024 × 768 to 3000 × 3000 Vertical display: 768 × 1024 to 3000 × 3000	4096	0 to 32767
GT27**-S (800x600)	Horizontal display: 800 × 600 Vertical display: 600 × 800	Horizontal display: 800 × 600 to 3000 × 3000 Vertical display: 600 × 800 to 3000 × 3000		
GT27**-V (640x480)	Horizontal display: 640 × 480 Vertical display: 480 × 640	Horizontal display: 640 × 480 to 3000 × 3000 Vertical display: 480 × 640 to 3000 × 3000		
GT2705-V (640x480)	Horizontal display: 640 × 480 Vertical display: 480 × 640	Horizontal display: 640 × 480 to 3000 × 3000 Vertical display: 480 × 640 to 3000 × 3000		
GT25**-WX (1280x800)	Horizontal display: 1280 × 800 Vertical display: 800 × 1280	Horizontal display: 1280 × 800 to 3000 × 3000 Vertical display: 800 × 1280 to 3000 × 3000		
GT25**-W (800x480)	Horizontal display: 800 × 480 Vertical display: 480 × 800	Horizontal display: 800 × 480 to 3000 × 3000 Vertical display: 480 × 800 to 3000 × 3000		
GT25**-S (800x600)	Horizontal display: 800 × 600 Vertical display: 600 × 800	Horizontal display: 800 × 600 to 3000 × 3000 Vertical display: 600 × 800 to 3000 × 3000		
GT25**-V (640x480)	Horizontal display: 640 × 480 Vertical display: 480 × 640	Horizontal display: 640 × 480 to 3000 × 3000 Vertical display: 480 × 640 to 3000 × 3000		
GT2505-V (640x480)	Horizontal display: 640 × 480 Vertical display: 480 × 640	Horizontal display: 640 × 480 to 3000 × 3000 Vertical display: 480 × 640 to 3000 × 3000		
GT23**-V (640x480)	Horizontal display: 640 × 480 Vertical display: 480 × 640	-		
GT2107-W (800x480)	Horizontal display: 800 × 480 Vertical display: 480 × 800	-	2048	
GT2105-Q (320x240)	Horizontal display: 320 × 240 Vertical display: 240 × 320	-		
GT2104-R (480x272)	Horizontal display: 480 × 272 Vertical display: 272 × 480	-		
GT2104-P (384x128)	Horizontal display: 384 × 128 Vertical display: 128 × 384	-		
GT2103-P (320x128)	Horizontal display: 320 × 128 Vertical display: 128 × 320	-		
GS25**-WX (1280x800)	Horizontal display: 1280 × 800 Vertical display: 800 × 1280	Horizontal display: 1280 × 800 to 3000 × 3000 Vertical display: 800 × 1280 to 3000 × 3000	4096	
GS21**-W-N (800x480)	Horizontal display: 800 × 480 Vertical display: 480 × 800	-	2048	
GS21**-W (800x480)	Horizontal display: 800 × 480 Vertical display: 480 × 800	-		

Model	Screen size (width × height) (dots)		Registrable number of screen	Registrable screen number
	Base screen size expansion disabled	Base screen size expansion enabled *1*2		
GT SoftGOT2000	640 × 480 to 1920 × 1200 (The maximum size depends on set resolution.)	-	4096	0 to 32767

*1 For GT27, GT25, and GS25, you can create base screens that are larger than the GOT screen by enabling the base screen size expansion.
To enable the base screen size expansion, select [Expand base screen sizes] in [Basic setting] in the [Type setting] dialog.
➥5.1.5 ■1 [Basic Setting]

*2 The size of images displayable on the expanded base screens depends on the image file format.
➥5.1.3 ■3 (4) Size of images displayable on the expanded base screens

(2) Window screen specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Model	Screen size (width × height) (dots)	Registrable number of screen	Registrable screen number
GT27**-X (1024x768)	Horizontal display: 16 × 2 to 1024 × 768 Vertical display: 16 × 2 to 768 × 1024	1024	0 to 32767
GT27**-S (800x600)	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800		
GT27**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640		
GT2705-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640		
GT25**-WX (1280x800)	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280		
GT25**-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800		
GT25**-S (800x600)	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800		
GT25**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640		
GT2505-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640		
GT23**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640x		
GT2107-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800		
GT2105-Q (320x240)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320		
GT2104-R (480x272)	Horizontal display: 16 × 2 to 480 × 272 Vertical display: 16 × 2 to 272 × 480		
GT2104-P (384x128)	Horizontal display: 16 × 2 to 384 × 128 Vertical display: 16 × 2 to 128 × 384		
GT2103-P (320x128)	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320		
GS25**-WX (1280x800)	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280		
GS21**-W-N (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800		
GS21**-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800		
GT SoftGOT2000	16 × 2 to 1920 × 1200 (The maximum size depends on set resolution.)		

The display size of window screens depends on the window types.
The following shows the specifications for each window type.

(a) **Superimpose window**

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

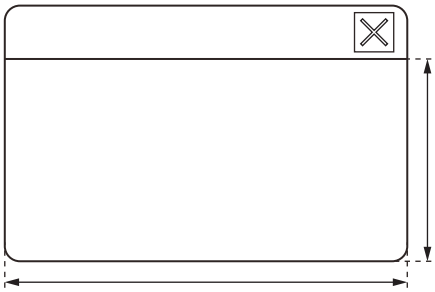
Model	Screen size (width × height) (dots)	Number of displayable screens on one base screen
GT27**-X (1024x768)	Horizontal display: 16 × 2 to 1024 × 768 Vertical display: 16 × 2 to 768 × 1024	2
GT27**-S (800x600)	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT27**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2705-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT25**-WX (1280x800)	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	
GT25**-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT25**-S (800x600)	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT25**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2505-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT23**-V (640x480)	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2107-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT2105-Q (320x240)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2104-R (480x272)	Horizontal display: 16 × 2 to 480 × 272 Vertical display: 16 × 2 to 272 × 480	
GT2104-P (384x128)	Horizontal display: 16 × 2 to 384 × 128 Vertical display: 16 × 2 to 128 × 384	
GT2103-P (320x128)	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320	
GS25**-WX (1280x800)	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	
GS21**-W-N (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GS21**-W (800x480)	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT SoftGOT2000	16 × 2 to 1920 × 1200 (The maximum size depends on set resolution.)	

(b) **Overlap window**

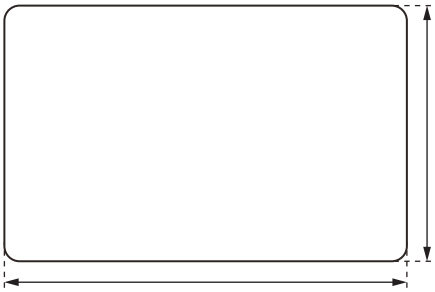
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The maximum size of a window screen differs depending on the design selected in the [Screen Design] dialog and the display state of the screen title bar.

Example) When a basic-type screen design is selected

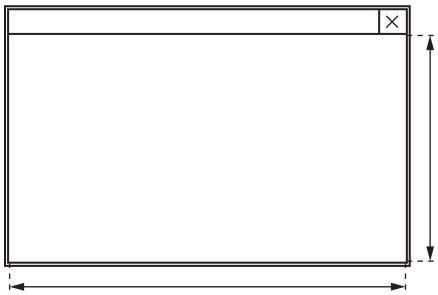


With a title bar

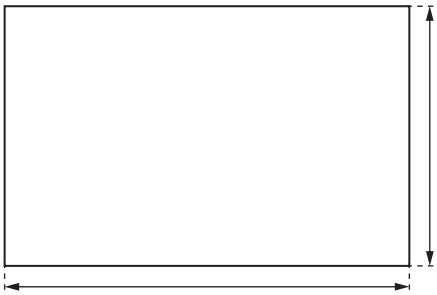


Without a title bar

Example) When a classic-type screen design is selected



With a title bar



Without a title bar

Model	Screen size (width × height) (dots)		Number of displayable screens on one base screen
	With a title bar	Without a title bar	
GT27**-X (1024x768)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1024 × 725 Vertical display: 16 × 2 to 768 × 981 • For classic-type screen designs Horizontal display: 16 × 2 to 1022 × 751 Vertical display: 16 × 2 to 766 × 1007	Horizontal display: 16 × 2 to 1024 × 768 Vertical display: 16 × 2 to 768 × 1024	5
GT27**-S (800x600)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 557 Vertical display: 16 × 2 to 600 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 583 Vertical display: 16 × 2 to 598 × 783	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT27**-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2705-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	

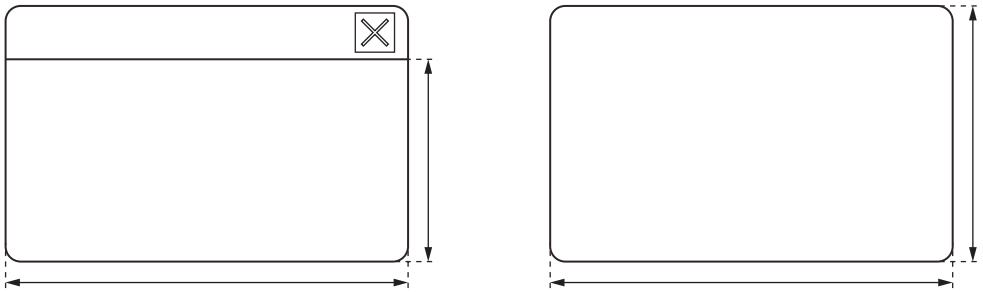
Model	Screen size (width × height) (dots)		Number of displayable screens on one base screen
	With a title bar	Without a title bar	
GT25**-WX (1280x800)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1280 × 757 Vertical display: 16 × 2 to 800 × 1237 • For classic-type screen designs Horizontal display: 16 × 2 to 1278 × 783 Vertical display: 16 × 2 to 798 × 1263	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	5
GT25**-W (800x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 437 Vertical display: 16 × 2 to 480 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 463 Vertical display: 16 × 2 to 478 × 783	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT25**-S (800x600)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 557 Vertical display: 16 × 2 to 600 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 583 Vertical display: 16 × 2 to 598 × 783	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT25**-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2505-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT23**-V (640x480)	Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	2
GT2107-W (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT2105-Q (320x240)	Horizontal display: 16 × 2 to 320 × 224 Vertical display: 16 × 2 to 240 × 304	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2104-R (480x272)	Horizontal display: 16 × 2 to 480 × 240 Vertical display: 16 × 2 to 272 × 448	Horizontal display: 16 × 2 to 480 × 272 Vertical display: 16 × 2 to 272 × 480	
GT2104-P (384x128)	Horizontal display: 16 × 2 to 384 × 108 Vertical display: 16 × 2 to 128 × 364	Horizontal display: 16 × 2 to 384 × 128 Vertical display: 16 × 2 to 128 × 384	
GT2103-P (320x128)	Horizontal display: 16 × 2 to 320 × 96 Vertical display: 16 × 2 to 128 × 288	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320	
GS25**-WX (1280x800)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1280 × 757 Vertical display: 16 × 2 to 800 × 1237 • For classic-type screen designs Horizontal display: 16 × 2 to 1278 × 783 Vertical display: 16 × 2 to 798 × 1263	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	5
GS21**-W-N (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	2
GS21**-W (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	

Model	Screen size (width × height) (dots)		Number of displayable screens on one base screen
	With a title bar	Without a title bar	
GT SoftGOT2000	• For screen designs other than the classic-type ones 16 × 2 to 1920 × 1157 • For classic-type screen designs 16 × 2 to 1918 × 1183 (The maximum size depends on set resolution.)	16 × 2 to 1920 × 1200 (The maximum size depends on set resolution.)	5

(c) Key window

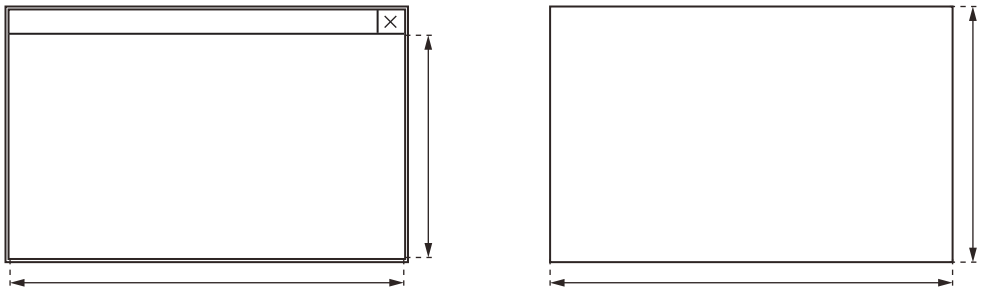
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The maximum size of a window screen differs depending on the design selected in the [Screen Design] dialog and the display state of the screen title bar.
Example) When a basic-type screen design is selected



With a title bar　　Without a title bar

Example) When a classic-type screen design is selected



With a title bar　　Without a title bar

Model	Screen size (width × height) (dots)		Number of displayable screens on one base screen
	With a title bar	Without a title bar	
GT27**-X (1024x768)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1024 × 725 Vertical display: 16 × 2 to 768 × 981 • For classic-type screen designs Horizontal display: 16 × 2 to 1022 × 751 Vertical display: 16 × 2 to 766 × 1007	Horizontal display: 16 × 2 to 1024 × 768 Vertical display: 16 × 2 to 768 × 1024	1
GT27**-S (800x600)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 557 Vertical display: 16 × 2 to 600 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 583 Vertical display: 16 × 2 to 598 × 783	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT27**-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2705-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT25**-WX (1280x800)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1280 × 757 Vertical display: 16 × 2 to 800 × 1237 • For classic-type screen designs Horizontal display: 16 × 2 to 1278 × 783 Vertical display: 16 × 2 to 798 × 1263	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	

Model	Screen size (width × height) (dots)		Number of displayable screens on one base screen
	With a title bar	Without a title bar	
GT25**-W (800x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 437 Vertical display: 16 × 2 to 480 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 463 Vertical display: 16 × 2 to 478 × 783	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	1
GT25**-S (800x600)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 800 × 557 Vertical display: 16 × 2 to 600 × 757 • For classic-type screen designs Horizontal display: 16 × 2 to 798 × 583 Vertical display: 16 × 2 to 598 × 783	Horizontal display: 16 × 2 to 800 × 600 Vertical display: 16 × 2 to 600 × 800	
GT25**-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2505-V (640x480)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 640 × 437 Vertical display: 16 × 2 to 480 × 597 • For classic-type screen designs Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT23**-V (640x480)	Horizontal display: 16 × 2 to 638 × 463 Vertical display: 16 × 2 to 478 × 623	Horizontal display: 16 × 2 to 640 × 480 Vertical display: 16 × 2 to 480 × 640	
GT2107-W (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT2105-Q (320x240)	Horizontal display: 16 × 2 to 320 × 224 Vertical display: 16 × 2 to 240 × 304	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2104-R (480x272)	Horizontal display: 16 × 2 to 480 × 240 Vertical display: 16 × 2 to 272 × 448	Horizontal display: 16 × 2 to 480 × 272 Vertical display: 16 × 2 to 272 × 480	
GT2104-P (384x128)	Horizontal display: 16 × 2 to 384 × 108 Vertical display: 16 × 2 to 128 × 364	Horizontal display: 16 × 2 to 384 × 128 Vertical display: 16 × 2 to 128 × 384	
GT2103-P (320x128)	Horizontal display: 16 × 2 to 320 × 96 Vertical display: 16 × 2 to 128 × 288	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320	
GS25**-WX (1280x800)	• For screen designs other than the classic-type ones Horizontal display: 16 × 2 to 1280 × 757 Vertical display: 16 × 2 to 800 × 1237 • For classic-type screen designs Horizontal display: 16 × 2 to 1278 × 783 Vertical display: 16 × 2 to 798 × 1263	Horizontal display: 16 × 2 to 1280 × 800 Vertical display: 16 × 2 to 800 × 1280	
GS21**-W-N (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GS21**-W (800x480)	Horizontal display: 16 × 2 to 800 × 448 Vertical display: 16 × 2 to 480 × 768	Horizontal display: 16 × 2 to 800 × 480 Vertical display: 16 × 2 to 480 × 800	
GT SoftGOT2000	• For screen designs other than the classic-type ones 16 × 2 to 1920 × 1157 • For classic-type screen designs 16 × 2 to 1918 × 1183 (The maximum size depends on set resolution.)	16 × 2 to 1920 × 1200 (The maximum size depends on set resolution.)	

(d) **Dialog window**

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Model	Screen size (width × height) (dots)	Number of displayable screens on one base screen
GT27**-X (1024x768)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT27**-S (800x600)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT27**-V (640x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2705-V (640x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT25**-WX (1280x800)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT25**-W (800x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT25**-S (800x600)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT25**-V (640x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2505-V (640x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT23**-V (640x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	1
GT2107-W (800x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2105-Q (320x240)	Horizontal display: 16 × 2 to 320 × 224 Vertical display: 16 × 2 to 240 × 304	
GT2104-R (480x272)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT2104-P (384x128)	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320	
GT2103-P (320x128)	Horizontal display: 16 × 2 to 320 × 128 Vertical display: 16 × 2 to 128 × 320	
GS25**-WX (1280x800)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GS21**-W-N (800x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GS21**-W (800x480)	Horizontal display: 16 × 2 to 320 × 240 Vertical display: 16 × 2 to 240 × 320	
GT SoftGOT2000	16 × 2 to 320 × 240	

(3) Report screen specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The report window is for outputting the data by the report function.
For the specifications of the report screen, refer to the following.

➟10.11.2 Specifications of the report function

(4) Mobile screen specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

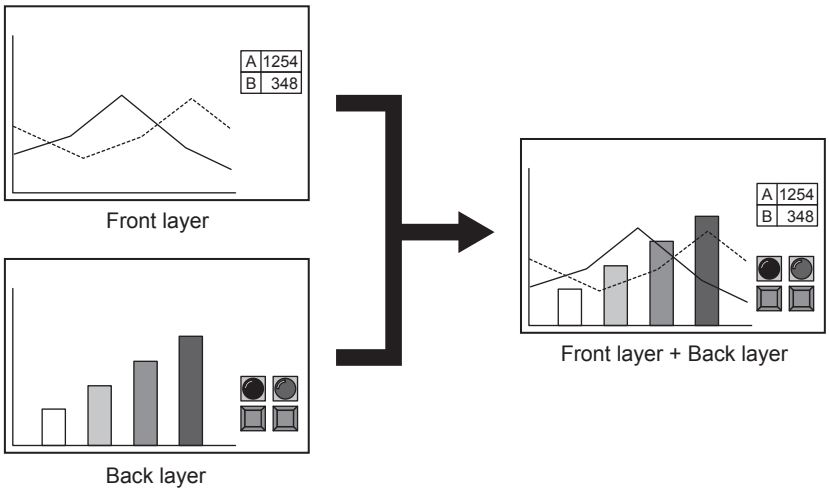
The mobile screen is displayed on information devices, such as a tablet, when the GOT Mobile function is used.
For the specifications of the mobile screen, refer to the following.

➟10.19.2 ■3 Mobile screen

(5) Layer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A base screen and a window screen created with GT Designer3 consist of a front layer and a back layer.
Placing the figures and objects separately on the front layer and the back layer ensures that the GOT displays the figures and objects in the superimposition order created with GT Designer3.



- Front layer
  The front layer is displayed as a transparent sheet. In the area where no figure or object is placed, the back layer is visible.

  GOT Graphic Ver.2

  The transparent color setting is not available.

  GOT Graphic Ver.1

  Set the transparent color of the front layer.
  The part of the figures and objects, whose color is the same as the transparent color of the front layer, also becomes transparent.
- Back layer
  The back layer is displayed behind the front layer.

The layer specifications for window screens depend on the window screen display on the GOT.

Model	Specifications
GT27, GT25, GT SoftGOT2000, GS25	• Superimpose windows, overlap windows, and key windows Figures and objects are arranged on the front layer and back layer. The display order on the GOT conforms to the overlap order on GT Designer3. • Dialog windows The front layer and back layer are combined into one layer on the GOT, and the object stacking order adjustment is applied. **GOT Graphic Ver.2** The object stacking order adjustment is always enabled. **GOT Graphic Ver.1** To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog. ➟5.1.5 [Type Setting] dialog
GT23	• Superimpose windows Figures and objects are arranged on the front layer and back layer. The display order on the GOT conforms to the overlap order on GT Designer3. • Overlap windows, key windows, and dialog windows The front layer and back layer are combined into one layer on the GOT, and the object stacking order adjustment is applied. **GOT Graphic Ver.2** The object stacking order adjustment is always enabled. **GOT Graphic Ver.1** To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog. ➟5.1.5 [Type Setting] dialog

For how to superimpose the figures and objects by using the layers or the screens for which superimposition by using the layer is enabled, refer to the following.

➟6.5.5 ■3 Superimposition

■3 Functions arrangeable on the screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Figure
(2) Object
(3) Functions performed on the background of the GOT

(1) Figure

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following figures can be drawn.

- Text
- Logo Text
- Line
- Line Freeform
- Rectangle
- Polygon
- Circle
- Arc
- Sector
- Scale
- Piping
- Paint
- Import Image
- Import DXF data
- Import IGES data

Figures with the lamp attribute are processed as a lamp object.

(2) Object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The maximum number of objects on one screen depends on the screen type.
If many objects are placed on a screen, refreshing the GOT screen may be delayed.

(a) Base screen

Up to 1024 objects can be placed.
Objects placed 1025th or later are not displayed on the GOT.
(For GT21 and GS21, up to 100 input objects can be placed, including the ones on the window screen currently displayed.)

(b) Window screen

Up to 512 objects can be arranged.
Objects arranged after the 513th objects are not displayed on the GOT.

(c) Report screen

For the specifications of the report screen, refer to the following.

➟10.11.2 Specifications of the report function

(d) Mobile screen

For the specifications of the mobile screen, refer to the following.

➟10.19.2 ■3 Mobile screen

The following shows the arrangeable objects and the maximum number of objects that can be set.

Function		Maximum number of objects per screen
Touch Switch	Switch	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Bit switch	
	Word switch	
	Go to screen switch	
	Change station No. switch	
	Special function switch	
	Key window display switch	
	Key code switch	
Lamp	Bit Lamp	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen Figures with the lamp attribute are included.
	Word Lamp	
	Lamp Area	
Numerical display/input	Numerical display	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Numerical input	
Text display/input	Text display	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Text input	
Date/Time display	Date display	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Time display	
Comment display	Bit comment	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Word comment	
	Simple comment	
Parts display	Bit parts	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Word Parts	
	Fixed Parts	
Parts Movement	Bit parts	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Word parts	
	Fixed parts	

Function		Maximum number of objects per screen
Historical data list display		• 8 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 1 object per screen (GT21 and GS21) (Any object from among a historical data list display, trend graph, scatter graph, and historical trend graph)
Alarm display	Alarm display (user)	• 33 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 1 object per screen (GT21 and GS21)
	Alarm display (system)	• 8 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 1 object per screen (GT21 and GS21)
	Simple alarm display	• 24 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 1 object per screen (GT21 and GS21)
	System alarm display	1 object per screen
Recipe display (record list)		1 object per screen
Graph	Line graph	32 objects per screen
	Trend graph	• 32 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) (Any object from among trend graphs and historical trend graphs) • 1 object per screen (GT21 and GS21) (Any object from among a historical data list display, trend graph, scatter graph, and historical trend graph)
	Bar graph	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Statistics bar graph	32 objects per screen
	Statistics pie graph per screen	32 objects per screen
	Scatter graph	• 24 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 1 object per screen (GT21 and GS21) (Any object from among a historical data list display, trend graph, scatter graph, and historical trend graph)
	Historical trend graph	• 32 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) (Any object from among trend graphs and historical trend graphs) • 1 object per screen (GT21 and GS21) (Any object from among a historical data list display, trend graph, scatter graph, and historical trend graph)
Graphical meter	Sector meter	32 objects per screen
	Semicircle meter	
	Vertical bar meter	
	Horizontal bar meter	
Meter	Level	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
	Panelmeter	• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
Slider		• Base screen: 1024 objects per screen • Window screen: 512 objects per screen
Document display		1 object per screen
Video/RGB display object		4 objects per screen
Script parts		32 objects per screen
Set overlay screen		• 2047 objects per screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • 5 objects per screen (GT21 and GS21)

Function		Maximum number of objects per screen
Window Position	Overlap window 1	1 object per screen
	Overlap window 2	1 object per screen
	Overlap window 3	1 object per screen
	Overlap window 4	1 object per screen
	Overlap window 5	1 object per screen
	Superimpose window 1	1 object per screen
	Superimpose window 2	1 object per screen
	Key window	1 object per screen
Key window object	Input value area setting	1 object per screen
	Input range area setting	1 object per screen
	Input maximum value area setting	1 object per screen
	Input minimum value area Setting	1 object per screen
	Previous value area setting	1 object per screen
Print	Numerical Print	➟10.11.2 Specifications of the report function
	Text print	
	Bit Comment Print	
	Word Comment Print	
Hyperlink		1024 objects per screen

(3) Functions performed on the background of the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

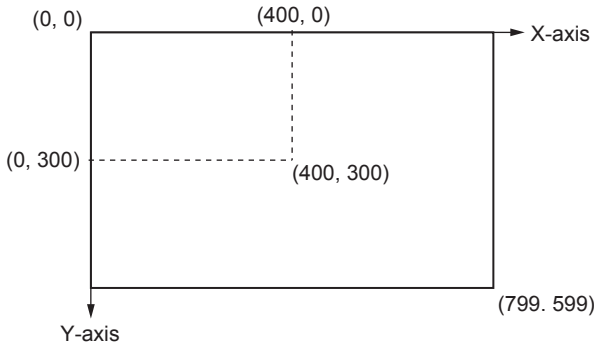
Function	Maximum number of actions per screen
Alarm popup display	1 object per screen
Trigger action (screen)	600 objects per screen
Screen script	256 objects per screen

1.2.4 Specifications of drawing

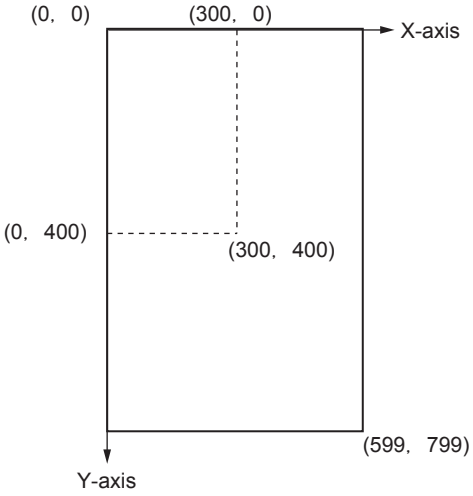
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Screen and coordinate

The horizontal direction on the screen is regarded as the X coordinate, and the vertical direction the Y coordinate. The coordinate (X, Y) indicates the distance from the origin (0, 0) at the top-left of the screen.
The unit of the coordinate is dot.
Example 1) When GT27-S (800 × 600) is installed horizontally



Example 2) When GT27-S (800 × 600) is installed vertically



1.2.5 Font specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Available fonts differ depending on the figures and objects.
Check the available fonts in the setting of each figure and object.
You can also specify the character code for the text display, text input, and others.
For the Shift JIS code, the GOT can only display the JIS level 1 and level 2 characters.
The following shows available fonts with GT Designer3.

Classification	Font type	Font image	KANJI region	Supported models
Standard font	6 × 8 dots		Not supported	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	12-dot Standard		Supported	
	16-dot Standard (Mincho)*1		Supported	
	16-dot Standard (Gothic)*1		Supported	
HQ font	12-dot HQ Mincho		Supported	
	12-dot HQ Gothic		Supported	
	16-dot HQ Mincho		Supported	
	16-dot HQ Gothic		Supported	
TrueType font	TrueType Mincho		Not supported	
	TrueType Gothic		Not supported	
	TrueType Numerical (Gothic)		Not supported	
	TrueType Numerical (7-Segment)		Not supported	
Outline font	Outline Square style*2		Supported	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
	Outline Gothic*2		Supported	
Windows font	TrueType font and OpenType font of Windows installed in a personal computer		Not supported	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

*1 For GT23, GT21, and GS21, the font type is set to the 16-dot standard font.
Set a typeface (Gothic or Mincho) by project.
➟5.1.5 [Type Setting] dialog

*2 For GT2107-W and GS21-W-N, the font type is specified as the outline font.
Set a typeface (Kaisho or Gothic) by project.
➟5.1.5 [Type Setting] dialog

KANJI region is a region where Chinese characters are used (such as Japan and China).
Some Chinese characters look different depending on the region where Chinese characters are used.
The font that supports the specification of KANJI region can display Chinese characters of Unified CJK Ideographs of Unicode in the style of the specified region.
Unified CJK Ideographs are Chinese characters that consist of Chinese (Simplified), Chinese (Traditional), Japanese, and Korean, all of which are standardized in Unicode.
GT Designer3 is compatible with the following KANJI regions.

KANJI region	Language	Font image
Japan	Japanese	
China	Chinese (Simplified)	
	Chinese (Traditional)	

If the KANJI regions are specified for individual figure or object, Chinese characters of different KANJI regions can be displayed on the single screen, and comments for each KANJI region can be displayed by language switching.

■1 Detailed font specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

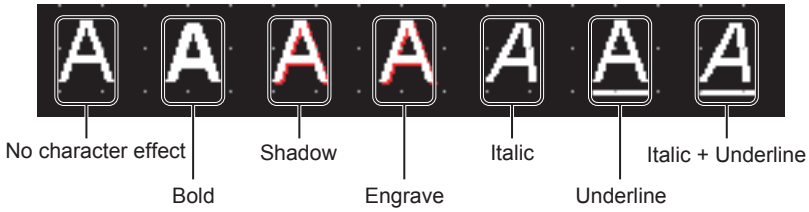
The following shows detailed specifications of available fonts with GT Designer3.

○: Supported , ×: Unsupported

Classification	Font type	Basic size and how to specify size	Character pitch*1	Character color*2	Character effect*3	Easily-distinguishable font*6
Standard font	6 × 8 dots	Fixed to 6 × 8 dots	Fixed	65536 colors	• Bold • Shadow • Engrave	×
	12-dot Standard	• One-byte: 6 × 12 dots • Two-byte: 12 × 12 dots 1 to 8 (integral multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
	16-dot Standard (Mincho)*5	• One-byte: 8 × 16 dots • Two-byte: 16 × 16 dots 0.5 times or 1 to 8 times (integral multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
	16-dot Standard (Gothic)*5	• One-byte: 8 × 16 dots • Two-byte: 16 × 16 dots 0.5 times or 1 to 8 times (integral multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
HQ font	12-dot HQ Mincho	• One-byte: 6 × 12 dots • Two-byte: 12 × 12 dots 2 to 8 times (even multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
	12-dot HQ Gothic	• One-byte: 6 × 12 dots • Two-byte: 12 × 12 dots 2 to 8 times (even multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
	16-dot HQ Mincho	• One-byte: 8 × 16 dots • Two-byte: 16 × 16 dots 2 to 8 times (even multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○
	16-dot HQ Gothic	• One-byte: 8 × 16 dots • Two-byte: 16 × 16 dots 2 to 8 times (even multiple) for height and width	Fixed	65536 colors	• Bold • Shadow • Engrave	○

Classification	Font type	Basic size and how to specify size	Character pitch*1	Character color*2	Character effect*3	Easily-distinguishable font*6
TrueType font	TrueType Mincho	8 to 240 dots (set in 1 dot unit) for height and width	Proportional	65536 colors	• Bold • Shadow • Engrave	×
	TrueType Gothic	8 to 240 dots (set in 1 dot unit) for height and width	Proportional	65536 colors	• Bold • Shadow • Engrave	×
	TrueType Numerical (Gothic)	16 to 240 dots (set in 4 dot units) for height and width*7	Fixed	65536 colors	-	×
	TrueType Numerical (7-segment)	16 to 240 dots (set in 4 dot units) for height and width*7	Fixed	65536 colors	-	×
Outline font	Outline Square style*9	8 to 240 dots (set in 1 dot unit) for height and width	Fixed or proportional*4	65536 colors	• Bold • Shadow • Engrave	×
	Outline Gothic*9	8 to 240 dots (set in 1 dot unit) for height and width	Fixed or proportional*4	65536 colors	• Bold • Shadow • Engrave	×
Windows font		8 to 240 dots (set in 1 dot unit) for height and width	Proportional	65536 colors	• Bold • Shadow • Engrave • Italic*8 • Underline*8	×

*1 A character pitch is the width of character.
A proportional font is a font type that has different character widths for each character.
*2 For GT2104-P and GT2103-P, 32-level monochrome is used.
*3 The following shows an example of a style.



*4 The character pitch differs depending on the object on which the outline font is used.
*5 For GT23, GT21, and GS21, the font type is set to the 16-dot standard font.
Set a font (Gothic/Mincho) for each project.
➟5.1.5 [Type Setting] dialog
*6 The slashed zero and the crossbar I are used in this font, which distinguish themselves easily from other characters.
The following shows an example image when this setting is enabled.

*7 For GT21, the setting range for the height and width is 16 dots to 128 dots (in 4-dot units).
*8 Not available when Windows fonts are used for comment groups.
*9 For GT2107-W and GS21-W-N, the font type is specified as the outline font.
Set a typeface (Kaisho or Gothic) by project.
➟5.1.5 [Type Setting] dialog

(1) Standard font

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The font specifications applied to 12-dot Standard, 16-dot Standard (Mincho), and 16-dot Standard (Gothic) differ depending on the combination of the following settings.

- [Standard language] in the [GOT Type Setting] dialog
  Specify a language used as the standard language.
  ➟5.1.5 [Type Setting] dialog

• [16dot Standard Font] of the [GOT Type Setting] dialog
Available to GT23, GT21, and GS21.
Specifies the font of [16dot Standard].
• [KANJI Region] for figures, objects and comments
Specify KANJI regions per unit such as figures, objects, and comments.

(a) **6 × 8 dots**

A font that the ASCII code supports (0x20 to 0x7E).
Characters which the ASCII code does not support are displayed in one-byte rectangle.
On the GOT, characters in one-byte rectangle in a character string are not displayed.

(b) **12-dot Standard, 16-dot Standard (Mincho), and 16-dot Standard (Gothic) (12-dot Standard and 16-dot Standard for GT23, GT21, and GS21)**

Fonts that Unicode 2.1 supports.
Unicode surrogate pairs (character code: 0xD800 to 0xDBFF and 0xDC00 to 0xDFFF) are not supported.
Characters of the Latin-1 Supplement or the Latin Extended-A are displayed in one-byte characters.
The fonts differ depending on the standard language setting.

Font type	[Standard language] and font	Supported model
[12dot Standard]	• [Japanese], [English], [Korean(Hangul)] The font is Gothic. • [Chinese(Simplified)] The font is Mincho. • [Chinese(Traditional)] The font is Gothic.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[16dot Standard Mincho]	• [Japanese], [English], [Korean(Hangul)] The font is Mincho. • [Chinese(Simplified)] The font is Mincho. • [Chinese(Traditional)] The font is Gothic.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[16dot Standard Gothic]	• [Japanese], [English], [Korean(Hangul)] The font is Gothic. • [Chinese(Simplified)] The font is Mincho. • [Chinese(Traditional)] The font is Gothic.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[16dot Standard]	The font varies depending on the setting of [16dot Standard Font] in the [GOT Type Setting] dialog. • [Japanese], [English], [Korean(Hangul)] The font is Gothic when [16dot Standard Font] is [Gothic]. The font is Mincho when [16dot Standard Font] is [Mincho]. • [Chinese(Simplified)] The font is Mincho. • [Chinese(Traditional)] The font is Gothic.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

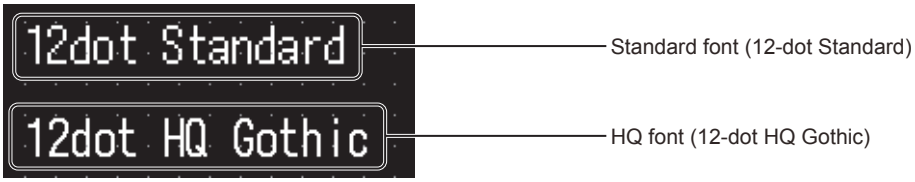
If the standard language and the KANJI region are specified, Unified CJK Ideographs can be displayed in Chinese characters of the specified KANJI region.

[Standard language]	Display of kanji
[Japanese], [English], [Korean(Hangul)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Japanese (Shift-JIS). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [China(GB)-Mincho]: Chinese (Simplified) (GB2312) • [China(Big5)-Gothic]: Chinese (Traditional) (Big5)
[Chinese(Simplified)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Simplified) (GB2312 or GB18030-2022). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Chinese characters of Japanese (Shift-JIS) • [China(Big5)-Gothic]: Chinese (Traditional) (Big5)
[Chinese(Traditional)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Traditional) (Big5). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Chinese characters of Japanese (Shift-JIS) • [China(GB)-Mincho]: Chinese (Simplified) (GB2312)

(2) HQ font

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A font with higher resolution than a standard font.



The font specifications applied to an HQ font differ depending on the following settings.

- [Standard language] in the [GOT Type Setting] dialog
  Specify a language used as the standard language.
  ➟5.1.5 [Type Setting] dialog
- [KANJI Region] for figures, objects and comments
  Specify KANJI regions per unit such as figures, objects, and comments.

(a) 12-dot HQ Mincho, 12-dot HQ Gothic, 16-dot HQ Mincho, 16-dot HQ Gothic

Fonts that Unicode 2.1 supports.
Unicode surrogate pairs (character code: 0xD800 to 0xDBFF and 0xDC00 to 0xDFFF) are not supported.
Characters of the Latin-1 Supplement or the Latin Extended-A are displayed in one-byte characters.
The fonts differ depending on the standard language setting.

- [Japanese], [English], [Korean(Hangul)]
  The font for 12-dot HQ Mincho and 16-dot HQ Mincho is Mincho.
  The font for 12-dot HQ Gothic and 16-dot HQ Gothic is Gothic.
- [Chinese(Simplified)]
  The characters are displayed in Mincho.
- [Chinese(Simplified)]
  The characters are displayed in Gothic.

If the standard language and the KANJI region are specified, Unified CJK Ideographs can be displayed in Chinese characters of the specified KANJI region.

Standard font	Display of kanji
[Japanese], [English], [Korean(Hangul)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Japanese (Shift-JIS). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [China(GB)-Mincho]: Chinese (Simplified) (GB2312) • [China(Big5)-Gothic]: Chinese (Traditional) (Big5)
[Chinese(Simplified)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Simplified) (GB2312 or GB18030-2022). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Chinese characters of Japanese (Shift-JIS) • [China(Big5)-Gothic]: Chinese (Traditional) (Big5)
[Chinese(Traditional)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Traditional) (Big5). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Chinese characters of Japanese (Shift-JIS) • [China(GB)-Mincho]: Chinese (Simplified) (GB2312)

(3) TrueType font

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) TrueType Mincho, TrueType Gothic

Fonts that Unicode 2.1 supports.
Unicode surrogate pairs (character code: 0xD800 to 0xDBFF and 0xDC00 to 0xDFFF) are not supported.
Characters of the Latin-1 Supplement or the Latin Extended-A are displayed in one-byte characters.
Characters of Unified CJK Ideographs are displayed in Chinese characters of Japanese.

(b) TrueType Numerical (Gothic), TrueType Numerical (7-Segment)

Fonts that the ASCII code supports (0x2B to 0x3A, 0x41 to 0x46, 0x4E, 0x6F).

These fonts are available only for displaying numerical values.

(4) Outline font

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
A font with higher resolution than a standard font.

Fonts that Unicode 2.1 supports.
Unicode surrogate pairs (character code: 0xD800 to 0xDBFF and 0xDC00 to 0xDFFF) are not supported.
The outline font supports the display of Thai.
In addition, many curves are used in each character. Hence, if a small size is applied to a character, you may find difficulty in reading the character.
The recommended character size for displaying Thai is 20 dots or more.
When a standard language and a KANJI region are specified, Unified CJK ideographs can be displayed in Chinese characters or Japanese kanji characters according to the specified KANJI region.

[Standard language]	Display of kanji
[Japanese], [English], [Korean(Hangul)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Japanese (Shift-JIS). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [China(GB)-Mincho]: Simplified Chinese (GB2312, GBK, or GB18030-2022) • [China(Big5)-Gothic]: Traditional Chinese (Big5)
[Chinese(Simplified)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Simplified) (GB2312 or GBK). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Japanese kanji (Shift-JIS) • [China(Big5)-Gothic]: Traditional Chinese (Big5)
[Chinese(Traditional)]	Characters of Unified CJK Ideographs are displayed in Chinese characters of Chinese (Traditional) (Big5). When the following KANJI regions are specified for figures or objects, characters of Unified CJK Ideographs are displayed in Chinese characters of a specified KANJI region. • [Japanese]: Japanese kanji (Shift-JIS) • [China(GB)-Mincho]: Simplified Chinese (GB2312, GBK, or GB18030-2022)

Antialiasing smooths out the jagged text.

GOT Graphic Ver.2

Antialiasing is always enabled.

GOT Graphic Ver.1

To enable antialiasing, select [Enable the antialiasing to smooth jagged text edges] in the [Type Setting] dialog.
GT23 does not support antialiasing.

➟5.1.5 [Type Setting] dialog

(5) Windows font

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The TrueType font and OpenType font of Windows installed to a personal computer.
Vertical fonts are unavailable.
Displayable characters, fonts, and character pitches differ depending on Windows fonts used.
Antialiasing smooths out the jagged text.
To enable antialiasing, select [Enable the antialiasing to smooth jagged text edges] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

When using Windows fonts, note the following points.

(a) Opening a created project with another personal computer

When Windows font used in the project has not been installed to the personal computer, and if a set text is changed, a different font is applied.
If the computer to open the project does not have the used Windows font , install the font to the computer.

(b) Using the Windows fonts installed during an operation of GT Designer3.

Restart GT Designer3 to use the Windows fonts installed during an operation of GT Designer3.

(c) Enabling antialiasing

When antialiasing is enabled, characters not included in European fonts may be displayed incompletely when you draw text using a Windows font.

■2 Applications and the recommended fonts

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A font has individual imaging speed and the way of specifying the character size. Therefore, appropriate fonts differ depending on the applications.
The following shows the applications and the recommended fonts. Refer to the table as rough guides.

Application	Recommended fonts*1	
	Specifying character size by 1 dot unit.	Specifying character size by magnification
Not switching a displayed text (figures (characters), comment display (simple))	• TrueType Mincho • TrueType Gothic • Outline Square style • Outline Gothic • Windows font	• 6 × 8 dots • 12-dot Standard • 16-dot Standard (Mincho) • 16-dot Standard (Gothic) • 12-dot HQ Mincho • 12-dot HQ Gothic • 16-dot HQ Mincho • 16-dot HQ Gothic
Switching and displaying a text with a comment (comment display, alarm observation)	• Outline Square style • Outline Gothic	• 12-dot Standard • 16-dot Standard (Mincho) • 16-dot Standard (Gothic) • 12-dot HQ Mincho • 12-dot HQ Gothic • 16-dot HQ Mincho • 16-dot HQ Gothic
Objects (numerical display, numerical input)	• Outline Square style • Outline Gothic	• 6 × 8 dots • 12-dot Standard • 16-dot Standard (Mincho) • 16-dot Standard (Gothic) • 12-dot HQ Mincho • 12-dot HQ Gothic • 16-dot HQ Mincho • 16-dot HQ Gothic • TrueType Numerical (Gothic) • TrueType Numerical (7-Segment)
Objects (text display, text input)	• Outline Square style • Outline Gothic	• 6 × 8 dots • 12-dot Standard • 16-dot Standard (Mincho) • 16-dot Standard (Gothic)

*1 [16dot Standard Mincho] and [16dot Standard Gothic] are replaced with [16dot Standard] for GT23.

■3 Displaying text on the GOT

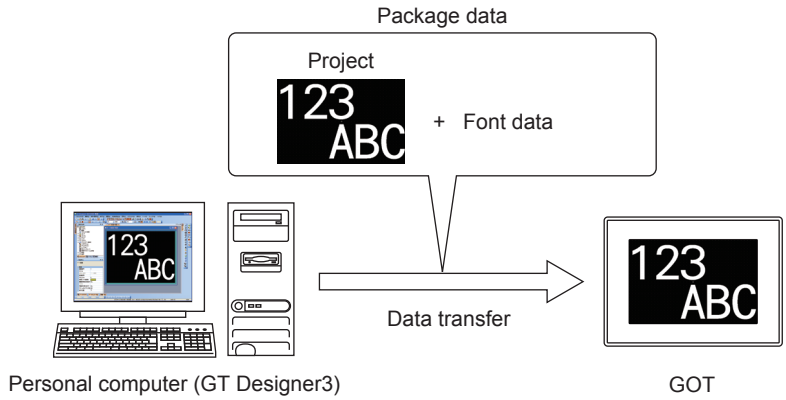
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Project and font data
(2) Utility language

(1) Project and font data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To display characters arranged with GT Designer3 on the screen of the GOT, install the font data of the font of the characters to the GOT together with the project (screen data).



When package data is written to the GOT, necessary font data is automatically incorporated into package data according to the standard language setting and the KANJI region setting.
The following shows the required settings for each font.

Classification	Settings
Standard font	The font data is automatically incorporated into package data by configuring one of the following settings. • Set [Standard Language] in the [Type Setting] dialog. • Set [16dot Standard Font] (for GT23 only) in the [Type Setting] dialog. • Set [KANJI Region] for a figure, object, or comment.
HQ font	The font data is automatically incorporated into package data by configuring one of the following settings. • Set the HQ font for a figure or object. • Select the HQ font in the comment attribute setting.
TrueType font	The font data is automatically incorporated into package data when the TrueType font is set for an object or others.
Outline font*1*2	The alphanumeric/kana font data is automatically incorporated into package data by configuring one of the following settings. • Select [Alphanumeric/Kana] in [Outline Font] in the [Type Setting] dialog. • Set the outline font for a figure or object.
	The font data of Japanese kanji or Chinese characters is automatically incorporated into package data by configuring one of the following settings. • Select [Kanji] in [Outline Font] in the [Type Setting] dialog. • Set the outline font for a figure or object. • Set [KANJI Region] for a figure or object.
	The font data of Hangul is automatically incorporated into package data by configuring one of the following settings. • Select [Hangul] in [Outline Font] in the [Type Setting] dialog. • Set the outline font for a figure or object.
Windows font	The font data is automatically incorporated into package data when the Windows font is set for an object or others.

*1 Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
*2 For GT2107-W and GS21-W-N, restrictions are placed on the typeface data and KANJI region data in the GOT as shown below.
• Multiple typefaces of data cannot coexist in the GOT.
• Three or more KANJI regions of data cannot coexist in the GOT.

(2) Utility language

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the relationship between the displayable languages in the utility and the required font data.

Displayable language in the utility	Required font data
Japanese	One of the following system applications is required. • [Standard Function]-[Standard Font]-[Japanese] • [Extended Function]-[Standard Font]-[Japanese]
English	The language can be selected regardless of the standard font installed on the GOT.
Chinese (Simplified)	One of the following system applications is required. • [Standard Function]-[Standard Font]-[Chinese(Simplified)] • [Extended Function]-[Standard Font]-[Chinese(Simplified)]
Chinese (Traditional)*1	One of the following system applications is required. • [Standard Function]-[Standard Font]-[Chinese(Traditional)] • [Extended Function]-[Standard Font]-[Chinese(Traditional)]
Korean*1	The language can be selected regardless of the standard font installed on the GOT.

*1 Not supported by GT21 and GS21.

For how to add a system application to be installed on the GOT, refer to the following.

➟4.2 Setting a System Application to be Written to the GOT

■4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Chinese characters which cannot be displayed with a specified KANJI region

If a specified KANJI region does not have Chinese character to be displayed, the character is displayed in Chinese character of another KANJI region that has the corresponding Chinese character.
The system finds the alternative KANJI region in order of Japanese, Chinese (Simplified), and Chinese (Traditional).

(2) Precautions for enabling antialiasing

GOT Graphic Ver.1

(a) Text width change

Enabling or disabling antialiasing may change the text width.
The set text may not appear entirely on a figure or object, or the margin of a figure or object may be increased.
Check the sizes of figures and objects after changing the antialiasing setting.

(b) Layers on which objects are placed

When antialiasing is enabled, place the object using an outline font on the back layer.
If you place such an object on the front layer, antialiasing may not be processed properly.

(3) Timing for reflecting the font setting on GT SoftGOT2000 or GT Simulator3

The following settings of the [Type Setting] dialog are reflected at the start of monitoring or simulation.

- [Graphics Setting]
- [Enable the antialiasing to smooth jagged text edges] in the [Type Setting] dialog

➟5.1.5 [Type Setting] dialog

If you change the setting after the start of monitoring or simulation, restart the relevant software.
If you open the project data without restarting the software, the characters cannot be displayed correctly in the specified font.

1.2.6 Character codes supported by the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GOT supports the following character codes.

- ASCII
- Unicode (UTF-16) *1
- Shift JIS
- GB (GB2312, GBK, GB18030-2022)
- Big5
- KS *2

*1 If any Unicode data other than UTF-16 data is used, the GOT converts the character code to UTF-16. There are restrictions depending on the data used.

*2 Not available to GT21 and GS21.

1.2.7 Specifications of available devices

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Available devices and setting ranges
■2 Data type of devices

■1 Available devices and setting ranges

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the devices that GT Designer3 can set and the setting ranges of the devices.

Device		Setting range	Device No. representation
GOT internal device	GOT bit register (GB)	GB0 to GB65535 (GB0 to GB2047 for GT21 and GS21)	Decimal number
	GOT data register (GD)	GD0 to GD65535 (GD0 to GD2047 for GT21 and GS21)	
	GOT special register (GS)	GS0 to GS2047	
SoftGOT2000 internal device *4	SoftGOT bit register (SGB)	SGB0 to SGB65535	
	SoftGOT data register (SGD)	SGD0 to SGD65535	
Gateway device (EG) *2		EG0 to EG32767	
GOT Mobile device *2	GOT Mobile bit register (VGB)	VGB0 to VGB32767	
	GOT Mobile data register (VGD)	VGD0 to VGD32767	
Controller device		Depends on the controller.	Depends on the controller.
System label		Depends on the setting.	-
Global label *2		Depends on the setting.	-
Label (GT Designer3)		Depends on the setting.	-
OMRON NJ/NX tag *1*3		Depends on the setting.	-
RSLogix 5000 tag *1*3		Depends on the setting.	-
AB native tag *1*2		Depends on the setting.	-
OPC UA Tag *4		Depends on the setting.	-

*1 Not available to GT SoftGOT2000.
*2 Not available to GT23, GT21, and GS21.
*3 Not available to GT2105-Q.
*4 Only available to GT SoftGOT2000.

(1) GOT internal devices (GB, GD, and GS)

Devices that the GOT has in itself.
The devices can be used regardless of a connection type of the GOT. However, they cannot be controlled in sequence programs by a controller.
If the GOT is powered off or reset, the GOT sets the GOT internal device values to 0.
The GOT internal device includes the GOT bit register, GOT data register, and GOT special register.

Device	Description
GOT bit register (GB)	Can be used as bit devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Work area for the script function • Read value storage area for bar codes.
GOT data register (GD)	Can be used as word devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Screen switching device • Work area for the script function • Read value storage area for bar codes.
GOT special register (GS)	Special register that the GOT has in itself. Internal information, communication status, and error information of the GOT are stored. By monitoring the GOT special register, various GOT information can be checked and the GOT can be operated.

The GOT internal devices have the area where functions are assigned or use prohibited areas used by the system.
For details of the devices and use prohibited areas, refer to the following.

➟12.1 GOT Internal Device

(2) SoftGOT2000 internal devices (SGB and SGD)

SoftGOT2000 internal device refers to a data storage area used by GT SoftGOT2000.
SoftGOT2000 internal devices are usable for any connection type, but they cannot be controlled by the sequence program of a controller.
When you exit GT SoftGOT2000, these devices are reset to 0.
The SoftGOT2000 internal devices are classified into two types: SoftGOT bit registers and SoftGOT data registers.

Device	Description
SoftGOT bit register (SGB)	Can be used as bit devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Work area for the script function • Read value storage area for bar codes.
SoftGOT data register (SGD)	Can be used as word devices. The devices come in useful if they are used in processing that does not need connection by way of a controller, such as the following. • Screen switching device • Work area for the script function • Read value storage area for bar codes.

The SoftGOT2000 internal devices are also usable to monitor the data collected by the data collector of Edgecross.
To monitor the collected data, assign the data to SoftGOT2000 internal devices in the Edgecross interaction function setting on GT SoftGOT2000.
For the Edgecross interaction function setting, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(3) Gateway device (EG)

Virtual devices used by the server/client function.
Controller devices can be assigned and the device values can be stored to the gateway devices.
The gateway devices can be monitored from other GOTs and personal computers. You can monitor the controller devices via the GOT indirectly.

➟10.13.3 How to use the gateway devices

(4) GOT Mobile device (VGB, VGD)

The GOT Mobile device is a virtual device usable for a client.
Assign GOT internal devices (GB and GD) to GOT Mobile devices for a client. The GOT Mobile devices are used as internal devices for the client.
Multiple clients are controllable individually by assigning different GOT internal devices for each client.
The virtual device is not initialized at the start of monitoring a mobile screen. Therefore, the device holds the value that is stored immediately before the monitoring.

➟10.19.2 ■4 GOT Mobile device (VGB and VGD)

(5) Controller device

Devices a controller has.
The GOT can monitor the controller devices.
The devices that GT Designer3 can set differ depending on the controller.

➟12.3 Device Range and Settings of Mitsubishi Electric Equipment
12.4 Device Range and Settings of Each Controller

(6) System label

Label used commonly to each project in the workspace for iQ Works.
Assign a controller device to a system label before using the system label.
For setting the system label, refer to the following.

➟6.1.3 How to set system labels

(7) Global label

This label is used for connection to the following controllers.

- MX-R
- MX-F
- RCPU *1
- Motion CPU (MELSEC iQ-R series)
- Motion module
- LHCPU

Among the global labels settable in GX Works3, MT Developer2, or Motion Control Setting Function, the GOT can monitor the ones that permit access from external devices.

*1 The GOT cannot monitor the global labels of R00CPU, R01CPU, and R02CPU that do not support the settings to permit access to their labels from external devices.

For setting the global labels, refer to the following.

➟6.1.4 How to set global labels

(8) Label (GT Designer3)

This label is used on GT Desinger3 only.
To use labels (GT Designer3), assign devices to them on GT Designer3.
For setting the labels (GT Designer3), refer to the following.

➟6.1.5 How to set labels (GT Designer3)

(9) OMRON NJ/NX tag

This tag is created with OMRON programming software.
To use OMRON NJ/NX tags, import them to GT Designer3.
For information on how to set the OMRON NJ/NX tags, refer to the following.

➟6.1.7 How to set OMRON NJ/NX tags

(10)RSLogix 5000 tag

This is a tag created with ALLEN-BRADLEY programming software.
To use RSLogix5000 tags, import them to GT Designer3.
For setting the RSLogix5000 tags, refer to the following.

➟6.1.8 Using RSLogix 5000 tags

(11)AB native tag

This is a tag created with ALLEN-BRADLEY programming software.
To use AB native tags, import them to GT Designer3.
For setting the AB native tags, refer to the following.

➟6.1.9 How to set AB native tags

(12)OPC UA Tag

This tag is created on an OPC UA server.
To use OPC UA tags, import them to GT Designer3.
For information on setting the OPC UA tags, refer to the following.

➡6.1.10 How to set OPC UA tags

■2 Data type of devices

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the data types that are available for GT Designer3.

Data type	Description	Data length	Data range
Signed BIN8	Signed binary value	8 bits	-128 to 127
Signed BIN16		16 bits	-32768 to 32767
Signed BIN32		32 bits	-2147483648 to 2147483647
Signed BIN64		64 bits	-9223372036854775808 to 9223372036854775807
Unsigned BIN8	Unsigned binary value	8 bits	0 to 255
Unsigned BIN16		16 bits	0 to 65535
Unsigned BIN32		32 bits	0 to 4294967295
Unsigned BIN64		64 bits	0 to 18446744073709551615
BCD16	Binary coded decimal	16 bits	0 to 9999
BCD32		32 bits	0 to 99999999
BCD64		64 bits	0 to 9999999999999999
Real numbers (32 bits)*1	Single-precision floating-point number	32 bits	±(0, 1.17550e-38 to 3.40282e+38)*2
Real numbers (64 bits)*1	Double-precision floating-point number	64 bits	±(0, 2.2250738585073e-308 to 1.7976931348623e+308)*3

*1 When a value exceeding the number of digits to which a real number is accurate is set, the set value and the operating value differ.
For a real number, set the number of digits not exceeding the number of digits to which the real number is accurate.
*2 The real number precision is given to 6-digit.
*3 The real number precision is given to 14-digit.

1.2.8 Drive configuration of the target GOT for data transfer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

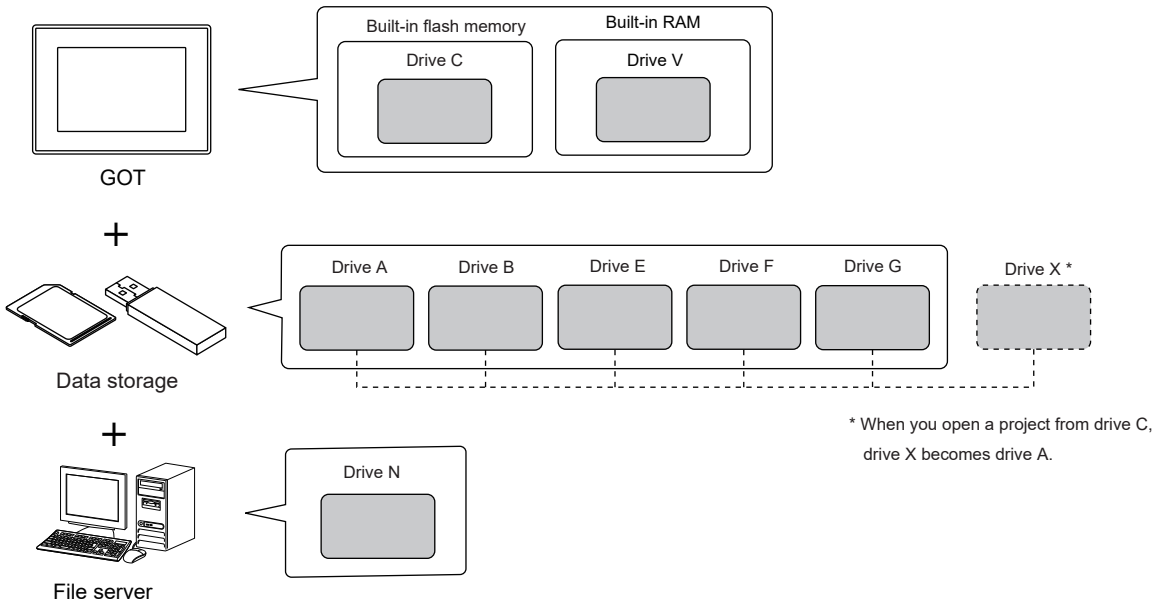
➟■1 GT27
■2 GT25 and GS25
■3 GT23
■4 GT21 and GS21

■1 GT27

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Drive configuration

The following shows the drive configuration of the GOT.



Drive	Name	Description, Condition of use
Drive A	Standard SD card	An area where projects, system applications (extended functions), and resource data are stored. Insert an SD card to the SD card interface of the GOT to use the drive.
Drive B	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. ➟(2) Installing the data storage and assigning the drive to GT27
Drive C	Built-in flash memory (user area)	An area where projects and system applications (extended functions) are stored. Always available.
Drive E	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. The usable drives and the drive assignment depend on the GOT model. For details, refer to the following. ➟(2) Installing the data storage and assigning the drive to GT27
Drive F		
Drive G		
Drive N	Network drive	Folder on the file server (such as a personal computer) that is connected to the GOT by Ethernet. ➟5.3.15 Configuring the network drive settings ([Network Drive])
Drive V	Built-in RAM (user work memory area)	An area where the image files written using the FTP server function are stored The image files in this drive can be used only when switching the image of a parts display automatically. ➟8.8.2 ■5 Switching the image on a parts display object automatically
Drive X	Current drive	A drive that is running a project. When you open a project from drive C, drive A becomes the current drive.

For the specifications of the USB interface of the GOT or data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

(2) Installing the data storage and assigning the drive to GT27

The usable drives and the drive assignment depend on the GOT model.
When multiple data storages are connected to a USB interface through a USB hub or card reader, drives are assigned to the storages in the order they are recognized.

GOT	Drive assignment			Maximum number of connectable data storages
	First data storage to the front USB interface (host)	First data storage to the rear USB interface (host)	The second or later data storage to each USB interface (host)	
GT2715-XTBA GT2715-XTBD GT2712-STBA GT2712-STBD GT2710-STBA GT2710-STBD GT2710-VTBA GT2710-VTBD GT2708-STBA GT2708-STBD GT2708-VTBA GT2708-VTBD GT2705-VTBD	Drive E	Drive B	Drive F Drive G	4 (Up to three data storages to each USB interface)
GT2712-STWA GT2712-STWD GT2710-VTWA GT2710-VTWD	-	Drive B	Drive F Drive G	3

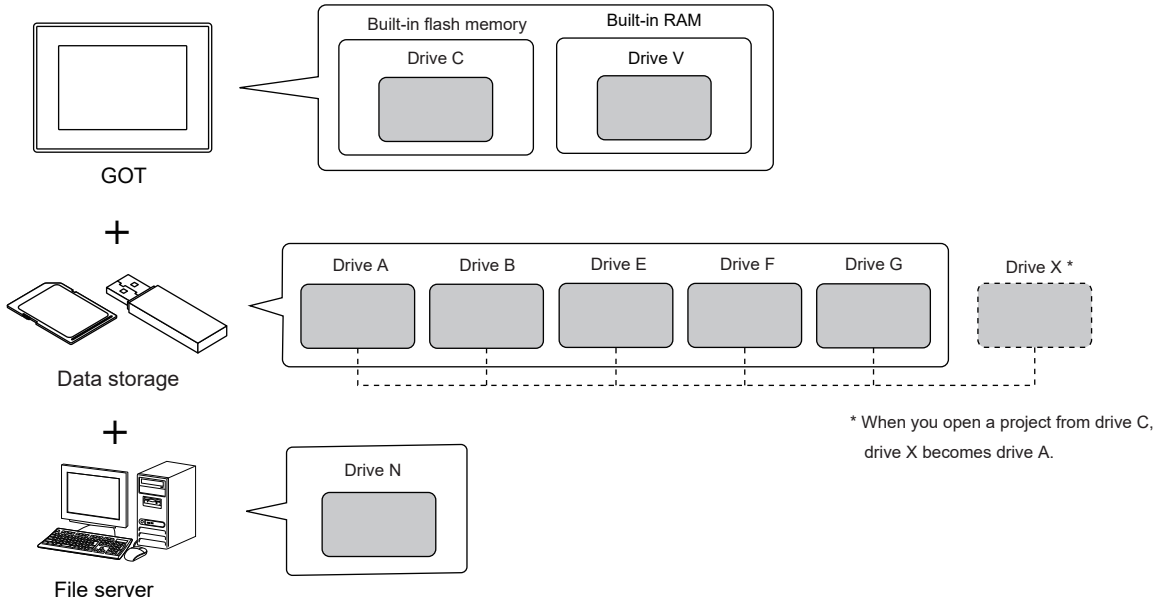
Connect the data storages in the order in which the drives are assigned to the storages as intended.

■2 GT25 and GS25

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Drive configuration

The following shows the drive configuration of the GOT.



Drive	Name	Description, Condition of use
Drive A	Standard SD card	An area where projects, system applications (extended functions), and resource data are stored. Insert an SD card to the SD card interface of the GOT to use the drive.
Drive B	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. The usable drives and the drive assignment depend on the GOT model. For details, refer to the following. ➟(2) Installing the data storage and assigning the drive to GT25 and GS25
Drive C	Built-in flash memory (user area)	An area where projects and system applications (extended functions) are stored. Always available.
Drive E	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. The usable drives and the drive assignment depend on the GOT model. For details, refer to the following. ➟(2) Installing the data storage and assigning the drive to GT25 and GS25
Drive F		
Drive G		
Drive N	Network drive	Folder on the file server (such as a personal computer) that is connected to the GOT by Ethernet. ➟5.3.15 Configuring the network drive settings ([Network Drive])
Drive V	Built-in RAM (user work memory area)	An area where the image files written using the FTP server function are stored The image files in this drive can be used only when switching the image of a parts display automatically. ➟8.8.2 ■5 Switching the image on a parts display object automatically
Drive X	Current drive	A drive that is running a project. When you open a project from drive C, drive A becomes the current drive.

For the specifications of the USB interface of the GOT or data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

(2) Installing the data storage and assigning the drive to GT25 and GS25

The usable drives and the drive assignment depend on the GOT model.
When multiple data storages are connected to a USB interface through a USB hub or card reader, drives are assigned to the storages in the order they are recognized.

GOT	Drive assignment			Maximum number of connectable data storages
	First data storage to the front USB interface (host)	First data storage to the rear USB interface (host)	The second or later data storage to each USB interface (host)	
GT2512-STBA GT2512-STBD GT2510-VTBA GT2510-VTBD GT2508-VTBA GT2508-VTBD	Drive E	Drive B	Drive F Drive G	4 (Up to three data storages to each USB interface)
GT2512-WXTBD GT2512-WXTSD GT2510-WXTBD GT2510-WXTSD GT2507-WTBD GT2507-WTSD	-	Drive B	Drive E Drive F Drive G	4
GT2512F-STNA GT2512F-STND GT2510-VTWA GT2510-VTWD GT2510F-VTNA GT2510F-VTND GT2508-VTWA GT2508-VTWD GT2508F-VTNA GT2508F-VTND GT2507T-WTSD	-	Drive B	Drive F Drive G	3
GT2505-VTBD GT2506HS-VTBD GT2505HS-VTBD	-	Drive E	Drive F Drive G	3
GS2512-WXTBD	-	Drive B	Drive E Drive F Drive G	4

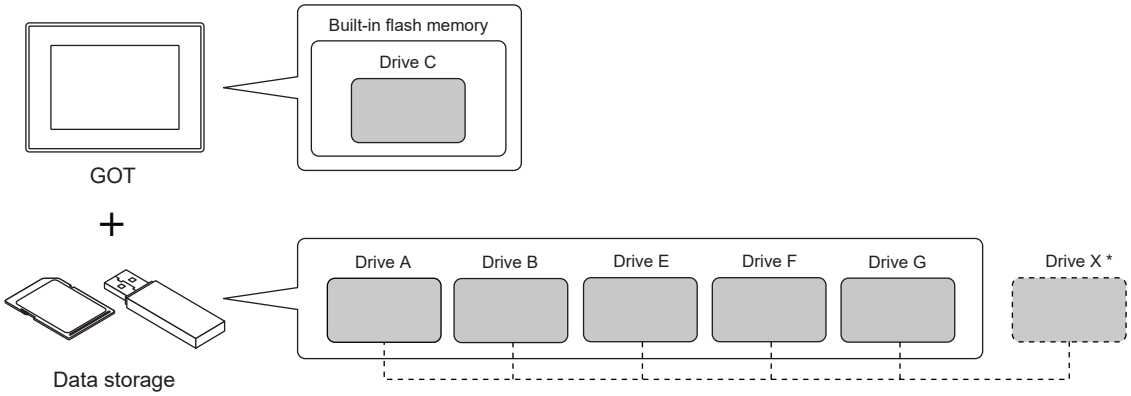
Connect the data storages in the order in which the drives are assigned to the storages as intended.

■3 GT23

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Drive configuration

The following shows the drive configuration of the GOT.



* When you open a project from drive C, drive X becomes drive A.

Drive	Name	Description, Condition of use
Drive A	Standard SD card	An area where projects, system applications (extended functions), and resource data are stored. Insert an SD card to the SD card interface of the GOT to use the drive.
Drive B	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. ➟(2) Installing the data storage and assigning the drive to GT23
Drive C	Built-in flash memory (user area)	An area where projects and system applications (extended functions) are stored. Always available.
Drive E	USB Drive	An area where projects, system applications (extended functions), and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. ➟(2) Installing the data storage and assigning the drive to GT23
Drive F		
Drive G		
Drive X	Current drive	A drive that is running a project. When you open a project from drive C, drive A becomes the current drive.

For the specifications of the USB interface of the GOT or data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

(2) Installing the data storage and assigning the drive to GT23

Up to four types of USB drives can be installed by using a USB hub or a card reader.

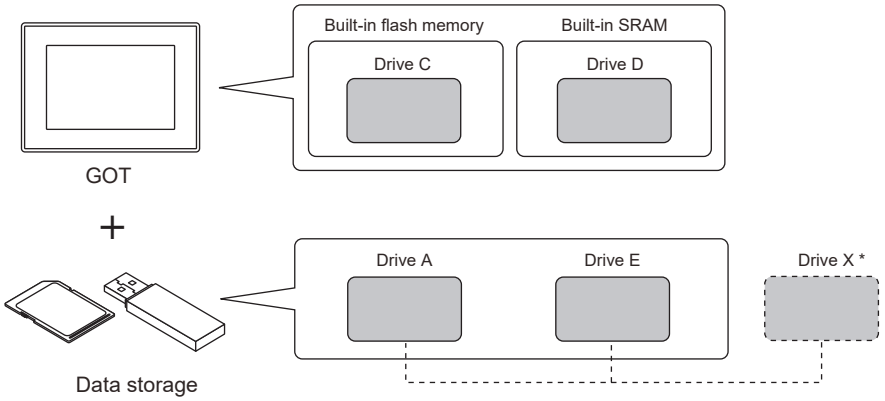
When multiple data storages are connected to a USB interface, drive B, E, F, and G are assigned to the storages in the order they are recognized.

■4 GT21 and GS21

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Drive configuration

The following shows the drive configuration of the GOT.



* When you open a project from drive C, drive X becomes drive A.

Drive	Name	Description, Condition of use
Drive A	Standard SD card	An area where projects, system applications, and resource data are stored. Insert an SD card to the SD card interface of the GOT to use the drive. To use an SD card on GT2103-P, mount the SD card unit (GT21-03SDCD) on the GOT.
Drive C	Built-in flash memory (user area)	An area where projects are stored. Always available.
Drive D	Built-in SRAM	An area where the resource data is stored. Always available. Not available to GT2103-P and GS21.
Drive E	USB Drive	An area where projects, system applications, and resource data are stored. Install a data storage to the USB interface (host) of the GOT to use the drive. The following models do not have drive E. • GT2105-Q • GT2104-R • GT2104-P • GT2103-P • GS21
Drive X	Current drive	A drive that is running a project. When you open a project from drive C, drive A becomes the current drive.

For the specifications of the USB interface of the GOT or data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

(2) Installing the data storage to GT21

To use drive A of GT2103-P, insert an SD card into the SD card unit.

2. CREATING A PROJECT

2.1 Startup and Exit of GT Designer3 . . . . . 2 - 2
2.2 Screen Layout of GT Designer3 . . . . . 2 - 5
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2.1 Startup and Exit of GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡2.1.1 Starting GT Designer3
2.1.2 Exiting GT Designer3
2.1.3 Switching the display language of GT Designer3

2.1.1 Starting GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for starting GT Designer3.

Step 1 From the Windows start menu, select [MELSOFT] → [GT Works3] → [GT Designer3] to start GT Designer3. *1*2

*1 How to open the start menu differs depending on the Windows version.
Check how to operate Windows.
*2 For GT Works3 version 1.136S or earlier, [MELSOFT Application] appears instead of [MELSOFT].

Step 2 Select an operation in the [Select Project] dialog.

Point

(1) **Drawing software to be started**

GT Designer3 consists of the following drawing software.

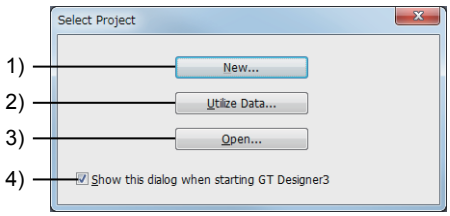
- GT Designer3(GOT2000): Drawing software for GOT2000 series
- GT Designer3(GOT1000): Drawing software for GOT1000 series

GT Designer3 startup will activate the drawing software used at the previous time.
For the project which cannot be edited or the operation in the drawing software in operation, the supported drawing software is started.

(2) **Operating on iQ Works**

Part of the function of iQ Works cannot be used with GT Designer3 when GT Designer3 is not started from MELSOFT Navigator.
Start GT Designer3 from MELSOFT Navigator.

■1 [Select Project] dialog



1) **[New] button**
Creates a new project.

➡2.3.1 Creating a project

2) **[Utilize Data] button**
Utilizes a sample project or existing project to create a new project.

➡11.1 Searching for Utilizable Data (Utilize Data)

3) **[Open] button**
Opens a saved project.

➡2.3.2 Opening a project

4) **[Show this dialog when starting GT Designer3]**
Displays the [Select Project] dialog at startup of GT Designer3.
Whether to display or hide the [Select Project] dialog at startup of GT Designer3 can be also selected in the [Operation] tab of the [Option] dialog.

➡11.10.3 Customizing the operation

2.1.2 Exiting GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Exit GT Designer3 by performing either of the following operations.

- Select [Project] → [Exit] from the menu.
- Click the [×] button on the title bar of GT Designer3.

2.1.3 Switching the display language of GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

By switching the display language of GT Designer3, you can use GT Designer3 in multiple languages on one personal computer.

The following shows how to switch the display language.

Step 1 Select [View] → [Switch Display Language] from the menu to display the [Switch Display Language] dialog.

➟■1 [Switch Display Language] dialog

Step 2 Select a language to be switched to in [Display Language], and click the [OK] button.

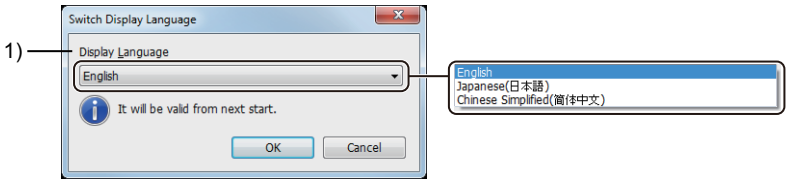
Step 3 Exit GT Designer3.

Step 4 Start GT Designer3 again to switch the display language.

The display language of the Help and sample projects is also switched accordingly.

If you need the latest Help and sample projects, contact your local sales office.

■1 [Switch Display Language] dialog



1) **[Switch Display Language]**
Select a language to be switched to.

■2 Precautions

(1) Languages supported on the personal computer

When the personal computer does not support a language to be switched to, screen layouts collapse and characters become garbled on GT Designer3.

Install a language pack or others on the personal computer as needed.

(2) Restrictions on the display language switching

(a) **Items to which the display language switching is not applied**

The display language switching is not applied to the following items.

Item	Display specifications
Some right-click context menu items	The display language depends on the OS language.
Setting items and buttons in some dialogs	The display language depends on the OS language.
Manuals	The display language depends on the language version of the manual installed.

(b) **Display language for importing files**

After exporting a file using the following functions, you cannot import the file to GT Designer3 whose display language is different.

- Wireless LAN setting
- Label group
- Comment group
- User alarm observation
- Logging
- Recipe

• Device data transfer

(c) **File format of exported files**

When display languages differ between GT Designer3 and the OS, export files in the Unicode text format.
CSV files may not be exported properly.

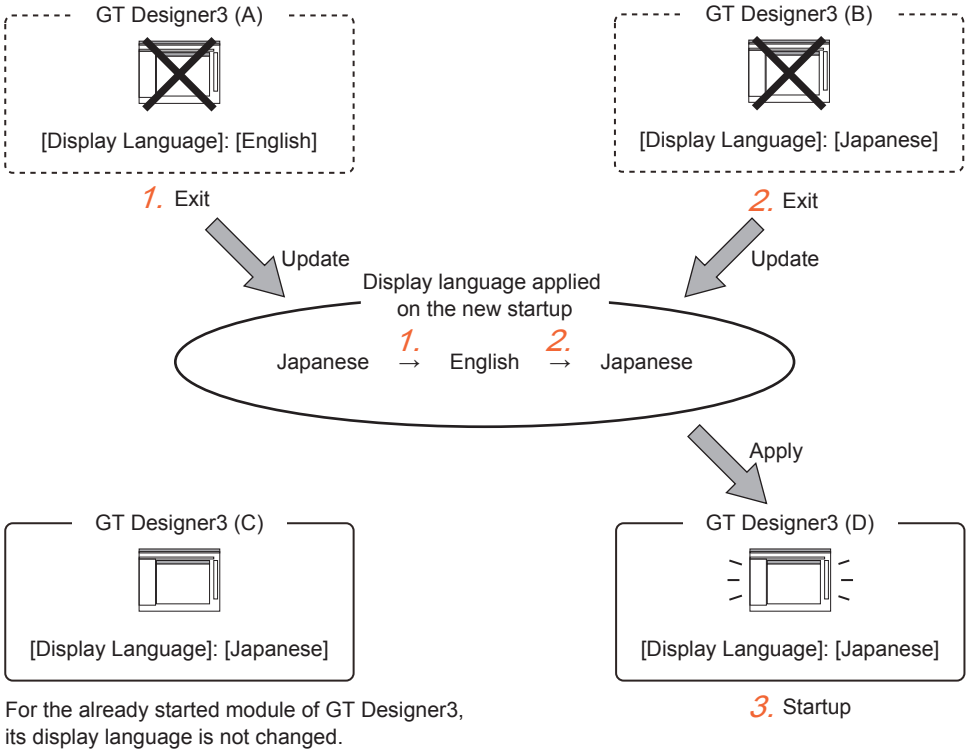
(d) **Data browser**

When starting multiple modules of GT Designer3, you cannot copy data between the modules whose display languages are different.

(3) Operation when multiple modules of GT Designer3 are started

The display language is shared among all modules of GT Designer3.
When the display language setting is changed, the setting change is reflected by exiting GT Desinger3 where the setting change is made.
The display language of the last exited GT Designer3 is applied when you newly start a GT Designer3 module.

Example) When exiting GT Designer3 (A) ([Display Language]: [English]), and then exiting GT Designer3 (B) ([Display Language]: [Japanese])
Japanese is applied as the display language when GT Designer3 (D) is newly started.

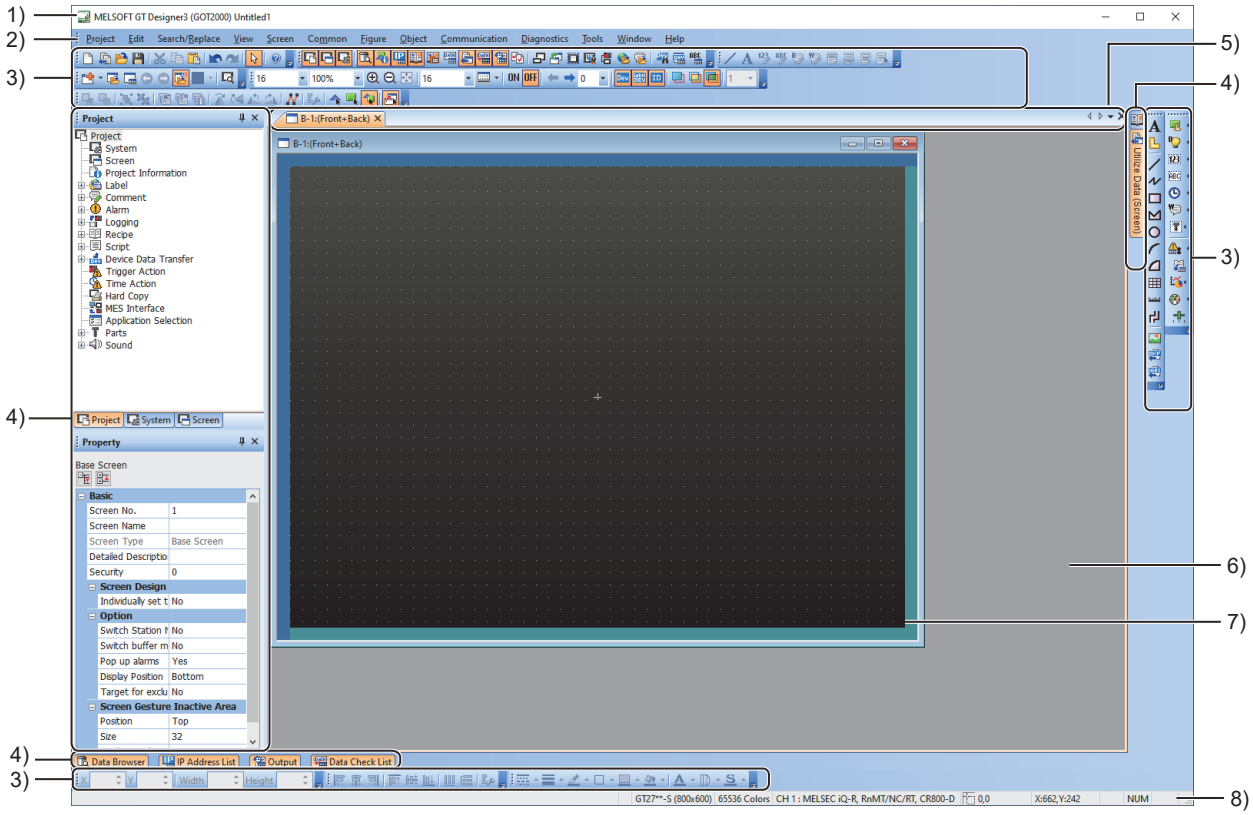


For the already started module of GT Designer3, its display language is not changed.

2.2 Screen Layout of GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the screen layout of GT Designer3.



1) **Title bar**
Displays the software name.
The title bar displays a project name (workspace format) and a file name with a full path (single file format) according to the format in which the project is being edited.

2) **Menu bar**
GT Designer3 can be operated from pull-down menus.
➟2.2.1 Menus

3) **Toolbar**
GT Designer3 can be operated by buttons.
➟2.2.2 Toolbar and shortcut keys

4) **Docking window**
A window that can be docked with the screen of GT Designer3.
The docking location can be customized.
➟11.10.2 Customizing the docking window
The following shows the types of windows that can be docked.

Item	Description
[Utilize Data (Screen)] window	Searches a screen of another project which can be utilized. ➟11.1 Searching for Utilizable Data (Utilize Data)
[Project] window	Displays the list of the settings of the whole project. ➟2.2.4 ■1 [Project] window
[System] window	Displays the list of settings such as the GOT type settings, environmental settings, and controller settings. ➟2.2.4 ■2 [System] window

Item	Description
[Screen] window	Lists created base screens, window screens, report screens, and mobile screens. You can create or edit a base screen, window screen, report screen, or mobile screen. ➟2.2.4 ■3 [Screen] window
[Property] window	Displays the list of settings of a selected screen, figure, or object. You can edit the settings without opening the setting dialog of a figure, object and others. ➟11.9 Checking and Editing Settings of Screens and Objects (Property Sheet)
[Library] window	Displays the list of figures and objects registered in the library. You can utilize or edit the figures and objects and create a new figure or object in the library. ➟8.1 Using Objects in the Library
[Device Search] window	Search the project for matching devices, labels, or tags. ➟11.8.1 Searching for a device (Device search)
[Data Browser] window	Displays the list of the settings in the project. You can search or edit the settings of a figure, object and others. ➟11.8.5 Searching for and editing a specific setting (Data Browser)
[Data Check List] window	Displays the list of data check results. ➟2.11.1 [Data Check List] window
[Output] window	Displays the list of the change history when the project is converted because of change of the GOT type or other reasons. ➟5.1.6 [Output] window
[Controller Type List] window	Displays the connection status of each channel. ➟5.5.1 ■6 [Controller Type List] window
[Data View] window	Displays the list of the figures and objects on the screen editor. You can select a figure or object on the [Data View] window. ➟6.5.2 ■3 [Data View] window
[Screen Image List] window	Displays the icons of base screens, window screens, and mobile screens. You can create or edit a base screen, window screen, or mobile screen. ➟2.8.1 [Screen Image List] window
[Category List] window	Displays the list of categories and figures and objects classified in each category. You can edit a category and execute batch change to the settings of devices by the category. ➟11.7.4 [Category List] window
[Parts Image List] window	Displays the list of the images of registered parts. You can create a new part or edit the existing parts. ➟5.9.5 [Parts Image List] window
[IP Address List] window	Displays the list of the IP addresses registered in the project. ➟11.8.6 Checking the IP addresses in the list (IP address list)

5) **Editor tab**

Displays the tabs of the windows and screen editors which are displayed on the work window.

➟2.2.3 Editor tab, work window

6) **Work window**

Displays screen editors, the [Environmental Setting] window, the [GOT Setup] window, and other windows.

➟2.2.3 Editor tab, work window

7) **Screen editor**

Creates a screen to be displayed on the GOT by arranging figures and objects on the screen editor.

➟2.5 Creating, Opening, and Closing a Screen

8) **Status bar**

Displays the following contents according to the position of the mouse cursor, a selected figure, or object.

- Description of the item over which the mouse cursor is moved.
- The GOT type, color settings, and controller settings of the project being edited.
- Coordinates of a selected figure or object

2.2.1 Menus

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Project]
■2 [Edit]
■3 [Search/Replace]
■4 [View]
■5 [Screen]
■6 [Common]
■7 [Figure]
■8 [Object]
■9 [Communication]
■10 [Diagnostics]
■11 [Tools]
■12 [Window]
■13 [Help]

■1 [Project]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[New]	Creates a new project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Utilize Data]	Searches projects that can be utilized.	
[Open]	Opens a saved project.	
[Close]	Closes the project being edited.	
[Save]	Overwrites the project being edited.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Save As]	Names and saves the project being edited.	
[Delete]	Deletes workspace format projects.	
[Verify]	Compares the project being edited with a saved project.	
[Project information]	Sets a project title and a creator's name.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Menu			Description	Supported models
[Utilize Project]			Utilizes data of saved projects.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Import Other Data]	[Device Comment/Device Definition]		Reads device comments.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Global Label]		Reads global labels.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Tag]	[OMRON NJ/NX Tag]	Not available to GT2105-Q. Reads tag files created with OMRON programming software.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[RSLogix 5000Tag]	Not available to GT2105-Q. Reads tag files created with ALLEN-BRADLEY programming software.	
		[AB Native Tag]	Reads tag files created with ALLEN-BRADLEY programming software.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[OPC UA Tag]	Reads tag information files exported from GT OPC UA Client.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Profile (CSP+)]	[Label (GT Designer3) Auto Registration]	Registers the labels (GT Designer3) created from profile data automatically.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Save As Single File Format Project]			Saves the project in the single file format (*.GTX). To be displayed only when GT Designer3 is started from MELSOFT Navigator.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Save Package Data]			Saves the project in the single file format (*.GTXS).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Security]	[Security Key Setting]		Assign a security key to the project or the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Security Key Management]		Manage security keys.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[User Management]		Manage the user information registered with the project.	
	[Setup Access Authority]		Set the access authority of each access level.	
	[Change Password]		Change the password of the logged-in user.	
[Page Settings]			Adjusts the page layout for printing.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Print Preview]			Displays a print preview.	
[Print]			Prints out the contents of the settings of the project or outputs them into a file.	
[Recent Projects]			Lists up to five recently-used projects.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Menu	Description	Supported models
[Start GT Designer3 (GOT1000)]	Starts GT Designer3 (GOT1000).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Exit]	Exits GT Designer3.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■2 [Edit]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[Undo]		Cancels the immediately preceding operation.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Redo]		Redoes the operation canceled by [Undo].	
[Cut]		Cuts a selected target.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Copy]		Copies a selected target.	
[Paste]		Pastes a copied or cut target to a selected area.	
[Duplicate]		Pastes a copy of a figure or object selected on the screen editor.	
[Consecutive Copy]		Pastes multiple copies of a figure or object selected on the screen editor.	
[Select All]		Selects all figures and objects arranged on the screen editor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Delete]		Deletes a selected target.	
[Object of Selection]	[Figure]	Changes the target for selecting on the screen editor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Object]		
	[Figure + Object]		
	[Report Line]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Overlay Screen]	Switches between setting and canceling set overlay screens as the targets for selecting.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Group]		Groups selected figures and objects.	
[Ungroup]		Cancels the grouping of a selected group.	

Menu		Description	Supported models
[Stacking Order]	[Move to the Front of Front Layer]	Changes the order of the layers of selected figures and objects.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Move to the Back of Back Layer]		
	[Move to the Front of Layer]		
	[Move to the Back of Layer]		
	[Move to the Foreground]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Move to the Background]		
	[Move to the Front]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Move to the Back]		
[Align]	[Left]	Aligns the positions of selected figures and objects.	
	[Center (Horizontal)]		
	[Right]		
	[Top]		
	[Center (Vertical)]		
	[Bottom]		
	[Align Sideways]		
	[Align Lengthways]		
	[Custom]		
[Rotate/Flip]	[Flip Vertical]	Rotates or flips a selected figure.	
	[Flip Horizontal]		
	[Rotate Left]		
	[Rotate Right]		
[Edit Vertex]		Switches between changing and fixing the positions of the vertexes of a figure.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Edit Objects with Fixed Frame Width]	[Always Fix the Width]	Fixes or does not fix the frame width of the object shape when the object is resized.	
	[Collective Edit]	Changes the shape frame widths of all objects that satisfy the frame width fixing conditions. After the change, the frame widths become fixed.	
[Edit Touch Area]	[Edit Manually]	Switches between separately setting and simultaneously setting the touch area and the displayed area of a touch switch.	
	[Adjust Automatically]	Matches the touch area of a selected touch switch with the displayed area.	
	[Always Adjust Automatically]	Switches between automatically matching and leaving unmatched the touch area of a touch switch with the displayed area.	
[Adjust Direct Text Size]		Switches between changing and fixing text size by scaling the object size.	
[Template Registration]	[Register to Template]	Registers a selected figure or object as a template.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Deregister from Template]	Deletes a selected figure or object from the template list.	
[Edit Template Attribute]		Edits the template attribute of a selected template.	
[Set as Default]		Changes the settings of a selected figure or an object to the default values.	
[Add to Category]	[Switch]	Changes the category of a selected figure or an object.	
	[Lamp]		
	[Other]		
	[User Definition Category]		

Menu	Description	Supported models
[Shape Change]	Changes the shape of a selected object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Display Template Property]	Displays the settings of a selected template.	
[Open Setting Dialog]	Displays the setting dialog of a selected figure or an object.	

■3 [Search/Replace]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[Device Search]		Search the project for matching devices, labels, or tags.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Device List]	[Screen]	Displays the list of the devices used in the project.	
	[Project]		
	[Script Text]		
[Text List]		Displays the list of the texts used in the project.	
[Batch Edit]	[Device]	Changes the device settings in the project collectively.	
	[Unit No./Axis No.]	Changes the unit numbers and axis numbers in the project collectively.	
	[Network]	Changes the network settings in the project collectively.	
	[CH No.]	Changes the channel number settings in the project collectively.	
	[Color]	Changes the color settings in the project collectively.	
	[Figure]	Changes the shape settings in the project collectively.	
[Data Browser]		Displays the [Data Browser] window.	
[IP Address List]		Displays the [IP Address List] window.	

■4 [View]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[Preview]		Displays the preview of the project being edited.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Window Preview]	[Apply to All Base Screens]	Switches between applying settings in the [Window Preview] dialog to all base screens and configuring the settings for each base screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Apply to all mobile screens]	Switches between applying settings in the [Window Preview] dialog to all mobile screens and configuring the settings for each mobile screen.	GT27 GT25 GT21 GS25 SoftGOT2000
	[Overlap Window1]	Displays the preview of overlap window 1.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Overlap Window2]	Displays the preview of overlap window 2.	
	[Overlap Window3]	Displays the preview of overlap window 3.	GT27 GT25 GT21 GS25 SoftGOT2000
	[Overlap Window4]	Displays the preview of overlap window 4.	
	[Overlap Window5]	Displays the preview of overlap window 5.	
	[Superimpose 1]	Displays the preview of superimpose window 1.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Superimpose 2]	Displays the preview of superimpose window 2.	
	[Key Window]	Displays the preview of the key window.	
	[Dialog Window]	Displays the preview of the dialog window.	
	[PC Remote Operation]	Displays the preview of the remote screen of the remote personal computer operation function (Ethernet).	GT27 GT25 GT21 GS25 SoftGOT2000
	[Setting]	Sets a window screen to be displayed.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[ON/OFF Display Switching]		Switches the display status of objects on screen editors between ON and OFF.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[State No.]	[Previous State]	Switches the states of objects to be displayed on screen editors in descending order.	
	[Next State]	Switches the states of objects to be displayed on screen editors in ascending order.	
[Refresh]		Redisplays a selected screen editor.	

Menu		Description	Supported models
[Toolbar]	[Standard]	Switches between displaying and hiding the [Standard] toolbar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Window Display]	Switches between displaying and hiding the [Window Display] toolbar.	
	[Display]	Switches between displaying and hiding the [Display] toolbar.	
	[Screen]	Switches between displaying and hiding the [Screen] toolbar.	
	[Edit]	Switches between displaying and hiding the [Edit] toolbar.	
	[Figure]	Switches between displaying and hiding the [Figure] toolbar.	
	[Object]	Switches between displaying and hiding the [Object] toolbar.	
	[Align]	Switches between displaying and hiding the [Align] toolbar.	
	[Draw Figure]	Switches between displaying and hiding the [Draw Figure] toolbar.	
	[Communication]	Switches between displaying and hiding the [Communication] toolbar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Diagnostics]	Displays or hides the [Diagnostics] toolbar.	
	[Simulator]	Switches between displaying and hiding the [Simulator] toolbar.	
	[GOT Offline Monitor]	Switches between displaying and hiding the [GOT Offline Monitor] toolbar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Report]	Switches between displaying and hiding the [Report] toolbar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Coordinate/Size]	Switches between displaying and hiding the [Coordinate/Size] toolbar.	
	[My Favorites]	Switches between displaying and hiding the [My Favorites] toolbar.	
	[Customize]	Customizes the toolbar. ➟11.10.1 Customizing the toolbar	

Menu		Description	Supported models
[Docking Window]	[Project Tree]	Switches between displaying and hiding the [Project] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Screen Tree]	Switches between displaying and hiding the [Screen] window.	
	[System Tree]	Switches between displaying and hiding the [System] window.	
	[Device Search]	Displays or hides the [Device Search] window.	
	[Data Browser]	Displays the [Data Browser] window.	
	[Propertysheet]	Switches between displaying and hiding the [Property] window.	
	[IP Address List]	Switches between displaying and hiding the [IP Address List] window.	
	[Library List]	Displays the [Library] window.	
	[Library List (Template)]	Displays the [Library] window with displaying the template screen in tree view.	
	[Controller Type List]	Switches between displaying and hiding the [Controller Type List] window.	
	[Data View]	Switches between displaying and hiding the [Data View] window.	
	[Screen Image List]	Switches between displaying and hiding the [Screen Image List] window.	
	[Category List]	Switches between displaying and hiding the [Category List] window.	
	[Parts Image List]	Switches between displaying and hiding the [Parts Image List] window.	
	[Utilize (Screen)]	Displays the [Utilize (Screen)] window.	
	[Data Check List]	Displays the [Data Check List] window.	
	[Output]	Displays the [Output] window.	
	[Verify Result]	Displays the [Verify Result] window.	
[Editor Tab]		Switches between displaying and hiding the editor tab.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Status bar]		Switches between displaying and hiding the status bar.	
[Display Items]	[Device]	Switches between displaying and hiding devices on screen editors.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Device of Label]	Displays or hides the devices that are assigned to system labels and labels (GT Designer3) on screen editors.	
	[Object ID]	Switches between displaying and hiding object IDs on screen editors.	
	[Paint]	Switches between displaying and hiding paints on screen editors.	
	[Object]	Switches between displaying and hiding objects on screen editors.	
	[Object Frame]	Switches between displaying and hiding object frames on screen editors.	
	[Template Information]	Switches between displaying and hiding template information on screen editors.	
	[Touch Area]	Switches between displaying and hiding the touch areas of touch switches on screen editors.	
	[Frame]	Switches between displaying and hiding the frames of screen editors.	
	[Option]	Displays the [Display] tab in the [Option] dialog to set information to be displayed on screen editors.	
[Grid]	[Front]	Displays the grids of screen editors.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Back]		
	[None]		

Menu		Description	Supported models
[Two-point Press Inactive Area]	[Front]	Displays the two-point press inactive area on the screen editor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Back]		
	[None]		
[Scroll Bar Area]	[Front]	Displays the scroll bar areas on the screen editor for editing the expanded base screens.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Back]		
	[None]		
[Display with Layer]	[All screens]	Sets layers to be displayed.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Front]		
	[Back]		
	[Front and Back]		
[Guidelines (auxiliary line)]	[Display]	Sets guidelines to be displayed for placing a figure or object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Figure]		
	[Object]		
	[Figure and Object]		
	[Same Type]		
	[Custom]		
[Zoom]	[All Screens]	Switches between applying a magnification setting to all screen editors and configuring the setting for each screen editor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[400%]	Changes the magnification of screen editors.	
	[300%]		
	[200%]		
	[150%]		
	[100%]		
	[75%]		
	[50%]		
	[25%]		
	[Custom]		
	[Whole Screen]		
[Switch Display Language]		Switches the display language of GT Designer3.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■5 [Screen]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[New]	[Base Screen]	Create a base screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Window Screen]	Create a window screen.	
	[Report Screen]	Create a report screen.	
	[Mobile Screen]	Create a mobile screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Dialog Window Wizard]	Create a window screen for a dialog window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Utilize Data]		Search other projects for screens that can be utilized.	
[Open]		Open a selected window.	
[Close]		Closes a window being edited.	
[Close All]		Closes all windows.	
[Copy]		Copy a selected window.	
[Delete]		Delete a selected window.	
[Screen Design]		Displays the [Screen Design] dialog.	
[Screen Image List]		Displays the [Screen Image List] window.	
[Previous Screen]		Opens a screen whose screen number is one smaller than that of the screen being edited.	
[Next Screen]		Opens a screen whose screen number is one greater than that of the screen being edited.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Open Closed Screens]		Sets or cancels a closed screen as the target for the operation of [Previous Screen] or [Next Screen].	
[Screen Script]		Set screen scripts.	
[Screen Trigger Action]		Set screen trigger actions.	
[Resize Screen]		Resizes the following screens. • Base screen (when the base screen size expansion is enabled) • Window screen • Mobile screen	
[Copy Screen Image to the Clipboard]		Captures a screen editor being edited.	
[Report Setting]		Configure the settings for the report function.	
[Header/Footer/Repeat]		Set the header, footer, and repeat row.	
[Screen Property]		Configure the settings for the screen being edited.	

■6 [Common]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu			Description	Supported models
[GOT Type Setting]			Change the GOT model setting of the project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Environmental Setting]	[Screen Switching/Window]		Configure the settings of screen switching.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Language Switching]		Configure the settings of language switching.	
	[Dialog Window]		Configure the settings of the system message dialog window.	
	[Key Window]		Configure the settings of key windows in the project.	
	[System Information]		Set devices that handle the system information.	
	[Security]		Set a password for operating the GOT and reading the data from the GOT.	
	[Operation Log]		Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Configure the settings for collecting operation history events of the GOT.	
	[Internal Device Retention]		Not available to GT2103-P. Configure the settings for retaining GOT internal device values.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Kana-Kanji/Pinyin Conversion]		Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Configure the settings of kana-kanji conversion or Pinyin conversion on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Startup Logo]		Set the initial screen displayed at the GOT startup.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Setup]	[Basic Setting]	[Display Setting/Language Setting]	Configure the display settings of the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[GOT ID No.]	Set unique information to the GOT.	
		[Operation Setting/Utility Call Key]	Set a buzzer sound and the utility call key for the GOT.	
		[USB Host]	Not available to GT25HS-V. Only available to GT2107-W of GT21 models. Configure the settings for using a mouse and keyboard on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Time Setting]	Set the GOT time setting method.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Transparent Mode Setting]	Set the target channel for the FA transparent function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[GOT Internal Device Monitor]	Set whether to use the GOT internal device monitor of the GOT diagnostics function.	

Menu			Description	Supported models
[GOT Setup]	[Advanced Setting]	[SoftGOT-GOT Link]	Configure the settings for the SoftGOT-GOT link function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[VNC Server]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Configure the settings for the VNC server function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Sequence Program Monitor]	Configure the settings for the sequence program monitor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Backup/Restoration]	Configure the settings for the backup/restoration function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Wireless LAN Setting]	Not available to GT2505-V and GT25HS-V. Configure the wireless LAN settings.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[System Launcher]	Configure the system launcher settings.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[iQSS Utility]	Configure the iQSS utility settings.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[Network Drive]	Configure the network drive settings.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Ethernet Setting]	[GOT IP Address Setting]		Not available to GT2105-Q. Set the IP address of the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[GOT Ethernet Common Setting]		Not available to GT2105-Q. Configure the GOT Ethernet setting.	
	[IP filter Setting]		Not available to GT2105-Q. Configure the IP filter setting.	
[Controller Setting]			Configure the settings for communicating with controllers.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Menu		Description	Supported models
[Peripheral Setting]	[PC (Data Transfer)]	Set the interface for connecting GT Designer3 (personal computer) with the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Bar Code]	Not available to GT25HS-V. Configure the settings for using a barcode reader on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[RFID]	Not available to GT25HS-V. Configure the settings for using a RFID controller on the GOT.	
	[PC Remote Operation]	Configure the settings for operating the personal computer from the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[VNC Server]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Configure the settings for viewing the GOT display contents from the personal computer.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Video/RGB Input]	Not available to GT2705-V. Configure the settings for displaying the video data taken with a video camera on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Multimedia]	Not available to GT2705-V. Configure the settings for recording or playing the video data taken with a video camera on the GOT.	
	[External I/O / Operation Panel]	Not available to GT25-W, GT2505-V, and GT25HS-V. Configure the settings for using an external I/O device and operation panel with the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[HDMI/RGB Output]	Not available to GT2705-V. Configure the settings for outputting the GOT screen data to an external display.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Printer]	Configure the settings for using a printer on the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Sound Output]	Not available to GT2505-V and GT25HS-V. Configure the setting for outputting sounds from the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[GOT (Extended Computer)]	Set the interface for the connection to the GOT (Extended Computer).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Network Interaction]		Configure the settings for controlling pieces of equipment on the same network to prevent simultaneous operations.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Mobile Setting]		Configure the settings for using the GOT as the server in the GOT Mobile function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Menu		Description	Supported models
[I/F Communication Setting]		Lists the interface settings of the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Label]	[Open]	Lists label groups.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[New Label Group]	Create a label group.	
	[Label Group Property]	Change the number and title of a label group.	
[Comment]	[Open]	Lists comment groups.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[New Comment Group]	Create a comment group.	
	[Comment Group Property]	Change the number and title of a comment group.	
	[New Row]	Create a row at the bottom of the comment group being edited.	
	[Insert Row]	Insert a new row into a comment group being edited.	
	[Insert Column]	Insert a new column into a comment group being edited.	
	[Import]	Imports a comment group from a file.	
	[Export]	Outputs a comment group to a file.	
	[Search]	Searches a comment in a comment group.	
	[Jump]	Displays the row of a specified comment No.	
	[Attribute Setting]	Changes the attribute of a selected row.	
	[Attribute Display/Non-Display]	Switches between displaying and hiding the attribute of a comment group.	
[Alarm]	[Alarm Common Setting]	Sets devices which convert alarm files.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[User Alarm Observation]	Configures the settings for collecting alarms by monitoring target devices.	
	[System Alarm Observation]	Configures the settings for collecting alarms by monitoring the system.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Alarm Popup Display]	Configures the setting for displaying collected alarms in a popup window when the alarms are collected.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Logging]		Configures the settings for collecting device values.	
[Recipe]	[Recipe Common Setting]	Sets devices for control used by the recipe function.	
	[Recipe]	Configures the settings for executing batch write or batch read on multiple devices.	
[Script]	[Script]	Sets scripts.	
	[Script List]	Displays the list of scripts.	
	[Script Symbol]	Sets script symbols.	
	[Object Script Symbol]	Sets object script symbols.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Device Data Transfer]		Configures the settings for transferring data between devices.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Trigger Action]		Sets actions with the devices or sampling cycle that trigger the actions.	
[Time Action]		Sets actions with time that triggers the actions.	
[Hard Copy]		Captures the operating screen of the GOT.	

Menu		Description	Supported models
[MES Interface]		Configures the settings for sending SQL statements from the GOT to the personal computer database.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Application in Use Setup]		Sets a system application to be written to the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Parts]	[Parts Image List]	Displays the list of part images.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Parts Setting]	Configures the part settings.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[New]	Creates a new part.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Sound]	[Sound Files]	Not available to GT2505-V and GT25HS-V. Lists the sound files to register or edit the files.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Touch Key Sound Setting]	Not available to GT2505-V and GT25HS-V. Configure the setting to use a specified sound file for the touch key sound.	

■7 [Figure]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[Text]	Draws a text.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Logo Text]	Draws a logo text.	
[Line]	Draws a line.	
[Line Freeform]	Draws a freeform line.	
[Rectangle]	Draws a rectangle.	
[Polygon]	Draws a polygon.	
[Circle]	Draws a circle.	
[Arc]	Draws an arc.	
[Sector]	Draws a sector.	
[Table]	Draws a table.	
[Scale]	Draws a scale.	
[Piping]	Draws a piping.	
[Paint]	Fills the framed area of the figure on the screen.	
[Import Image Data]	Imports an image file into the screen.	
[Import DXF Data]	Imports a DXF data into the screen.	
[Import IGES Data]	Imports an IGES data into the screen.	

■8 [Object]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[Select Library]	[Library List]	Displays the [Library] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[System Library]	Displays the [Library] window with data of [System Library] shown in the tree view.	
	[My Favorites]	Displays the [Library] window with data of [My Favorites] shown in the tree view.	
[Switch]	[Switch]	Place a touch switch with multiple functions.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Bit Switch]	Place a touch switch to switch ON/OFF of a bit device.	
	[Word Switch]	Place a touch switch to change the value of a word device.	
	[Go To Screen Switch]	Place a touch switch to switch a screen.	
	[Change Station No. Switch]	Place a touch switch to switch the station number of the GOT monitoring target.	
	[Special Function Switch]	Place a touch switch to display the utility or the screen for a monitor function.	
	[Key Window Display Switch]	Place a touch switch to display a key window.	
	[Key Code Switch]	Place a touch switch to enter a key code.	
[Lamp]	[Bit Lamp]	Place a lamp controlled by a bit device.	
	[Word Lamp]	Place a lamp controlled by a word device.	
	[Lamp Area]	Place a lamp area object controlled by a bit device.	
[Numerical Display/Input]	[Numerical Display]	Place an object to display a device value (numerical value).	
	[Numerical Input]	Place an object to input a device value (numerical value).	
[Text Display/Input]	[Text Display]	Place an object to display a device value (text).	
	[Text Input]	Place an object to input a device value (text).	
[Date/Time Display]	[Date Display]	Place an object to display the date.	
	[Time Display]	Place an object to display the time.	
[Comment Display]	[Bit Comment]	Place an object to display a comment. A bit device controls the displayed comment.	
	[Word Comment]	Place an object to display a comment. A word device controls the displayed comment.	
	[Simple Comment]	Place an object to display a comment. The displayed comment is fixed.	
[Parts Display]	[Bit Parts]	Place an object to display parts. A bit device controls the displayed parts.	
	[Word Parts]	Place an object to display parts. A word device controls the displayed parts.	
	[Fixed Parts]	Place an object to display parts. The displayed parts are fixed.	
[Parts Movement]	[Bit Parts]	Place an object to move parts. A bit device controls the displayed parts.	
	[Word Parts]	Place an object to move parts. A word device controls the displayed parts.	
	[Fixed Parts]	Place an object to move parts. The displayed parts are fixed.	
	[Parts Move Route]	Set a route to move parts.	
[Historical Data List Display]		Place an object to display the history of device values collected by the logging function.	

Menu		Description	Supported models
[Alarm Display]	[Alarm Display (User)]	Place an object to display the alarms collected by the user alarm observation.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Alarm Display (System)]	Place an object to display the alarms collected by the system alarm observation.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Simple Alarm Display]	Place an object to display the alarms collected by monitoring devices. Set the alarms to be monitored by object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[System Alarm Display]	Place an object to display the alarms collected by monitoring the system. Set the alarms to be monitored by object.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Recipe Display (Record List)]		Place an object to list the records of a recipe. This object must be used in combination with the recipe function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Graph]	[Line Graph]	Place an object to display device values in line graph.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Trend Graph]	Place an object to display device values in chronological order in graph.	
	[Bar Graph]	Place an object to display device values in bar graph.	
	[Statistics Bar Graph]	Place an object to display the ratio of each device value to the total device values in bar graph.	
	[Statistics Pie Graph]	Place an object to display the ratio of each device value to the total device values in pie graph.	
	[Scatter Graph]	Place an object to display two device values as a point in scatter graph by assigning the two devices to the X and Y coordinates respectively.	
	[Historical Trend Graph]	Place an object to display the device values collected by the logging function in chronological order in graph.	
[Graphical Meter]	[Sector Meter]	Place an object to display a device value on a sector meter.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Semicircle Meter]	Place an object to display a device value on a semicircle meter.	
	[Bar (Vertical) Meter]	Place an object to display a device value on a vertical bar meter.	
	[Bar (Horizontal) Meter]	Place an object to display a device value on a horizontal bar meter.	
[Meter]	[Level]	Place an object to display a device value by filling the specified area.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Panelmeter]	Place an object to display a device value on a meter.	
[Slider]		Place an object to specify a device value (numeric value) by sliding the knob along the bar.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Menu		Description	Supported models
[Document Display]		Place an object to display a document on a screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Video/RGB display]		Not available to GT2705-V. Place an object to display an RGB image. Displaying video images will be supported soon.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Script Parts]		Place an object to create a script.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Set Overlay Screen]		Place an object to overlay a called screen on a base screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Window Position]	[Overlap1]	Place an object to specify the display position of overlap window 1.	
	[Overlap2]	Place an object to specify the display position of overlap window 2.	
	[Overlap3]	Place an object to specify the display position of overlap window 3.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Overlap4]	Place an object to specify the display position of overlap window 4.	
	[Overlap5]	Place an object to specify the display position of overlap window 5.	
	[Superimpose1]	Place an object to specify the display position of superimpose window 1.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Superimpose2]	Place an object to specify the display position of superimpose window 2.	
	[Key Window]	Place an object to specify the display position of the key window.	
[Key Window Object]	[Input Value Area Setting]	Place an object to display the value being input.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Input Range Area Setting]	Place an object to display the range of values that can be input.	
	[Input Maximum Value Area Setting]	Place an object to display the maximum value that can be input.	
	[Input Minimum Value Area Setting]	Place an object to display the minimum value that can be input.	
	[Previous Value Area Setting]	Place an object to display the value that is input previously.	
	[Project Setting]	Configure the settings of key windows in the project.	
[Print]	[Numerical Print]	Place an object to print a device value (numerical value).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Text Print]	Place an object to print a device value (text).	
	[Bit Comment Print]	Place an object to print a comment. A bit device controls the comment to be printed.	
	[Word Comment Print]	Place an object to print a comment. A word device controls the comment to be printed.	
[Hyperlink]		Place an object to access a website or a file in the GOT public folder, or make a phone call.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[My Favorites]		Displays objects registered in [My Favorites] in the library.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■9 [Communication]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[Write to GOT]	Writes data from the personal computer (GT Designer3) to the GOT.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Read from GOT]	Reads data from the GOT to the personal computer (GT Designer3).	
[Verify GOT]	Compares the project being edited with the project in the GOT.	
[Communication Configuration]	Sets the method of the communication between the personal computer (GT Designer3) and the GOT.	
[Batch Write to multiple GOTs]	Not available to GT2105-Q. Writes data to multiple GOTs in one go with a personal computer (GT Designer3).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Write to Memory Card]	Writes data to data storage.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[CSP+ for iQSS Data Write]	Writes iQSS data (CSP+) to a data storage.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Communicate with GT01-RS4-M]	Transfers data between the personal computer (GT Designer3) and GT01-RS4-M.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■10 [Diagnostics]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[GOT Diagnostics]	Displays the GOT error information.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■11 [Tools]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu		Description	Supported models
[Data Check]	[Check]	Checks if no error exists in the project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Item Setting]	Sets the targets for the data check function.	
[System Label Update/ Check]	[Update/Check]	Updates system labels and checks them.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Setting]	Configures the settings of iQ Works interaction.	
[Label Check]		Updates labels (GT Designer3) and checks them.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Data Size]	[Screen]	Displays the data size of the screen and the project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Project]		
[Simulator]	[Activate]	Simulates the project you are editing.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Update]		
	[Setting]		
	[Exit]		
[GOT Offline Monitor]	[Activate]	Monitors the project running on the GOT by establishing connection with the GX Works3 offline monitor on a personal computer.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Set]		
	[Exit]		
[Resource Data Conversion]	[Operation Log File]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Converts the file format of the operation log file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Alarm File]	Converts the file format of the alarm file.	
	[Logging File]	Converts the file format of the logging file.	
	[Recipe File]	Converts the file format of the recipe file.	
[Default Setting]	[Edit]	Sets the preset values of figures and objects.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Export]		
	[Import]		
[Customize]		Customizes the toolbar. ➡11.10.1 Customizing the toolbar	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Option]		Customizes operations and displayed contents of GT Designer3.	

■12 [Window]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[Cascade]	Aligns screen editors and windows on the work window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Vertical]		
[Horizontal]		
[Align Icons]	Aligns minimized screens.	
[Close All Windows]	Closes all screens on the work window.	
List of windows being opened	Up to nine screens being opened on the work window are displayed in the pull-down menu.	
[Other Windows]	Select a screen to be operated on the [Window Selection] dialog.	

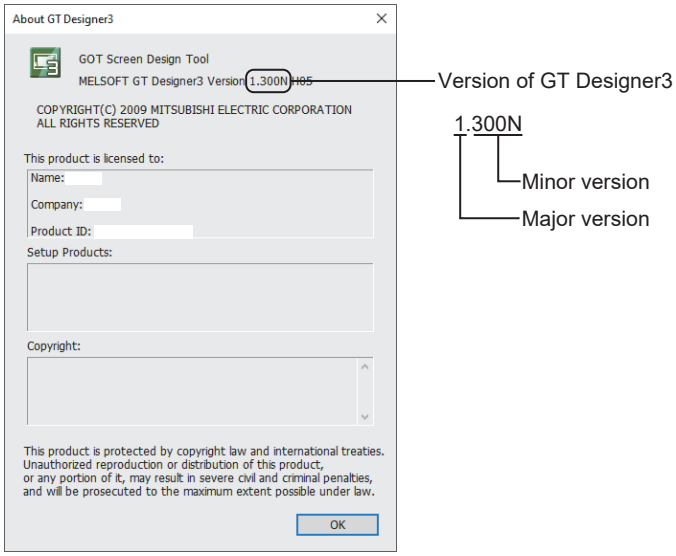
■13 [Help]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Menu	Description	Supported models
[GT Designer3 Help]	Displays Help.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Manual List]	Lists the manuals.	
[Connection to MITSUBISHI ELECTRIC FA Global Website]	Connects to the MITSUBISHI ELECTRIC FA Global Website.	
[About GT Designer3]	Displays the version of GT Designer3. ➟(1) [About GT Designer3] dialog	

(1) [About GT Designer3] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

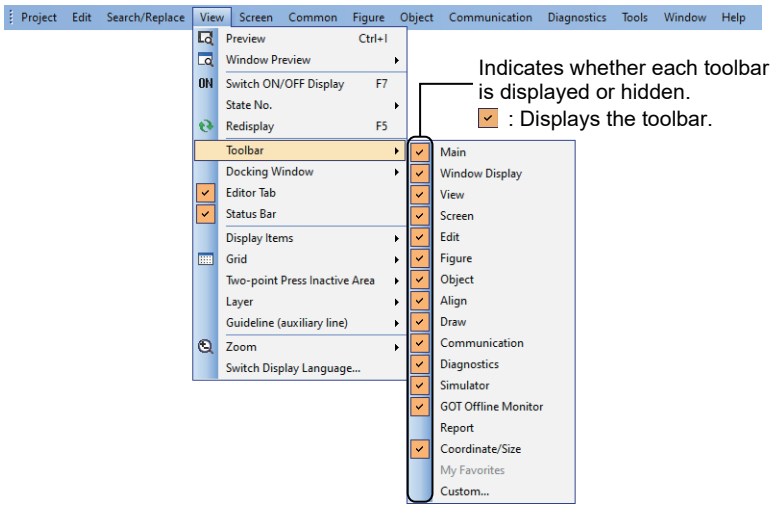


2.2.2 Toolbar and shortcut keys

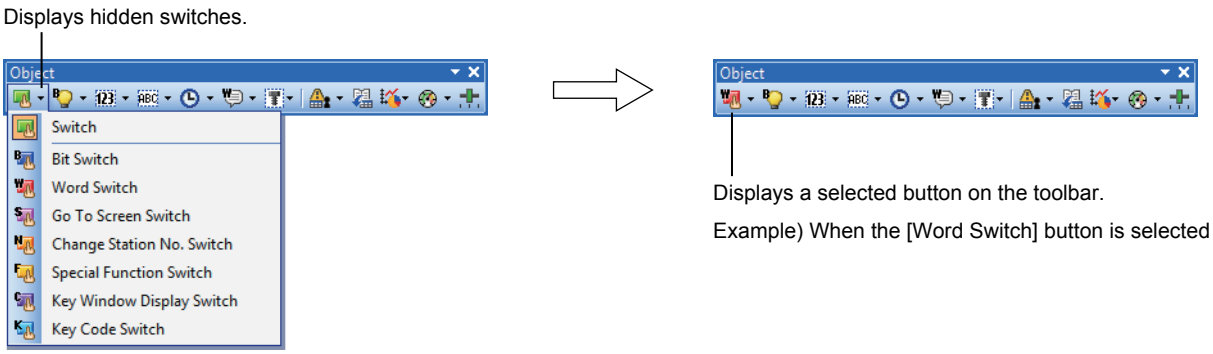
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Main]
■2 [Window Display]
■3 [View]
■4 [Screen]
■5 [Edit]
■6 [Figure]
■7 [Object]
■8 [Align]
■9 [Draw Figure]
■10 [Communication]
■11 [Diagnostics]
■12 [Simulator]
■13 [GOT Offline Monitor]
■14 [Report]
■15 [Coordinate/Size]
■16 [My Favorites]

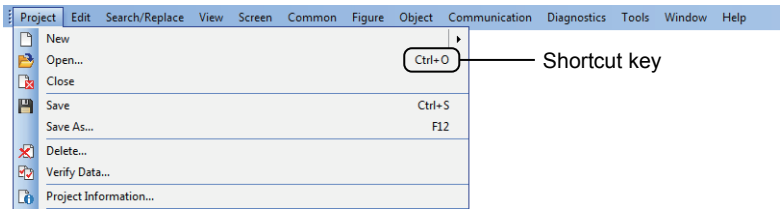
• You can switch between displaying and hiding the toolbar items of GT Designer3 with the [Display] menu.



• Some buttons may not be displayed on the toolbar.
Select the hidden buttons from the toolbar to display them on the pull-down menu.

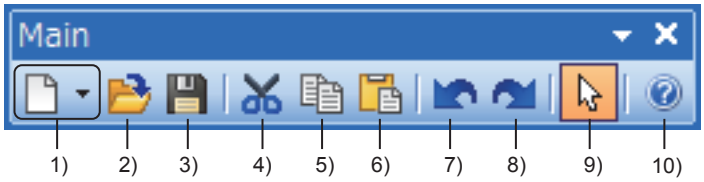


• You can check shortcut keys on each pull-down menu.



■1 [Main]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[New] button**
Creates a new project.
Shortcut key: [Ctrl] + [N]

Item	Description
[Utilize]	Searches projects that can be utilized.

2) **[Open] button**
Opens a saved project.
Shortcut key: [Ctrl] + [O]

3) **[Save] button**
Overwrites the project being edited.
Shortcut key: [Ctrl] + [S]

4) **[Cut] button**
Cuts a selected target.
Shortcut key: [Ctrl] + [X]

5) **[Copy] button**
Copies a selected target.
Shortcut key: [Ctrl] + [C]

6) **[Paste] button**
Pastes a copied or cut target to a selected area.
Shortcut key: [Ctrl] + [V]

7) **[Undo] button**
Cancels the last operation.
Shortcut key: [Ctrl] + [Z]

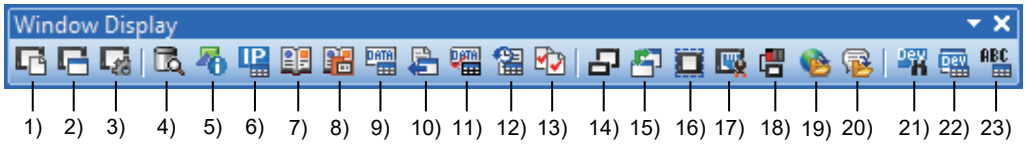
8) **[Redo] button**
Redoes the operation canceled by [Undo].
Shortcut key: [Ctrl] + [Y]

9) **[Figure or Object Selection] button**
Enables the mouse cursor to select a figure and object.

10) **[GT Designer3 Help] button**
Displays GT Designer3 Help.
Shortcut key: [F1]

■2 [Window Display]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Docking Window: Project Tree] button**
Displays or hides the [Project] window.
Shortcut key: [Alt] + [0]

2) **[Docking Window: Screen Tree] button**
Displays or hides the [Screen] window.

3) **[Docking Window: System Tree] button**
Displays or hides the [System] window.

4) **[Docking Window: Data Browser] button**
Displays or hides the [Data Browser] window.
Shortcut key: [Ctrl] + [E]

5) **[Docking Window: Property Sheet] button**
Displays or hides the [Property] window.
Shortcut key: [Alt] + [1]

6) **[Docking Window: IP Address List] button**
Displays or hides the [IP Address List] window.

7) **[Docking Window: Library List] button**
Displays or hides the [Library] window.
Shortcut key: [F9]

8) **[Docking Window: Library List (Template)] button**
Displays the [Library] window with displaying the template screen in tree view.
Shortcut key: [Alt] + [F9]

9) **[Docking Window: Data View] button**
Displays or hides the [Data View] window.

10) **[Docking Window: Utilize Creation (Screen)] button**
Displays or hides the [Utilize Creation (Screen)] window.

11) **[Docking Window: Data Check List] button**
Displays or hides the [Data Check List] window.

12) **[Docking Window: Output] button**
Displays or hides the [Output] window.

13) **[Docking Window: Verify Result] button**
Displays or hides the [Verify Result] window.

14) **[GOT Type Setting] button**
Displays the [GOT Type Setting] dialog.

15) **[GOT Environmental Setting: Screen Switching/Window] button**
Displays the [Environmental Setting] window.

16) **[GOT Setup: Basic Setting: Display Setting/Language Setting] button**
Displays the [GOT Setup] window.

17) **[GOT Ethernet Setting] button**
Displays the [GOT Ethernet Setting] window.

18) **[Controller Setting] button**
Displays the [Controller Setting] window.

19) **[Label: Open] button**
Displays the [Label Group List] dialog.

20) **[Comment: Open] button**
Displays the [Open Comment Group] dialog.

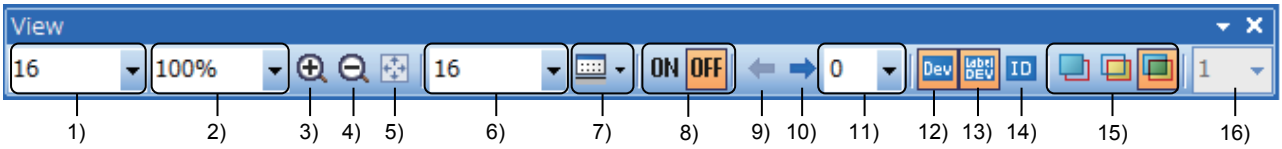
21) **[Docking Window: Device Search] button**
Displays or hides the [Device Search] window.
Shortcut key: [Ctrl] + [F]

22) **[Device List: Screen] button**
Displays the [Device List] window.

23) **[Text List] button**
Displays the [Text List] window.

■3 [View]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Snap]**
Sets the moving distance of a figure and an object on the screen editor.

2) **[Zoom]**
Sets the magnification of the screen editor.

3) **[Expansion] button**
Increases the magnification of the screen editor in increments of 10%.
Shortcut key: [Ctrl] + [Num+]

4) **[Reduction] button**
Reduces the magnification of the screen editor in decrements of 10%.
Shortcut key: [Ctrl] + [Num-]

5) **[Whole Screen] button**
Resizes the screen display area of the screen editor according to the editor window size.
This item is unavailable when [All Screens] is selected in [Zoom] on the [View] menu.

6) **[Grid Interval]**
Sets the distance between the lines of the grid on the screen editor.

7) **[Grid Color]**
Sets the grid color of the screen editor.

8) **[ON] button, [OFF] button**
Switches the display status of objects on screen editors between ON and OFF.
Shortcut key: [F7] (The display of devices can be off by [F8] as well.)

9) **[Previous State] button**
Switches the states of objects to be displayed on screen editors in descending order.

10) **[Next State] button**
Switches the states of objects to be displayed on screen editors in ascending order.

11) **[State No.]**
Switches the states of objects to be displayed on screen editors by selecting the state No.

12) **[Display Items: Device] button**
Switches between displaying and hiding devices on screen editors.

13) **[Display Items: Device of Label] button**
Displays or hides the devices that are assigned to system labels and labels (GT Designer3) on screen editors.

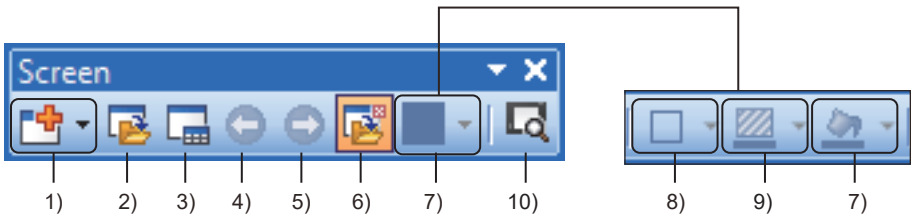
14) **[Display Items: Object ID] button**
Switches between displaying and hiding object IDs on screen editors.

15) **[Layer Display: Front] button, [Layer Display: Back] button, [Layer Display: Front+Back] button**
Switches layers to be displayed.
Not available to GT21 and GS21.

16) **[Language Switching Preview Column No.]**
Sets a comment column No. to be displayed on the screen editor.
The setting range is [1] to [30].

■4 [Screen]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[New] button**
Creates a new screen.

Item	Description
[Base Screen]	Creates a new base screen.
[Window Screen]	Create a new window screen.
[Report Screen]	Creates a new report screen.
[Mobile Screen]	Creates a mobile screen. Available to GT27, GT25, GT SoftGOT2000, and GS25.
[Dialog Window Wizard]	Creates a window screen for a dialog window.
[Utilize]	Searches a screen of another project which can be utilized.

2) **[Open] button**
Opens a selected window.

3) **[Screen Image List] button**
Displays the [Screen Image List] window.

4) **[Previous Screen] button**
Opens a screen whose screen number is one smaller than that of a screen being edited.
Shortcut key: [Ctrl] + [Alt] + [P]

5) **[Next Screen] button**
Opens a screen whose screen number is one greater than that of a screen being edited.
Shortcut key: [Ctrl] + [Alt] + [N]

6) **[Open Closed Screens] button**
Switches between setting and canceling screens that are closed as the target for the operation of [Previous Screen] or [Next Screen].

7) **[Screen Background Color] button**

GOT Graphic Ver.2

Select a background color, gradient, and pattern for the screen.

GOT Graphic Ver.1

Select a background color for the screen.

8) **[Screen Color Pattern] button**

GOT Graphic Ver.1

Select a pattern for the screen background.

9) **[Screen Color Pattern Color] button**

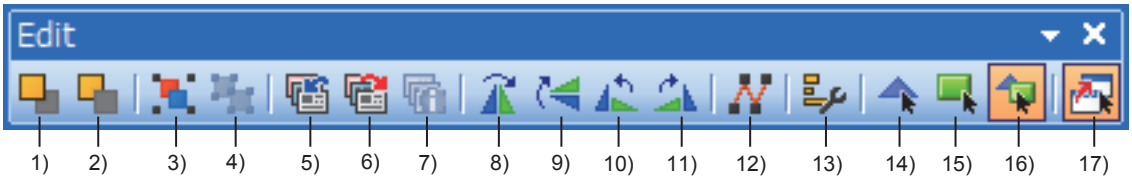
GOT Graphic Ver.1

Select a pattern color for the screen background.

10) **[Preview] button**
Displays the preview of the screen being edited.
Shortcut key: [Ctrl] + [I]

■5 [Edit]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Stacking Order: Moves to front] button**
Moves selected figures and objects to the front.

2) **[Stacking Order: Moves to back] button**
Moves selected figures and objects to the back.

3) **[Group] button**
Groups selected figures and objects.
Shortcut key: [Ctrl] + [G]

4) **[Ungroup] button**
Cancels the grouping of selected figures and objects.
Shortcut key: [Ctrl] + [U]

5) **[Template Registration: Register to Template] button**
Registers a selected figure or object to the template.

6) **[Template Registration: Register from Template] button**
Deletes a selected figure or object from the template list.

7) **[Edit Template Attribute] button**
Edits the template attribute of selected template information.

8) **[Turn/Invert: Flip Horizontal] button**
Flips a selected figure horizontally.
Shortcut key: [Ctrl] + [H]

9) **[Turn/Invert: Flip Vertical] button**
Flips a selected figure vertically.
Shortcut key: [Ctrl] + [J]

10) **[Turn/Invert: Rotate Left] button**
Rotates a selected figure 90 degrees counterclockwise.
Shortcut key: [Ctrl] + [L]

11) **[Turn/Invert: Rotate Right] button**
Rotates a selected figure 90 decrees clockwise.
Shortcut key: [Ctrl] + [R]

12) **[Edit Vertex] button**
Changes the length of a freeform line or a polygon line.

13) **[Align: Custom] button**
Aligns selected figures and objects.

14) **[Object of Selection: Shape] button**
Sets only figures as the targets for selecting.

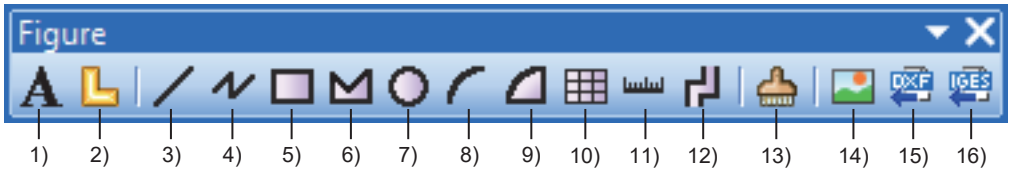
15) **[Object of Selection: Object] button**
Sets only objects as the targets for selecting.

16) **[Object of Selection: Shape + Object] button**
Sets figures and objects as the targets for selecting.

17) **[Object of Selection: Overlay Screen] button**
Switches between setting and canceling set overlay screens as the targets for selecting.

■6 [Figure]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Text] button**
Draws a text.

2) **[Logo Text] button**
Draws a logo text.

3) **[Line] button**
Draws a line.

4) **[Line Freeform] button**
Draws a freeform line.

5) **[Rectangle] button**
Draws a rectangle.

6) **[Polygon] button**
Draws a polygon.

7) **[Circle] button**
Draws a circle.

8) **[Arc] button**
Draws an arc.

9) **[Sector] button**
Draws a sector.

10) **[Table] button**
Draws a table.

11) **[Scale] button**
Draws a scale.

12) **[Piping] button**
Draws a piping.

13) **[Paint] button**

GOT Graphic Ver.1

Fills the framed area of the figure on the screen.

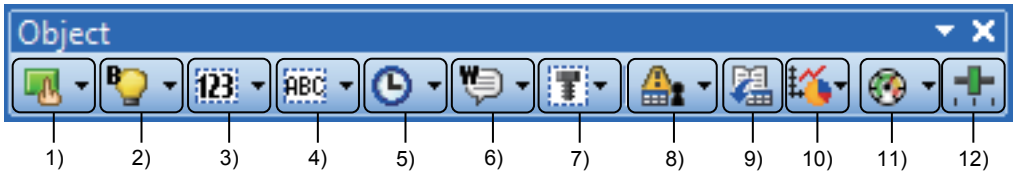
14) **[Import Image Data] button**
Imports an image file into the screen.

15) **[Import DXF Data] button**
Imports a DXF data into the screen.

16) **[Import IGES Data] button**
Imports an IGES data into the screen.

■7 [Object]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) [Switch] button

Item	Description
[Switch] button	Touch switch with multiple functions
[Bit Switch] button	Touch switch to switch ON/OFF of a bit device
[Word Switch] button	Touch switch to change the value of a word device
[Go To Screen Switch] button	Touch switch to switch the screen
[Change Station No. Switch] button	Touch switch to switch the station No. of the GOT monitor target
[Special Function Switch] button	Touch switch to display the utility or the screen for the monitor function
[Key Window Display Switch] button	Touch switch to display a key window
[Key Code Switch] button	Touch switch to enter a key code

2) [Lamp] button

Item	Description
[Bit Lamp]	Lamp controlled by the bit device
[Word Lamp]	Lamp controlled by the word device
[Lamp Area]	Lamp area controlled by the bit device

3) [Numerical Display/Input] button

Item	Description
[Numerical Display]	Object to display a device value (numeric value)
[Numerical Input]	Object to input the device value (numeric value)

4) [ASCII Display/Input] button

Item	Description
[ASCII Display]	Object to display the device value (text)
[ASCII Input]	Object to input the device value (text).

5) [Date/Time Display] button

Item	Description
[Date Display]	Object to display the date
[Time Display]	Object to display the time

6) [Comment Display] button

Item	Description
[Bit Comment]	Object to display the comments The bit device controls the displayed comments.
Word comment	Object to display the comments The word device controls the displayed comments.
[Simple Comment]	Object to display the comments The displayed comments are fixed.

7) [Parts Display] button

Item	Description
[Bit Parts]	Object to display the parts The bit device controls the displayed parts.
[Word Parts]	Object to display the parts The word device controls the displayed parts.

Item	Description
[Fixed Parts]	Object to display the parts The displayed parts are fixed.

8) **[Alarm Display] button**

Item	Description
[Alarm Display (User)]	Object to display the alarms collected by the user alarm observation.
[Alarm Display (System)]	Object to display the alarms collected by the system alarm observation.
[Simple Alarm Display]	Object to display the alarms collected by monitoring the device Sets the monitored alarm per object.
[System Alarm Display]	Object to display the alarms collected by monitoring the system Sets the monitored alarm per object.

9) **[Recipe Display (Record List)] button**

Places an object to list the records of a recipe.

This object must be used in combination with the recipe function.

10) **[Graph] button**

Item	Description
[Line Graph]	Object to indicate the device values as a line graph.
[Trend Graph]	Object to indicate the device values in chronological order as a graph.
[Bar Graph]	Object to indicate the device values as a bar graph.
[Statistics Bar Graph]	Object to indicate the ratio of each device value compared to the total value of multiple devices as a bar graph.
[Statistics Pie Graph]	Object to indicate the ratio of each device value compared to the total value of multiple devices as a pie graph.
[Scatter Graph]	Object to indicate the device values as a scatter graph with the X and Y coordinates representing two devices, respectively.
[Historical Trend Graph]	Object to indicate, in chronological order as a graph, the device values collected by the logging function.

11) **[Graphical Meter] button**

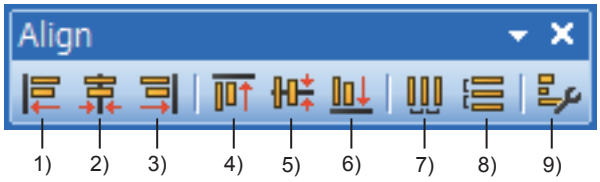
Item	Description
[Sector Meter]	Places an object to display a device value on a sector meter.
[Semicircle Meter]	Places an object to display a device value on a semicircle meter.
[Bar (Vertical) Meter]	Places an object to display a device value on a vertical bar meter.
[Bar (Horizontal) Meter]	Places an object to display a device value on a horizontal bar meter.

12) **[Slider] button**

Object to specify the device value (numeric value) by sliding the knob along the bar.

■8 [Align]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Align: Align left] button**

Aligns the left sides of all selected figures and objects with the left side of the leftmost figure or object.

2) **[Align: Center(left and right)] button**

Horizontally centers all selected figures and objects.

3) **[Align: Align right] button**

Aligns the right sides of all selected figures and objects with the right side of the rightmost figure or object.

4) **[Align: Align top] button**

Aligns the top sides of all selected figures and objects with the top side of the topmost figure or object.

5) **[Align: Center(top and down)] button**
Vertically centers all selected figures and objects.

6) **[Align: Align bottom] button**
Aligns the bottoms of all selected figures and objects with the bottom of the lowest figure or object.

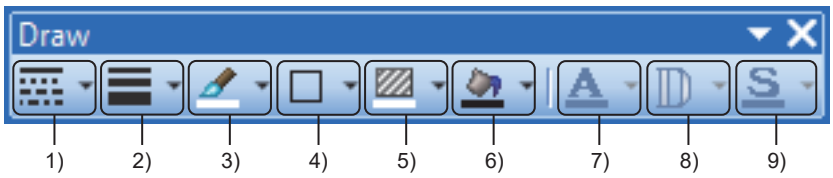
7) **[Align: Align equally to X] button**
Evenly and horizontally aligns all selected figures and objects.

8) **[Align: Align equally to Y] button**
Evenly and vertically aligns all selected figures and objects.

9) **[Align: Custom] button**
Displays the [Align] dialog.

■9 [Draw Figure]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style] button**
Sets the line type of a selected figure.

2) **[Line Width] button**
Sets the line width of a selected figure.

3) **[Line Color] button**
Sets the line color of a selected figure.

4) **[Pattern] button**
Sets the pattern of a selected figure.

5) **[Shape Color] button**
Sets the pattern color of a selected figure.

6) **[Background Color] button**
Sets the pattern background color of a selected figure.

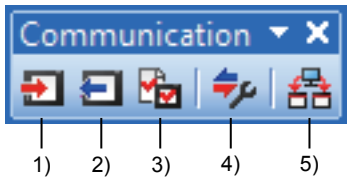
7) **[Text Color] button**
Sets a text color.

8) **[Style] button**
Sets a character effect.

9) **[Text Solid Color] button**
Sets the color of the shade of a text.

■10 [Communication]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Write to GOT] button**
Writes data from the personal computer (GT Designer3) to the GOT.
Shortcut key: [Shift] + [F11]

2) **[Read from GOT] button**
Reads data from the GOT to the personal computer (GT Designer3).

3) **[Verify GOT] button**
Compares the project being edited with the project in the GOT.

4) **[Communication Configuration] button**
Sets the method of the communication between the personal computer (GT Designer3) and the GOT.

5) **[Batch Write to multiple GOTs] button**
Not available to GT2105-Q.
Writes data to multiple GOTs in one go with a personal computer (GT Designer3).

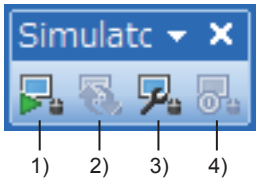
■11 [Diagnostics]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

1) **[GOT Diagnostics] button**
Displays the GOT error information.

■12 [Simulator]

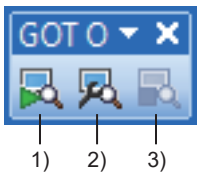
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Simulator: Start] button**
Starts GT Simulator3 and executes a simulation.
Shortcut key: [Ctrl] + [F10]
2) **[Simulator: Update] button**
Updates the project in simulation with the project being edited.
Shortcut key: [Alt] + [F10]
3) **[Simulator: Setting] button**
Configures the communication settings and other settings of GT Simulator3.
4) **[Simulator: End] button**
Exits GT Simulator3.

■13 [GOT Offline Monitor]

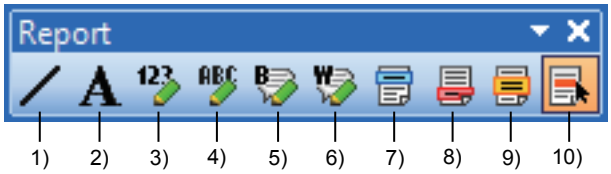
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[GOT Offline Monitor: Activate] button**
Activates the GOT offline monitor.
Shortcut key: [Ctrl] + [F12]
2) **[GOT Offline Monitor: Set] button**
Configures the settings of the GOT offline monitor.
3) **[GOT Offline Monitor: Exit] button**
Exits the GOT offline monitor.

■14 [Report]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line] button**
Arranges a line.

2) **[Text] button**
Arranges a text.

3) **[Print:Numerical Print] button**
Place an object to print a device value (numerical value).

4) **[Print:Text Print] button**
Place an object to print a device value (text).

5) **[Print:Bit Comment Print] button**
Place an object to print a comment.
A bit device controls the comment to be printed.

6) **[Print:Word Comment Print] button**
Place an object to print a comment.
A word device controls the comment to be printed.

7) **[Set for Header] button**
Sets the selected row as the header.

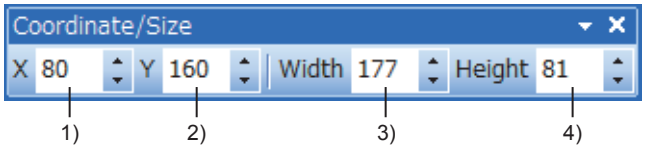
8) **[Set for Footer] button**
Sets the selected row as the footer.

9) **[Set for Repeat] button**
Sets the selected row to be repeatedly printed.

10) **[Object of Selection:Report Line] button**
Sets only report lines as the targets for selecting.

■15 [Coordinate/Size]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[X]**
Sets the X coordinate of the upper left vertex of a selected figure or object in dots.

2) **[Y]**
Sets the Y coordinate of the upper left vertex of a selected figure or object in dots.

3) **[Width]**
Sets the width of a selected figure or object in dots.

4) **[Height]**
Sets the height of a selected figure or object in dots.

■16 [My Favorites]

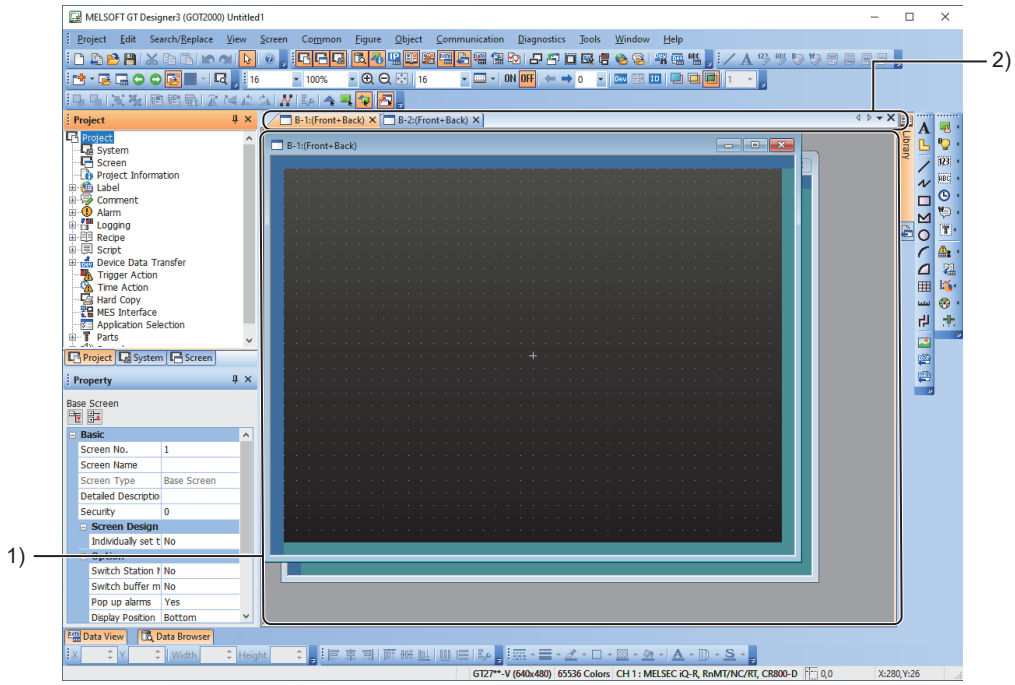
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays figures and objects registered in the favorite of the [Library] window.

2.2.3 Editor tab, work window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows what are displayed in the editor tab and work window.



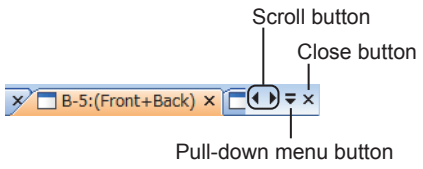
1) **Work window**

Area where screen editors and other windows are displayed.
The following shows the screens to be displayed in the work window.

- Screen editor
- [Environmental Setting] window
- [GOT Setup] window
- [Controller Setting] window
- [Comment List] window
- [Device List] window
- [Text List] window

2) **Editor tab**

Displays the tabs of the windows and screen editors which are displayed on the work window.
When a tab is selected, the corresponding window is displayed in the topmost position in the work window.



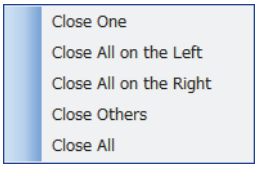
- **Scroll button**

  Scrolls the position of a selected tab sideways.
  The button can be used when tabs are too many to be displayed in the editor tab.
- **Pull-down menu button**

  Displays the list of screen editors and windows being displayed in the work window.
  This button displays a screen editor or window selected from the pull-down menu in the topmost position.
- **Close button**

  Closes a selected tab.

Right-click a tab to display menus to operate the tab.



- **[Close this Tab]**
  Closes the right-clicked tab.
- **[Close All Tab on the Left]**
  Closes all the tabs on the left side of the right-clicked tab.
- **[Close All Tab on the Right]**
  Closes all the tabs on the right side of the right-clicked tab.
- **[Close All Other]**
  Closes all the tabs except the right-clicked tab.
- **[Close All]**
  Closes all the displayed tabs.

To switch between displaying and hiding the editor tab, select [Display] → [Editor tab] from the menu.

2.2.4 Work tree

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

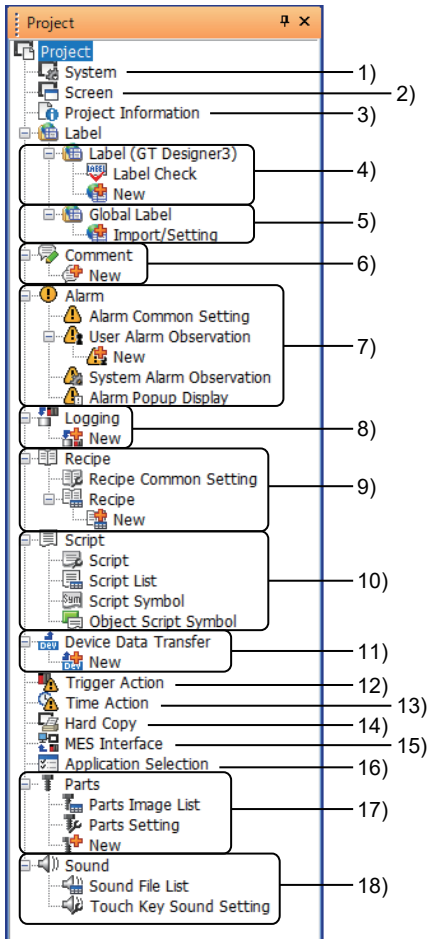
The work tree refers to the [Project] window, [System] window, or [Screen] window.

➟■1 [Project] window
■2 [System] window
■3 [Screen] window

■1 [Project] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Project] window lists the settings of the whole project.
Double-click an item to display the setting dialog.



1) **[System]**
Displays the [System] window.

➟■2 [System] window

2) **[Screen]**
Displays the [Screen] window.

➟■3 [Screen] window

3) **[Project Information]**
Set a project title and a creator's name.

4) **[Label (GT Designer3)]**
Displays the list of set label groups.
Each one can be copied and pasted with the [Edit] menu.

Item	Description
[Label Check]	Updates labels (GT Designer3) and checks them.

Item	Description
[New]	Create a label group.

5) **[Global Label]**

Not available to GT21 and GS21.

Lists the imported global labels.

Item	Description
[Import/Setting]	Displays the [Global Label List] dialog. ➟6.1.4 ■2 Importing global labels 6.1.4 ■7 [Global Label List] dialog

6) **[Comment]**

Lists the set comment groups.

Each one can be copied and pasted with the [Edit] menu.

Item	Description
[New]	Create a comment group.

7) **[Alarm]**

Item	Description
[Alarm Common Setting]	Set devices that convert alarm files.
[User Alarm Observation]	Lists the settings of placed user alarm observation. Each one can be copied and pasted with the [Edit] menu. Double-click [New] to configure the settings for collecting alarms by monitoring devices.
[System Alarm Observation]	Configure the settings for collecting alarms by monitoring the system.
[Alarm Popup Display]	Configure the settings for displaying collected alarms in a popup window when the alarms are collected.

8) **[Logging]**

Lists the set logging settings.

Each one can be copied and pasted with the [Edit] menu.

Item	Description
[New]	Configure the settings for collecting device values.

9) **[Recipe]**

Item	Description
[Recipe Common Setting]	Set control devices for the recipe function.
[Recipe]	Lists the set recipe settings. Each one can be copied and pasted with the [Edit] menu. Double-click [New] to configure the settings for executing batch write or batch read on multiple devices.

10) **[Script]**

Item	Description
[Script]	Set scripts.
[Script List]	Lists the scripts.
[Script Symbol]	Set script symbols.
[Object Script Symbol]	Set object script symbols.

11) **[Device Data Transfer]**

Lists the set device data transfer settings.

Each one can be copied and pasted with the [Edit] menu.

Item	Description
[New]	Configure the settings for transferring data between devices.

12) **[Trigger Action]**

Set actions triggered by devices or sampling.

13) **[Time Action]**

Set actions triggered by time.

14) **[Hard Copy]**

Configure the settings for capturing the active screen on the GOT.

15) **[MES Interface]**

Configure the settings for sending SQL statements from the GOT to the personal computer database.

16) **[Application Selection]**

Select system applications to be written to the GOT.

17) **[Parts]**

Item	Description
[Parts Image List]	Lists the part images. Each one can be copied and pasted with the [Edit] menu.
[Parts Setting]	Configure the part settings.
[New]	Create a part.

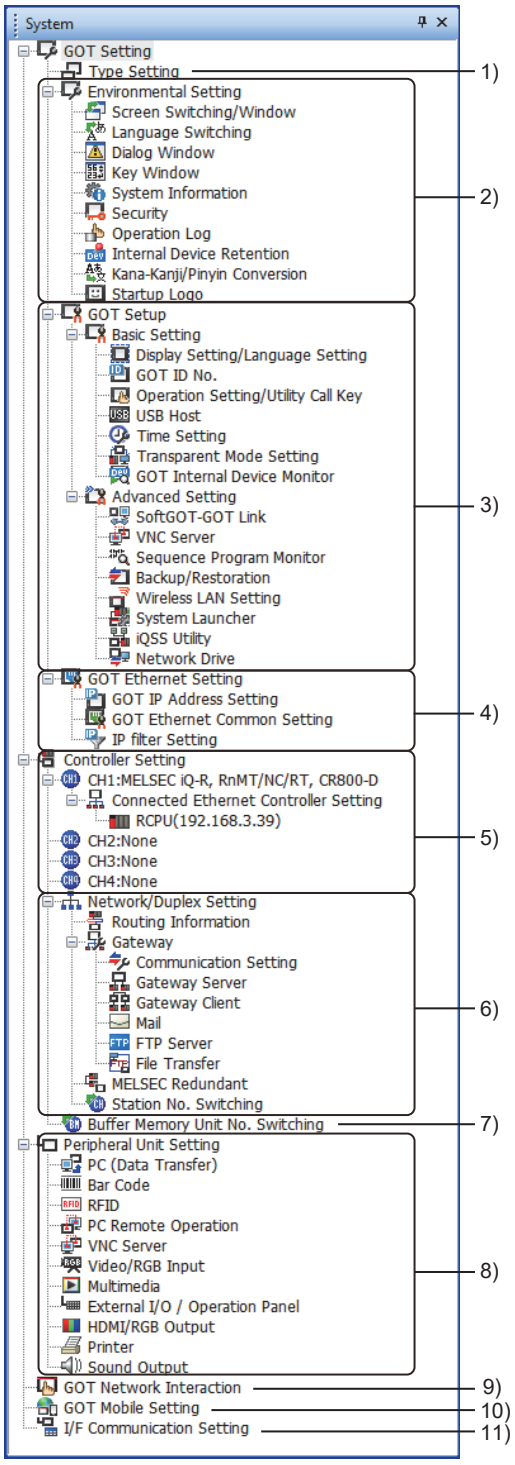
18) **[Sound]**

Item	Description
[Sound File List]	Lists the sound files to register or edit the files.
[Touch Key Sound Setting]	Configure the setting to use a specified sound file for the touch key sound.

■2 [System] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [System] window lists the settings, including the GOT type settings, environmental settings, and controller settings. Double-click an item to display the setting dialog.



1) **[Type Setting]**
Change the model setting of the project.

2) **[Environmental Setting]**

Item	Description
[Screen Switching/Window]	Configure the settings of screen switching.
[Language Switching]	Configure the settings of language switching.

Item	Description
[Dialog Window]	Configure the settings of the system message dialog window.
[Key Window]	Configure the settings of key windows in the project.
[System Information]	Set devices that handle the system information.
[Security]	Configure the security settings for the GOT operations.
[Operation Log]	Configure the settings for collecting operation history events of the GOT.
[Internal Device Retention]	Configure the settings for retaining GOT internal device values.
[Kana-Kanji/Pinyin Conversion]	Configure the settings of kana-kanji conversion or Pinyin conversion on the GOT.
[Startup Logo]	Set the initial screen displayed at the GOT startup.

3) **[GOT Setup]**

Item	Description
[Basic Setting]	• [Display Setting/Language Setting] Configure the display settings of the GOT. • [GOT ID No.] Set unique information to the GOT. • [Operation Setting/Utility Call Key] Set a buzzer sound and the utility call key for the GOT. • [USB Host] Configure the settings for using a mouse and keyboard on the GOT. • [Time Setting] Set the GOT time setting method. • [Transparent Mode Setting] Set the target channel for the FA transparent function. • [GOT Internal Device Monitor] Set whether to use the GOT internal device monitor of the GOT diagnostics function.
[Advanced Setting]	• [SoftGOT-GOT Link] Configure the settings for the SoftGOT-GOT link function. • [VNC Server] Configure the settings for the VNC server function. • [Sequence Program Monitor] Configure the settings for the sequence program monitor. • [Backup/Restoration] Configure the settings for the backup/restoration function. • [Wireless LAN Setting] Configure the wireless LAN settings. • [System Launcher] Configure the system launcher settings. • [iQSS Utility] Configure the iQSS utility settings. • [Network Drive] Configure the network drive settings.

4) **[GOT Ethernet Setting]**

Item	Description
[GOT IP Address Setting]	Set the IP address of the GOT.
[GOT Ethernet Common Setting]	Configure the GOT Ethernet setting.
[IP filter Setting]	Configure the IP filter setting.

5) **[Controller Setting]**

Configure the settings for communicating with controllers.
The number of channels depends on the GOT model.

6) **[Network/Duplex Setting]**

Item	Description
[Routing Information]	Configure the settings for monitoring other networks.

Item	Description
[Gateway]	• [Communication Setting] Configure the communication settings for the server/client function. • [Gateway Server] Configures the settings of the server function. • [Gateway Client] Configure the settings for the server function. • [Mail] Configure the settings for the mail send function. • [FTP Server] Configure the settings for the FTP server function. • [File Transfer] Configure the settings for the file transfer function (FTP transfer or GOT internal transfer).
[MELSEC Redundant]	Configure the settings for monitoring the MELSEC redundant system.
[Station No. Switching]	Configure the settings for switching the station number of the monitoring target.

7) **[Buffer Memory Unit No. Switching]**
Configure the settings for switching the buffer memory unit No. of the monitoring target.

8) **[Peripheral Unit Setting]**

Item	Description
[PC (Data Transfer)]	Set the interface for connecting GT Designer3 (personal computer) with the GOT.
[Bar Code]	Configure the settings for using a barcode reader on the GOT.
[RFID]	Configure the settings for using a RFID controller on the GOT.
[PC Remote Operation]	Configure the settings for operating the personal computer from the GOT.
[VNC Server]	Configure the settings for viewing the GOT display contents from the personal computer.
[Video/RGB Input]	Configure the settings for displaying the video data taken with a video camera on the GOT.
[Multimedia]	Configure the settings for recording or playing the video data taken with a video camera on the GOT.
[External I/O / Operation Panel]	Configure the settings for using an external I/O device and operation panel with the GOT.
[HDMI/RGB Output]	Configure the settings for outputting the GOT screen data to an external display.
[Printer]	Configure the settings for using a printer on the GOT.
[Sound Output]	Configure the setting for outputting sounds from the GOT.
[GOT (Extended Computer)]	Set the interface for the connection to the GOT (Extended Computer).

9) **[GOT Network Interaction]**
Configure the settings for controlling pieces of equipment on the same network to prevent simultaneous operations.

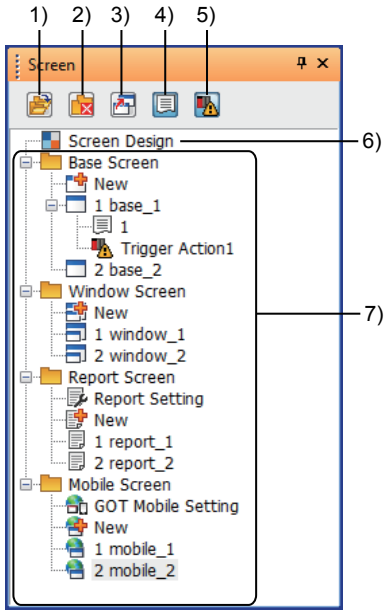
10) **[GOT Mobile Setting]**
Configure the settings for using the GOT as the server in the GOT Mobile function.

11) **[I/F Communication Setting]**
Lists the interface settings of the GOT.

■3 [Screen] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Screen] window lists the created base screens, window screens, report screens, and mobile screens.
Double-click an item to display the setting dialog.



1) **[Unfold All] button**
Expands the tree.

2) **[Fold All] button**
Collapses the tree.

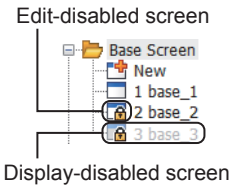
3) **[Overlay Screen] button**
Displays or hides the hierarchy of set overlay screens in the tree.

4) **[Script (Screen)] button**
Displays or hides the screen script settings in the tree.

5) **[Trigger Action (Screen)] button**
Displays or hides the screen trigger action settings in the tree.

6) **[Screen Design]**
Displays the [Screen Design] dialog.
Screen designs are copied or pasted from the right-click menu.

7) **[Base Screen], [Window Screen], [Report Screen], and [Mobile Screen]**
Lists the created base screens, window screens, report screens, and mobile screens.
Each one can be copied and pasted with the [Edit] menu.
The copied screen appears after it is pasted in the list.
When displaying and editing the screens are prohibited by the project security, the list is displayed as shown below.



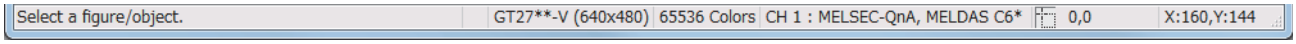
Item	Description
[New]	Create a base screen, window screen, report screen, or mobile screen.
[Report Setting]	Configure the settings for the report function.
[GOT Mobile Setting]	Configure the settings for using the GOT as the server in the GOT Mobile function.

2.2.5 Status bar

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the following contents according to the position of the mouse cursor, a selected figure, or object.

- Description of the item over which the mouse cursor is moved.
- The GOT type, color settings, and controller settings of the project being edited.
- Coordinates of a selected figure or object



Switch between displaying and hiding the status bar by selecting [Display] → [Status bar] from the menu.
If system labels or global labels are used, the icon notifying the change appears when there is a change in the labels.

➟6.1.3 ■4 (4) System label update notification
6.1.4 ■2 (3) Notifying and updating a change in the global labels

2.3 Creating and Editing a Project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟2.3.1 Creating a project
2.3.2 Opening a project
2.3.3 Closing a project
2.3.4 Deleting a project
2.3.5 Giving a title to a project

2.3.1 Creating a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to create a project.

- Creating a new project

  Create a new project.
  By using the wizard, you can configure required settings accordingly.
  At the default setting, the wizard is displayed.

  ➟■1 Using the wizard

  You can also create a project without using the wizard.

  ➟■2 Without using the wizard

- Creating a project utilizing a saved project

  Search a project that can be utilized from stored projects by specifying conditions such as a keyword.
  You can create a project based on the searched project.

  ➟11.1 Searching for Utilizable Data (Utilize Data)

Point

Operating on iQ Works

A new project cannot be created with GT Designer3 when GT Designer3 is started from MELSOFT Navigator.
Create a new project with MELSOFT Navigator.

■1 Using the wizard

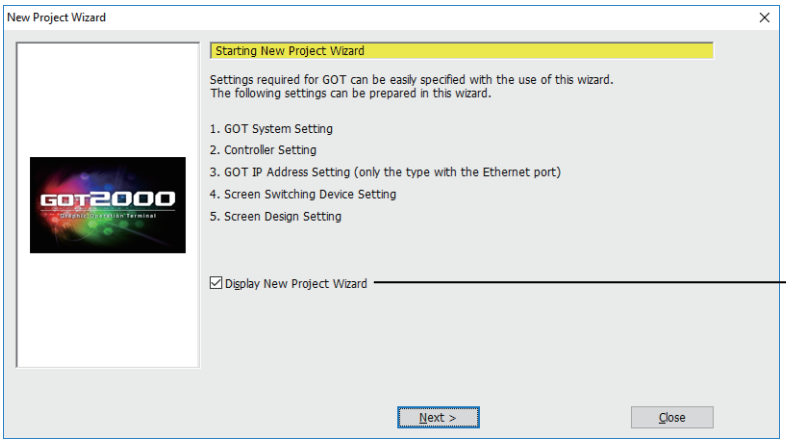
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows an example of creating a GT27 project.

Step 1 Either of the following operations displays the [New Project Wizard] dialog.

- Click the [New] button in the [Select Project] dialog.
- Select [Project] → [New] from the menu.

Step 2 Click the [Next] button.



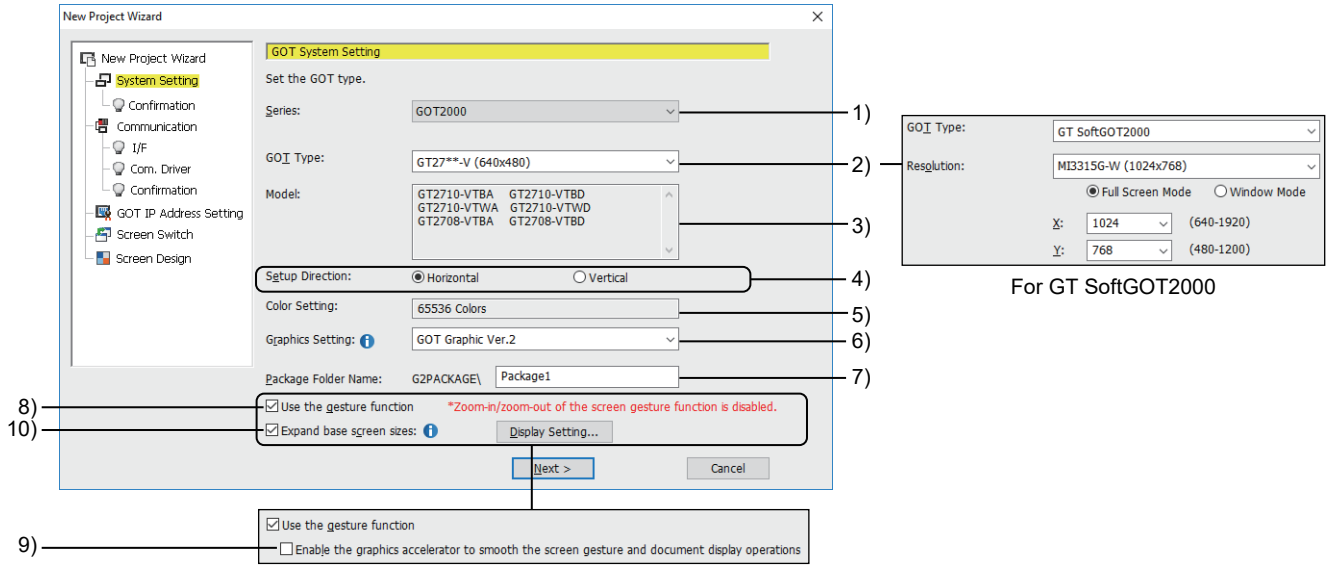
1) **[Display New Project Wizard]**

Select this item to display the wizard when creating a new project.

You can display or hide the wizard also in the [Operation] tab of the [Option] dialog.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

Step 3 Set [Series] and [Type] then click the [Next] button.



1) **[Series]**

Select the GOT series.

- [GOT2000]:
  Creates a project for the GOT2000 series.
- [GS Series]:
  Creates a project for the GS series.
- [GOT1000]:
  Creates a project for the GOT1000 series by starting GT Designer3 (GOT1000).
  Click the [OK] button, and then the confirmation message appears.

2) **[GOT Type]**

Select the GOT model.

The following shows the items to be selected.

- When [GOT2000] is selected for [Series]
  - [GT27**-X (1024x768)]
  - [GT27**-S (800x600)]
  - [GT27**-V (640x480)]
  - [GT2705-V (640x480)]
  - [GT25**-WX (1280x800)]
  - [GT25**-W (800x480)]
  - [GT25**-S (800x600)]
  - [GT25**-V (640x480)]
  - [GT2505-V (640x480)]
  - [GT23**-V (640x480)]
  - [GT2107-W (800x480)]
  - [GT2105-Q (320x240)]
  - [GT2104-R (480x272)]
  - [GT2104-P (384x128)]
  - [GT2103-P (320x128)]
  - [GT SoftGOT2000]
- When [GS Series] is selected for [Series]
  - [GS25**-WX(1280x800)]
  - [GS21**-W-N (800x480)]
  - [GS21**-W (800x480)]

In [Name], you can check the model names of the GOTs that belong to the selected model.

➟1.1.2 Supported models

If you select [GT SoftGOT2000], set the resolution.

Item	Description
[Resolution]	Select the resolution of GT SoftGOT2000. The following shows the items to be selected. • [MI3315G-W (1024x768)] Select [Full Screen Mode] or [Window Mode]. • [MI3321G-W (1920x1080)] Select [Full Screen Mode] or [Window Mode]. • [VGA (640x480)] • [SVGA (800x600)] • [XGA (1024x768)] • [HD (1280x720)] • [WXGA (1280x800)] • [FWXGA (1366x768)] • [Full HD (1920x1080)] • [WUXGA (1920x1200)] To customize the resolution, set [X] and [Y]. When [X] or [Y] is set, [Resolution] is set to [Custom].

3) **[Name]**

Names of the GOT models that belong to the selected model in [GOT Type].

4) **[Setup Direction]**

Not available to GT SoftGOT2000.

Set the installation direction of the GOT.

The following shows the items to be selected.

- [Horizontal]
- [Vertical]

5) **[Color Setting]**

Displays the number of display colors of the GOT type selected in [Type].

When [GT2105-Q (320x240)] is selected for [Type], select the number of display colors.

The following shows the items to be selected.

- [65536 Colors]
- [32(Grayscale)]

6) **[Graphics Setting]**

Not available to GT23 because the setting is fixed to [GOT Graphic Ver.1].

The following shows the items to be selected.

• [GOT Graphic Ver.2]
• [GOT Graphic Ver.1]

For the details of the graphics modes, refer to the following.

➟5.1.2 Graphics mode ([Graphics Setting])

7) **[Package Folder Name]**

Set the name of the folder that stores the package data.
Use up to 32 alphanumeric characters and symbols for the folder name.
For the character strings available and unavailable for folder names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

This item is required for project creation. Always set this item.

8) **[Use the gesture function]**

Only available to GT27.
Enables the GOT operation by gesture.

➟11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function)
11.13 Operating Objects by the Gesture (Object Gesture Function)

9) **[Enable the graphics accelerator to smooth the screen gesture and document display operations]**

Only available to GT27.

GOT Graphic Ver.1

Enables the graphics accelerator for the screen gesture function and the document display.
When the graphics accelerator is enabled, the operations of the screen gesture function and the documentdisplay become smooth.

➟5.1.5 [Type Setting] dialog

Note that the GOT startup time becomes long.

➟11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function)
8.26.3 How to use the document display (for Document Converter output files)

To use the graphics accelerator, install the CoreOS version E or later to the GOT.

➟4.5.3 Installing the BootOS or the CoreOS to the GOT

For how to check the CoreOS version, refer to the following.

➟GOT2000 Series User's Manual (Utility)

10) **[Expand base screen sizes]**

Available to GT27, GT25, and GS25.

GOT Graphic Ver.2

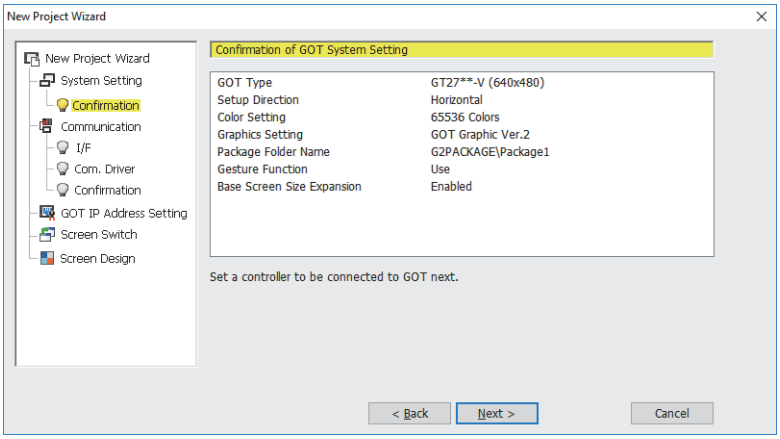
Enables you to set a larger base screen by setting higher resolution than the original GOT resolution.
For details on the base screen size expansion, refer to the following.

➟5.1.3 Base screen size expansion ([Expand base screen sizes])

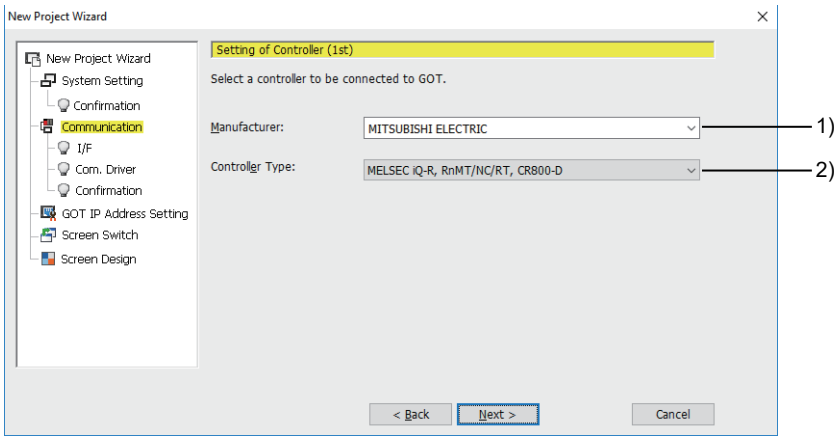
Click the [Display Setting] button to display the [Display Setting] dialog.
Configure the settings for displaying the scroll bars and navigation window on the GOT.

➟5.1.5 ■1 (1) [Display Setting] dialog (Base screen size expansion)

Step 4 Check the settings made in step 3, and click the [Next] button.



Step 5 Set [Manufacturer] and [Controller Type] then click the [Next] button.
(For GT SoftGOT2000, proceed to step 8.)

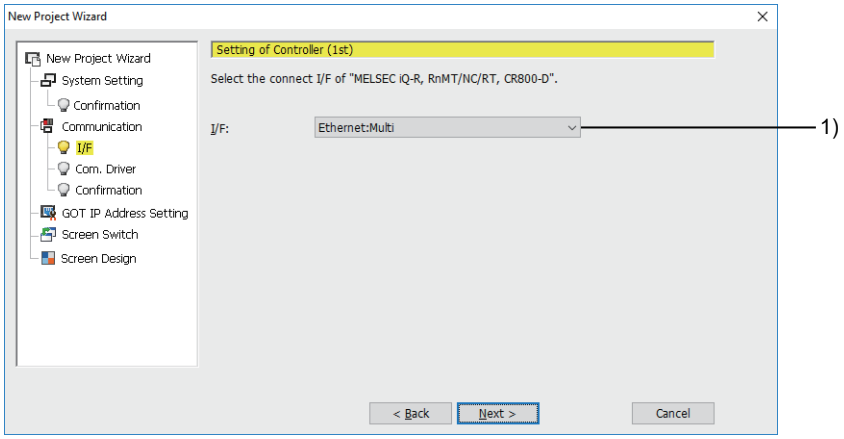


1) **[Manufacturer]**
Select the manufacturer of the controller connected to the GOT.

2) **[Controller Type]**
Select the controller type connected to the GOT.
For the controllers that belong to the type selected with [Controller Type], refer to the following.

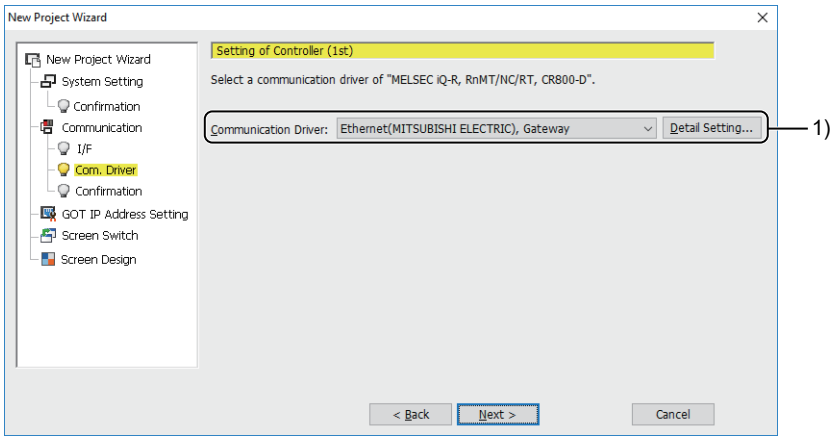
➟12.2 Correspondence between the setting of [Controller Type] and the controller used

Step 6 Select [I/F] then click the [Next] button.



1) **[I/F]**
Select the interface of the GOT that connects the controller.

Step 7 Set [Communication Driver] and click the [Next] button.



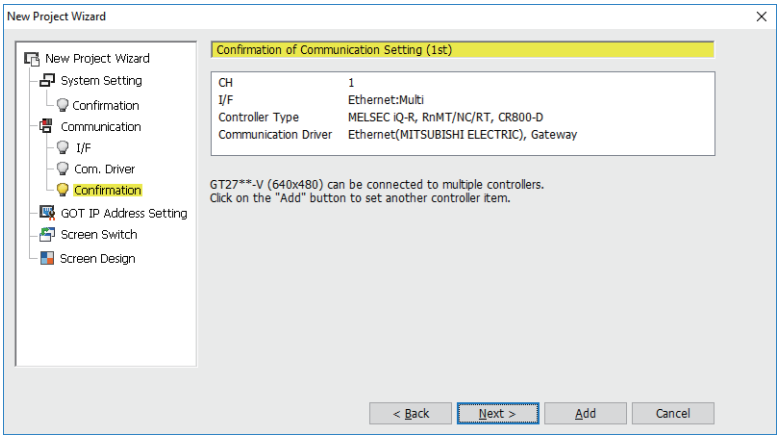
1) **[Communication Driver]**
Select the communication driver according to the connection type of the GOT and controller.
Selectable communication driver differs depending on the settings of [Manufacturer], [Controller Type], and [I/F].
Configure the setting according to the controller and the connection type used.

➟GOT2000 Series Connection Manual for a controller used

Item	Description
[Detail Setting] button	Click this button to display the [Detail Setting] dialog. The setting items differ depending on the [Communication Driver] setting. ➟GOT2000 Series Connection Manual for a controller used

Step 8 When the settings for the controller are complete, click the [Next] button.

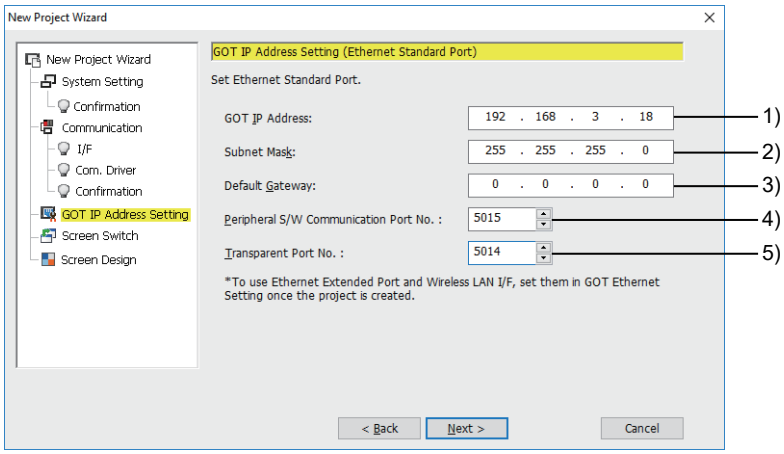
(If an Ethernet interface of the GOT is deselected, or if GT SoftGOT2000 is used, proceed to step 10.)
To add other controllers, click the [Add] button.
(Proceed to step 5.)



You can change or add the controller settings in the [Controller Setting] window.

➟5.5.1 ■4 [Controller Setting]

Step 9 Configure the GOT Ethernet setting, and click the [Next] button.



1) **[GOT IP Address]**
Set the IP address of the GOT.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

2) **[Subnet Mask]**
Set the subnet mask for the GOT.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

3) **[Default Gateway]**
Set the default gateway.
The setting range is [0.0.0.0] to [255.255.255.255].

4) **[Peripheral S/W Communication Port No.]**
Set the port No. used for the communication with GT Designer3.
The setting range is [1024] to [65534].
Do not set the port number used for the other settings.
Duplication of the port number disables communication.

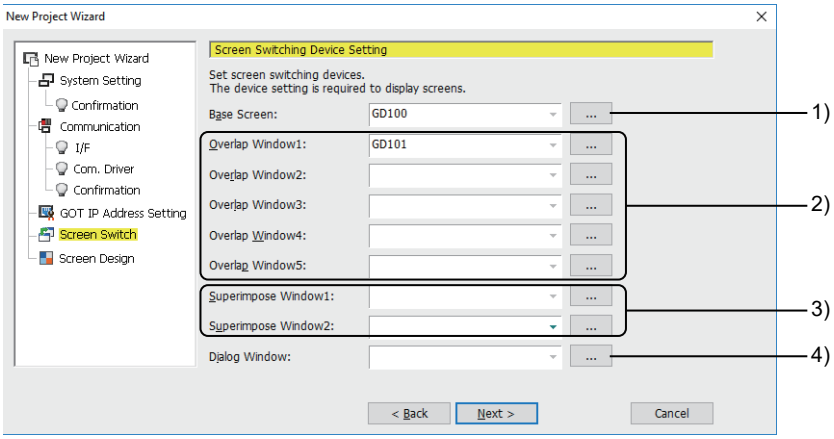
5) **[Transparent Port No.]**
Set the port number used for the FA transparent function.

The setting range is [1024] to [65534].
Do not set the port number used for the other settings.
Duplication of the port number disables communication.

Step 10 Set screen switching devices for the base screen and other necessary windows then click the [Next] button.

You can also set the screen switching devices in the [Environmental Setting] window.

➟5.2.1 ■5 [Screen Switching/Window]



1) **[Base Screen]**
Set a screen switching device for a base screen.

2) **Overlap window**
Set screen switching devices for overlap window 1 to 5.
For GT23, GT21, and GS21, you can set the screen switching devices for overlap window 1 and 2 only.

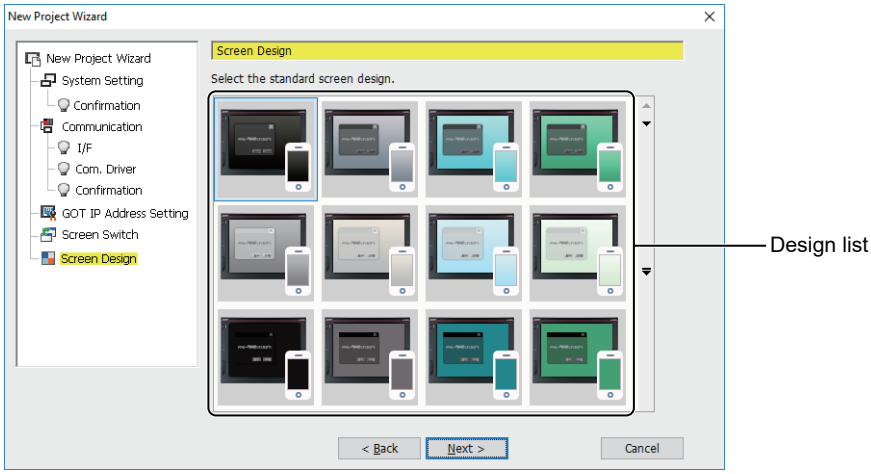
3) **Superimpose window**
Set screen switching devices for superimpose window 1 and 2.

4) **[Dialog Window]**
Set a screen switching device for a dialog window.

Step 11 Select a screen design, and click the [Next] button.

The selected design is applied to all target screens in the project.
The selectable designs differ depending on the selection for [Graphics Setting] in the [Type Setting] dialog.

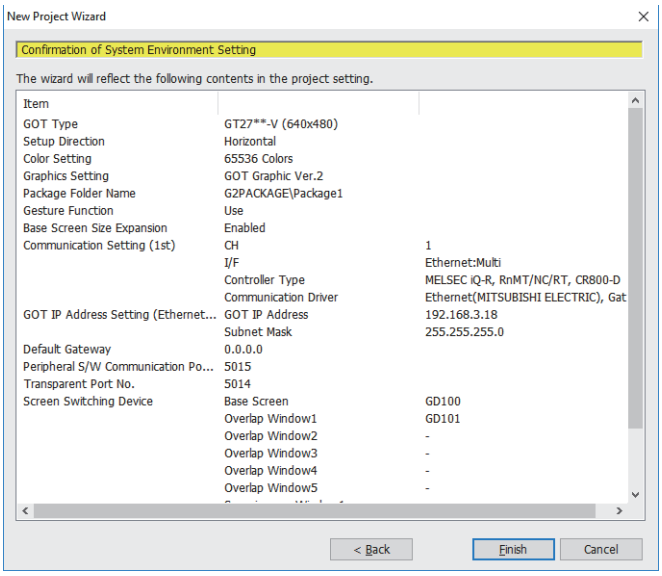
➟5.1.5 [Type Setting] dialog



You can also select a screen design in the [Screen Design] dialog.

➟2.4.3 [Screen Design] dialog

Step 12 Check the settings with the wizard then click the [Finish] button to complete the settings.



■2 Without using the wizard

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can set whether to display or not the wizard when creating a new project in the [Operation] tab of the [Option] dialog. At the default setting, the wizard is displayed.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

(1) Setting a model when creating a new project

If the settings of the [Operation] tab of the [Option] dialog are configured as described below, the [GOT Type Setting] dialog and the [Controller Setting] window appear when a new project is created.

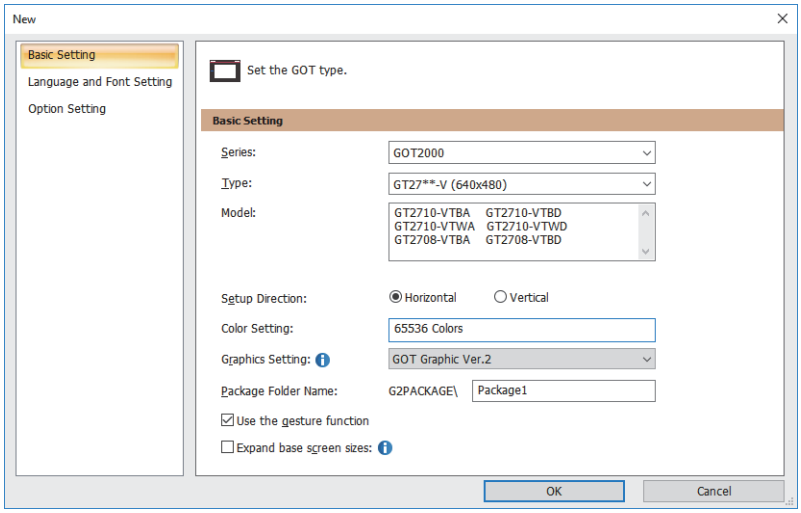
- [Display New Project Wizard] is cleared.
- [Perform type setting at the time of creating a new project] is selected.

Step 1 Either of the following operations displays the [GOT Type Setting] dialog.

- Click the [New] button in the [Select Project] dialog.
- Select [Project] → [New] from the menu.

Step 2 Click the [OK] button after the required settings.

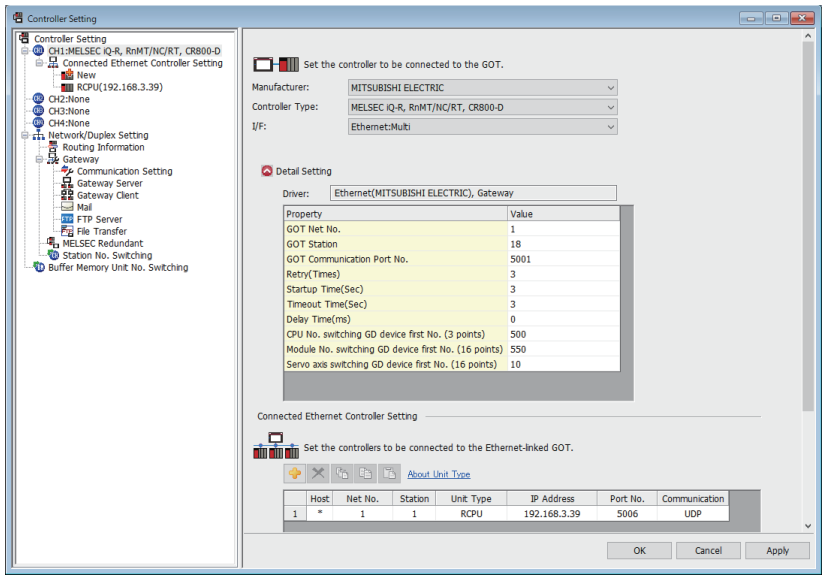
➟5.1.5 [Type Setting] dialog



Step 3 A project is created and the [Controller Setting] window appears.

Step 4 Select the manufacturer, model, GOT interface, and communication driver for the controller to be connected then click the [OK] button.

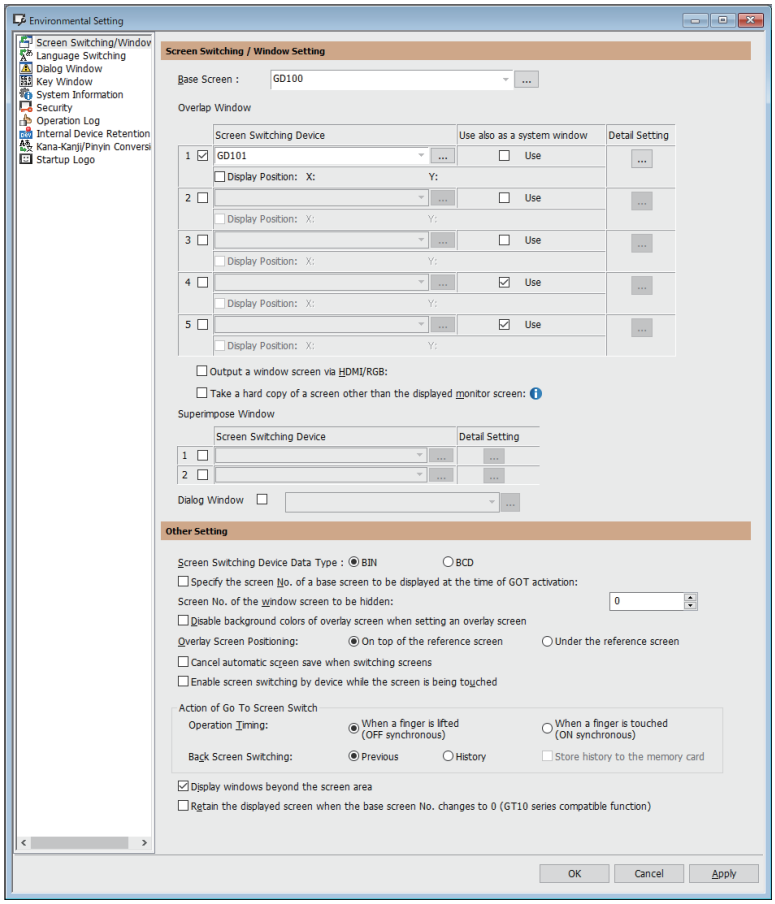
➟5.5.1 ■4 [Controller Setting]



Step 5 Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window] from the menu to display the [Screen Switching/Window] window of the [Environmental Setting] window.

Step 6 Set screen switching devices for the base screen and other necessary windows then click the [OK] button.

➟5.2.1 ■5 [Screen Switching/Window]



(2) Creating a new project without setting a model

If the settings of the [Operation] tab of the [Option] dialog are configured as described below, the project is created with the model setting of the last edited project.

- [Display New Project Wizard] is cleared.
- [Perform type setting at the time of creating a new project] is cleared.

■3 Searching a utilizable project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Search a project that can be utilized from sample projects or saved projects with a keyword.
You can create a project efficiently by utilizing an existing project.

➟11.1 Searching for Utilizable Data (Utilize Data)

2.3.2 Opening a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In GT Designer3, you can open projects of the following formats.

GOT	Available project format
GOT2000 Series	• Workspace format • Single file format (*.GTX, *.GTXS, *.G2, *.GTCNV) You can transfer a project with a system application (package data) to the GOT without opening the project. You cannot open a project that has the workspace format if another user has opened the project. A single file format project (*.GTX, *.GTXS) opens in a read-only mode if another user has opened the project. You cannot save the read-only project. ➟■1 Opening a project for GOT2000
GOT1000 Series	• Workspace format • Single file format (*.GTW, *.GTE, *.G1) There are two alternatives: convert a project into the GOT2000 equivalent, or start GT Designer3 (GOT1000) to edit the project with keeping a GOT1000 project. ➟■2 Opening a project for GOT1000
GOT900 Series	• Single file format (*.GTD) Converts the project into the GOT1000 equivalent by starting GT Designer3 (GOT1000). To edit the project as a GOT900 project, use GT Designer2 Classic. To convert the project into the GOT2000 equivalent, convert the project into the GOT1000 equivalent in advance. ➟■3 Opening a project for GOT900

Point

(1) **Project to which a security key is assigned**

To open a project to which a security key is assigned, GT Designer3 must have the matched security key.

➟2.12 Protecting a Project with a Security Key

(2) **Project for which project security is set**

When a project for which project security is set is about to be opened, the system requires user authentication.

➟2.13 Protecting a Project by Registering Users

(3) **Operating on iQ Works**

(a) Opening a project

A project cannot be opened with GT Designer3 when GT Designer3 is started from MELSOFT Navigator.
Open a project with MELSOFT Navigator.

(b) Project format

When GT Designer3 is started from MELSOFT Navigator, the project format that can be handled with GT Designer3 is the workspace format project only.
When using a single file format project, save the project in the workspace created with MELSOFT Navigator with the following procedure.
Step 1. Start only GT Designer3, and then open the single file format project.
Step 2. Select [Project] → [Save As] from the menu, and save the project in a workspace of MELSOFT Navigator as a workspace format project.

■1 Opening a project for GOT2000

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

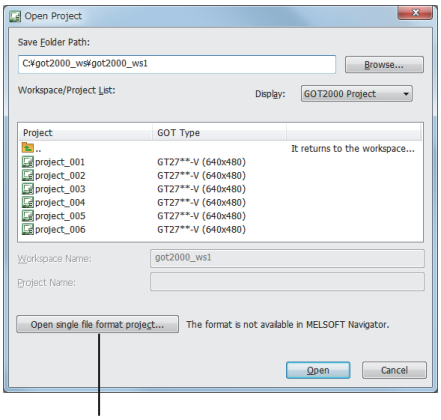
Step 1 Select [Project] → [Open] from the menu to display the [Open Project] dialog.
Switch the screens according to the format of the project.
• Workspace format: Open the project from the [Open Project] dialog (workspace format).

➟■4 [Open Project] dialog (workspace format)

• Single file format: Open the project from the [Open Project] dialog (single file format).

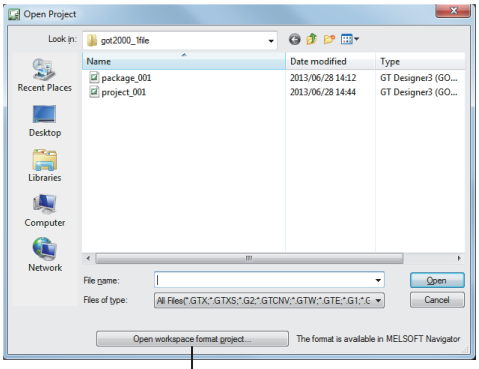
➟■5 [Open Project] dialog (single file format)

[Open Project] dialog (workspace format)



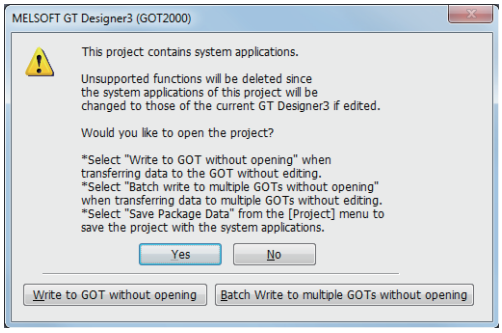
Switching to the [Open Project] dialog (single file format)

[Open Project] dialog (single file format)



Switching to the [Open Project] dialog (workspace format)

Step 2 In the [Open Project] dialog, select the project , and then click the [Open] button to open the project.
When the project with a system application (package data) is opened, the following dialog appears.



By clicking the [Write to the GOT without Open] button, you can transfer the project to the GOT without opening the project.
To write package data to multiple GOTs without opening the relevant project, click the [Batch Write to multiple GOTs without opening] button.

➟4. COMMUNICATING WITH GOT

■2 Opening a project for GOT1000

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Open] from the menu to display the [Open Project] dialog.
Switch the screens according to the format of the project.

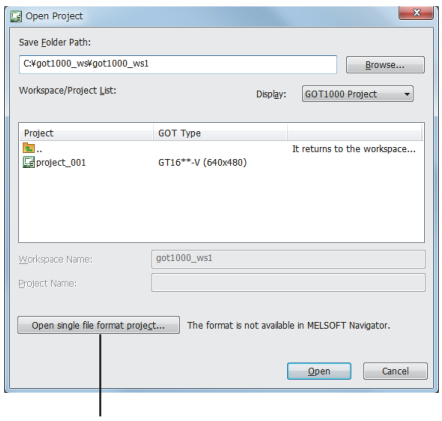
• Workspace format: Open the project from the [Open Project] dialog (workspace format).

➟■4 [Open Project] dialog (workspace format)

• Single file format: Open the project from the [Open Project] dialog (single file format).

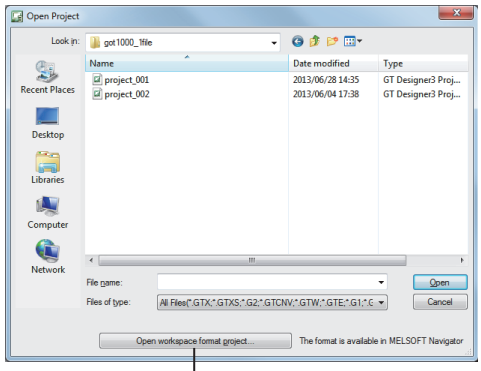
➟■5 [Open Project] dialog (single file format)

[Open Project] dialog (workspace format)



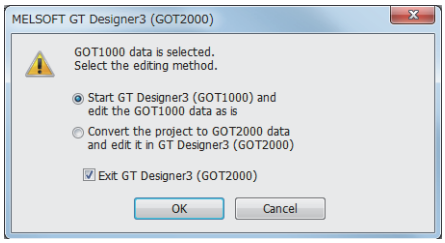
Switching to the [Open Project] dialog (single file format)

[Open Project] dialog (single file format)



Switching to the [Open Project] dialog (workspace format)

Step 2 In the [Open Project] dialog, select the project , and then click the [Open] button to display the following dialog.

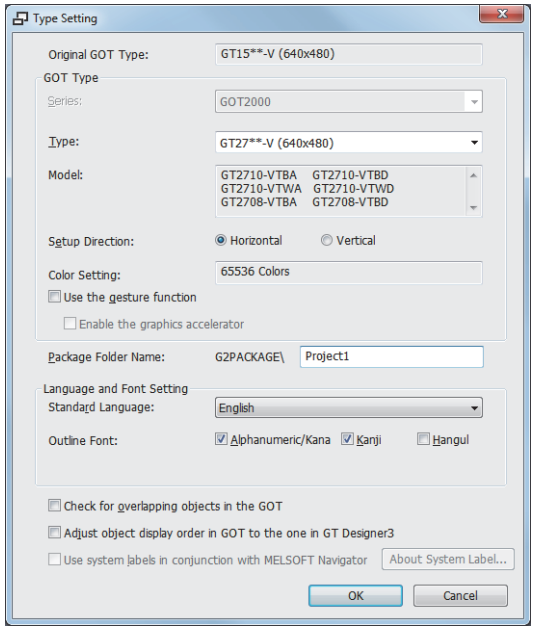


Step 3 Select the editing method of the project and click the [OK] button.

- [Start GT Designer3 (GOT1000) and edit the GOT1000 data as is]
  GT Designer3 (GOT1000) is started then the project is opened.
- [Convert the project to GOT2000 data and edit it in GT Designer3 (GOT2000)]
  A project is converted to the GOT2000 equivalent.
  The [GOT Type Setting] dialog appears.
  Proceed to the step 4.

Step 4 Set the GOT type that the project belongs to after the conversion and click the [OK] button. The project is converted then opens.

➟5.1.5 [Type Setting] dialog



Step 5 The conversion operation is listed in the [Output] window.

➟5.1.6 [Output] window

■3 Opening a project for GOT900

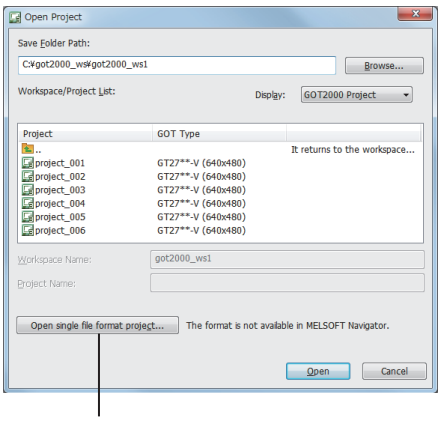
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Open] from the menu to display the [Open Project] dialog.

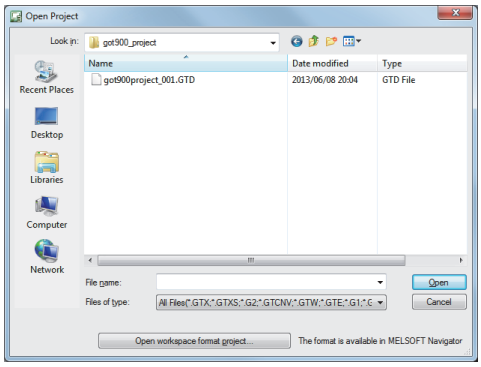
When the [Open Project] dialog (workspace format) appears, switch the dialog to the [Open Project] dialog (single file format).

➟■5 [Open Project] dialog (single file format)

[Open Project] dialog (workspace format)

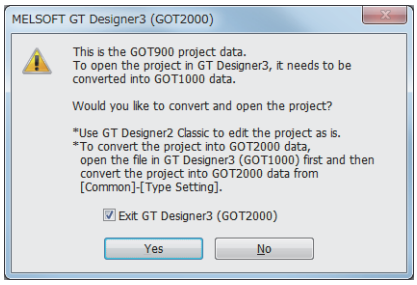


[Open Project] dialog (single file format)



Switching to the [Open Project] dialog (single file format)

Step 2 In the [Open Project] dialog (single file format), select the project , and then click the [Open] button to display the following dialog.

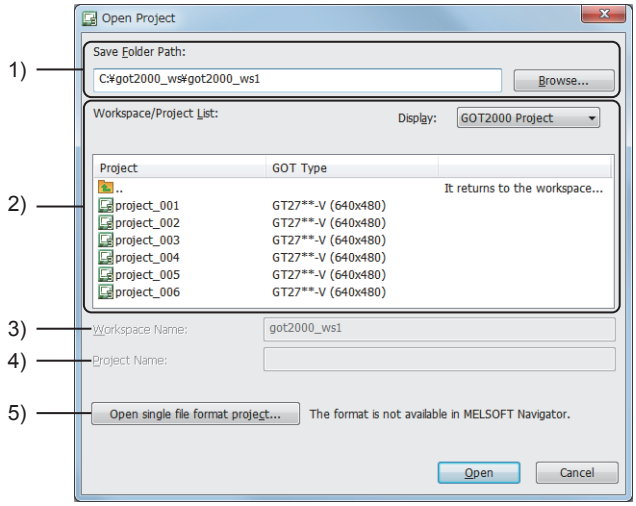


Step 3 Click the [Yes] button to switch the screen design software to GT Designer3 (GOT1000).

Convert the project into the GOT1000 equivalent by using GT Designer3 (GOT1000).

■4 [Open Project] dialog (workspace format)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Save Folder Path]**
Set the destination path to save the project.
The path can be set from the [Browse] button.

2) **[Workspace/Project List]**
The workspaces and projects in the path set in the [Save Folder Path] are displayed.
If a workspace is double-clicked, the projects in the workspace are displayed.
If the [Open] button is clicked, a selected project opens.

Item	Description
[Display]	Select the target projects to be displayed in [Workspace/Project List]. • [All Folder]: Displays GOT2000 projects and GOT1000 projects. • [GOT2000 Project]: Displays GOT2000 projects. • [GOT1000 Project]: Displays GOT1000 projects.

3) **[Workspace Name]**
Displays the workspace name selected in [Workspace/Project List].

4) **[Project Name]**
Displays the project name selected in [Workspace/Project List].
Up to 200 characters can be used for the total number of the characters of [Save Folder Path], [Workspace Name], and [Project Name].
"\" at the end of the project name is not counted as a character.

5) **[Open single file format project] button**
Switches the dialog to the [Open Project] dialog (single file format).

➟■5 [Open Project] dialog (single file format)

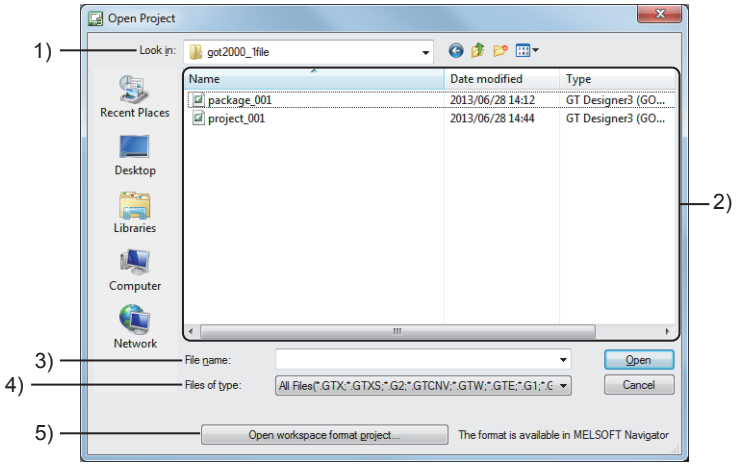
Point

Project not displayed in [Workspace/Project List]
The following workspace and project are not displayed in [Workspace/Project List].
- Workspace that does not have the workspace management file
- Project that does not have the project management file
- Workspace that has not been registered to the workspace management file
- Project that has not been registered to the workspace management file

Do not operate (migrate, rename, or delete) the folders or files in the workspace by using Windows Explorer or others.
Otherwise, the states listed above and thus they cannot be opened.

■5 [Open Project] dialog (single file format)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Look in]**
Select a location where the project has been saved.

2) **File list**
Lists the files saved in the location specified in [Look in].

3) **[File name]**
Input the file name of the project to be opened.
Click the [Open] button to open the project having the input file name.

4) **[Files of type]**
Select the file type of the files to be displayed in the file list.
- [All file (*.GTX;*.GTXS;*.G2;*.GTCNV;*.GTW;*.GTE;*.G1;*.GTD)]
- [GOT2000 File (*.GTX;*GTXS;*.G2;*.GTCNV)]
- [GOT1000 File (*.GTW;*.GTE;*.G1)]
- [GOT900 File (*.GTD)]

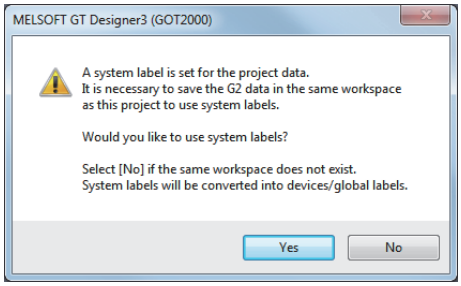
5) **[Open workspace format project] button**
Switches the dialog to the [Open Project] dialog (workspace format).
➟■4 [Open Project] dialog (workspace format)

Point

Opening a single file format project (*.G2) in which a system label has been set

When a single file format project (*.G2) is opened, the system label set in the project cannot be used if the project in the original workspace format does not exist.
If the project in the original workspace format does not exist, save the project with the G2 format as the workspace format with the following procedure.

Step 1 Use GT Designer3 to open a G2 format project in which a system label is set. The following dialog appears.



Step 2 Click the [Yes] button.
Step 3 Select [Project] → [Save as] from the menu and save the G2 format project in the original workspace.

You can use the system label properly.

2.3.3 Closing a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Project] → [Close] from the menu to close the project.
When GT Designer3 is started from MELSOFT Navigator, [Close] cannot be selected from the menu.

2.3.4 Deleting a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Deleting a workspace format project
■2 Deleting a single file format project

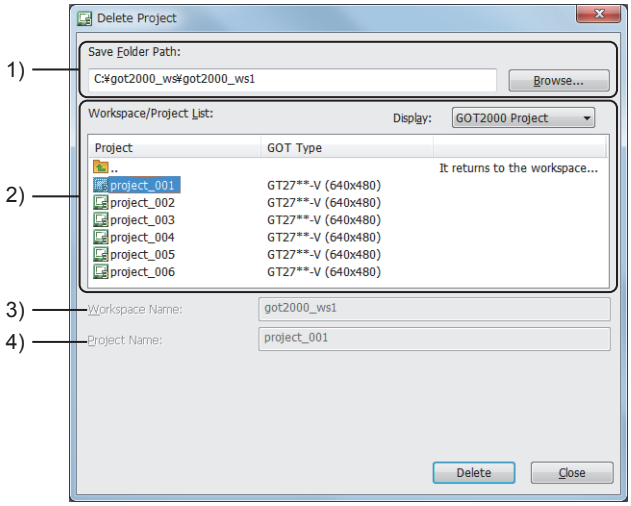
■1 Deleting a workspace format project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Delete] from the menu to display the [Delete Project] dialog.

Step 2 Select a project to be deleted from [Workspace/Project List] and click the [Delete] button. The selected project is deleted.

(1) [Delete Project] dialog



1) **[Save Folder Path]**
Set the destination path to save the project.
The path can be set from the [Browse] button.

2) **[Workspace/Project List]**
The workspaces and projects in the path set in the [Save Folder Path] are displayed.
If a workspace is double-clicked, the projects in the workspace are displayed.
Click the [Delete] button to delete the selected project.

Item	Description
[Display]	Select the target projects to be displayed in [Workspace/Project List]. The following shows the items to be selected. • [GOT2000 Project] • [GOT1000 Project]

3) **[Workspace Name]**
Displays the workspace name selected in [Workspace/Project List].

4) **[Project Name]**
Displays the project name selected in [Workspace/Project List].

■2 Deleting a single file format project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Delete files of the project using Windows Explorer or other methods.

2.3.5 Giving a title to a project

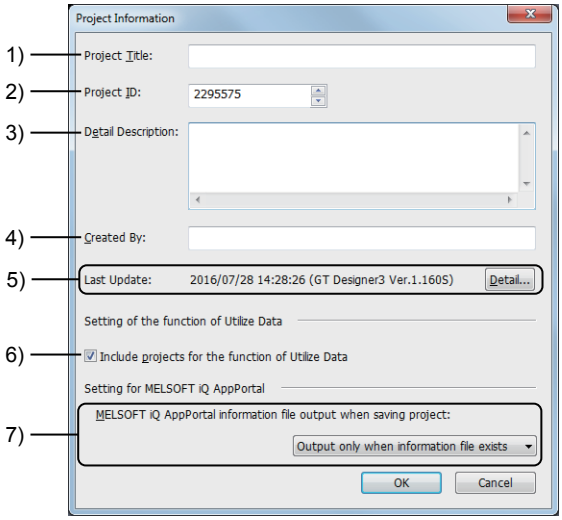
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set a title, a creator's name, and other information for a project.

Step 1 Select [Project] → [Project Information] from the menu to display the [Project Information] dialog.

Step 2 Set each item, and then click the [OK] button to complete the settings.

■1 [Project Information] dialog



1) **[Project Title]**
Set the title for the project.
Up to 32 characters can be set.

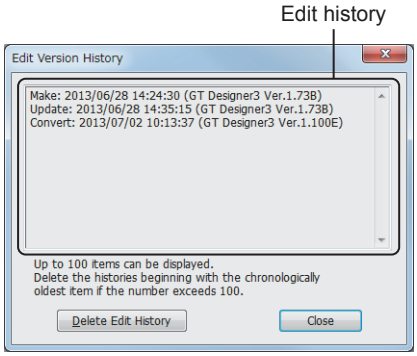
2) **[Project ID]**
Set a project ID.
A project ID is automatically given to the project when a project is created.
The setting range is [1] to [4294967295].

3) **[Detailed Description]**
Set text information for the project.
Up to 512 characters can be set.
A line feed is counted as two characters.

4) **[Created By]**
Set the creator's name of the project.
Up to 64 characters can be set.

5) **[Last Update]**
Displays the latest date and time at which the project was saved and the GT Designer3 version.

Click the [Detail] button to display the [Edit Version History] dialog.



- **Edit history**
  The edit history of the project is displayed.
- **[Delete Edit History] button**
  Deletes the edit history.

6) **[Include projects for the function of Utilize Data]**

Enables the following.

- The current project is included in the search targets for creating a project based on another project.
- The display of screen images in the [Screen Image List] window or [Screen Image List] dialog is sped up.

7) **[MELSOFT iQ AppPortal information file output when saving project]**

Select the setting to output a MELSOFT iQ AppPortal information file when a workspace format project or a single file format project (*.GTX or *.GTXS) is saved.

The following shows the items to be selected.

- [Always output]
  Outputs a MELSOFT iQ AppPortal information file each time the project is saved.
- [Output only when information file exists]
  Overwrites an existing MELSOFT iQ AppPortal information file when the project is saved.
- [Not output (delete information file)]
  Does not output a MELSOFT iQ AppPortal information file when the project is saved.
  Deletes an existing MELSOFT iQ AppPortal information file.

For the details of MELSOFT iQ AppPortal, refer to the following.

➟iQ AppPortal Operating Manual

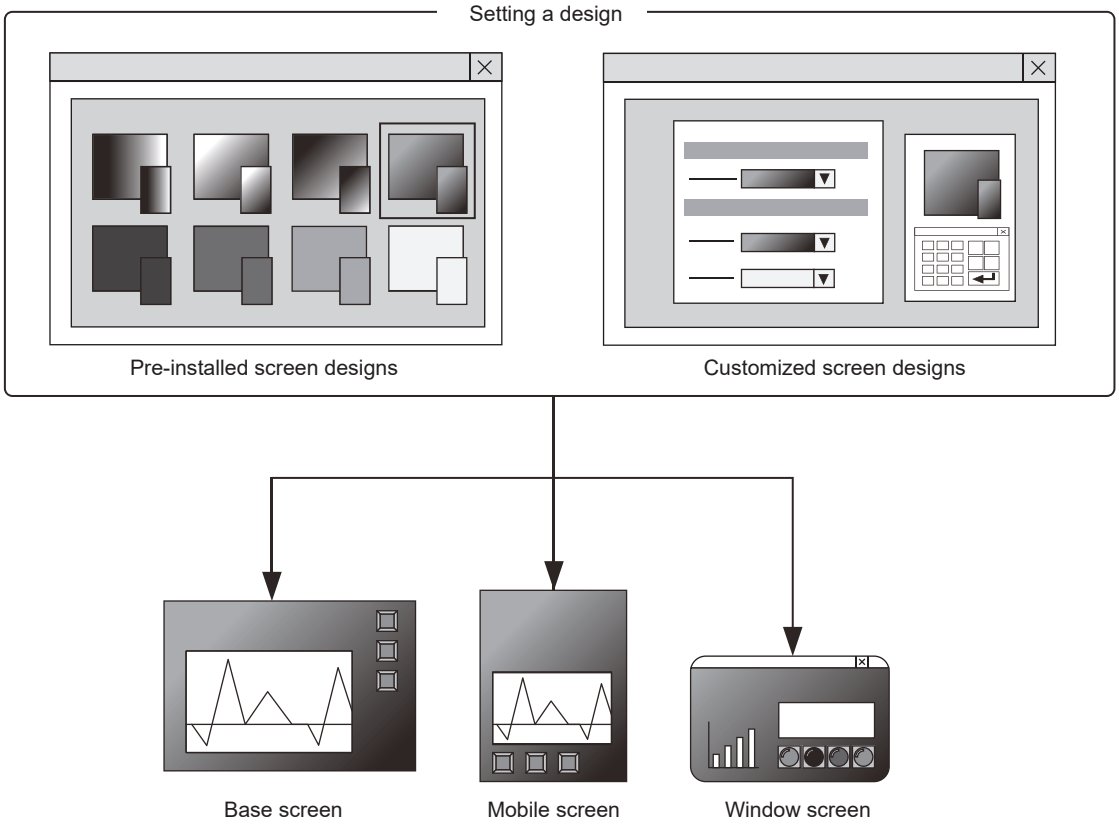
2.4 Setting a Screen Design

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can collectively configure the settings such as the background color for base screens, windows screens, and mobile screens of a screen design.

The following settings are available for a screen design.

- Pre-installed screen designs
  Select one of the screen designs pre-installed in GT Designer3.
  You can easily set a screen design without paying attention to the setting items.
- Customized screen designs
  Customize a screen design.
  You can customize the background color, design of window screens, and other settings of a screen design selected from the pre-installed screen designs.



A screen design is composed of the following settings.

Screen	Setting item
Base screen	• Background color • Gradation • Pattern
Window screen	• Background color • Gradation • Pattern • Transparency • Screen contours • Radius • Window design • Shadow
Mobile screen	• Background color • Gradation • Pattern

2.4.1 Selecting a screen design

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the following locations, select a screen design that is applied to all target screens in the project.

- New project wizard

  ➟2.3.1 ■1 Using the wizard

- [Screen Design] dialog

  ➟■1 Changing the screen design of all screens

To customize the screen design of each screen, configure the settings in the [Screen Property] dialog.

➟■2 Customizing the screen design for each screen

■1 Changing the screen design of all screens

A newly selected screen design is applied to all base screens, window screens, and mobile screens in the project.

➟(1) Selecting a pre-installed screen design
(2) Customizing a screen design

(1) Selecting a pre-installed screen design

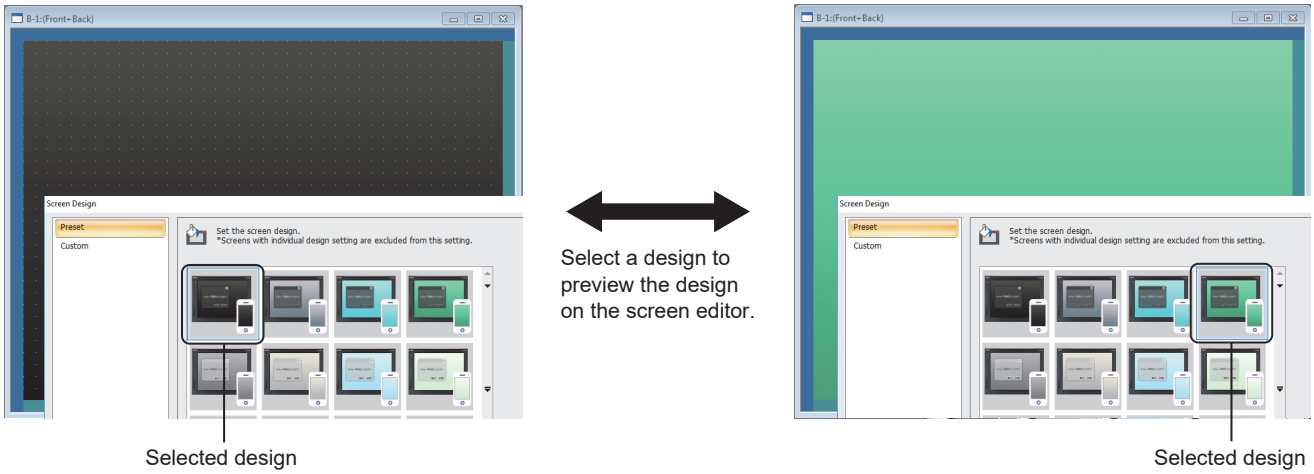
The following shows how to set a screen design when [Preset] is selected in the [Screen Design] dialog.

Step 1 Select [Screen] → [Screen Design] from the menu to display the [Screen Design] dialog.

➟2.4.3 [Screen Design] dialog

Step 2 Select a design from the design list to preview the selected design on the screen editor.

Step 3 Click the [OK] button to apply the design to all target screens.



(2) Customizing a screen design

The following shows how to set a screen design when [Custom] is selected in the [Screen Design] dialog.

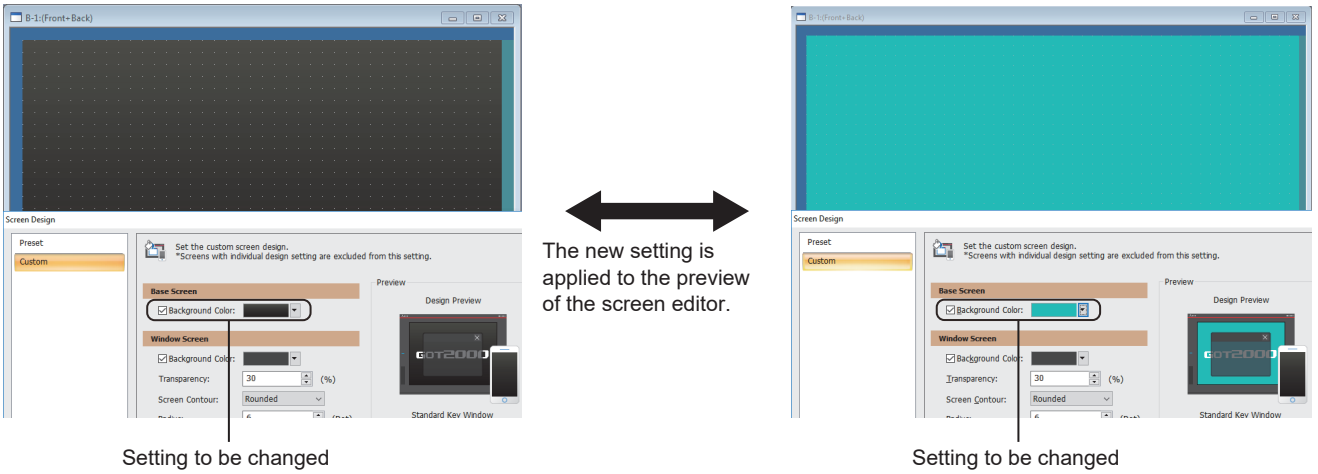
Step 1 Select [Screen] → [Screen Design] from the menu to display the [Screen Design] dialog.

➟2.4.3 [Screen Design] dialog

Step 2 Select [Custom], and change each setting.

The change is applied to the preview of the screen editor.

Step 3 Click the [OK] button to apply the design to all target screens.



■2 Customizing the screen design for each screen

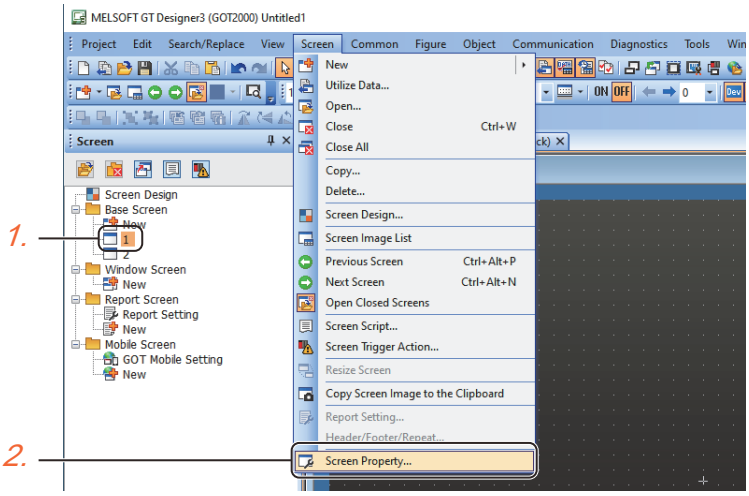
Customize the screen design for each screen in the [Screen Property] dialog.
For the [Screen Property] dialog for each screen type, refer to the following.

➟2.7.1 Property of base screens
2.7.2 Properties of window screens
10.19.7 Mobile screen properties

The following shows the procedure for setting an individual screen design for base screen 1 as an example.

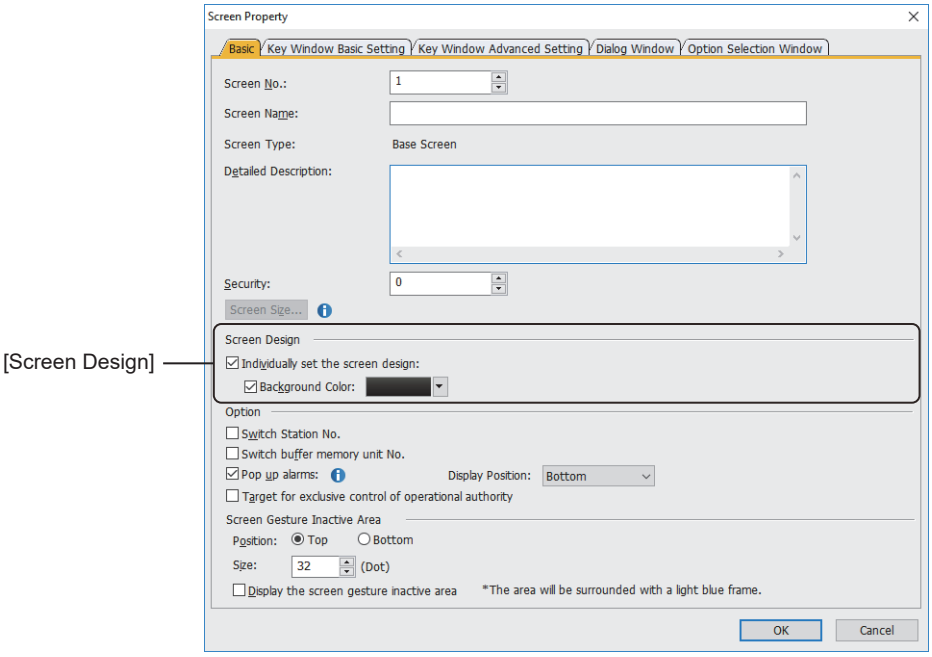
Step 1 Select base screen 1.

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog.



Step 3 Select [Individually set the screen design] to enable the individual screen design setting.

Step 4 Set [Screen Design] and click the [OK] button to apply the setting to base screen 1.



2.4.2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for drawing

(1) Project for which project security is set

When editing the project is prohibited, you cannot perform the following operations.

- Changing the screen designs in the [Screen Design] dialog
- Pasting a copied screen design

(2) Behavior when the [Reflect the setting in all screens] button is clicked

The specified design is not applied to the screens satisfying all the following conditions.

- Editing a screen is prohibited by the project security.
- [Individually set the screen design] is selected in the [Screen Property] dialog.

■2 Precautions for use

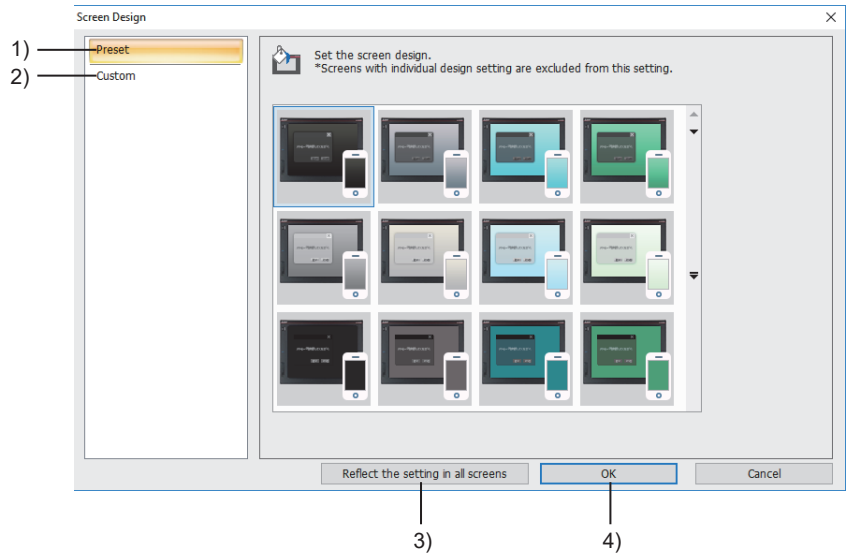
(1) Display of a screen with a gradient background on the GOT

As the screen display method differs between the GOT and a personal computer, a screen with a gradient background may look different on the GOT.

2.4.3 [Screen Design] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Screen] → [Screen Design] from the menu to display the [Screen Design] dialog.
The set design is applied to all base screens, window screens, and mobile screens in the project.
The screen design setting is saved when the project is saved.
The saved screen design setting is retained upon exit from GT Designer3 and applied at the next GT Designer3 startup.



1) [Preset]
Displays screen designs.
Select a design.

➟■1 [Preset]

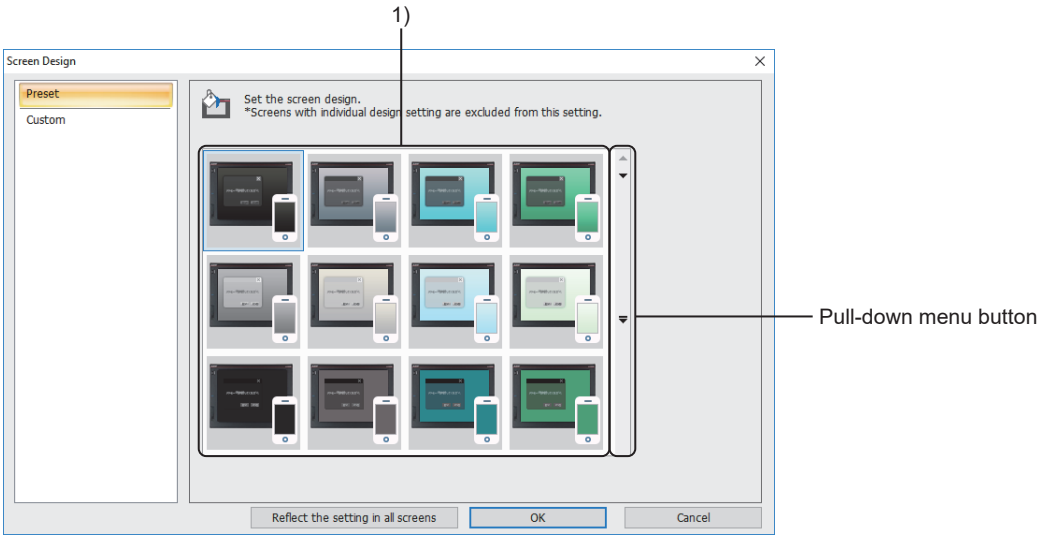
2) [Custom]
Displays customizable settings for base screens, window screens, and mobile screens.
Customize the settings of the screen design selected from the pre-installed screen designs.

➟■2 [Custom]

3) [Reflect the setting in all screens] button
Applies the set design to all screens.
The design is also applied to a screen for which [Individually set the screen design] is selected in the [Screen Property] dialog.
Upon the application of the design, [Individually set the screen design] is deselected in the [Screen Property] dialog.
After clicking this button, you cannot restore the screens to their former design.

4) [OK] button
Applies the set design to all screens.
The design is not applied to a screen for which [Individually set the screen design] is selected in the [Screen Property] dialog.

■1 [Preset]

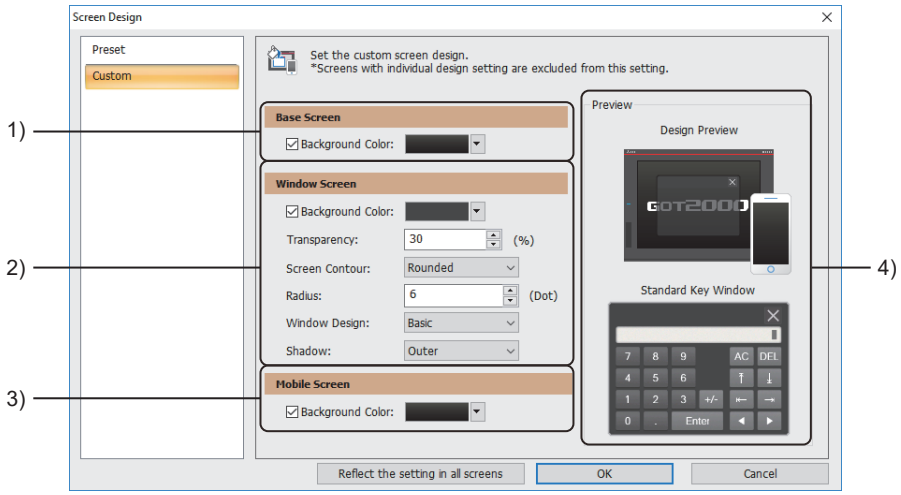


1) Design list
Select a screen design.
Click the pull-down menu button to display all designs.
The selectable designs differ depending on the selection for [Graphics Setting] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

■2 [Custom]

Customize the settings for base screens, window screens, and mobile screens.
Customize the background color, transparency, and other settings based on the screen design setting selected in [Preset].
Customizable setting items vary according to the screen type.
When you select a screen design in [Preset] while changing the settings in [Custom], the changes in [Custom] are canceled and the screen design selected in [Preset] is set.



1) [Base Screen]
Select a background color for base screens.
For the color setting, refer to the following.

➟6.4.2 Color settings

2) [Window Screen]
Set the design for window screens.

Item	Description
[Background Color]	Select a background color. For the color setting, refer to the following. ➟6.4.2 Color settings

Item	Description
[Transparency]	**GOT Graphic Ver.2** Set the transparency of the window screen. The setting range is [0]% to [100]%.
[Screen Contour]	**GOT Graphic Ver.2** Set the contours of the window screen. The following shows the items to be selected. • [Rectangle] • [Rounded]
[Radius]	**GOT Graphic Ver.2** When [Rounded] is selected for [Screen Contour], set the circle radius. The setting range is [0] to [599]. The radius may be adjusted automatically depending on the size of the window screen.
[Window Design]	**GOT Graphic Ver.2** Set a design for the title bar of window screens and the standard key window. The following shows the items to be selected. • [Basic] • [Stylish] • [Dark Tone Flat] • [Light Tone Flat] • [Classic]
[Shadow]	**GOT Graphic Ver.2** Set a shadow to window screens and the standard key window. The following shows the items to be selected. • [Outer] • [Bottom Right] • [None]

3) [Mobile Screen]
Select a background color for mobile screens.
For the color setting, refer to the following.

➟6.4.2 Color settings

4) [Preview]
Previews a base screen, window screen, mobile screen, and standard key window.

2.5 Creating, Opening, and Closing a Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟2.5.1 Creating a screen
2.5.2 Opening and closing screens

2.5.1 Creating a screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to create a screen.

- Creating a screen
  Create a base screen, window screen, or report screen.

➟■1 Creating a base screen
■2 Creating a window screen
■3 Creating a report screen

  Create a mobile screen.

➟10.19.7 Mobile screen properties

  You can create a window screen to be displayed on the GOT as a dialog window efficiently by using the wizard.

➟■4 Creating a window screen for a dialog window

- Creating a screen utilizing a saved project
  Search sample projects and saved projects for a screen to be utilized with keywords.
  You can create a screen efficiently by utilizing.

➟11.1 Searching for Utilizable Data (Utilize Data)

Point

Editing a project for which project security is set

If a login user has access on which project editing is banned, the user cannot create any screen.

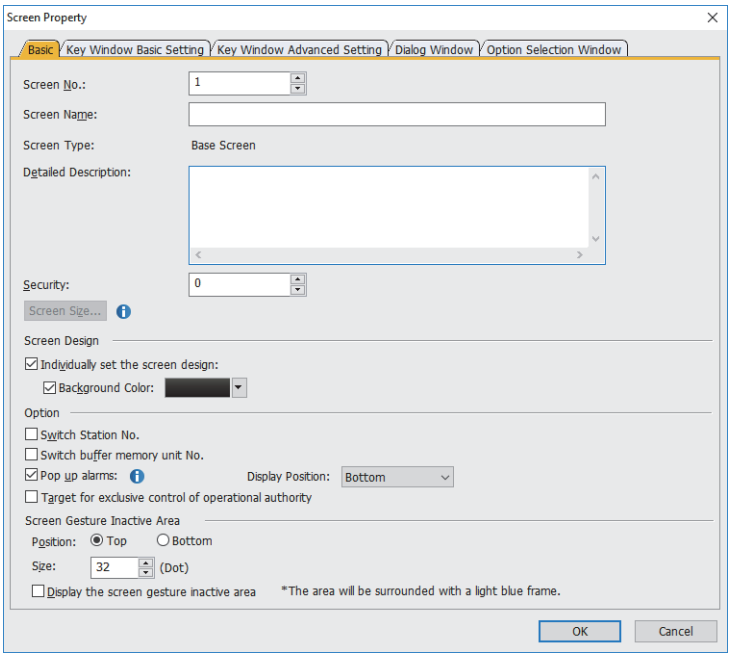
➟2.13 Protecting a Project by Registering Users

■1 Creating a base screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Either of the following operations displays the [Screen Property] dialog.

- Select [Screen] → [New] → [Base Screen] from the menu.
- Double-click [Base Screen] → [New] on the tree in the [Screen] window.



Step 2 Click the [OK] button after the required settings.

➟2.7.1 Property of base screens

Step 3 A base screen is created and a screen editor appears on the work window.

Point

How to expand the base screen size

For GT27, GT25, and GS25, you can create base screens that are larger than the GOT screen by enabling the base screen size expansion.

For details on the base screen size expansion, refer to the following.

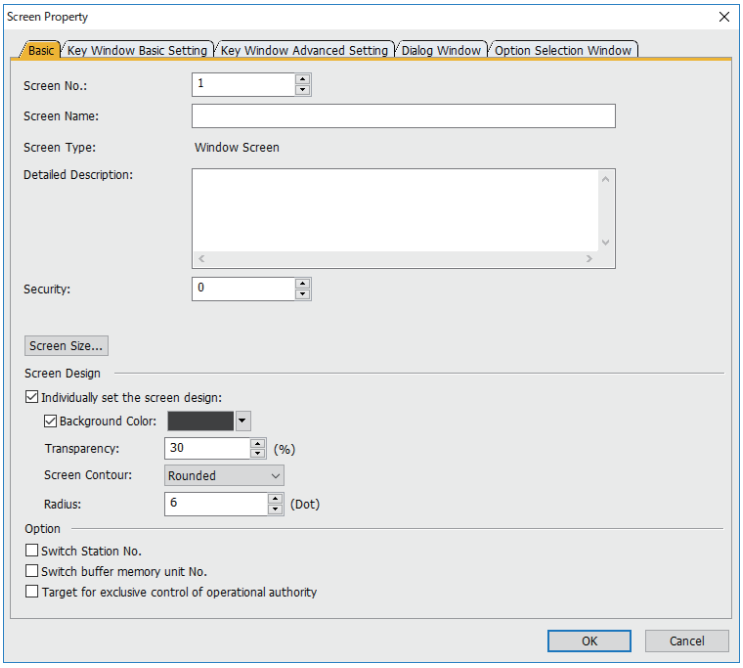
➟5.1.3 Base screen size expansion ([Expand base screen sizes])

■2 Creating a window screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Either of the following operations displays the [Screen Property] dialog.

- Select [Screen] → [New] → [Window Screen] from the menu.
- Double-click [Window Screen] → [New] on the tree in the [Screen] window.



Step 2 Click the [OK] button after the required settings.

➟2.7.2 Properties of window screens

Step 3 A window screen is created and a screen editor appears on the work window.

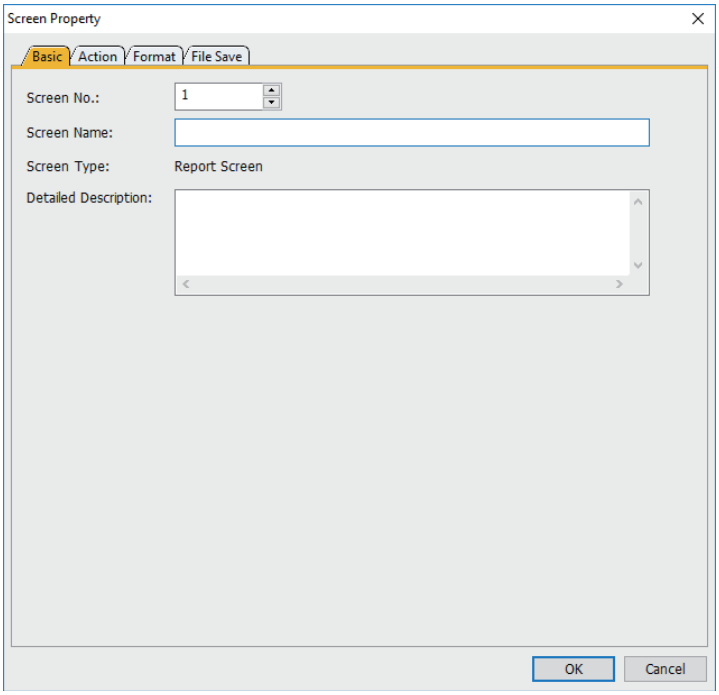
■3 Creating a report screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

Step 1 Either of the following operations displays the [Screen Property] dialog.

- Select [Screen] → [New] → [Report Screen] from the menu.
- Double-click [Report Screen] → [New] on the tree in the [Screen] window.



Step 2 Click the [OK] button after the required settings.

➟2.7.3 Property of report screens

Step 3 A report screen is created and a screen editor appears on the work window.

■4 Creating a window screen for a dialog window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Screen] → [New] → [Dialog Window Wizard] to display the [Dialog Window Wizard] dialog.

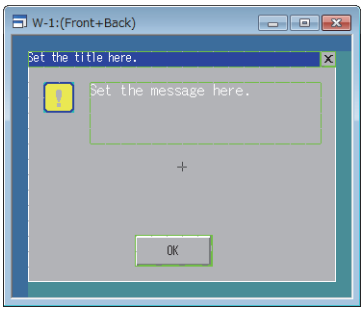
➟(1) [Dialog Window Wizard] dialog

Step 2 Click the [OK] button after the required settings.

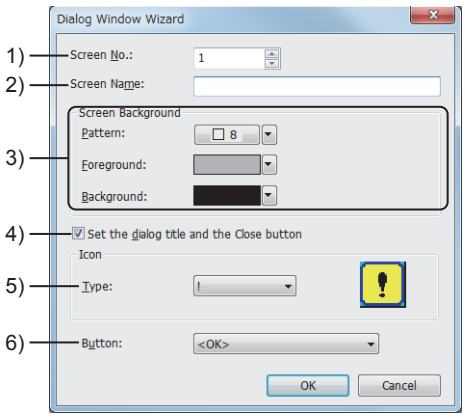
Step 3 A window screen is created and a screen editor appears on the work window.

Example)

- [Set the dialog title and the Close button]: selected
- [Type]: [!]
- [Button]: [Yes or No]



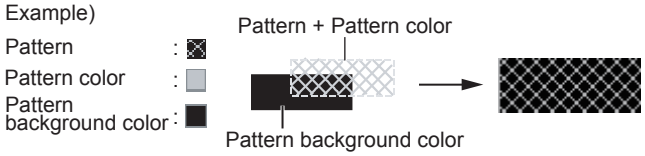
(1) [Dialog Window Wizard] dialog



1) **[Screen No.]**
Set a screen number.
The setting range is [1] to [32767].

2) **[Title]**
Set the title of the screen.
Up to 32 characters can be set.

3) **[Screen Background]**
Select a pattern, pattern color, and pattern background color of the screen.
The pattern is displayed over the background color.



4) **[Set the dialog title and the Close button]**
Select this item to arrange the dialog title and a close button on the window screen.

5) **[Type]**
Select an icon to be arranged on the window screen.
When an icon is selected, the image of the icon is displayed on the [Dialog Window Wizard] dialog.

6) **[Button]**
Select the type of a button to be arranged on the window screen.

■5 Searching a screen to be utilized

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Search sample projects and saved projects for a screen to be utilized with keywords.
You can create a screen efficiently by utilizing.

➟11.1 Searching for Utilizable Data (Utilize Data)

2.5.2 Opening and closing screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Opening screens
■2 Closing screens

■1 Opening screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Opening screens from the [Screen] window
(2) Opening screens from the [Screen Image List] window
(3) Opening screens from the menu

Up to 25 screens can be opened.
A number smaller than 25 can be set as the maximum number of screens that can be opened.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

Point

Project for which project security is set

When project security is set for each screen, displaying or editing screens is disabled according to the access level set for each screen.

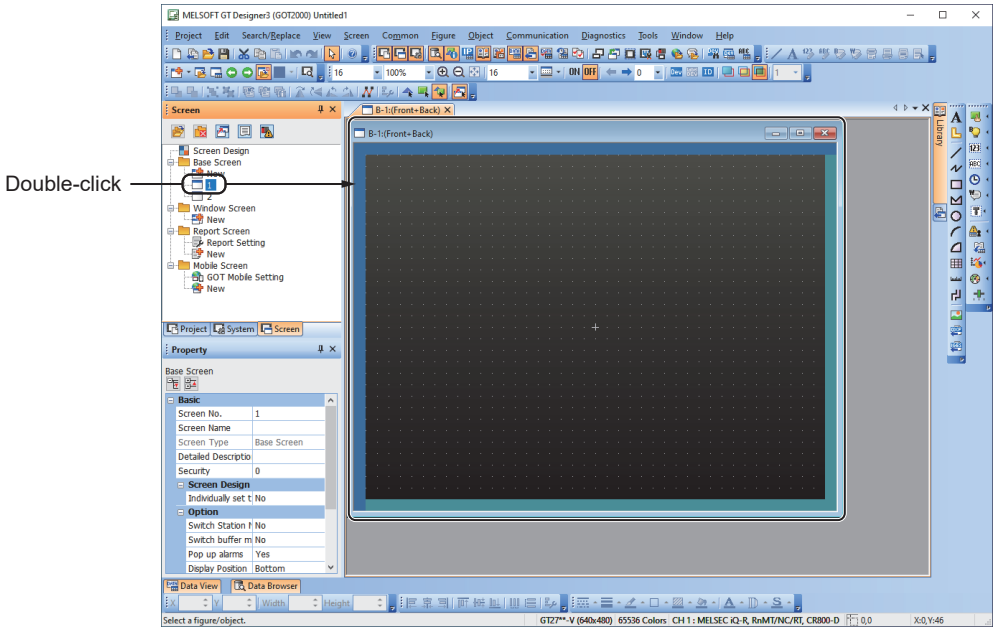
➟2.13 Protecting a Project by Registering Users

(1) Opening screens from the [Screen] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

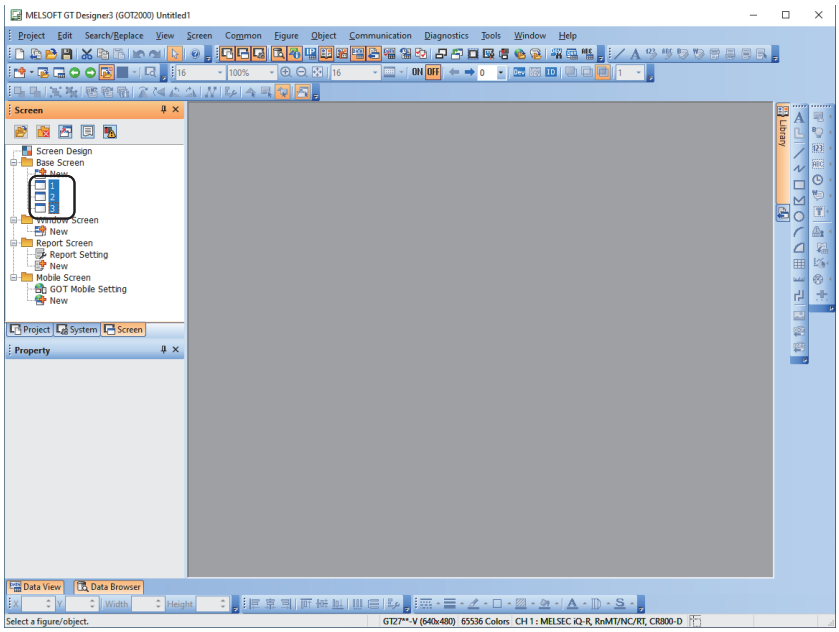
(a) Opening screens one by one

Double-click the screen to be opened on the [Screen] window to display a screen editor on the work window.



(b) Opening multiple screens simultaneously

Step 1 Select multiple screens to be opened while pressing the [Ctrl] or [Shift] key.



Step 2 Either of the following operations displays a screen editor on the work window.

- Press the [Enter] key.
- Right-click on the selected screen and select [Open] from the menu.

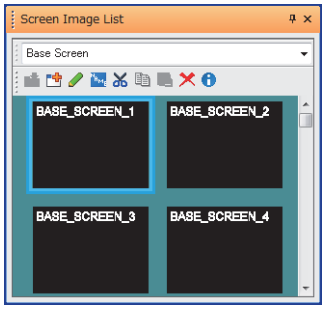
(2) Opening screens from the [Screen Image List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Base screens, window screens, and mobile screens are displayable from the [Screen Image List] window.

Step 1 Select [Display] → [Docking Window] → [Screen Image List] from the menu to display the [Screen Image List] window.

➟2.8.1 [Screen Image List] window



Step 2 Double-click the image of a screen to be opened to display a screen editor on the work window.

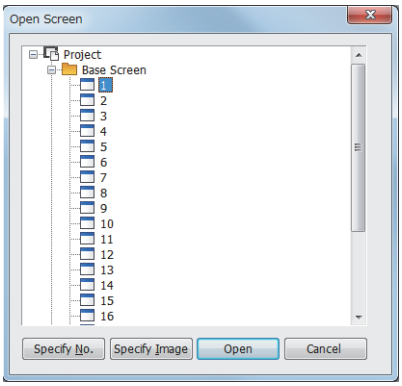
(3) Opening screens from the menu

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

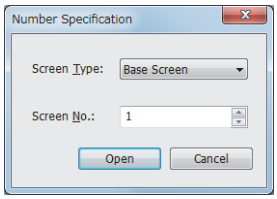
(a) Opening a screen specifying the screen number

Step 1 Select [Screen] → [Open] from the menu to display the [Open Screen] dialog.

➟■3 [Open Screen] dialog



Step 2 Click the [Number Specification] button to display the [Number Specification] dialog.

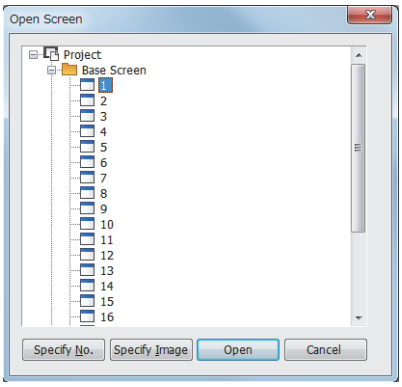


Step 3 Set [Screen Type] and [Screen No.] then click the [Open] button to display a screen editor on the work window.

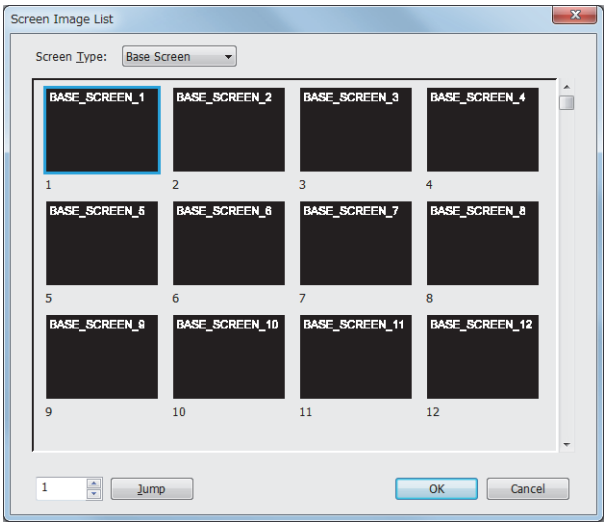
(b) Opening a screen checking the corresponding screen image

Step 1 Select [Screen] → [Open] from the menu to display the [Open Screen] dialog.

➟■3 [Open Screen] dialog



Step 2 Click the [Specify Image] button to display the [Screen Image List] dialog.



Step 3 Select a screen and click the [OK] button to display a screen editor on the work window.

■2 Closing screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Closing a single screen

Either of the following operations closes a screen being edited.

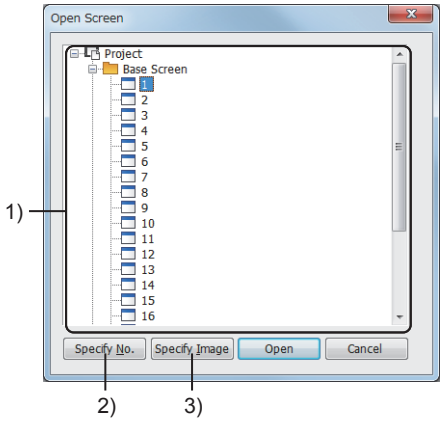
- Select [Screen] → [Close] from the menu.
- Click the [×] button on the title bar on the screen editor.

(2) Closing all screens

Select [Screen] → [Close All] from the menu to close all screens.

■3 [Open Screen] dialog

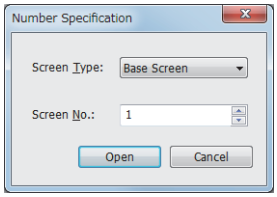
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **List of screens**
Lists the created base screens, window screens, report screens, and mobile screens.

2) **[Number Specification] button**
Displays the [Number Specification] dialog.

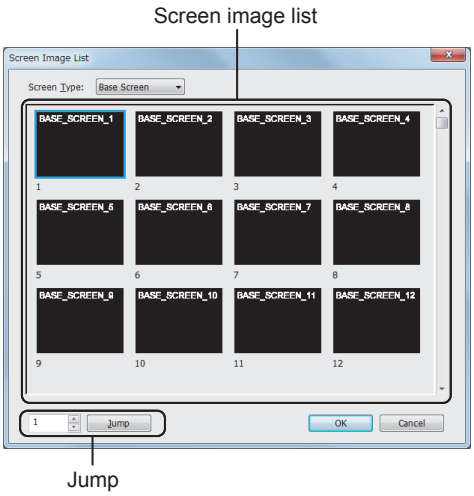
Specify a screen number to open the corresponding screen.



- **[Screen Type]**
  Select the type of a screen to be opened.
- **[Screen No.]**
  Set the screen number of a screen to be opened.

3) **[Specify Image] button**

Displays the [Screen Image List] dialog.
You can open a screen by selecting the corresponding screen image.

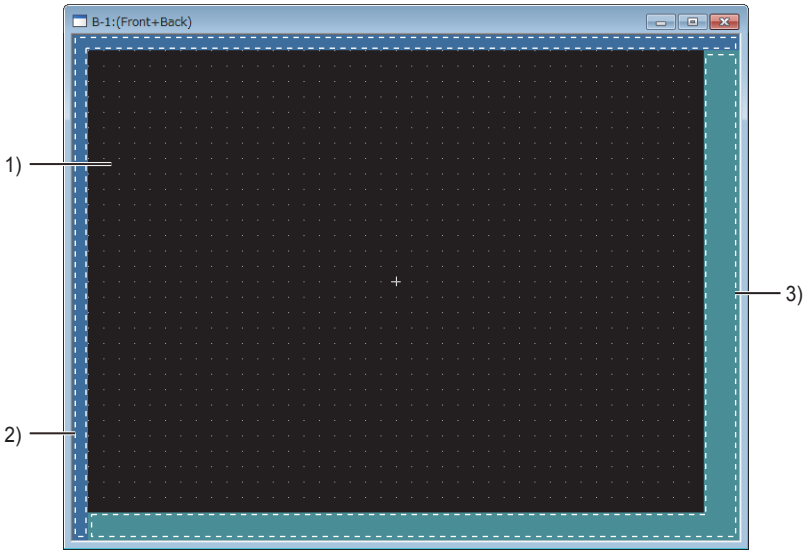


- **[Screen Type]**
  Select the type of a screen to be opened.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

2.6 Basic Operations of the Drawing Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the layout of the screen editor.



1) **Screen display area**
This area is displayed on the GOT.
Figures and objects can be arranged on this area.
The [+] sign indicates the center of the screen.
On an expanded base screen with its base point at the upper left corner, this sign indicates the center of the GOT screen.

2) **Blank area**
This area is not displayed on the GOT.
Figures and objects cannot be arranged on this area.

3) **Temporary area**
This area is not displayed on the GOT.
Figures and objects can be temporarily arranged on this area.
The data size of a screen includes the size of the figures and objects arranged on the temporary area.
Before writing package data to the GOT, delete the figures and objects on the temporary area.
The size of the temporary area depends on the screen type.
- Base screen or mobile screen: 3000 dots × 3000 dots
- Window screen, parts editor, or library editor: 2000 dots × 1600 dots
- Report screen: 2048 dots × 2048 dots

The following operations are available for up to 2000 dots × 1600 dots of figures and objects placed on base screens or mobile screens.
- Copying a figure or object to a window screen, parts editor, or library editor
- Registering a figure or object as a part
- Registering a figure or object to the library

For how to arrange and set figures and objects, refer to the following.

➟6.5 Placing and Editing Figures and Objects

For the operations of the screen editor, refer to the following.

➟2.6.1 Selecting a screen editor to be edited
2.6.2 Switching the display status of objects to be displayed on the screen editor
2.6.3 Redisplaying a selected screen editor
2.6.4 Setting information to be displayed on the screen editor
2.6.5 Displaying the grid
2.6.6 Displaying the two-point press inactive area
2.6.7 Displaying the scroll bar areas for editing the expanded base screens

2.6.8 Switching the layer display
2.6.9 Displaying guidelines
2.6.10 Scaling the size of items on the screen editor
2.6.11 Cascading or arranging open screen editors
2.6.12 Copying the image of a screen editor to the clip board

■1 How a figure and an object arranged on the boundary between areas are dealt with.

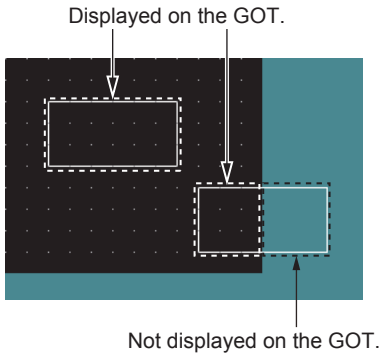
To display a figure and an object on the GOT, arrange them in the screen display area.
Perform a data check to check if some figures or objects have a part extending to the temporary area.

➟2.11 Performing a Data Check

When figures or objects are arranged on the boundary between the screen display area and temporary area, they are displayed on the GOT as described below.

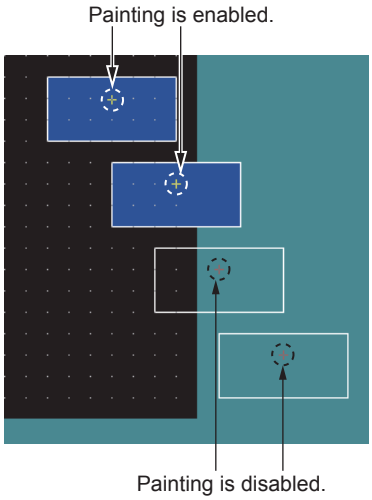
(1) How a figure is displayed

The GOT displays only the part that lies in the screen display area.



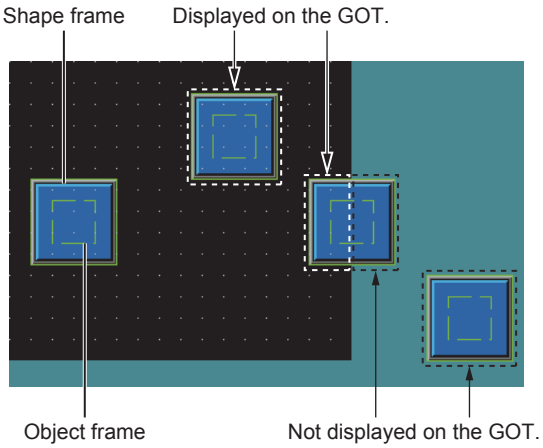
(2) How the paint on a figure is displayed

Only when a paint mark is placed in the screen display area, the marked figure is painted.



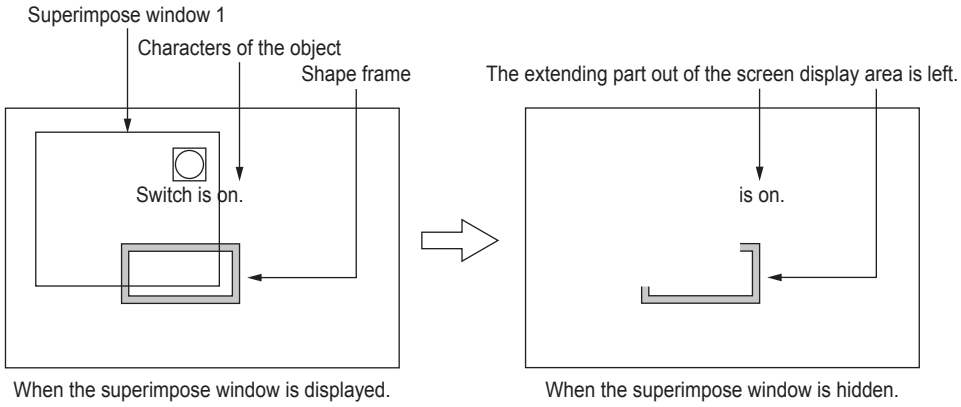
(3) How an object is displayed

The GOT displays only the part that lies in the screen display area.
If the object frame is in the screen display area, it can be displayed on the GOT.



(4) How a superimpose window is displayed

When a window, on which an arranged figure or object extends to the temporary area, is displayed as a superimpose window on the GOT, the extending part is displayed on the GOT.
When the superimpose window is hidden, the extending part is left on the base screen.
Switching the base screen updates the screen to remove the left extending part.



2.6.1 Selecting a screen editor to be edited

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To select a screen editor to be edited, click any part of the screen editor displayed on the work window.
The selected screen editor is displayed at the topmost position.
When multiple screen editors are displayed, the followings are more useful.

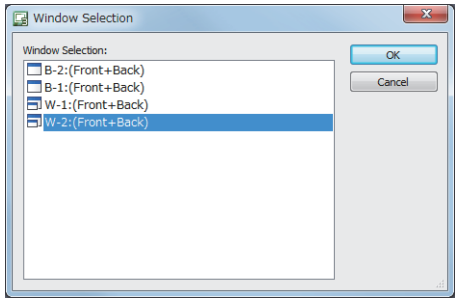
■1 Selecting a screen editor with the editor tab

Select a screen editor with the editor tab to display the selected editor at the topmost position.

➡2.2.3 Editor tab, work window

■2 Selecting a screen editor in the [Window Selection] dialog

Step 1 Select [Window] → [Select Windows] from the menu to display the [Window Selection] dialog.



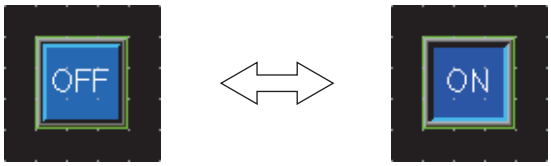
Step 2 Select a screen editor to be edited and click the [OK] button to display the selected editor at the topmost position.

2.6.2 Switching the display status of objects to be displayed on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Switching the display status between ON and OFF

Select [View] → [ON/OFF Display Switching] from the menu to switch between the on status image and off status image of each object on the screen editor.
If a condition is set to an object, the image of the object switches between OFF with the condition No.0 and ON with the condition No.1.



■2 Switching the display status by specifying the state No.

Select [View] → [State No.] → [Previous State] or [Next State] from the menu to switch between displaying and hiding the objects on the screen editor according to the state No.
If the display status of an object is switched between ON and OFF, the display of the object switches between OFF with state No.0 and ON with state No.1 or more.

State No.0 State No.1 State No.2 State No.63

2.6.3 Redisplaying a selected screen editor

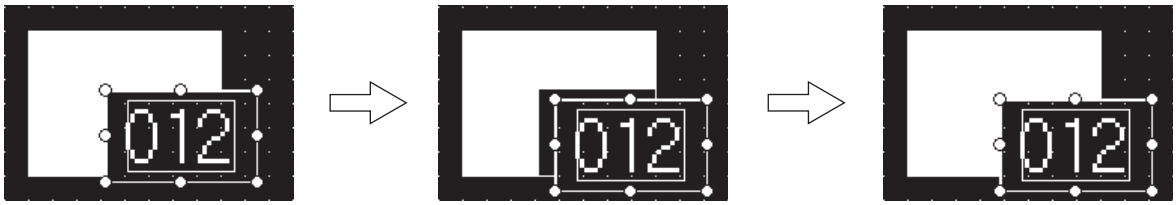
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When the paint is used for a figure, a part of the figure may be left unpainted.
To display the screen correctly, redisplay the screen editor.

Step 1 Select a screen editor to be redisplayed.

Step 2 Select [View] → [Refresh] from the menu to redisplay the selected screen editor.

Example) When an object on a painted figure is moved



An object on a painted figure is moved.

Some area remains unpainted on the figure.

To redisplay the object, select [Display] → [Refresh] from the menu.

2.6.4 Setting information to be displayed on the screen editor

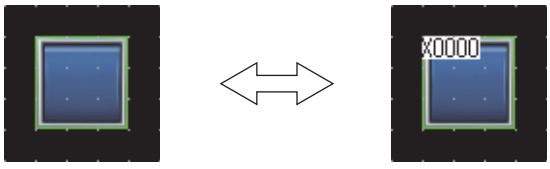
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can switch between displaying and hiding the following items on the screen editor.

- Device
- Device of label (device assigned to a system label or a label (GT Designer3))
- Object ID
- Paint
- Object
- Object frame
- Template information
- Touch area
- Frame

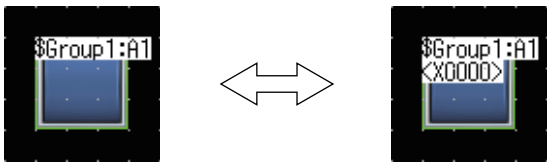
■1 [Device]

Select [View] → [Display Items] → [Device] from the menu to display or hide devices on the screen editor.



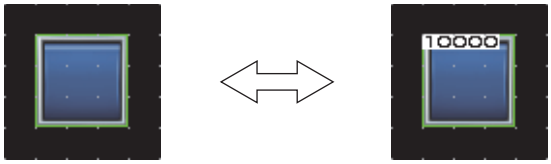
■2 [Device of Label]

Select [View] → [Display Items] → [Device of Label] from the menu to display or hide the devices assigned to system labels and labels (GT Designer3) on the screen editor.



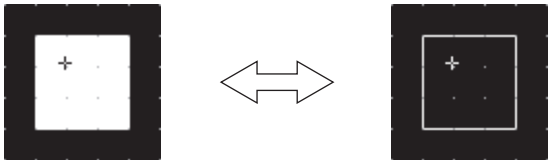
■3 [Object ID]

Select [View] → [Display Items] → [Object ID] from the menu to display or hide object IDs on the screen editor.
The object ID is displayed only for objects.



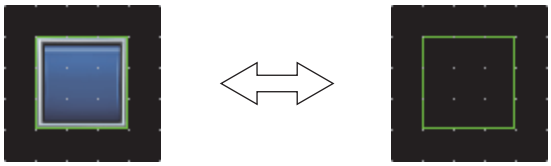
■4 [Paint]

Select [View] → [Display Items] → [Paint] from the menu to display or hide paints on the screen editor.



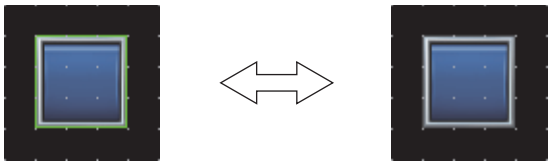
■5 [Object]

Select [View] → [Display Items] → [Object] from the menu to display or hide objects on the screen editor.



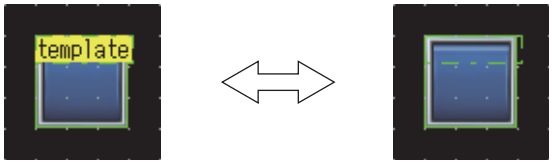
■6 [Object Frame]

Select [View] → [Display Items] → [Object Frame] from the menu to display or hide object frames on the screen editor.



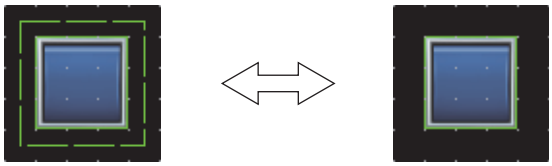
■7 [Template Information]

Select [View] → [Display Items] → [Template Information] from the menu to display or hide the template information on the screen editor.



■8 [Touch Area]

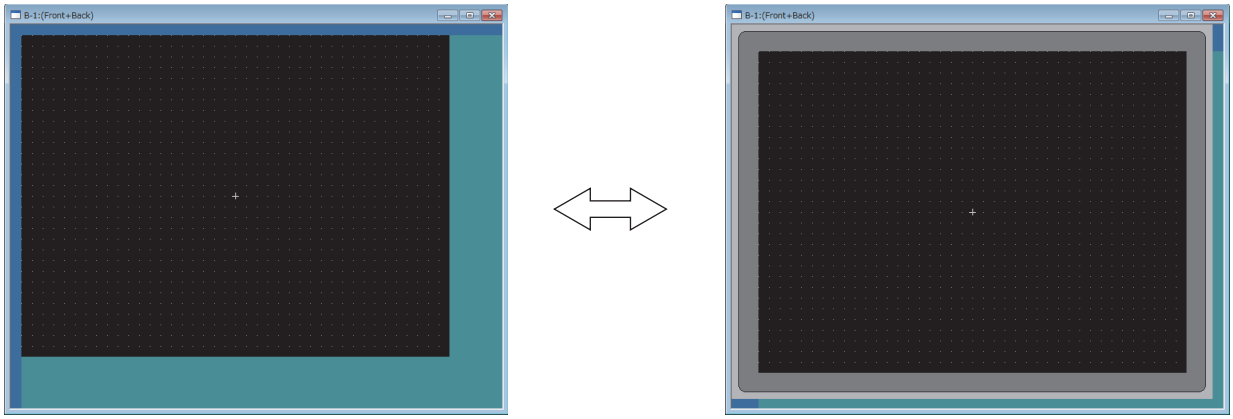
Select [View] → [Display Items] → [Touch area] from the menu to display or hide the touch area on the screen editor.



■9 [Frame]

The item is not displayed for expanded base screens.

Select [View] → [Display Items] → [Frame] from the menu to display or hide the GOT frame on the screen editor.



■10 [Option]

Select [View] → [Display Items] → [Option] from the menu to display the [Option] dialog.

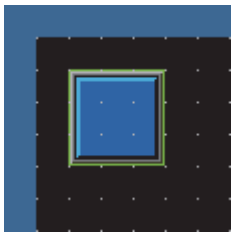
In this dialog, you can configure the settings displayed on the screen editor.

➟11.10.5 ■1 [Options] dialog ([View] tab)

2.6.5 Displaying the grid

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can display the screen editor with equally-spaced points (a grid) which give an indication to arrange figures and objects.
Select [View] → [Grid] → [Front], [Back], or [None] from the menu to display or hide the grid on the screen editor.



[Front]

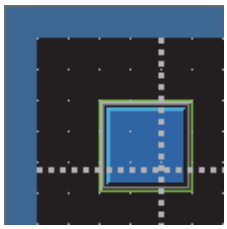
[Back]

[None]

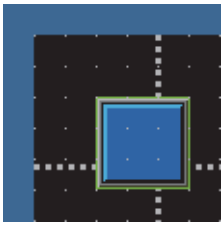
2.6.6 Displaying the two-point press inactive area

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

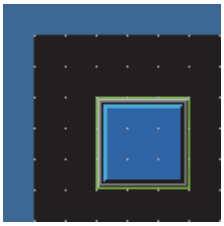
You can display the two-point press inactive area on the screen editor.
The item is not displayed for expanded base screens.
Select [View] → [Two-point Press Inactive Area] → [Front], [Back], or [None] from the menu to display or hide the two-point press inactive area on the screen editor.



[Front]



[Back]



[None]

To enable the two-point touch on the GOT, the touched points must be in different two-point press inactive areas.
Place the points for the two-point touch in different two-point press inactive areas.

➟8.2.3 ■2 (1) Simultaneous 2-point press

2.6.7 Displaying the scroll bar areas for editing the expanded base screens

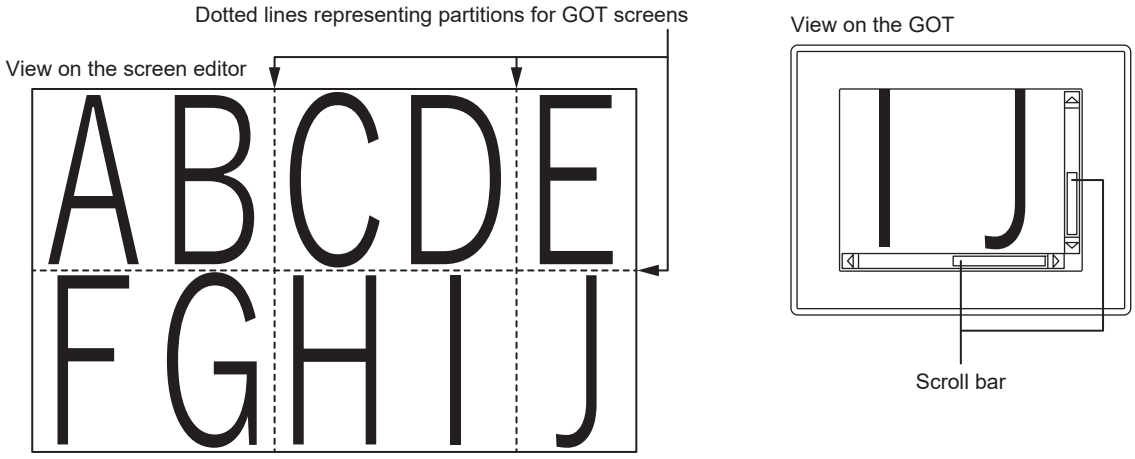
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.2

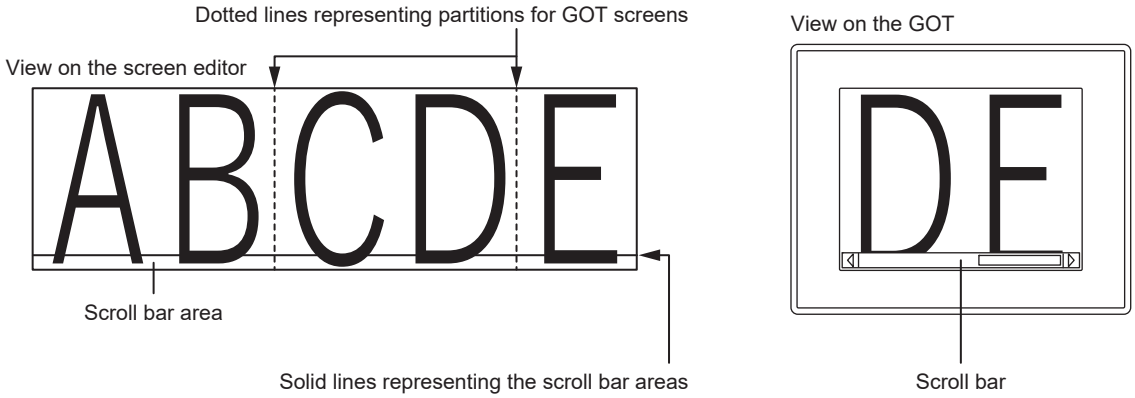
The following lines are displayable on screen editors.

Line type	Description
Solid line	Appears when either the vertical or horizontal size of the base screen is larger than the vertical or horizontal size of the GOT screen. Represents the areas of the scroll bars to appear on the GOT. Appears 40 dots from the right or bottom edge of the screen display area. Place figures and objects so that they do not overlap the scroll bar areas.
Dotted line	Represents a partition for one GOT screen. Represents partitions for multiple GOT screens. The lines are usable as guidelines to specify the size of a base screen to an integral multiple of the GOT screen size.

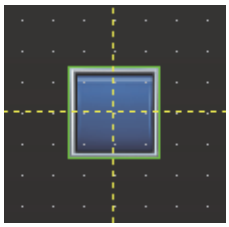
Example) Displaying an expanded base screen (1600 × 960) on GT27-V (640 × 480)
The scroll bar areas are not displayed because the base screen is vertically and horizontally expanded.



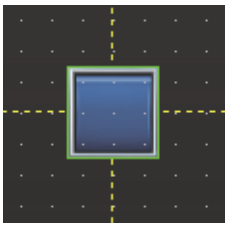
Example) Displaying an expanded base screen (1600 × 480) on GT27-V (640 × 480)
A solid line representing the scroll bar area is displayed in the lower part of the base screen because the screen is horizontally expanded.
A scroll bar appears in the scroll bar area when the base screen is displayed on the GOT.



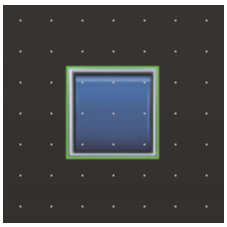
Select [View] → [Scroll Bar Area] → [Front], [Back], or [None] from the menu to display or hide the lines on the screen editors.



[Front]



[Back]



[None]

In the following cases, no scroll bar is displayed on the GOT, and no lines representing the scroll bar areas and partitions for GOT screens are displayed on the screen editors.

- The base screen is smaller than the GOT screen.
- The scroll bars are set to be hidden.

For details on the base screen size expansion, refer to the following.

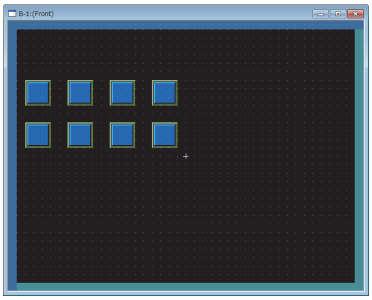
➟5.1.3 Base screen size expansion ([Expand base screen sizes])

2.6.8 Switching the layer display

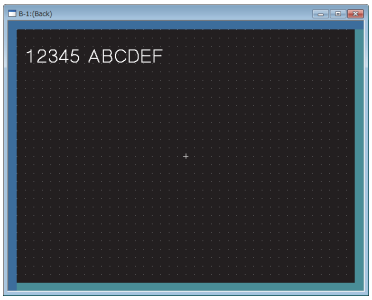
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [View] → [Layer] → [All screens], [Front], [Back], or [Front+Back] from the menu to switch the layers to be displayed.

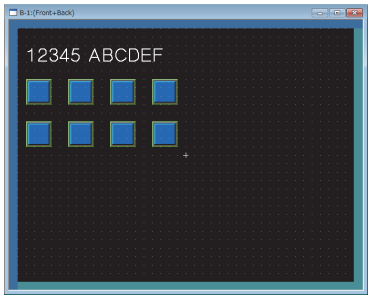
- [All screens]
  Switches between all screen editors and individual screen editor as the target for the layer switching.
- [Front], [Back], [Front+Back]
  Switches the layers to be displayed.



[Front]



[Back]

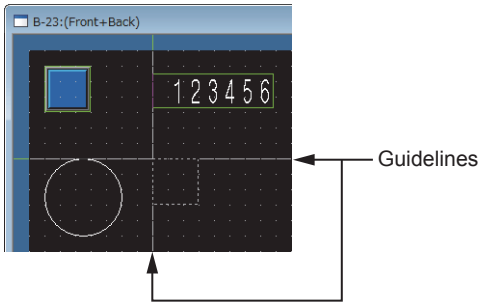


[Front and Back]

2.6.9 Displaying guidelines

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When moving a figure or object, you can display guidelines to indicate a position relation between other figures and objects.



Select [View] → [Guidelines (auxiliary line)] → [Display], [Shape], [Object], [Shape+Object], [Same Type], or [Custom] from the menu to change the display of guidelines.

- [Display]
  Displays or hides guidelines.
- [Figure]
  Displays guidelines in relation to existing figures.
- [Object]
  Displays guidelines in relation to existing objects.
- [Figure and Object]
  Displays guidelines in relation to existing figures and objects.
- [Same Type]
  Displays guidelines in relation to the same type of existing figures or objects as those being moved.
- [Custom]
  [Displays the Guidelines (auxiliary line)] dialog.
  You can customize guidelines such as where they are displayed.

➟■1 [Guidelines (auxiliary line) setting] dialog

Point

(1) **Guidelines displayed for grouped figures or objects**

When you group figures or objects, the guidelines are displayed for the figure or object group.

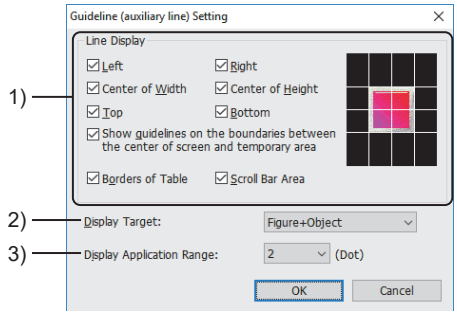
(2) **Cases in which guidelines are not displayed**

Guidelines are not displayed in the following cases.

- In the touch area of a touch switch
- When performing operations with a keyboard

■1 [Guidelines (auxiliary line) setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

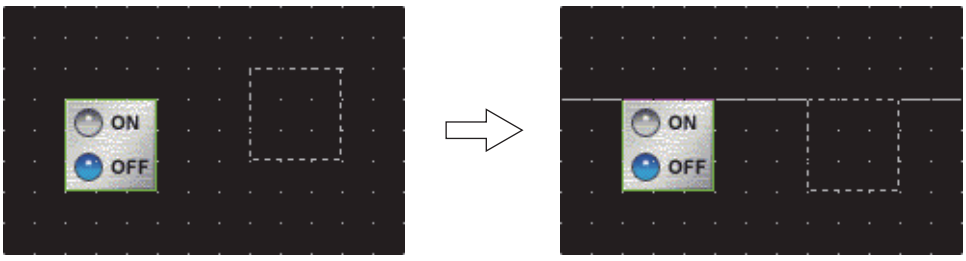


1) **[Line Display]**
Set where to display guidelines.

Item	Description
[Left], [Right], [Center of Width], [Center of Height], [Up], [Down]	Set the position of guidelines displayed on a figure or an object being moved. Select each item to display the image of corresponding guideline in the [Guidelines (auxiliary line)] dialog.
[Show guidelines on the boundaries between the center of screen and temporary area]	Displays the guidelines at the center of the screen ([+]) and the boundary of the temporary area.
[Borders of Table]	Displays the guidelines for table borders.
[Scroll Bar Area]	Displays the guidelines for the following items on the expanded base screens. • Solid lines representing the scroll bar areas • Dotted lines representing partitions for GOT screens

2) **[Display Target]**
Select targets for guidelines.
- [Figure]
  Displays guidelines in relation to existing figures.
- [Object]
  Displays guidelines in relation to existing objects.
- [Figure and Object]
  Displays guidelines in relation to existing figures and objects.
- [Same Type]
  Displays guidelines in relation to the same type of existing figures or objects as those being selected.

3) **[Display Application Range]**
A figure or object can be automatically in alignment with an existing figure or object. Select the distance (in dot) between a figure/object to be moved and existing figures/objects.
The available value is [0], [2], [4], and [8].
Moving an existing figure or object while pressing the [Alt] key disables the setting for [Display Application Range].
Example) Correcting a vertical position
- [Display Application Range]: [8]
  Drag the figure or object, which should be vertically aligned, within 8 dots from the target for the alignment. Doing so horizontally aligns the figure or object being moved with the target figure or object.



Before correction (away more than 8 dots) After correction (moved within 8 dots)

2.6.10 Scaling the size of items on the screen editor

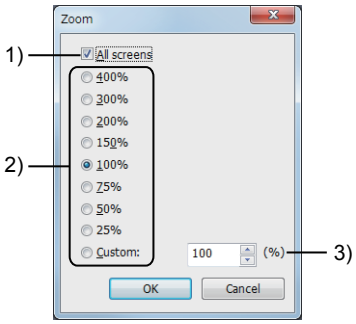
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [View] → [Zoom] → one of the following items from the menu to change the display magnification of the screen editor.

- [All Screens]
  Applies a specified display magnification to all screen editors.
- [400%], [300%], [200%], [150%], [100%], [75%], [50%], [25%]
  Changes the display magnification of the screen editor to the selected magnification.
- [Custom]
  Displays the [Zoom] dialog.
  The display magnification of the screen editor is customizable.
  ➟■1 [Zoom] dialog
- [Whole Screen]
  Resizes the screen display area of the screen editor according to the editor window size.
  This item is not selectable when [All Screens] is selected.

■1 [Zoom] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

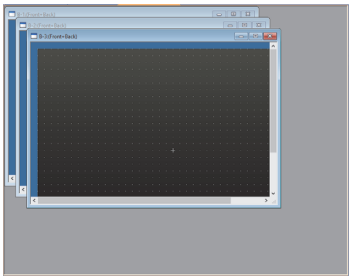


1) **[All screens]**
   Applies the display magnification setting to all screen editors.
2) **Display magnification**
   Select the display magnification of a selected screen editor.
3) **Custom magnification**
   Specify the display magnification in units of 1%.
   The setting range is [25] to [400].

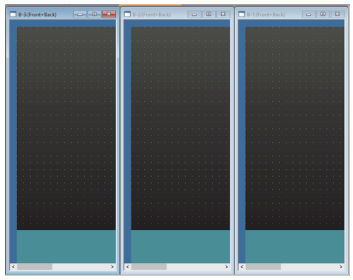
2.6.11 Cascading or arranging open screen editors

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

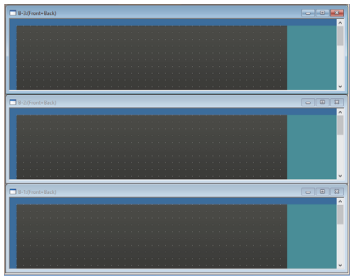
Select [Window] → [Cascade], [Arrange Sideways], or [Arrange Lengthways] from the menu to cascade or arrange screen editors and windows which are displayed on the work window.



[Cascade]



[Arrange Sideways]



[Arrange Lengthways]

2.6.12 Copying the image of a screen editor to the clip board

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Screen] → [Copy Screen Image to the Clipboard] from the menu to copy the image of a screen editor being edited to the clip board.
Only the image within the screen display area is copied.

2.7 Changing Screen Property

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can change the screen properties including the screen number, background color, and the key window setting that can be enabled per screen.

➟2.7.1 Property of base screens
2.7.2 Properties of window screens
2.7.3 Property of report screens

For information on how to set the mobile screen properties, refer to the following.

➟10.19.7 Mobile screen properties

2.7.1 Property of base screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 By either of the following operations, select a base screen whose screen property is to be changed.

- Clicking any part of the screen editor
- Selecting a screen in the [Screen] window

(If you select multiple screens with the [Ctrl] key or [Shift] key, you can change the properties of the screens at a time.)

➟2.2.4 ■3 [Screen] window

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog (for base screen).

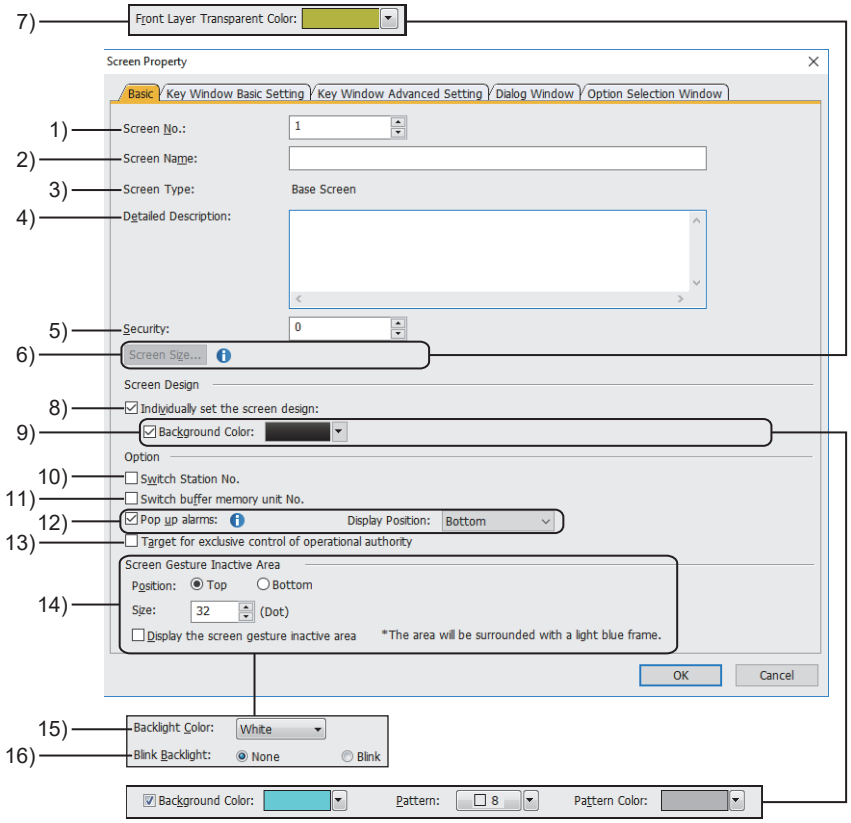
➟■1 [Basic] tab
■2 [Key Window Basic Setting] tab
■3 [Key Window Advanced Setting] tab
■4 [Dialog Window] tab
■5 [Option Selection Window] tab

Step 3 Click the [OK] button after the required settings to reflect the setting.

When you select multiple screens in the [Screen] tree, the settings are reflected to all the selected screens.

■1 [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Screen No.]**
Set a screen number.
The setting range is [0] to [32767].
If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

2) **[Title]**
Set the title of the screen.
Up to 32 characters can be set.

3) **[Screen Type]**
Displays the screen type.

4) **[Detailed Description]**
Set the explanation for the screen.
Up to 512 characters can be set.
A line feed is counted as two characters.

5) **[Security]**
Set the security level.
The setting range is [0] to [15].
If you do not use the security function of the GOT, select [0].

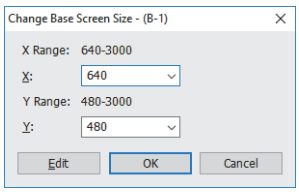
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

6) **[Screen Size] button**
Available to GT27, GT25, and GS25.

GOT Graphic Ver.2

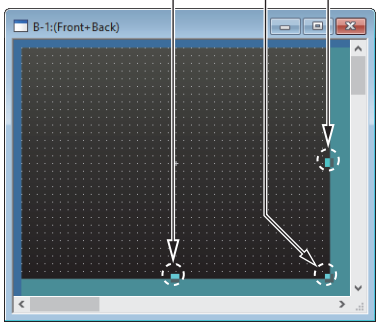
This item is available when [Expand base screen sizes] is selected in [Basic Setting] in the [Type Setting] dialog.
The [Change Base Screen Size] dialog appears.

You can enter values to change the base screen size.



- [X Range]
  Setting range of the horizontal size
- [X]
  Set the horizontal size (dot).
- [Y Range]
  Setting range of the vertical size
- [Y]
  Set the vertical size (dot).
- [Edit] button
  This button is not displayed when the screen is newly created.
  Changes the size of window screens on the screen editor.

Drag the handles to change the screen size.



Change the screen size and click any part other than the handles to confirm the change.

7) **[Front Layer Transparent]**
Not available to GT21 and GS21.

GOT Graphic Ver.1

Set the transparent color of the object arranged on the front layer.

➟6.5.5 ■3 (2) Using layers

The parts of the objects whose colors are set to the transparent color become transparent, and the back layer can be seen through them.

➟6.4.2 Color settings

8) **[Individually set the screen design]**
Enables the individual screen design (including the background color), instead of the design selected in the [Screen Design] dialog.

9) **[Background Color]**

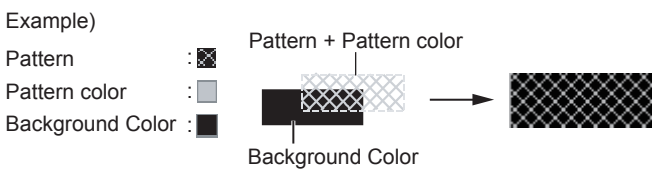
GOT Graphic Ver.2

Select a background color.
For the color setting, refer to the following.

➟6.4.2 Color settings

GOT Graphic Ver.1

Select a background color, pattern, and pattern color for the screen.
The pattern is displayed on the background color.



For the color setting, refer to the following.

➟6.4.2 Color settings

10) **[Switch Station No.]**
Enables the station No. switching by screen.

➟5.5.4 Configuring the settings for switching the target station No. for monitoring

11) **[Switch buffer memory unit No.]**

Enables the buffer memory unit No. switching by screen.

➟5.5.5 Configuring the settings for switching the buffer memory unit No. of the monitoring target

12) **[Pop up alarms]**

An alarm pops up when an alarm occurs.

Item	Description
[Display Position]	Select the position to display an alarm to be popped up. The following shows the items to be selected. • [Up] • [Center] • [Down]

Configure the following settings additionally.

• User alarm settings or system alarm settings

➟9.1.2 ■7 [User Alarm Observation] dialog
9.1.3 ■5 [System Alarm Observation] dialog

• Alarm popup display setting

➟9.1.4 ■4 [Alarm Popup Display] dialog

13) **[Target for exclusive control of operational authority]**

Not available to GT21 and GS21.

Enables the authorization control for the base screen.

➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

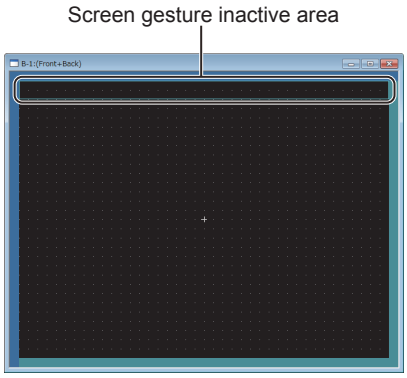
14) **[Screen Gesture Inactive Area]**

Only available to GT27.

This item is not available when [Expand base screen sizes] is selected in [Basic Setting] in the [Type Setting] dialog.

Set an area (screen gesture inactive area) where object operations are enabled even in the screen gesture mode.

➟11.12.1 ■1 Screen gesture mode

Item	Description
[Position]	Select a position to arrange the screen gesture inactive area. The following shows the items to be selected. • [Top]: Specifies the area from the top edge of the base screen to the position specified with [Size]. • [Bottom]: Specifies the area from the bottom edge of the base screen to the position specified with [Size].
[Size]	Set the height of the screen gesture inactive area. The setting range is [16] dots to [100] dots.
[Display the screen gesture inactive area]	Displays the box indicating the screen gesture inactive area on the screen editor. Arrange the switch for switching to the screen gesture mode in the screen gesture inactive area. ➟11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function) 

15) **[Backlight Color]**

Only available to GT21-P.

Set whether to blink the backlight.

The following shows the items to be selected.

• [White]

• [Green]

- [Red]
- [Pink]
- [Orange]

16) **[Blink Backlight]**

Only available to GT21-P.

The following shows the items to be selected.

- [None]
- [Blink]

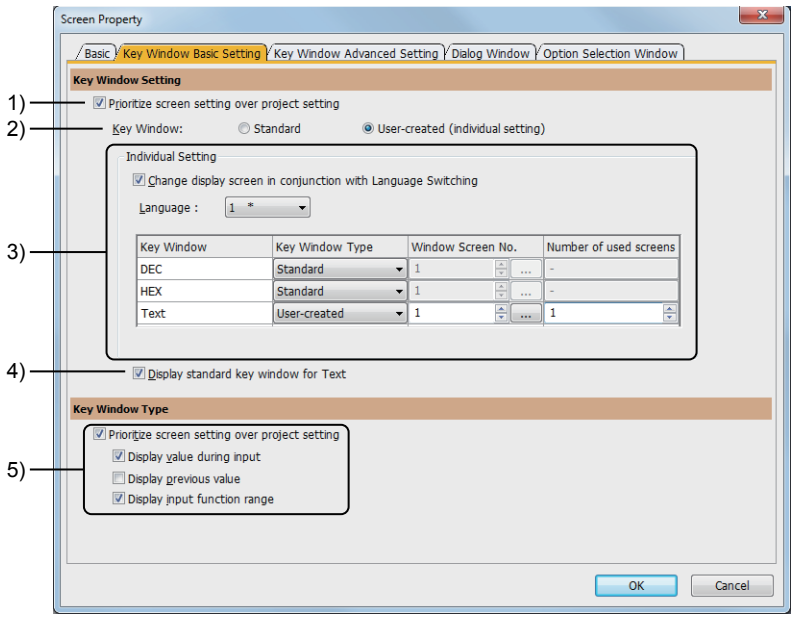
■2 [Key Window Basic Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the basic settings of key windows for each screen.

For the settings for each project, configure the settings in the [Environmental Setting] window.

➟5.2.4 ■4 [Key Window]



1) **[Prioritize screen setting over project setting]**

Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window Setting] for each screen.

2) **[Key Window]**

Select the type of a key window to be used.

The following shows the items to be selected.

- [Standard]

  Uses the standard key window pre-installed in the GOT.
- [User-created (individual setting)]

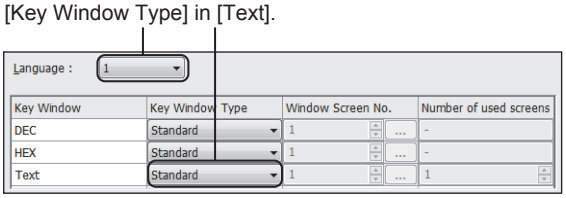
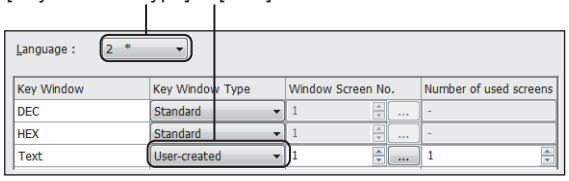
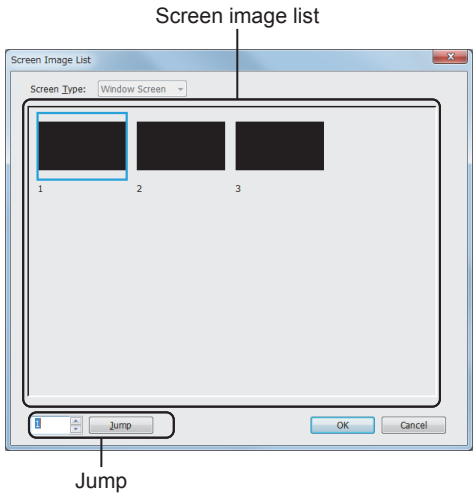
  Uses the standard key window or the user-created key window.

  Set the key window to be used in [Individual Setting].

3) **[Individual Setting]**

Set the key window to be used for each input target.

Item	Description
[Change display screen in conjunction with Language Switching]	Changes the key windows to be used in conjunction with the value of the language switching device.

Item	Description
[Language]	Select the value of the language switching device. The setting range is [1] to [30]. ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching]) For each value of the language switching device, you can set a key window to be used. If you select [User-created] in [Key Window Type], [*] is added to the value of the selected range. Example) • If the value of the language switching device is 1, the standard key window is used for text input. • If the value of the language switching device is 2, the user-created key window is used for text input. Select [1] for [Language] and select [Standard] for [Key Window Type] in [Text].  Select [2] for [Language] and select [User-created] for [Key Window Type] in [Text]. 
[Key Window]	The use of each key window
[Key Window Type]	Select the type of key windows according to their uses. The following shows the items to be selected. • [Standard] Uses the standard key window. • [User-created] Uses the created window screen as a key window. Set the window screen to be used in [Window Screen No.].
[Window Screen No.]	If you select [User-created] in [Key Window Type], set the window screen number to be displayed as a key window. Click the [...] button to display the [Screen Image List] dialog. You can check the image on the screen when selecting a window screen.  • **[Screen Type]** Displays the screen type. • **Screen image list** Displays screen images. • **Jump** Specify a screen number and click the [Jump] button to select the screen in the screen image list.

Item	Description
[Number of used screens]	This can be set only to [Text]. Set the number of key windows used for text input. With the window screen set in [Window Screen No.] as the first on the list, window screens are used for the set number as key windows. To switch key windows, arrange key code switches to which the following operations are set. • [Window Screen Switching for Text (next)] • [Window Screen Switching for Text (previous)] • [Window Screen Switching for Text (specified screen No.)] ➟8.2.11 [Key Code Switch] dialog

4) **[Display the standard key window for text]**
Not available to GT21 and GS21.
Uses the standard key window for text input.

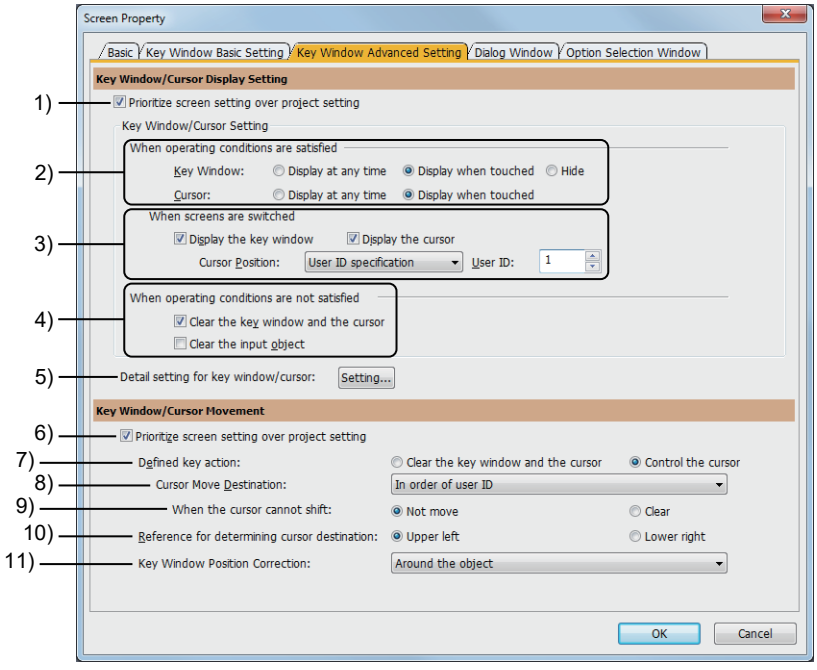
5) **[Prioritize screen setting over project setting]**
Not available to GT21 and GS21.
Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window Type] for each screen.

Item	Description
[Display value during input]	Displays the value being input in the key window. To display the value in the user-created key window, arrange the input value area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information
[Display previous value]	Displays the previous value in the key window. To display the previous value in the user-created key window, arrange the previous value area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information
[Display input function range]	Displays the valid input range in the key window. To display the valid input range in the user-created key window, arrange the input range area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information

■3 [Key Window Advanced Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the advanced settings of key windows for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.
➟5.2.4 ■4 (2) [Advanced Setting] tab



1) **[Prioritize screen setting over project setting]**
Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window/ Cursor Display Setting] for each screen.

2) **[When operating conditions are satisfied]**
Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are satisfied.

Item	Description
[Key Window]	Configure the display settings of the key window for when the operating conditions of the objects for input are satisfied. The following shows the items to be selected. • [Display at any time] (Not available to GT21 and GS21) • [Display when touched] • [Hide]
[Cursor]	Not available to GT21 and GS21. Configure the display settings of the cursor for when the operating conditions of the object for input are satisfied. The following shows the items to be selected. • [Display at any time] • [Display when touched]

3) **[When screens are switched]**
Configure the display settings of the key window and cursor to switch screens for when the operating conditions of the object for input are satisfied.

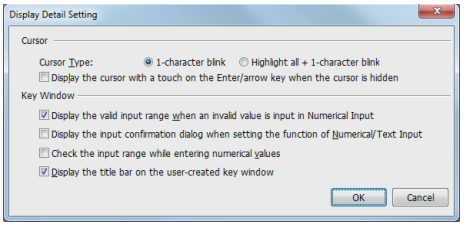
Item	Description
[Display the key window]	Displays a key window when the screen is switched.
[Display the cursor]	Displays a cursor when the screen is switched. Set the position to display the cursor in [Cursor Position].
[Cursor Position]	Select the position to display the cursor when the screen is switched. The following shows the items to be selected. • [Upper left] Displays the cursor at the object nearest to the upper left corner of the screen. • [User ID minimum] Displays the cursor at the object with the smallest user ID. • [User ID specification] Displays the cursor at the object with the specified user ID. Set the user ID of the object on which the cursor is displayed in [User ID].
[User ID]	Sets the user ID of the object on which the cursor is displayed. The setting range is [1] to [65535].

4) **[When operating conditions are not satisfied]**
Not available to GT21 and GS21.
Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are not satisfied.

Item	Description
[Clear the key window and the cursor]	Deletes the key window and cursor when the operating conditions of the objects for input are not satisfied.
[Clear the input object]	Deletes the key window, the cursor, and the objects for input when the operating conditions of the objects for input are not satisfied.

5) **[Key Window Advanced Setting]**

Click the [Setting] button to display the [Display Detail Setting] dialog.



- **[Cursor Type]**
  Select the action of the cursor to be displayed on the input area.
  - [1-character blink]
    Blinks the area for one character in the input area.
  - [Highlight all + 1-character blink]
    Highlights the characters displayed in the input area, and blinks the area for one character.
- **[Display the cursor with a touch on the Enter/arrow key when the cursor is hidden]**
  Not available to GT21 and GS21.
  Displays the cursor when the enter key or an arrow key is touched while the cursor is hidden.
- **[Display the valid input range when an invalid value is input in Numerical Input]**
  Not available to GT21 and GS21.
  Displays the dialog indicating the valid input range when an invalid value is input in numerical input.
- **[Display the input confirmation dialog when setting the function of Numerical/Text Input]**
  Displays the confirmation dialog when numerical values or text are input.
- **[Check the input range while entering numerical values]**
  Not available to GT21 and GS21.
  This item is enabled only when an input range is set.
  The error message is displayed when a value out of the setting range is being entered.
  ➟8.4.5 ■3 [Input case] tab
- **[Display the title bar on the user-created key window]**
  Not available to GT2104-P and GT2103-P.
  Displays the title bar of a user-created key window.
  For the precautions on hiding the title bar, refer to the following.
  ➟5.2.4 ■3 (2) Setting to close the key window whose title bar is hidden

6) **[Prioritize screen setting over project setting]**

Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window/Cursor Movement] for each screen.

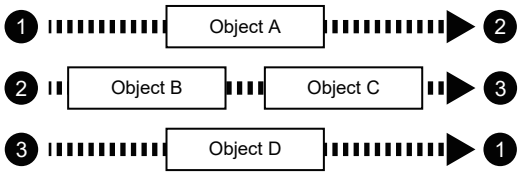
7) **[Defined key action]**

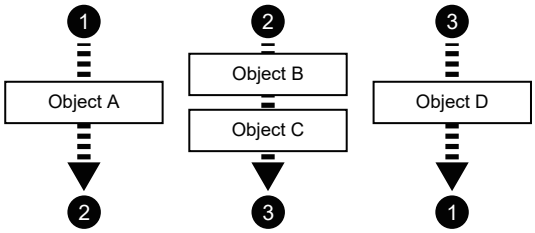
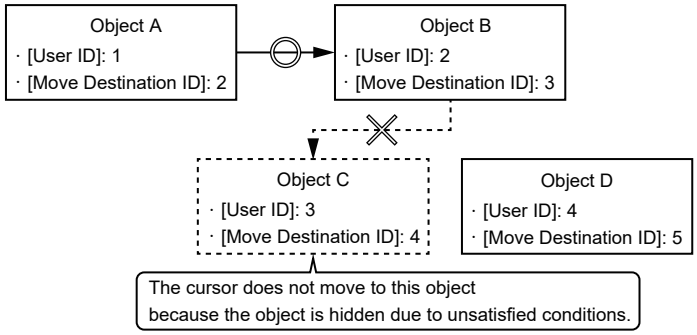
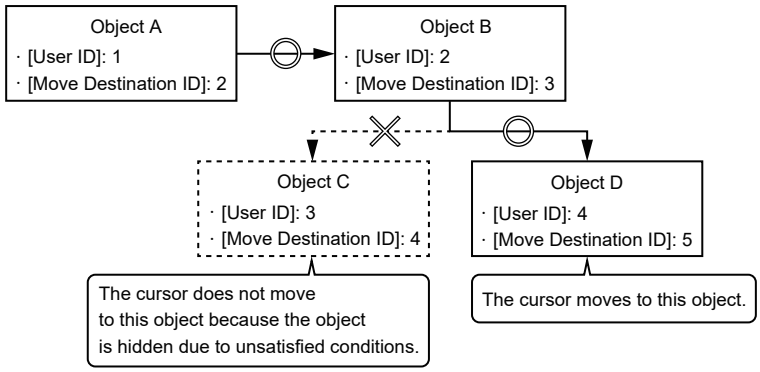
Select the action of the key window and cursor when the enter key is touched.
The following shows the items to be selected.

- [Clear the key window and the cursor]
  Deletes the key window and cursor.
- [Control the cursor]
  Moves the cursor to the specified position.
  Select a position to move the cursor in [Cursor Move Destination].

8) **[Cursor Move Destination]**

Select a position to move the cursor.
The following shows the items to be selected.

Item	Description
[Same operation as the right arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 

Item	Description
[Same operation as the down arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 
[In order of user ID]	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object. If the destination object is hidden due to unsatisfied conditions, the cursor does not move. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[Subsequently valid user ID] (Not available to GT21 and GS21)	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object. If the destination object is hidden due to unsatisfied conditions, the cursor moves to the object specified with [Move Destination ID] of the hidden destination object. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[Not move]	Does not move the cursor even after the entry is confirmed.

9) **[When the cursor cannot shift]**

This item is displayed when [Cursor Move Destination] is set to [In order of user ID] or [Subsequently valid user ID].
Select how the cursor moves when no destination object exists.
The following shows the items to be selected.

- [Not move]
- [Clear]

10) **[Reference for determining cursor destination]**

Select the standard to determine a position to move the cursor.
The following shows the items to be selected.

- [Upper left]
- [Lower right]

11) **[Key Window Position Correction]**

Select an action of the key window when it overlaps the input target object.
The following shows the items to be selected.

- [Not move]

Keeps the key window displayed even if it overlaps the input target object.

• [To the four corners of the screen]

Displays the key window at one of the four corners so that it does not overlap the input target object.
Displays the key window on the lower right of the screen if it overlaps the input target object wherever it is.

• [Around the object]

Displays the key window according to the position of the input target object.

Point

Cursor movement among the objects in a superimpose window

When a superimpose window is placed in the temporary area, the cursor moves among different objects depending on the position of the superimpose window.

• When placed in the temporary area on the right side of the screen display area

The cursor moves among the objects in the superimpose window.

• When placed in the temporary area at the bottom of the screen display area

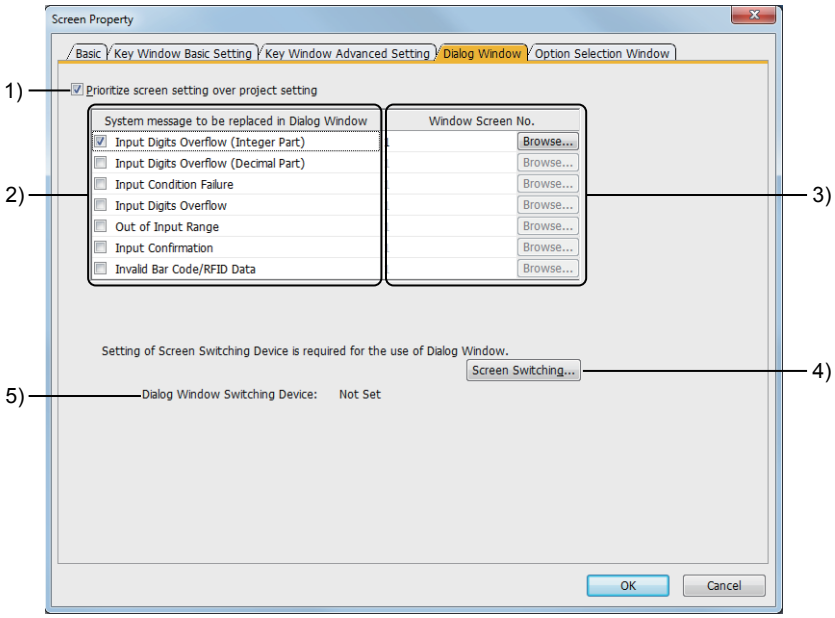
The cursor does not move among the objects in the superimpose window.
The cursor moves to the next object, ignoring the objects in the superimpose window.

■4 [Dialog Window] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the settings of the dialog window for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.

➟5.2.3 ■4 [Dialog Window...]



1) **[Prioritize screen setting over project setting]**

Prioritizes the settings of [Dialog Window] in the [Screen Property] dialog over the settings for each project in the [Environmental Setting] window.

2) **[System message to be replaced in Dialog Window]**

Select a system message to be replaced by the dialog window.
Replaces the selected system message with the window screen set in [Window Screen No.].
The following shows the items to be selected.

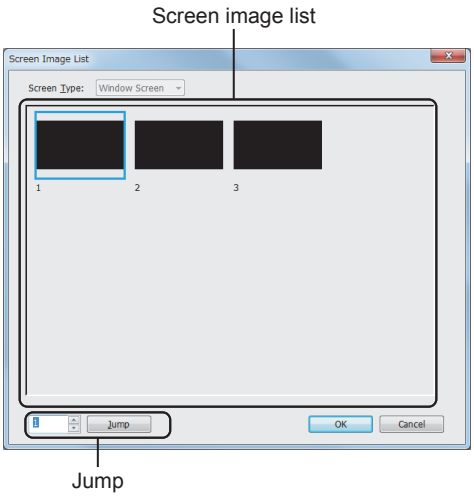
- [Input Digits Overflow (Integer Part)]
- [Input Digits Overflow (Decimal Part)]
- [Input Condition Failure]
- [Input Digits Overflow]
- [Out of Input Range]
- [Input Confirmation]
- [Barcode/RFID Data invalid]

For the system messages of each item, refer to the following.

➟5.2.3 ■2 How to use dialog windows

3) **[Window Screen No.]**

Set a screen number of the window screen to be displayed instead of the system message.
The setting range is [0] to [32767].
Click the [Browse] button to display the [Screen Image List] dialog.
You can check the image on the screen when selecting a window screen.



- **[Screen Type]**
  Displays the screen type.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

4) **[Screen Switching] button**

Displays the [Environmental Setting] dialog.

➟5.2.3 ■4 [Dialog Window...]

5) **[Dialog window Switching Device]**

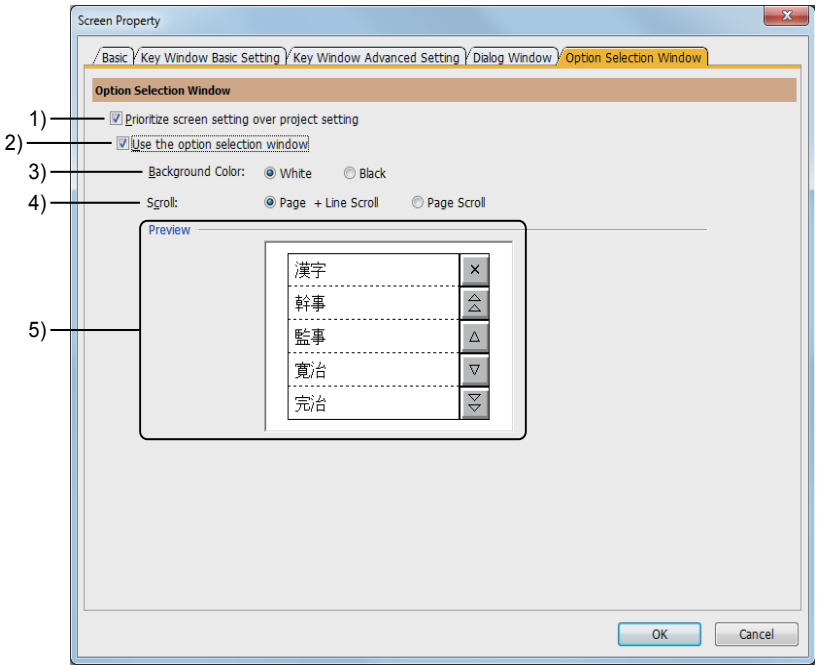
The currently set screen switching device for a dialog window

■5 [Option Selection Window] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Configure the settings in the option selection window. The settings are used at Kana-Kanji conversion or Pinyin conversion for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.

➟5.2.13 ■4 [Kana-Kanji/Pinyin Conversion]



1) **[Prioritize screen setting over project setting]**
Prioritizes the settings of [Option Selection Window] in the [Screen Property] dialog over the settings for each project in the [Environmental Setting] window.

2) **[Use the option selection window]**
Select this item to display the option selection window when converting kana characters to kanji characters or Pinyin characters to Simplified Chinese characters.

3) **[Background Color]**
Select the background color of the option selection window.

4) **[Scroll]**
Select the key to be displayed in the option selection window.
- [Page + Line Scroll]: Displays the key to scroll the screen by page and line.
- [Page Scroll]: Displays the key to scroll the screen by page.

5) **[Preview]**
Displays the preview of the option selection window which the settings of [Background Color] and [Scroll] are reflected.

2.7.2 Properties of window screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 By either of the following operations, select a window screen whose properties are to be changed.
- Clicking any part of the screen editor
- Selecting a screen in the [Screen] window

(If you select multiple screens with the [Ctrl] key or [Shift] key, you can change the properties of the screens at a time.)

➟2.2.4 ■3 [Screen] window

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog (for window screen).

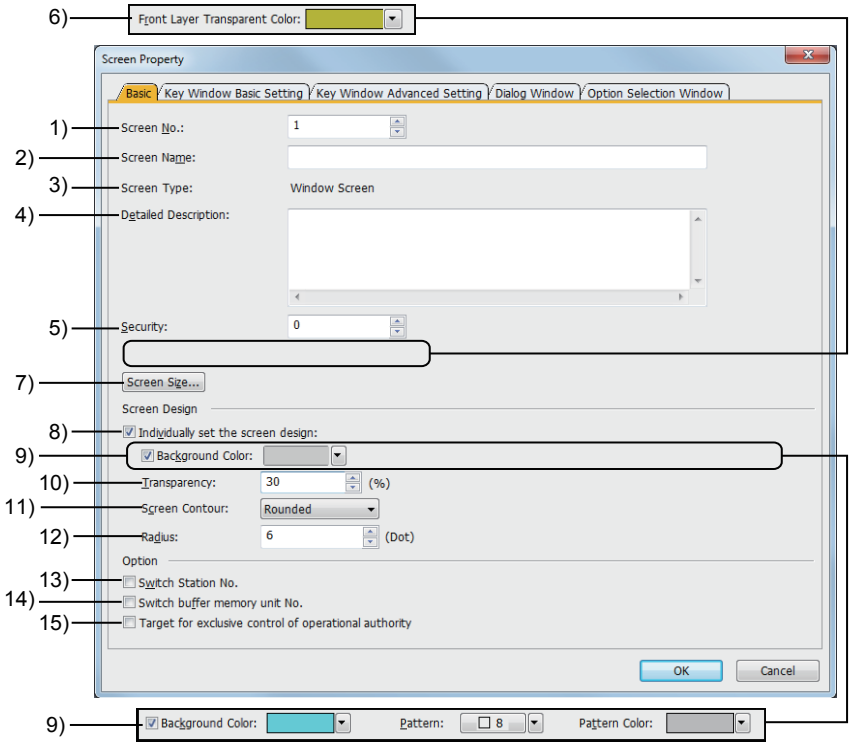
➟■1 [Basic] tab
■2 [Key Window Basic Setting] tab
■3 [Key Window Advanced Setting] tab
■4 [Dialog Window] tab
■5 [Option Selection Window] tab

Step 3 Click the [OK] button after the required settings to reflect the setting.

When you select multiple screens in the [Screen] tree, the settings are reflected to all the selected screens.

■1 [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Screen No.]**
Set a screen number.
The setting range is [0] to [32767].
If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

2) **[Title]**
Set the title of the screen.
Up to 32 characters can be set.

3) **[Screen Type]**
Displays the screen type.

4) **[Detailed Description]**
Set the explanation for the screen.
Up to 512 characters can be set.
A line feed is counted as two characters.

5) **[Security]**
Set the security level.
The setting range is [0] to [15].
If you do not use the security function of the GOT, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

6) **[Front Layer Transparent]**
Not available to GT23, GT21, and GS21.

GOT Graphic Ver.1

Set the transparent color of the object arranged on the front layer.

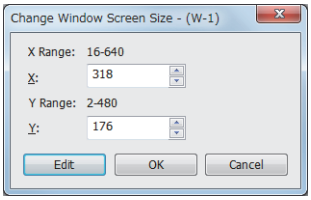
➟6.5.5 ■3 (2) Using layers

The parts of the objects whose colors are set to the transparent color become transparent, and the back layer can be seen through them.

➟6.4.2 Color settings

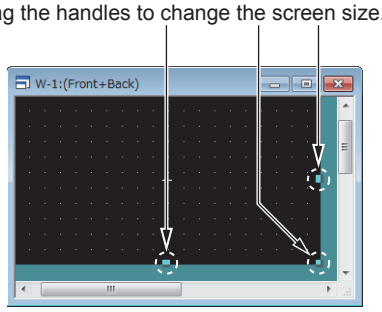
7) **[Screen Size] button**
Displays the [Change Window Size] dialog.

Specify a numerical value to change the size of the window screen.



- **[X Range]**
  Setting range of the horizontal size
- **[X]**
  Set the horizontal size (dot).
- **[Y Range]**
  Setting range of the vertical size
- **[Y]**
  Set the vertical size (dot).
- **[Edit] button**
  This button is not displayed when the screen is newly created.
  Changes the size of window screens on the screen editor.

Drag the handles to change the screen size.



Change the screen size and click any part other than the handles to confirm the change.

8) **[Individually set the screen design]**
Enables the individual screen design (including the background color), instead of the design selected in the [Screen Design] dialog.

9) **[Background Color]**

GOT Graphic Ver.2

Select a background color.
For the color setting, refer to the following.

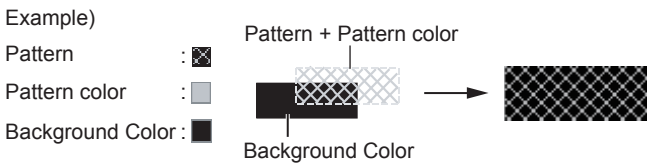
➟6.4.2 Color settings

For a window screen, if [Screen Contour] is set to [Rounded], the gradient area of the window screen varies depending on whether its title bar is displayed.
Position the window screen on the screen editor of the base screen, and check the window screen image in the [Screen Preview] window.

➟2.9.1 Displaying a preview

GOT Graphic Ver.1

Select a background color, pattern, and pattern color for the screen.
The pattern is displayed on the background color.



For the color setting, refer to the following.

➟6.4.2 Color settings

10) **[Transparency]**

GOT Graphic Ver.2

Set the transparency of the window screen.
The setting range is [0]% to [100]%.

11) **[Screen Contour]**

GOT Graphic Ver.2

Set the contours of the window screen.
The following shows the items to be selected.

• [Rectangle]
• [Rounded]

12) **[Radius]**

GOT Graphic Ver.2

When [Rounded] is selected for [Screen Contour], set the circle radius.
The following shows the items to be selected.
[0] dots to (n - 1) / 2 dots
n: Window screen height or width, whichever is smaller (dots)
The fractional portion of the result is rounded off.

13) **[Switch Station No.]**

Enables each screen to swtich station No.

➟5.5.4 Configuring the settings for switching the target station No. for monitoring

14) **[Switch buffer memory unit No.]**

Enables the buffer memory unit No. switching by screen.

➟5.5.5 Configuring the settings for switching the buffer memory unit No. of the monitoring target

15) **[Target for exclusive control of operational authority]**

Not available to GT21 and GS21.
Enables the authorization control for the base screen.

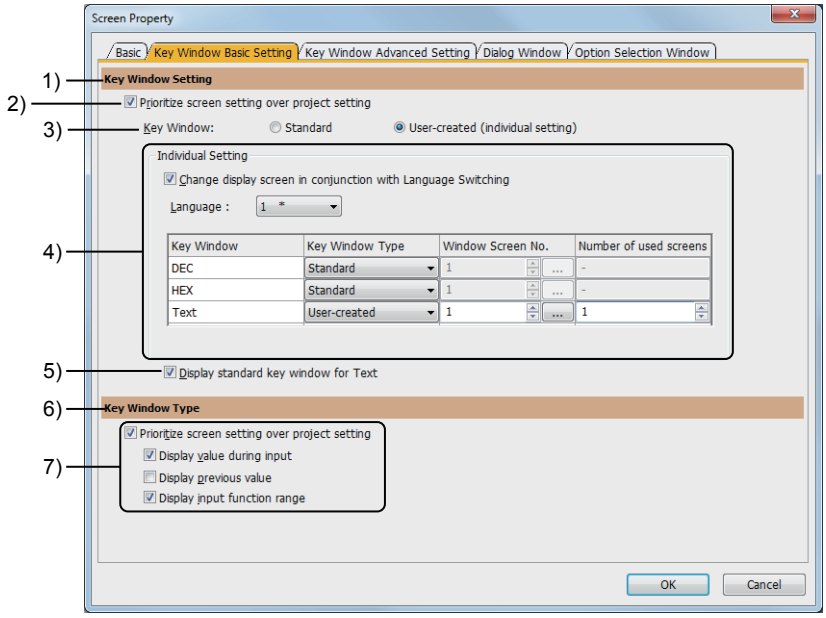
➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

■2 [Key Window Basic Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the basic settings of key windows for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.

➟5.2.4 ■4 (1) [Basic] tab



1) **[Key Window Setting]**
Type settings of the key window to be used

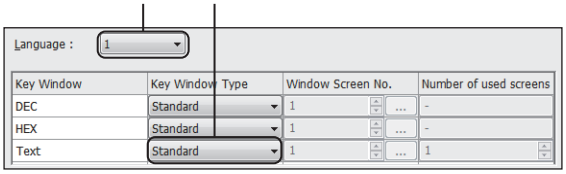
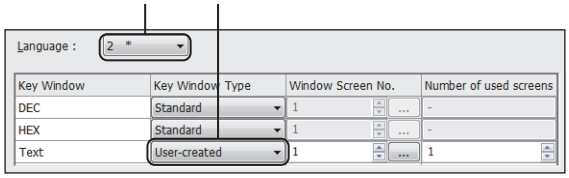
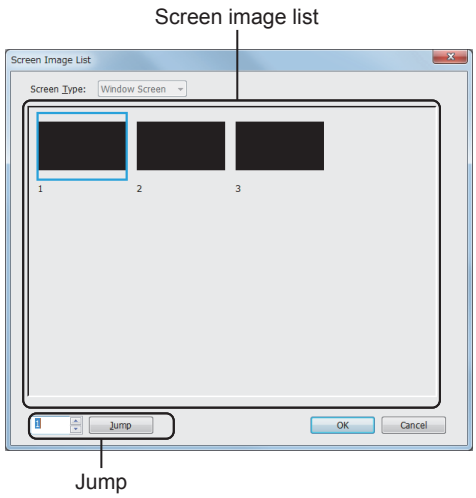
2) **[Prioritize screen setting over project setting]**
Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window Setting] for each screen.

3) **[Key Window Setting]**
Select the type of a key window to be used.
The following shows the items to be selected.

- [Standard Key Window]
  Uses the standard key window pre-installed in the GOT.
- [User-created screen Key window (individual)]
  Uses the standard key window or the user-created key window.
  Set the key window to be used in [Individual Setting].

4) **[Individual Setting]**
Set the key window to be used for each input target.

Item	Description
[Change display screen in conjunction with Language Switching]	Changes the key windows to be used in conjunction with the value of the language switching device.

Item	Description
[Language]	Select the value of the language switching device. The setting range is [1] to [30]. For each value of the language switching device, you can set a key window to be used. If you select [User-created] in [Key Window Type], [*] is added to the value of the selected range. Example) • If the value of the language switching device is 1, the standard key window is used for text input. • If the value of the language switching device is 2, the user-created key window is used for text input. Select [1] for [Language] and select [Standard] for [Key Window Type] in [Text].  Select [2] for [Language] and select [User-created] for [Key Window Type] in [Text]. 
[Key Window]	The use of each key window
[Key Window Type]	Select the type of key windows according to their uses. The following shows the items to be selected. • [Standard] Uses the standard key window. • [User-created] Uses the created window screen as a key window. Set the window screen to be used in [Window Screen No.].
[Window Screen No.]	If you select [User-created] in [Key Window Type], set the window screen number to be displayed as a key window. Click the [...] button to display the [Screen Image List] dialog. You can check the image on the screen when selecting a window screen.  • **[Screen Type]** Displays the screen type. • **Screen image list** Displays screen images. • **Jump** Specify a screen number and click the [Jump] button to select the screen in the screen image list.

Item	Description
[Used Screen No.]	This can be set only to [Text]. Set the number of key windows used for text input. With the window screen set in [Window Screen No.] as the first on the list, window screens are used for the set number as key windows. To switch key windows, arrange key code switches to which the following operations are set. • [Window Screen Switching for Text (next)] • [Window Screen Switching for Text (previous)] • [Window Screen Switching for Text (specified screen No.)] ➟8.2.11 [Key Code Switch] dialog

5) **[Display the standard key window for text]**
Not available to GT21 and GS21.
Uses the standard key window for text input.

6) **[Key Window Type]**
Not available to GT21 and GS21.
Settings of the information displayed on the key window.

7) **[Prioritize screen setting over project setting]**
Not available to GT21 and GS21.
Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window Type] for each screen.

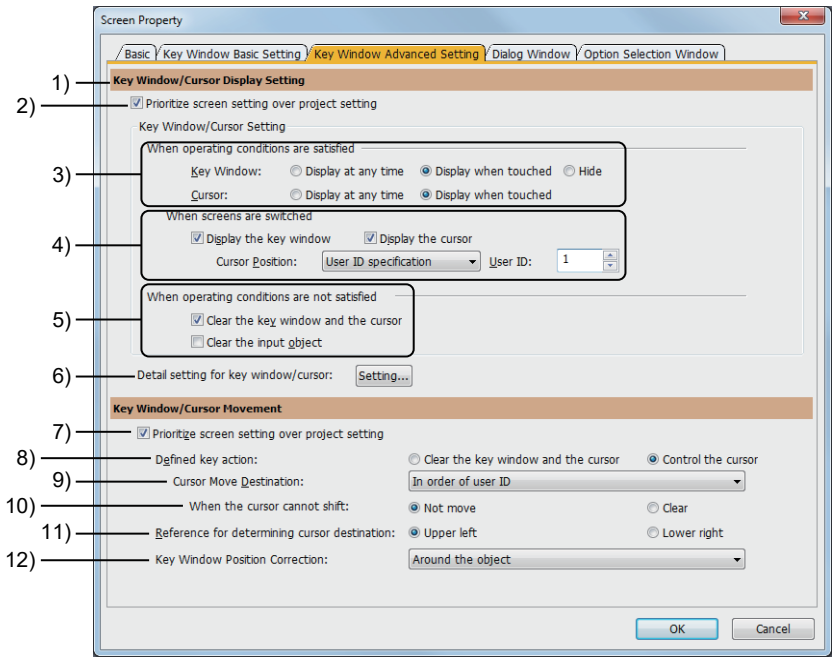
Item	Description
[Display value during input]	Displays the value being input in the key window. To display the value in the user-created key window, arrange the input value area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information
[Display previous value]	Displays the previous value in the key window. To display the previous value in the user-created key window, arrange the previous value area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information
[Display input function range]	Displays the valid input range in the key window. To display the valid input range in the user-created key window, arrange the input range area setting on the window screen. ➟8.31 Placing an Object to Display the Input Information

■3 [Key Window Advanced Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the advanced settings of key windows for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.

➡5.2.4 ■4 (2) [Advanced Setting] tab



1) **[Key Window Display Setting]**
Display settings of the key window and cursor

2) **[Prioritize screen setting over project setting]**
Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window/Cursor Display Setting] for each screen.

3) **[When operating conditions are satisfied]**
Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are satisfied.

Item	Description
[Key Window]	Configure the display settings of the key window for when the operating conditions of the objects for input are satisfied. The following shows the items to be selected. • [Display at any time] (Not available to GT21 and GS21) • [Display when touched] • [Hide]
[Cursor]	Not available to GT21 and GS21. Configure the display settings of the cursor for when the operating conditions of the object for input are satisfied. The following shows the items to be selected. • [Display at any time] • [Display when touched]

4) **[When screens are switched]**
Configure the display settings of the key window and cursor to switch screens for when the operating conditions of the object for input are satisfied.

Item	Description
[Display the key window]	Displays a key window when the screen is switched.
[Display the cursor]	Displays a cursor when the screen is switched. Set the position to display the cursor in [Cursor Position].

Item	Description
[Cursor Position]	Select the position to display the cursor when the screen is switched. The following shows the items to be selected. • [Upper left] Displays the cursor at the object nearest to the upper left corner of the screen. • [User ID minimum] Displays the cursor at the object with the smallest user ID. • [User ID specification] Displays the cursor at the object with the specified user ID. Set the user ID of the object on which the cursor is displayed in [User ID].
[User ID]	Sets the user ID of the object on which the cursor is displayed. The setting range is [1] to [65535].

5) **[When operating conditions are not satisfied]**

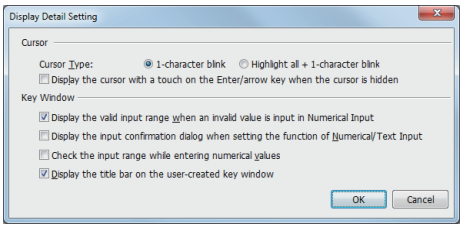
Not available to GT21 and GS21.

Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are not satisfied.

Item	Description
[Clear the key window and the cursor]	Deletes the key window and cursor when the operating conditions of the objects for input are not satisfied.
[Clear the input object]	Deletes the key window, the cursor, and the objects for input when the operating conditions of the objects for input are not satisfied.

6) **[Key Window Advanced Setting]**

Click the [Setting] button to display the [Display Detail Setting] dialog.



- **[Cursor Type]**
  Select the action of the cursor to be displayed on the input area.
  - [1-character blink]
    Blinks the area for one character in the input area.
  - [Highlight all + 1-character blink]
    Highlights the characters displayed in the input area, and blinks the area for one character.
- **[Display the cursor with a touch on the Enter/arrow key when the cursor is hidden]**
  Not available to GT21 and GS21.
  Displays the cursor when the enter key or an arrow key is touched while the cursor is hidden.
- **[Display the valid input range when an invalid value is input in Numerical Input]**
  Not available to GT21 and GS21.
  Displays the dialog indicating the valid input range when an invalid value is input in numerical input.
- **[Display the input confirmation dialog when setting the function of Numerical/Text Input]**
  Displays the confirmation dialog when numerical values or text are input.
- **[Check the input range while entering numerical values]**
  Not available to GT21 and GS21.
  This item is enabled only when an input range is set.
  The error message is displayed when a value out of the setting range is being entered.
  ➟8.4.5 ■3 [Input case] tab
- **[Display the title bar on the user-created key window]**
  Not available to GT2104-P and GT2103-P.
  Displays the title bar of a user-created key window.
  For the precautions on hiding the title bar, refer to the following.
  ➟5.2.4 ■3 (2) Setting to close the key window whose title bar is hidden

7) **[Prioritize screen setting over project setting]**

Does not apply the settings made in the [Environmental Setting] window, and enables setting in [Key Window/Cursor Movement] for each screen.

8) **[Defined key action]**

Set the action of the key window and cursor when the enter key is touched.

The following shows the items to be selected.

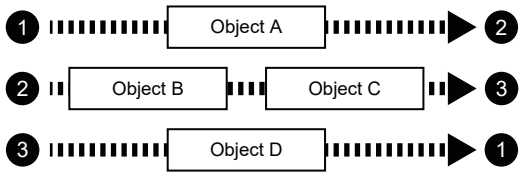
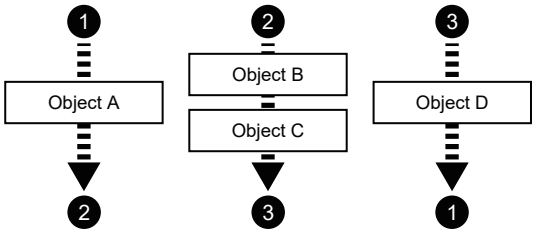
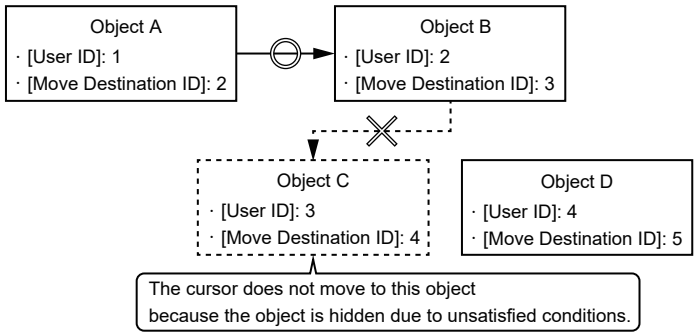
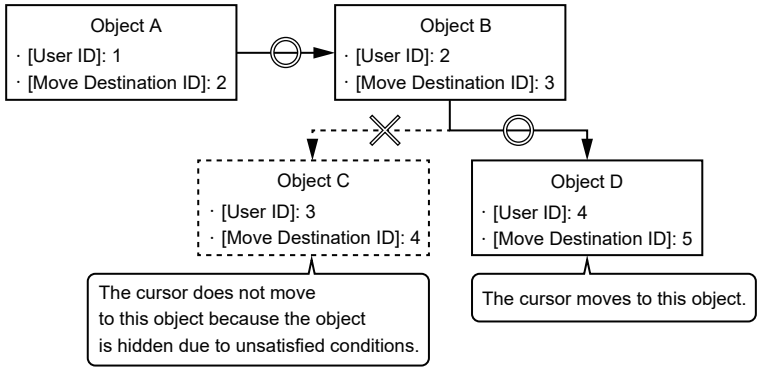
- [Clear the key window and the cursor]
  Deletes the key window and cursor.
- [Control the cursor]
  Deletes the key window and cursor.

Select a position to move the cursor in [Cursor Move Destination].

9) **[Cursor Move Destination]**

Select a position to move the cursor.

The following shows the items to be selected.

Item	Description
[Same operation as the right arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 
[Same operation as the down arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 
[In order of user ID]	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object. If the destination object is hidden due to unsatisfied conditions, the cursor does not move. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[Subsequently valid user ID] (Not available to GT21 and GS21)	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object. If the destination object is hidden due to unsatisfied conditions, the cursor moves to the object specified with [Move Destination ID] of the hidden destination object. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[In order of user ID]	Does not move the cursor even after the entry is confirmed.

10) **[When the cursor cannot shift]**
This item is displayed when [Cursor Move Destination] is set to [In order of user ID] or [Subsequently valid user ID].
Select how the cursor moves when no destination object exists.
- [Not move]
- [Clear]

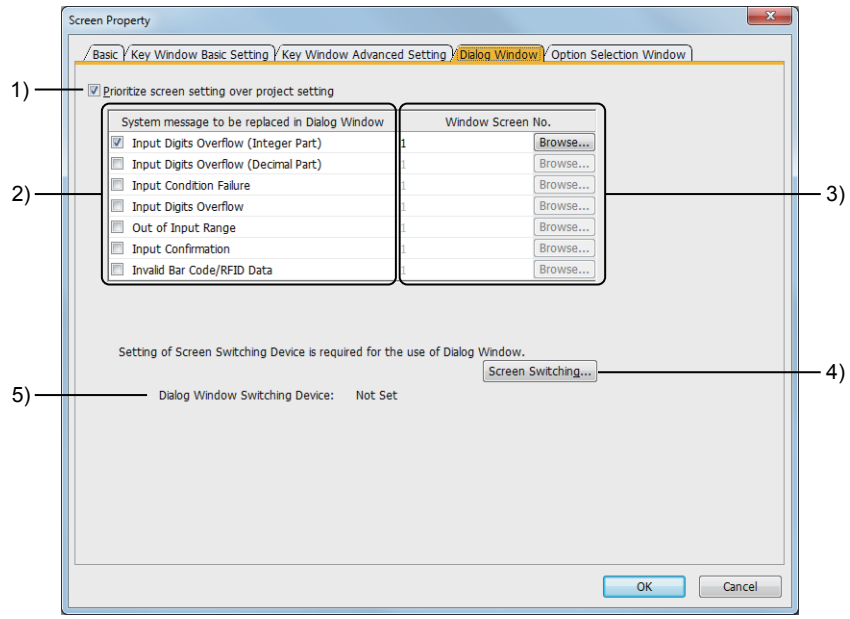
11) **[Reference for determining cursor destination]**
Select the standard to determine a position to move the cursor.
The following shows the items to be selected.
- [Upper left]
- [Lower right]

12) **[Key Window Position Correction]**
Set the action of the key window when it overlaps the input target object.
The following shows the items to be selected.
- [Not move]
  Keeps the key window displayed even if it overlaps the input target object.
- [To the four corners of the screen]
  Displays the key window at one of the four corners so that it does not overlap the input target object.
  Displays the key window on the lower right of the screen if it overlaps the input target object wherever it is.
- [Around the object]
  Displays the key window according to the position of the input target object.

■4 [Dialog Window] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the settings of the dialog window for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.
➟5.2.3 ■4 [Dialog Window...]



1) **[Prioritize screen setting over project setting]**
Prioritizes the settings of [Dialog Window] in the [Screen Property] dialog over the settings for each project in the [Environmental Setting] window.

2) **[System message to be replaced in Dialog Window]**
Select a system message to be replaced by the dialog window.
Replaces the selected system message with the window screen set in [Window Screen No.].
The following shows the items to be selected.
- [Input Digits Overflow (Integer Part)]
- [Input Digits Overflow (Decimal Part)]
- [Input Condition Failure]
- [Input Digits Overflow]

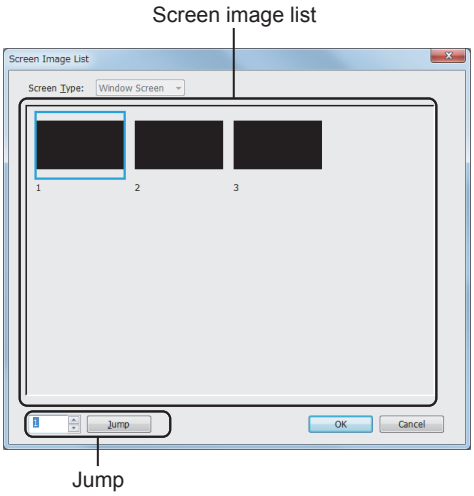
• [Out of Input Range]
• [Input Confirmation]
• [Barcode/RFID Data invalid]

For the system messages of each item, refer to the following.

➟5.2.3 ■2 How to use dialog windows

3) **[Window Screen No.]**

Set a screen number of the window screen to be displayed instead of the system message.
The setting range is [0] to [32767].
Click the [Browse] button to display the [Screen Image List] dialog.
You can check the image on the screen when selecting a window screen.



• **[Screen Type]**
Displays the screen type.
• **Screen image list**
Displays screen images.
• **Jump**
Specify a screen number and click the [Jump] button to select the screen in the screen image list.

4) **[Screen Switching] button**

Displays the [Environmental Setting] dialog.

➟5.2.3 ■4 [Dialog Window...]

5) **[Dialog window Switching Device]**

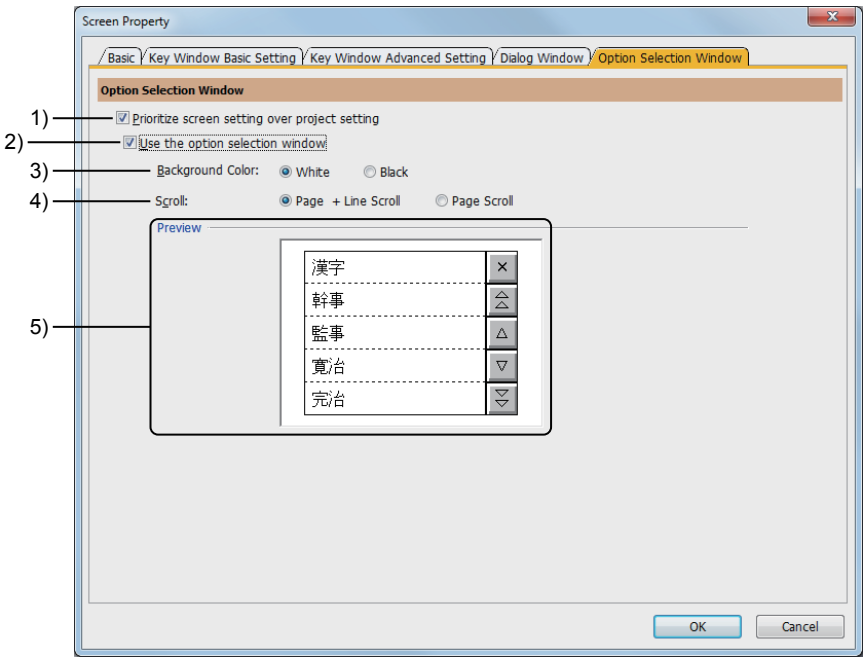
The currently set screen switching device for a dialog window

■5 [Option Selection Window] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Configure the settings in the option selection window. The settings are used at Kana-Kanji conversion or Pinyin conversion for each screen.
For the settings for each project, configure the settings in the [Environmental Setting] window.

➟5.2.13 ■4 [Kana-Kanji/Pinyin Conversion]



1) **[Prioritize screen setting over project setting]**
Prioritizes the settings of [Option Selection Window] in the [Screen Property] dialog over the settings for each project in the [Environmental Setting] window.

2) **[Use the option selection window]**
Select this item to display the option selection window when converting kana characters to kanji characters or Pinyin characters to Simplified Chinese characters.

3) **[Background Color]**
Select the background color of the option selection window.

4) **[Scroll]**
Select the key to be displayed in the option selection window.
- [Page + Line Scroll]: Displays the key to scroll the screen by page and line.
- [Page Scroll]: Displays the key to scroll the screen by page.

5) **[Preview]**
Displays the preview of the option selection window which the settings of [Background Color] and [Scroll] are reflected.

2.7.3 Property of report screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 By either of the following operations, select a report screen whose screen property is to be changed.

- Clicking any part of the screen editor
- Selecting a screen in the [Screen] window

(If you select multiple screens with the [Ctrl] key or [Shift] key, you can change the properties of the screens at a time.)

➟2.2.4 ■3 [Screen] window

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog (for report screen).

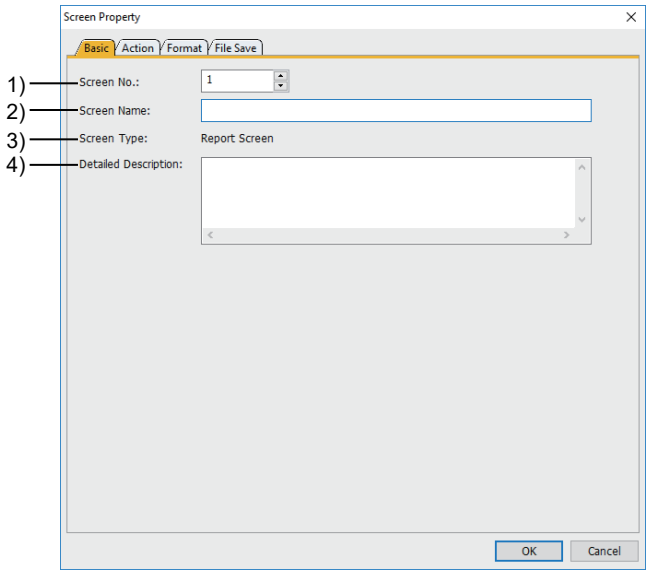
➟■1 [Basic] tab
■2 [Action] tab
■3 [Format] tab
■4 [File Save] tab

Step 3 Click the [OK] button after the required settings to reflect the setting.

When you select multiple screens in the [Screen] tree, the settings are reflected to all the selected screens.

■1 [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Screen No.]**
Set a screen number.
The setting range is [1] to [99].
If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

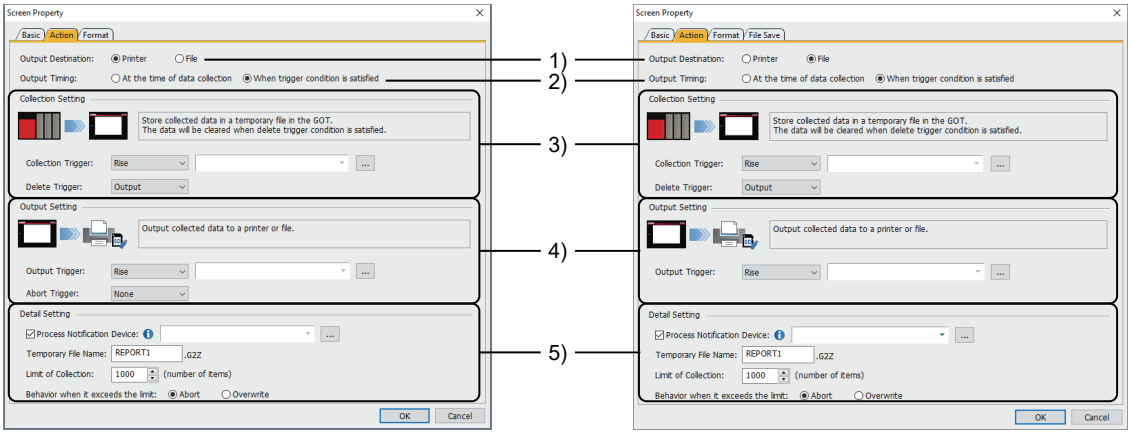
2) **[Screen Name]**
Set the title of the screen.
Up to 32 characters can be set.

3) **[Screen Type]**
Displays the screen type.

4) **[Detailed Description]**
Set the explanation for the screen.
Up to 512 characters can be set.
A line feed is counted as two characters.

■2 [Action] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Output Destination] is set to [Printer]

When [Output Destination] is set to [File]

1) **[Output Destination]**

Set the destination to which a report is output.

The following shows selectable items.

- [Printer]
- [File] (GT27, GT25, GT23, and GS25)

2) **[Output Timing]**

Set the timing for outputting data to a report.

The following shows selectable items.

- [At the time of data collection]

  This item appears when [Printer Type] is set to [Serial] in the [Printer] dialog.

  ➟10.11.8 [Printer] dialog

  Outputs the collected data to a report simultaneously with data collection.
- [When trigger condition is satisfied]

  Stores the collected data into a temporary file, and collectively outputs the data to a report when the output trigger condition is satisfied.
- [When one page's worth of data is collected] (GT21 and GS21)

  This item appears when [Printer Type] is set to [PCL5] in the [Printer] dialog.

  ➟10.11.8 [Printer] dialog

  Outputs data to a report when one page's worth of data has been collected.

3) **[Collection Setting]**

Item	Description
[Collection Trigger]	This item appears when [Repeat] is included in [Output Target]. The following shows selectable items. • [Rise] Collects the data at the rise of the bit device. Specify a bit device. • [Fall] Collects the data at the fall of the bit device. Specify a bit device. • [Sampling] This item is selectable when [Output Timing] is set to [When trigger condition is satisfied]. Collects the data at a constant period. The setting range is [3] to [3600] seconds.

Item	Description
[Delete Trigger]	This item appears when [Output Timing] is set to [When trigger condition is satisfied]. Select this item to use the trigger that clears the data stored in the data storage. The following shows selectable items. • [Rise] Deletes the data at the rise of the bit device. Specify a bit device. • [Fall] Deletes the data at the fall of the bit device. Specify a bit device. • [Power-on] Deletes the data at the GOT startup. • [Output] Deletes the data upon its output.

4) **[Output Setting]**

Item	Description
[Output Trigger]	This item appears when [Output Timing] is set to [When trigger condition is satisfied] or [When one page's worth of data is collected]. Select a trigger to output the collected data. The following shows selectable items. • [Rise] Outputs the data on the rising edge of a bit device. Specify a bit device. • [Fall] Outputs the data on the falling edge of a bit device. Specify a bit device.
[Abort Trigger]	This item appears when [Output Destination] is set to [Printer], and [Output Timing] is set to [When trigger condition is satisfied] or [At the time of data collection]. Select a trigger to abort an output. The following shows selectable items. • [None] Does not use the abort trigger. • [Rise] Aborts an output on the rising edge of a bit device. Specify a bit device. • [Fall] Aborts an output on the falling edge of a bit device. Specify a bit device.

5) **[Detail Setting]**

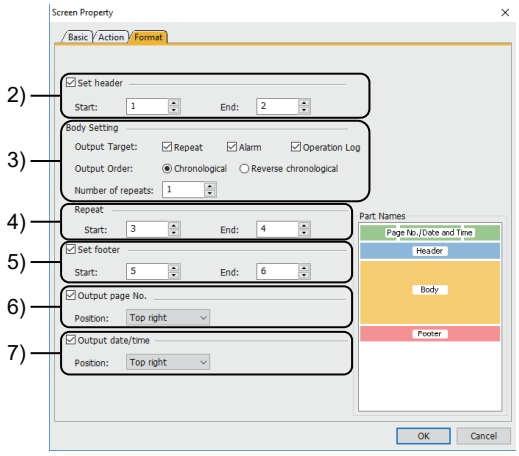
Configure the process notification device settings and detailed settings for temporary files.

Item	Description
[Process Notification Device]	This item appears in either of the following conditions. • [Output Timing] is set to [When trigger condition is satisfied] or [When one page's worth of data is collected]. • [Repeat] is included in [Output Target]. Select this item when using the process notification function and set a device to be used as the process notification device. You can specify a word device or word-specified bit device.For details on the process notification device, refer to the following. ➟10.11.3 ■8 Process notification device
[Temporary File Name]	This item appears when [Output Timing] is set to [When trigger condition is satisfied]. Name a temporary file. A temporary file will be created per report screen. Up to eight one-byte alphabetic characters (uppercase) and numbers (0 to 9) can be entered. Specify a unique temporary file name.
[Limit of Collection]	This item appears when [Output Timing] is set to [When trigger condition is satisfied]. Set the maximum number of collections of data to be stored into a temporary file. The setting range is [1] to [10000]. If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

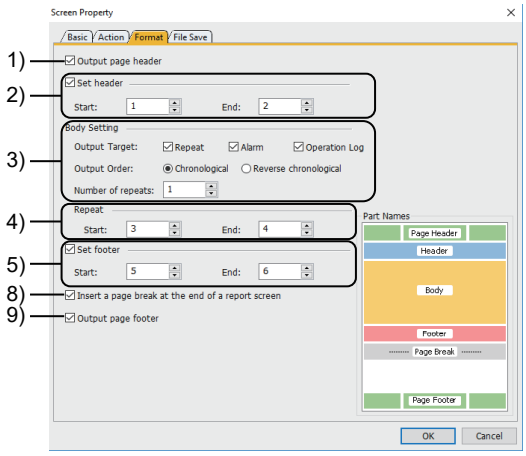
Item	Description
[Behavior when it exceeds the limit]	This item appears when [Output Timing] is set to [When trigger condition is satisfied]. Select how data will be collected and stored into a temporary file if the maximum number of collections of data in the file is exceeded. The following shows selectable items. • [Abort] Aborts the data collection. The data collection will resume after the data in the temporary file is deleted by the delete trigger. • [Overwrite] Continues the data collection, and overwrites the temporary file.

■3 [Format] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Output Destination] is set to [Printer]



When [Output Destination] is set to [File]

1) **[Output page header]**

Not available to GT21, GT SoftGOT2000, and GS21.

This item appears when [Specification] is set to [Direct] or [Device] in the [File Save] tab.

Outputs the page header.

For the page header, refer to the following.

➟10.11 Outputting the Collected Data as a Report (Report Function)

2) **[Set header]**

Set the header.

Make sure that the number of lines to be output does not exceed the set value of [Page Lines] in the [Report Setting] dialog.

➟10.11 Outputting the Collected Data as a Report (Report Function)

The header lines are not settable as the footer or repeat lines.

- [Start]
  Specify the start line of the header.
- [End]
  Specify the end line of the header.

3) **[Body Setting]**

Item	Description
[Output Target]	Select an item to be output. The following shows selectable items. • [Repeat] • [Alarm] • [Operation Log] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) For the settings required to output an alarm line, refer to the following. ➟10.11.3 ■4 Settings to output alarm lines For the settings required to output an operation log line, refer to the following. ➟10.11.3 ■5 Settings to output operation log lines

Item	Description
[Output Order]	Not available to GT21 and GS21. This item appears when [Output Timing] is set to [When trigger condition is satisfied] in the [Action] tab. Select the order in which data is output from a temporary file. The following shows selectable items. • [Chronological] • [Reverse chronological]
[Number of repeats]	Not available to GT21 and GS21. This item appears when [Output Timing] is set to [When trigger condition is satisfied] in the [Action] tab. Specify the number of times that the specified lines are repeated. The setting range is [0] to [9999]. To output the data of all temporary files in the data storage, specify the following value: the set value of [Limit of Collection] in the [Action] tab - 1. If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

4) **[Repeat]**

Specify lines to be output repeatedly.

Make sure that the number of lines to be output does not exceed the set value of [Page Lines] in the [Report Setting] dialog.

The repeat lines are not settable as the header or footer lines.

Item	Description
[Start]	Specify the start line to be output repeatedly.
[End]	Specify the end line to be output repeatedly.

5) **[Set footer]**

Set the footer.

Make sure that the number of lines to be output does not exceed the set value of [Page Lines] in the [Report Setting] dialog.

The footer lines are not settable as the header or repeat lines.

- [Start]
  Specify the start line of the footer.
- [End]
  Specify the end line of the footer.

6) **[Output page No.]**

This item appears when [Output Destination] is set to [Printer] in the [Action] tab.

Outputs page numbers.

Select where the page number will be output with [Position].

The setting is fixed to [Top right].

7) **[Output date/time]**

This item appears when [Output Destination] is set to [Printer] in the [Action] tab.

Outputs the date and time on which a report is printed.

Select where the date and time will be output with [Position].

The following shows selectable items.

- [Top left]
- [Top center]
- [Top right]

The year, month, day, hour, minute, and second will appear in that order.

Example) 18/07/01 16:53:41

8) **[Output page footer]**

Not available to GT21, GT SoftGOT2000, and GS21.

This item appears when [Specification] is set to [Direct] or [Device] in the [File Save] tab.

Outputs the page footer.

For the page footer, refer to the following.

➡10.11 Outputting the Collected Data as a Report (Report Function)

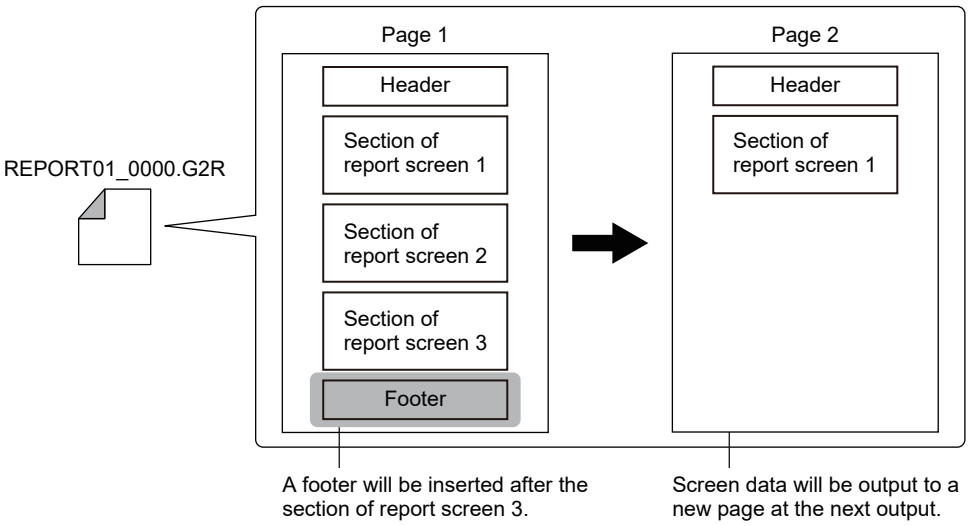
9) **[Insert a page break at the end of a report screen]**

Not available to GT21, GT SoftGOT2000, and GS21.

This item appears when [Output Destination] is set to [File] and [Output Timing] is set to [When trigger condition is satisfied] in the [Action] tab.

Inserts a page break after a report screen section.
If you output the data of multiple report screens to one report file, you can insert a page break after the section of your preferred report screen.
Example) Inserting a page break after the section of report screen 3 when outputting the data of report screens 1 to 3 repeatedly
The following shows how the data of report screens 1 to 3 are output.

Report screen	Settings
Report screen 1	• [Specification] in the [File Save] tab: [Direct] • [File Name] in the [File Save] tab: REPORT01 • [Insert a page break at the end of a report screen]: Not selected
Report screen 2	• [Specification] in the [File Save] tab: [Add to other report file] • [Screen No.] in the [File Save] tab: 1 • [Insert a page break at the end of a report screen]: Not selected
Report screen 3	• [Specification] in the [File Save] tab: [Add to other report file] • [Screen No.] in the [File Save] tab: 1 • [Insert a page break at the end of a report screen]: Selected



■4 [File Save] tab

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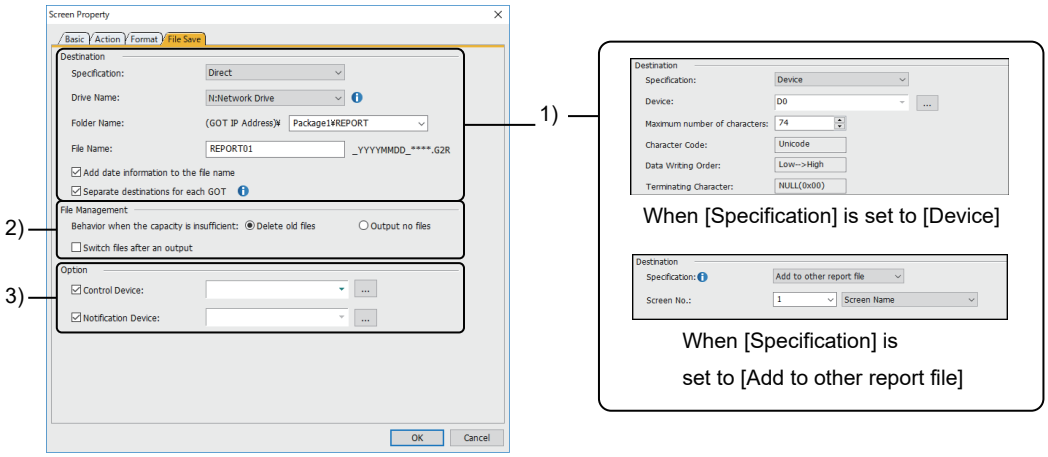
The [File Save] tab appears when [Output Destination] is set to [File] in the [Action] tab.



When [Specification] is set to [Direct]

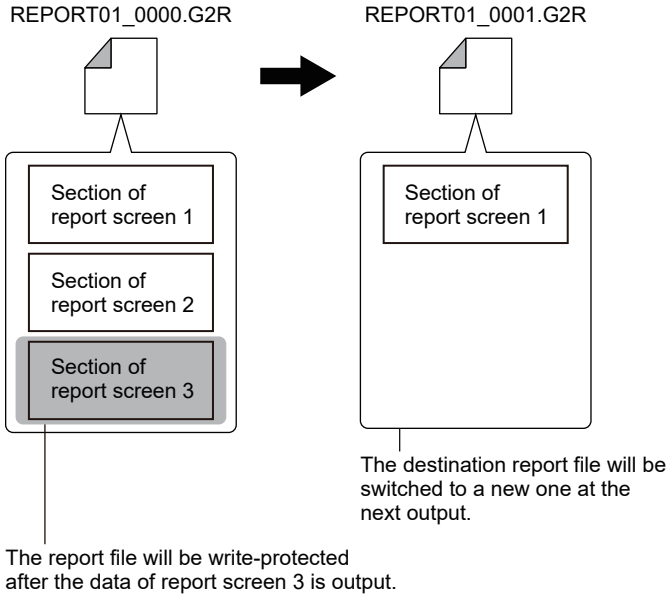
1) [Destination]

Item	Description
[Specification]	Select how to specify a destination report file. The following shows selectable items. • [Direct] Saves the screen data to the user-specified file. The specified file will be created when the screen data is output to the file. • [Device] Saves the screen data to the file that is specified with the user-specified devices. The specified file will be created when the screen data is output to the file. • [Add to other report file] Adds the screen data to the report file created for another report screen. For information on how to specify a report file, refer to the following. ➟10.11.2 ■7 (1) Specifying a report file
[Drive Name]	This item appears when [Specification] is set to [Direct]. Select the drive to which a report file will be saved. The following shows selectable items. • [A:Standard SD Card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] • [N:Network Drive] • [X:Current Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Folder Name]	This item appears when [Specification] is set to [Direct]. Specify the folder to which a report file will be saved. For the restrictions on the folder name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT
[File Name]	This item appears when [Specification] is set to [Direct]. Set the name of a report file. For the restrictions of the file name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT Specify a unique report file name. For the details of a report file, refer to the following. ➟10.11 Outputting the Collected Data as a Report (Report Function)
[Add date information to the file name]	This item appears when [Specification] is set to [Direct]. Appends the creation date (year, month, and day) to the name of the report file.

Item	Description
[Separate destinations for each GOT]	Available to GT27, GT25, and GS25. This item appears when [Drive Name] is set to [N:Network Drive]. Automatically creates a folder for each GOT to save report files. Each folder is named as the IP address of each GOT. ➟5.3.15 ■4 Creating a folder for each GOT
[Device]	This item appears when [Specification] is set to [Device]. Specify the start device of consecutive devices that store the path to the report file. ➟6.1.2 How to set devices Unicode is supported. Data will be read from the specified devices starting from the lower-order bits. NULL (0x00) is supported as the termination character.
[Maximum number of characters]	This item appears when [Specification] is set to [Device]. Specify the maximum number of characters in the name of a report file. The setting range is [4] to [74].
[Screen No.]	This item appears when [Specification] is set to [Add to other report file]. Specify a screen number or screen name to add the screen data to an existing report file. The setting range of the screen number is [1] to [99].

2) **[File Management]**

Item	Description
[Behavior when the capacity is insufficient]	This item appears when [Specification] is set to [Direct] or [Device]. Select how screen data will be saved to a report file when the destination drive does not have enough free space. The following shows selectable items. • [Delete old files] • [Output no files]

Item	Description
[Switch files after an output]	This item appears when [Output Timing] is set to [When trigger condition is satisfied] in the [Action] tab. Write-protects the destination report file once report screen data is output to the file. The destination report file will be switched to a new one at the next output. If you output the data of multiple report screens to one report file, you can set when the destination file switching will occur. Example) Switching the destination report file after the data of report screen 3 is output when outputting the data of report screens 1 to 3 repeatedly The following shows how the data of report screens 1 to 3 are output. • Report screen [Specification] in the [File Save] tab: [Direct] [File Name] in the [File Save] tab: REPORT01 [Switch files after an output]: Not selected • Report screen 2 [Specification] in the [File Save] tab: [Add to other report file] [Screen No.] in the [File Save] tab: 1 [Switch files after an output]: Not selected • Report screen 3 [Specification] in [Destination]: [Add to other report file] [Screen No.] in the [File Save] tab: 1 [Switch files after an output]: Selected 

3) **[Option]**

This item appears when [Specification] is set to [Direct] or [Device].

Item	Description
[Control Device]	Specify a device to control the output of a report file. ➟6.1 Device Settings A word device is settable. For the function of each bit of the device, refer to the following. ➟(1) [Control Device]
[Notification Device]	Specify a device to notify the output status of a report file. ➟6.1 Device Settings A word device is settable. For the function of each bit of the device, refer to the following. ➟(2) [Notification Device]

(1) [Control Device]

The following shows the function of each bit of the set device.

Bit number	Function
b0	When this bit is turned on, b0 of the notification device turns off and the destination report file is write-protected. The destination report file will be switched to a new one at the next output.
b1	When this bit is turned on while GS524.b0 is on, a page break is inserted. If the footer is set in the previously output report screen, the footer will be output and then a page break will be inserted. This function is valid for the report screens where the output destination is set to a file. For GS524, refer to the following. ➟12.1.3 GOT special register (GS)

(2) [Notification Device]

The following shows the function of each bit of the set device.

Bit number	Function
b0	Turns on when a report file is created. Turns off when the destination report file becomes write-protected under the following conditions. • B0 of the control device is turned on. • The data of a report screen is output when [Switch files after an output] is enabled for the screen.
b1	Turns on when an output is aborted due to data storage anomalies. Turns off after the data storage recovers from the anomalies and the output is complete. When [Output Timing] is set to [At the time of data collection], up to 200 files of alarm and operation log data collected during the output interruption will be held. Any files over the 200 file limit will be discarded. The held data will be output upon resumption of output.
b2	Turns on when the output is aborted because the report file name is unspecified, duplicate, or invalid. Turns off after the report file name is specified correctly and the output is complete. When [Output Timing] is set to [At the time of data collection], up to 200 files of alarm and operation log data collected during the output interruption will be held. Any files over the 200 file limit will be discarded. The held data will be output upon resumption of output.
b3	Turns on when any files of alarm and operation log data over the 200 file limit are discarded due to the causes mentioned above. Turns off after the causes are eliminated and the output is complete.

2.8 Managing the Created Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The created screen is displayed on the [Screen] window and [Screen Image List] window.
You can copy or delete the screen on each window.

- [Screen] window
  Displays the screen view tree with the screen number and title of the created screens.
  Whether the script and trigger action is set for each screen can be displayed.
  ➟2.2.4 ■3 [Screen] window
- [Screen Image List] window
  The mobile screen is available to GT27, GT25, GT SoftGOT2000, and GS25.
  Displays the icons of created base screens, window screens, and mobile screens.
  ➟2.8.1 [Screen Image List] window

2.8.1 [Screen Image List] window

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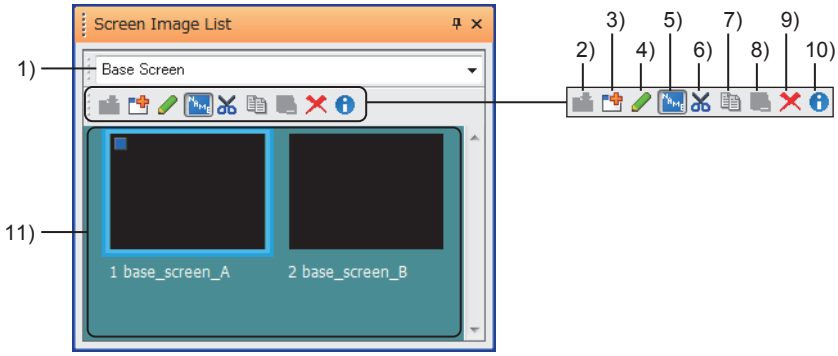
Either of the following operations displays the [Screen Image List] window.

- Select [Display] → [Docking Window] → [Screen Image List] from the menu.
- Select [Screen] → [Screen Image List] from the menu.

Point

Display speed of screen images

To speed up the display of screen images, select [Include projects for the function of Utilize Data] in the [Project information] dialog.



1) **Screen types**
Select the type of the screen to be displayed in the screen image list.
The following shows the items to be selected.

- [Base Screen]
  Displays base screens.
- [Window Screen]
  Displays window screens.
- [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)
  Displays the icons of mobile screens.
- [An image of set overlay screen(Base Screen)]
  Displays the icons of base screens for the set overlay screen function.
- [An image of set overlay screen(Window Screen)]
  Displays the icons of window screens for the set overlay screen function.
- [An image of set overlay screen(Mobile Screen)] (GT27, GT25, GT SoftGOT2000, and GS25)
  Displays the icons of mobile screens for the set overlay screen function.

2) **[Register] button**
Creates a new screen utilizing the figure or object selected on the screen editor.

3) **[New] button**
Creates a new screen of the type selected in the screen types.

4) **[Edit] button**
Opens the screen selected in the screen image list.

5) **[Name] button**
Switches between displaying and hiding screen numbers and titles in the screen image list.

6) **[Cut] button**
Cuts the screen selected in the screen image list.

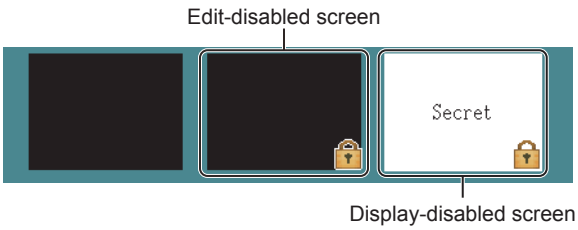
7) **[Copy] button**
Copies the screen selected in the screen image list.

8) **[Paste] button**
Pastes the screen cut or copied in the screen image list.
The screen appears after the paste.

9) **[Delete] button**
Deletes the screen selected in the screen image list.

10) **[Property] button**
Displays the [Screen Property] dialog of the screen selected in the screen image list.

11) **Screen image list**
Lists the images of the created screens.
When the display or edit of a screen is disabled by the project security, the screen image is displayed as shown below.



2.9 Viewing the Image of the Created Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟2.9.1 Displaying a preview
2.9.2 Displaying the preview of a window screen on the screen editor

2.9.1 Displaying a preview

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select the screen editor of the base screen or window screen to display the preview.

➟2.6.1 Selecting a screen editor to be edited

Step 2 Select [Display] → [Preview] from the menu to display the [Screen preview] window.

Edit the screen editor to apply the edit contents to the [Screen Preview] window.

➟■1 [Screen preview] window
■2 Precautions

■1 [Screen preview] window

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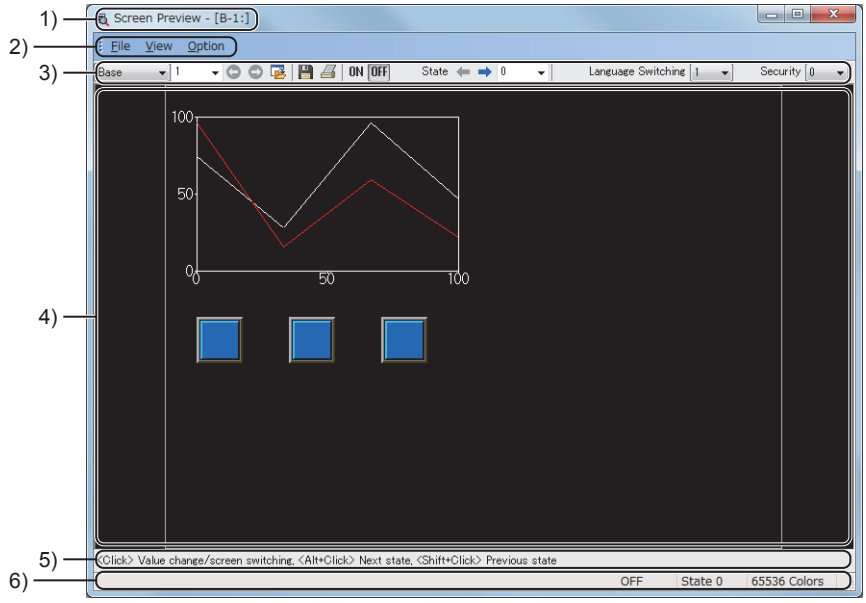


1) **Title bar**
Screen number and title of the previewed screen

2) **Menu bar**
Operate the [Screen Preview] window from the pull-down menu.

➟(1) Menu bar

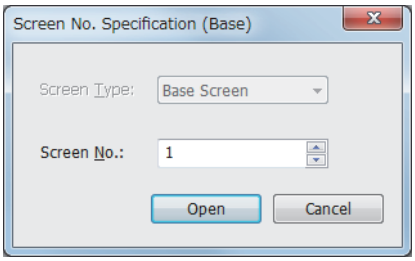
3) **Toolbar**
Use the buttons and other items to operate the [Screen Preview] window.

➟(2) Toolbar

4) **Display section**
Displays the preview of the screen editor.
The scroll bars appear on the expanded base screens.
Each time you click the superimposed part of objects while holding down the [Ctrl] key, the selected object is shifted in order from the topmost object.
Right-click the display section to display the menu.
The available items are the same as those in [Display] in the menu.

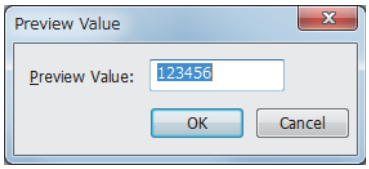
➟2.9.1 ■1 (1) (b) [Display]

Click a Go To Screen switch for which an option other than [Fixed] is selected in [Next Station] to display the [Screen No. Specification] dialog.
In this dialog, you can set the destination screen number.



- **[Screen Type]**
  Displays the screen type.
- **[Screen No.]**
  Set the destination screen number.
  The setting range is [0] to [32767].

Click the numerical display, numerical input, text display, or text input to display the [Preview Value] dialog.
In this dialog, you can change the value to be displayed.



- **[Preview Value]**
  Set the value to be displayed.

5) **Description bar**
Displays the operation description of the [Screen Preview] window.

6) **Status bar**
The following are displayed according to the position of the mouse cursor and setting of the preview.

- Type and condition of an object which the mouse cursor is pointed to
- Condition in preview
- Number of colors being previewed

(1) Menu bar

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) [File]

Menu	Description
[Save]	Saves the image of the display section in the BMP format. Shortcut key: [Ctrl] + [Shift] + [S]
[Print]	Prints the image of the display section.
[Printer Setting]	Sets the printer for printing.
[Output in reverse]	Switches between reversing the color and leaving the color unreversed when an image is output to a printer or file.
[Fill Black at Text BG]	Outputs an image with the text in white and background in black to a printer or file.
[Dithering]	Outputs an image with the intermediated color added to the two-tone monochrome to a printer or file.
[Copy Screen Image to Clip Board]	Captures the image of the display section.
[Close]	Closes the [Screen Preview] window.

(b) [Display]

Menu	Description
[Menu and Title]	Switches between displaying and hiding the menu bar and title bar.
[Toolbar]	Switches between displaying and hiding the toolbar.
[Status bar]	Switches between displaying and hiding the status bar.
[Description Bar]	Switches between displaying and hiding the description bar.
[Next Screen]	Switches to a screen whose screen number is one greater than that of the currently displayed screen.
[Previous Screen]	Switches to a screen whose screen number is one smaller than that of the currently displayed screen.

Menu	Description
[Use Preview No.]	Switches between enabling and disabling the preview number as the column No. of the comment group.
[ON Image]	Switches between on and off of the object to be displayed.
[Next State]	Switches the states of objects to be displayed on screen editors in ascending order.
[Previous State]	Switches the states of objects to be displayed on screen editors in descending order.
[Overlap Window1]	Switches between displaying and hiding the overlap window 1.
[Overlap Window2]	Switches between displaying and hiding the overlap window 2.
[Overlap Window3]	Switches between displaying and hiding the overlap window 3.
[Overlap Window4]	Switches between displaying and hiding the overlap window 4.
[Overlap Window5]	Switches between displaying and hiding the overlap window 5.
[Superimpose 1]	Switches between displaying and hiding the superimpose window 1.
[Superimpose 2]	Switches between displaying and hiding the superimpose window 2.
[Key Window]	Switches between displaying and hiding the key window.
[Dialog Window]	Switches between displaying and hiding the dialog window.
[PC Remote Operation]	Switches between displaying and hiding the remote screen.
[65536 Colors]	Previews a screen in 65536 colors.
[32(Grayscale)]	Previews a screen in 32-level grayscale.
[Show the entire base screen]	Switches between the view modes of the expanded base screens. The following shows the view modes. • The area of the base screen for the GOT to display • The entire expanded base screen
[Show the Screen Only]	Deletes the menu bar and other bars to display only the image of the display section. Double-clicking the display section also switches the display. Shortcut key: [Shift] + [F4]

(c) **[Option]**

Menu	Description
[Open the editing screen in conjunction with Screen Preview]	Switches between displaying and hiding the screen editor of the screen displayed on the [Screen Preview] window.
[Display the frame around the selected item]	Switches between displaying and hiding the frame of the target which mouse cursor is pointed to.

(2) Toolbar

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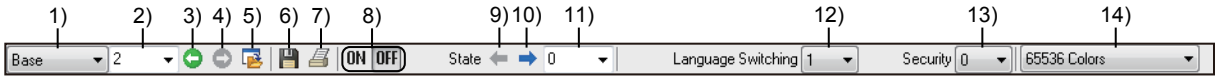


1) **[Screen Type]**
Select the type of the screen to be displayed.

2) **[Screen No.]**
Select the screen number of the screen to be displayed.

3) **[Previous Screen]**
Switches to a screen whose screen number is one smaller than that of the currently displayed screen.

4) **[Next Screen]**
Switches to a screen whose screen number is one greater than that of the currently displayed screen.

5) **[Open the editing screen]**
Displays the screen editor of the screen displayed on the [Screen Preview] window.

6) **[Save]**
Saves the image of the display section in the BMP format.

7) **[Print]**
Prints the image of the display section.

8) **[ON], [OFF]**
Switches between on and off of the object to be displayed.

9) **[Previous State]**
Switches the states of objects to be displayed on screen editors in descending order.

10) **[Next State]**
Switches the states of objects to be displayed on screen editors in ascending order.

11) **[State No.]**
Switches the states of objects to be displayed on screen editors by selecting the state No.

12) **[Language Switching]**
Select the column No. for a comment group to be displayed.

13) **[Security]**
Select the security level.
Only the objects which can be displayed in the selected security level are displayed.

14) **[Color Setting]**
Only available to GT2105-Q.
Select the number of colors for previewing a screen.

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Object which cannot be displayed on the preview window

The parts movement is not displayed on the [Screen Preview] window.

2.9.2 Displaying the preview of a window screen on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When arranging a window position object on the screen editor, you can display the preview of the window screen.
The preview of a window screen on a mobile screen is available to GT27, GT25, GT SoftGOT2000, and GS25.

Step 1 Select [Display] → [Window Preview] → [Setting] from the menu to display the [Window Preview] dialog.

➟■1 [Window Preview] dialog

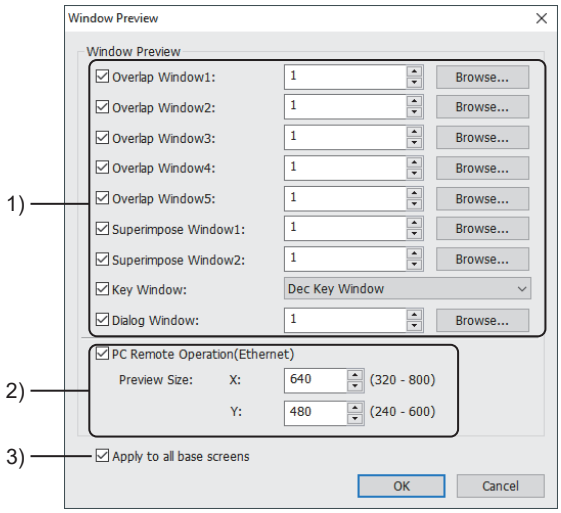
Step 2 Set the window screen to be displayed in the preview of each screen. Then click the [OK] button.

When a window screen on a mobile screen is previewed, if the window screen has the setting configured for previewing another window screen, that window screen will not be previewed.

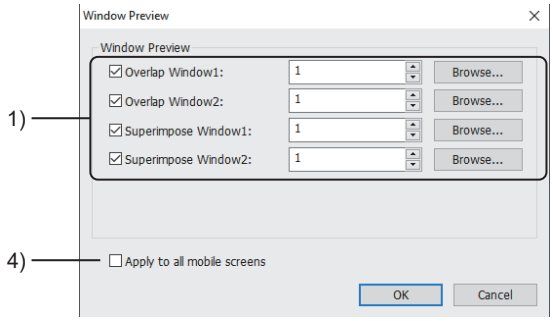
■1 [Window Preview] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The preview of a window screen on a mobile screen is available to GT27, GT25, GT SoftGOT2000, and GS25.



Base screen



Mobile screen

1) **Window preview**
Set the window screens, such as an overlap window, to be displayed on the screen editor.
Set the screen number of window screens to be displayed.
The setting range is [0] to [32767].
Click the [Browse] button to display the [Screen Image List] dialog.
You can check the image on the screen when selecting a window screen.

- **[Screen Type]**
  Displays the screen type.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

Item	Description
[Overlap Window1]	Displays the preview of overlap window 1.
[Overlap Window2]	Displays the preview of overlap window 2.
[Overlap Window3]	Displays the preview of overlap window 3. Not available for mobile screens. Not available to GT23, GT21, and GS21.
[Overlap Window4]	Displays the preview of overlap window 4. Not available for mobile screens. Not available to GT23, GT21, and GS21.
[Overlap Window5]	Displays the preview of overlap window 5. Not available for mobile screens. Not available to GT23, GT21, and GS21.
[Superimpose Window1]	Displays the preview of superimpose window 1.
[Superimpose Window2]	Displays the preview of superimpose window 2.
[Key Window]	Displays the preview of the key window. Select a standard key window to be displayed. The following shows the items to be selected. • [Dec Key Window] • [Hex Key Window] • [Text Key Window] Not available for mobile screens.
[Dialog Window]	Displays the preview of the dialog window. Not available for mobile screens.

2) **[PC Remote Operation(Ethernet)]**

Displays the preview of the remote screen of the remote personal computer operation function (Ethernet).
Not available for mobile screens.
Not available to GT23, GT21, GT SoftGOT2000, and GS21.
Displays the preview of the overlap window used as a system window, instead of the preview of the personal computer screen.
Example) Using overlap window 4 as a system window
Place a window position object for overlap window 4 to display the preview of the personal computer screen.

Item	Description
[Preview Size]	Set the size of the window.

3) **[Apply to All Base Screens]**

Applies the settings in the [Window Preview] dialog to all the base screens.

4) **[Apply to all mobile screens]**

Applies the settings in the [Window Preview] dialog to all the mobile screens.

2.10 Copying and Deleting Screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟2.10.1 Copying screens
2.10.2 Deleting screens

2.10.1 Copying screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Screens can be copied from the [Screen] window, [Screen Image List] window, and menu.
For the operation of the [Screen] window and [Screen Image List] window, refer to the following.

➟2.2.4 ■3 [Screen] window
2.8.1 [Screen Image List] window

For how to copy a base screen or window screen to create a mobile screen, refer to the following.

➟10.19.3 ■5 Copying a base screen or window screen to a mobile screen

The following shows how to copy screens from the menu.

Step 1 Select [Screen] → [Copy] from the menu to display the [Copy Screen] dialog.

➟■2 [Copy Screen] dialog

Step 2 Select the screen to be copied in the screen list and set [Destination No.] and [Number of Copy].

Step 3 Click the [Copy] button to create a screen.

■1 Specifications on how screen data is copied

(1) Setting of the screen trigger action and screen script

When the trigger action or script is set to the screen to be copied, the setting of the trigger action or script is also copied.

(2) Project for which project security is set

For operating the project for which project security is set, refer to the following.

➟2.13 Protecting a Project by Registering Users

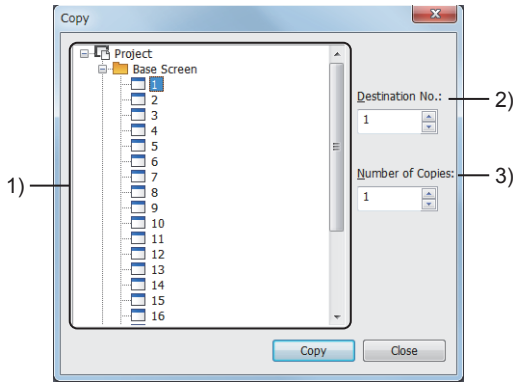
(3) Settings that are not migrated when report screens are copied

Some settings of report screens are not migrated, but their default values are set.
The following settings in the [Screen Property] dialog are not migrated.

- [Temporary File Name] in the [Action] tab
- [File Name] in the [File Save] tab

■2 [Copy Screen] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **List of screens**
List of the created screens
Select a screen to be copied.
Use the [Ctrl] key or [Shift] key to select up to 25 screens of the same type.

2) **[Destination No.]**

Set the screen number of the screen to be created.

The setting range depends on the screen type.

- Base screen, window screen, or mobile screen: [0] to [32767]
- Report screen: [1] to [99]

3) **[Number of Copy]**

Set the number of copies.

The setting range depends on the screen type.

- Base screen, window screen, or mobile screen: [1] to [100]
- Report screen: [1] to [99]

The screen numbers after the second copied screen are set sequentially from the number set in [Destination No.]. If you copy the screens exceeding the number of the maximum number of the screen setting or range of the screen number, the screens cannot be copied.

2.10.2 Deleting screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Screens can be deleted from the [Screen] window, [Screen Image List] window, and the menu.
For the operation of the [Screen] window and [Screen Image List] window, refer to the following.

➟2.2.4 ■3 [Screen] window
2.8.1 [Screen Image List] window

The following shows how to delete screens from the menu.

Step 1 Select [Screen] → [Delete] from the menu to display the [Delete Screen] dialog.

➟■1 [Delete Screen] dialog

Step 2 Select the screen to be deleted in the screen list and click the [Delete] button to delete the screen.

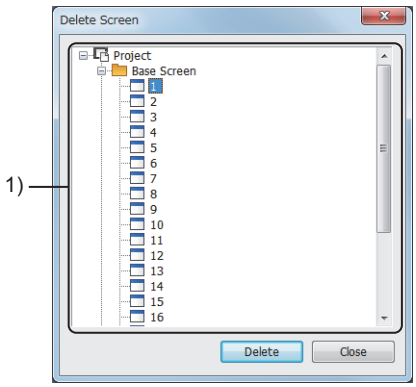
Point

Project for which project security is set

The screen for which editing is prohibited cannot be deleted.

■1 [Delete Screen] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **List of screens**

List of the created screens

Select a screen to be deleted.

Use [Ctrl] key or [Shift] key to select multiple screens of the same type.

2.11 Performing a Data Check

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Checking that no error exists in the project

Select [Tool] → [Data Check] → [Check] from the menu to display the check result in the [Data Check List] window.

➡2.11.1 [Data Check List] window

To narrow the check items, change the setting in the [Check Item Setting] dialog.

To display the [Check Item Setting] dialog, perform one of the following operations.

- Select [Tool] → [Data Check] → [Item Setting] from the menu.
- Click the [Option] button in [Data Check List] to select [Check Item Setting] from the pull-down menu.

➡2.11.2 [Check Item Setting] dialog

■2 Exporting the check result

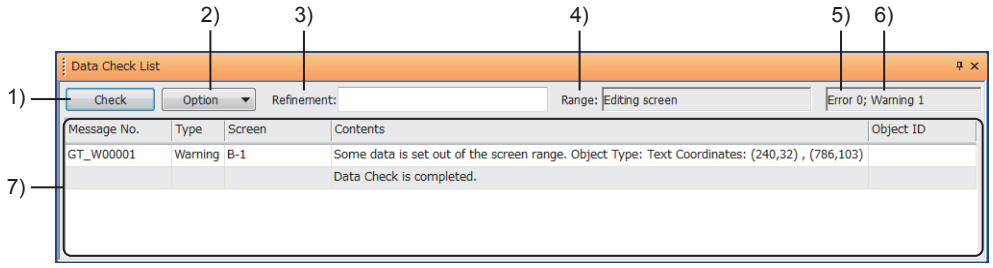
You can export the check result in a CSV format or Unicode text format.

Step 1 Click the [Option] button in the [Data Check List] window and select [Export] from the pull-down menu to display the [Save As] dialog.

Step 2 Set [File name] and [Files of type] and click the [OK] button to export the check result.

➡2.11.3 Details of the exported file

2.11.1 [Data Check List] window



1) **[Check] button**
Checks the items selected in the [Check Item Setting] dialog.

2) **[Option] button**
Operates the [Data Check List] window from the pull-down menu.

Item	Description
[Check Item Setting]	Displays the [Check Item Setting] dialog. In this dialog, you can set the check target and check item. ➟2.11.2 [Check Item Setting] dialog
[Export]	Exports the check result as a CSV file or Unicode text file. Set [File name] and [Files of type] in the displayed dialog and click the [Save] button. ➟2.11.3 Details of the exported file

3) **[Refinement]**
Narrow the displayed contents of the check result by keywords.
Up to 128 characters can be set.
To narrow the contents using multiple keywords, separate each keyword with one-byte spaces.

4) **[Range]**
Range selected in [Object No.] of the [Check Item] dialog

5) **Number of errors**
Number of settings which do not perform operation

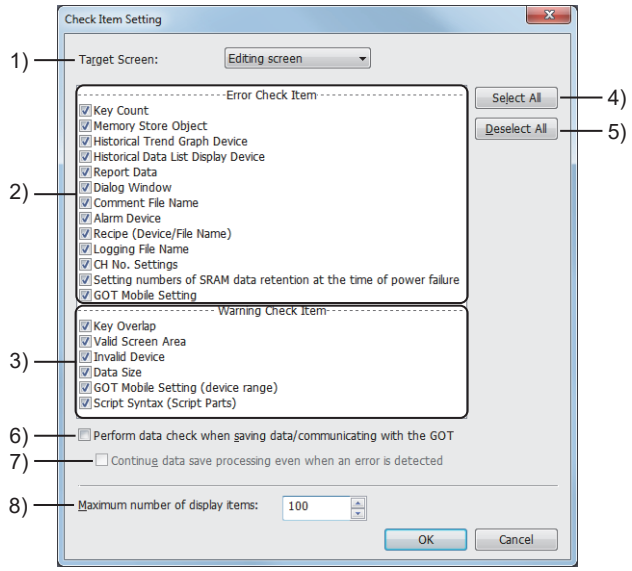
6) **Number of warnings**
Number of settings which cause unintentional operation

7) **List of check results**
Displays the check result.
Double-click a result to jump to the position which causes an error or warning.

Item	Description
[Message No.]	Message No. of an error or warning
[Type]	Type of a detected event • [Error]: Setting which does not perform operation • [Warning]: Setting which causes unintentional operation
[Screen]	Screen with the cause of an error or warning • [B-n]: Base screen ("n" indicates the screen number.) • [W-n]: Window screen ("n" indicates the screen number.) • [R-n]: Report screen ("n" indicates the screen number.) • [M-n]: Mobile screen ("n" indicates the screen number.)
[Contents]	Message which shows the description of an error or warning
[Object ID]	Object ID of the cause of an error or warning

2.11.2 [Check Item Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Object No.]**

Select the check target.

The following shows the items to be selected.

- [All screens]

  Select this item to check all the screens in the project and common settings.
- [Open Screen]

  Select this item to check all the opened screens and common settings.
- [Editing screen]

  Select this item to check the screen whose screen editor is displayed at the topmost position and common settings.

2) **[Error Check Item]**

Items for checking whether any setting which does not perform operation exists

Select the items to check.

Item	Description
[Key Count]	Checks whether 1024 or more touch switches are arranged in one screen.
[Memory Store Object]	Checks whether 16 or more scatter graphs (when [Store Memory] is set) are arranged in one screen.
[Historical Trend Graph Device]	Checks whether a mismatch exists in the logging setting and device setting in the historical trend graph.
[Historical Data List Display Device]	Checks whether a mismatch exists in the following settings. • Logging setting and device setting in the historical data list display • Device format in the historical data list display and device display
[Report Data]	Checks the following settings of the [Screen Property] dialog (report screen). Settings in the [Action] tab • Checks whether the setting of [Temporary File Name] in [Detail Setting] is duplicated with other report screens. Settings in the [Format] tab • Checks whether the total number of header, footer, and repeat lines exceeds the set value of [Page Lines] in the [Report Setting] dialog. Settings in the [File Save] tab • Checks whether the save destination setting is duplicated with other report screens. • Checks whether the specified report screen exists and [Output Destination] is set to [Printer] when [Specification] is set to [Add to other report file]. Checks the following settings in the [Report Setting] dialog. • Checks whether the total number of characters specified for [Text] and [Device] in the [Edit Page Header/Page Footer] dialog exceeds the set value of [Page Columns] in the [Report Setting] dialog.

Item	Description
[Dialog Window]	Checks the following for the setting in the [Screen Property] dialog of the base screen and window screen or [Dialog Window] in the [Environmental Setting] window. • Checks whether the screen number of a window screen which does not exist is set to a dialog window. • Checks whether the screen size of the window screen is 320 × 240 or more.
[Comment File Name]	Not available to GT23, GT21, and GS21. Checks the comment group settings for duplicate comment text file paths. For comment text files, refer to the following. ➟5.8.2 ■5 Importing or exporting comments
[Alarm Device]	Checks that the alarm device and alarm range are set correctly in the user alarm observation.
[Recipe (Device/Alarm name)]	Checks the following for the setting in the [Recipe Common Setting] dialog and [Recipe] dialog. • Checks that the common control device and external notification device are not duplicated with the screen switching device or station No. switching device. • Checks that the recipe files (file path) in each recipe setting are not duplicated.
[Logging File Name]	Checks that the settings(file path) of the destination to save files in each logging setting are not duplicated.
[CH No. Settings]	Checks that any channel which is not used is not set to the following settings. • [CH No. for Station No. Switching] in [Station No. Switching] in the [Controller Setting] window • [Adjust CH No.] in the [Adjust] tab in [Time Setting] in the [GOT Setup] window • [Broadcast CH No.] in the [Broadcast] tab in [Time Setting] in the [GOT Setup] window • [Controller CH No.] in [Transparent Mode Setting] in the [GOT Setup] window
[Number of the retains data in the SRAM user area under power failure]	Not available to GT21 and GS21. Checks the following. • The SRAM power-failure backup function is enabled for a maximum of 10 alarm observation settings. • The SRAM power-failure backup function is enabled for a maximum of 20 logging settings.
[GOT Mobile Setting]	Not available to GT23, GT21 and GS21. Checks the following. • Checks that GOT Mobile devices (VGB and VGD) are only specified in the mobile screens and in the [GOT Mobile Setting] window. • Checks that specified GOT Mobile devices (VGB and VGD) are within the setting ranges. • Checks that [Use GOT Mobile function] is selected when a mobile screen is used.
[OPC UA Setting]	Only available to GT SoftGOT2000. Checks that no invalid OPC UA tag is set in device settings.

3) **[Alarm Check Item]**

Items for checking that any setting which causes unintentional operation does not exist.
Select the items to check.

Item	Description
[Key Overlap]	Checks whether the following objects are overlapped. • Touch switch • Numerical input • Text input • Historical data list (when [Single Touch Operation] is set) • Trend graph (when [Single Touch Operation] is set) • Historical trend graph (when [Single Touch Operation] is set) • Alarm display • Simple alarm display (when [Operation] is selected in [Touch Mode]) • Slider • Recipe Display (Record List) Objects in the temporary area are not checked. The overlap of an object on a screen opened using the set overlay screen and an object on the basic screen is not checked.
[Valid Screen Area]	Checks that objects are not arranged out of the screen display area.
[Invalid Device]	Checks that any device for which [??] is set does not exist.
[Data Size]	Checks the total size of the project size and SRAM user area to be used.
[GOT Mobile Setting (device range)]	Not available to GT23, GT21 and GS21. Checks that the GOT internal devices (GB and GD) assigned to GOT Mobile devices (VGB and VGD) are not specified for other settings.
[Script Syntax (Script Parts)]	Checks the script parts for possible errors in their scripts.

4) **[Select All] button**
Checks all the items in the check item.

5) **[Deselect All] button**
Unchecks all the items in the check item.

6) **[Data Checking at Save or Communication]**
Performs a data check when a project is saved and package data is transferred.

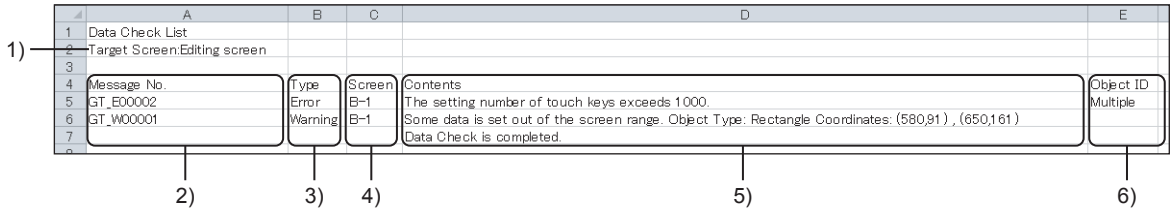
7) **[Continue Save Processing even with Error]**
Saves a project even if an error is found when the project is saved.

8) **[Maximum number of display items]**
Set the maximum number of errors and warnings displayed in the [Data Check List] window.
The setting range is [1] to [1000].

2.11.3 Details of the exported file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the details of the exported file of a check result.



	A	B	C	D	E
1	Data Check List				
2	Target Screen:Editing screen				
3					
4	Message No.	Type	Screen	Contents	Object ID
5	GT_E00002	Error	B-1	The setting number of touch keys exceeds 1000.	Multiple
6	GT_W00001	Warning	B-1	Some data is set out of the screen range. Object Type: Rectangle Coordinates: (580,91) , (650,161)	
7				Data Check is completed.	

1) **[Target Screen]**
Target screens which are selected in [Target screen] of the [Check Item Setting] dialog

2) **[Message No.]**
Message No. of a detected error or warning

3) **[Type]**
Type of a detected event
- [Error]: Setting which does not perform operation
- [Warning]: Setting which causes unintentional operation

4) **[Screen]**
Screen with the cause of a detected error or warning
- [B-n]: Base screen ("n" indicates the screen number.)
- [W-n]: Window screen ("n" indicates the screen number.)
- [R-n]: Report screen ("n" indicates the screen number.)
- [M-n]: Mobile screen ("n" indicates the screen number.)

5) **[Contents]**
Message which shows the description of a detected error or warning

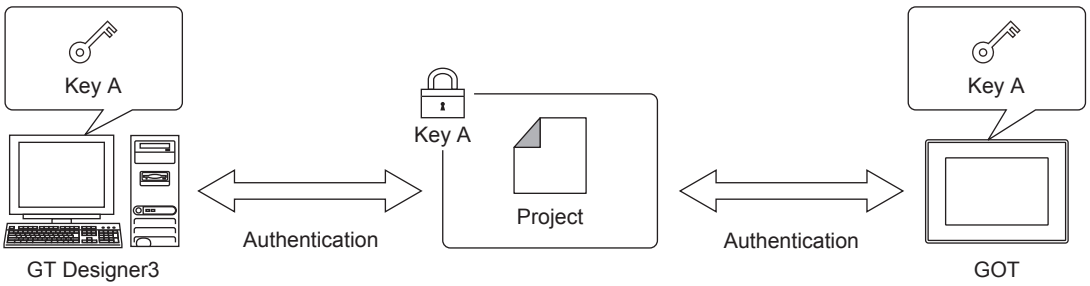
6) **[Object ID]**
Object ID of the cause of a detected error or warning

2.12 Protecting a Project with a Security Key

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟2.12.1 Specifications of the security key authentication
2.12.2 How to use the security key authentication
2.12.3 Precautions
2.12.4 [Security Key Setting] dialog
2.12.5 [Security Key Management] dialog

The security key authentication restricts project operations by using a security key.
When assigning a security key to GT Designer3, a project, and the GOT, you can operate the project only by using the matched security key.

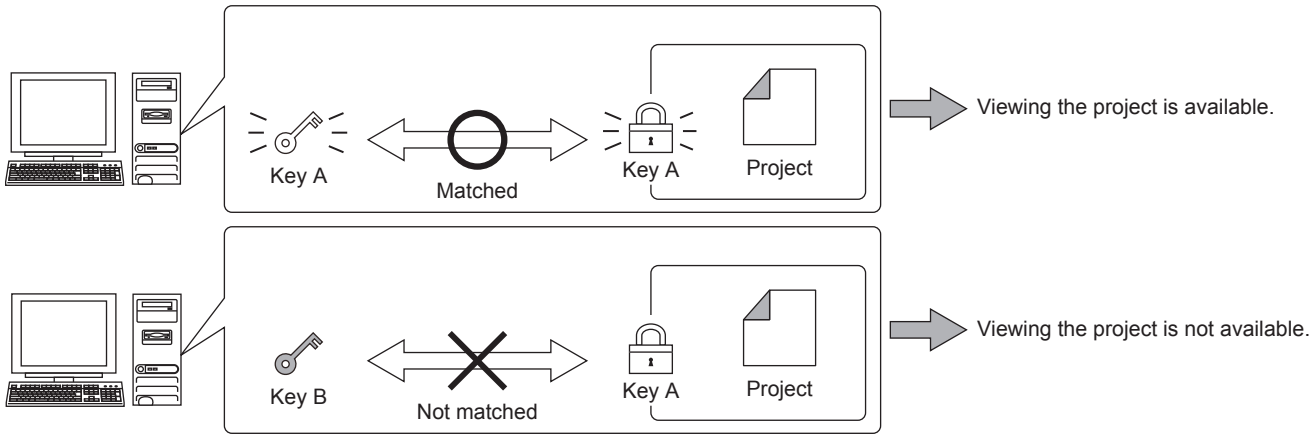


Security key assignment target	Operation
GT Designer3	Viewing a project to which the security key is assigned is available.
Project	The following operations are restricted. • Viewing the project on GT Designer3 • Executing the project on the GOT
GOT	Executing a project to which the security key is assigned is available.

■1 Operations restricted with a security key

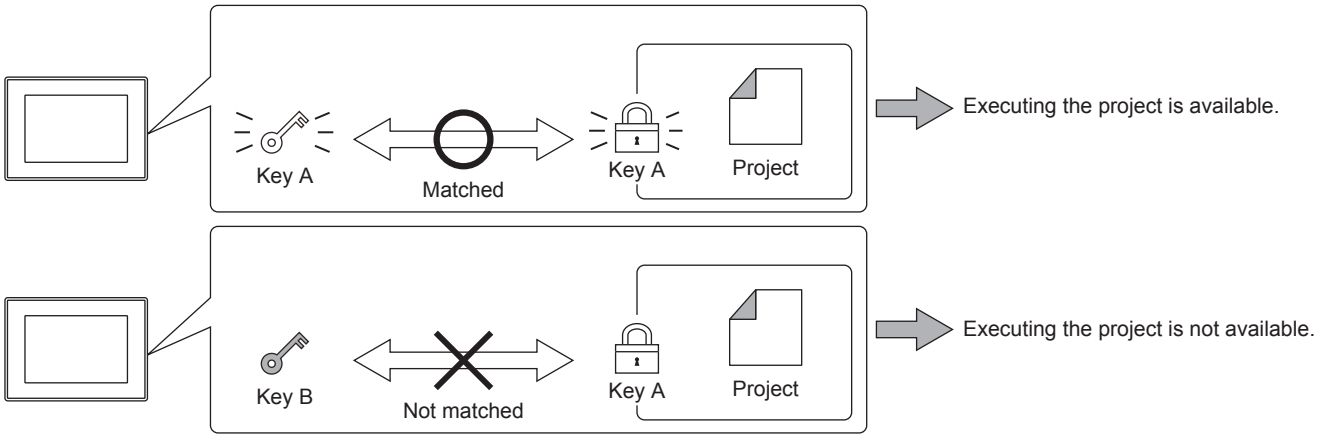
(1) Viewing a project on GT Designer3

A project protected with a security key can only be viewed on GT Designer3 that has the matched security key.



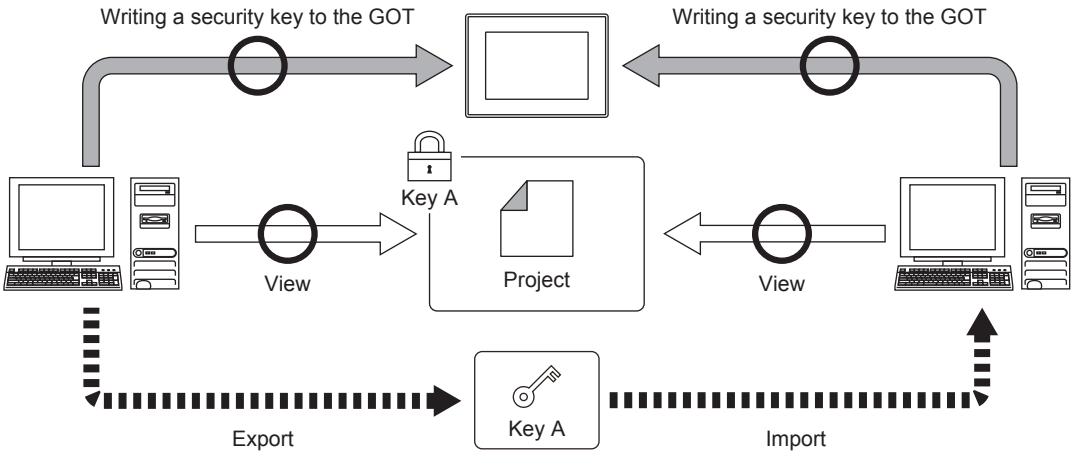
(2) Executing a project on the GOT

A project protected with a security key can only be executed on the GOT that has the matched security key.



■2 Copying a security key

A security key can be assigned to multiple personal computers by exporting and importing the key.
Operation authority restrictions and the expiration date are settable for the security key to be exported.



2.12.1 Specifications of the security key authentication

➟■1 Operations restricted by the security key authentication
■2 Security key specifications
■3 Project-related specifications
■4 GOT-related specifications

■1 Operations restricted by the security key authentication

The security key authentication restricts the following operations.

- Viewing a project on GT Designer3
- Executing a project on the GOT

To restrict operations other than the above, use the following security functions.
Using multiple security functions in combination further strengthens the security.

(1) Function restricting project operations

Function	Description
Project security	Restricts unregistered users to view or edit a project by registering users with the project. Also restricts operations by screen according to the access level of each user. ➟2.13 Protecting a Project by Registering Users

(2) Function restricting communication with the GOT

Function	Description
Data transfer security	Restricts data transfer between the personal computer (GT Designer3) and the GOT with a password. ➟5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])
IP filter	Restricts access to the GOT by Ethernet by registering IP addresses with the filtering list. ➟5.4.3 Setting the IP filter

(3) Function restricting the GOT operations

Function	Description
Screen security	Restricts the display of screens and objects on the GOT by registering users with the GOT. ➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])
Functional operation security	Restricts the display of the utility, and operations of some monitor functions. ➟5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])

■2 Security key specifications

(1) Number of registrable security keys

Security keys registered on GT Designer3 are shared among all of the MELSOFT applications, such as GX Works3.
Up to 128 security keys are registrable by user account on the personal computer.

(2) Name of a security key

You cannot create a security key with the same name as an existing security key.
Even if you delete the existing security key and then create a new one with the same name, the new one is recognized as a different security key.

(3) Deletion of a security key

Even if GT Designer3 is uninstalled, security keys still remain in the personal computer.
To delete security keys, use GT Designer3.

➟2.12.2 ■1 (1) Creating a security key

(4) Authority of a security key

The operation authority and the expiration date are settable for a security key to be exported.

Security key	Operation authority	Expiration date
New security key	Not restricted	Not set
Security key to be exported	Whether to allow the following operations after the security key is imported is settable. • Exporting the security key • Assigning the security key to a project • Writing the security key to the GOT	The expiration date for using the security key is settable.

■3 Project-related specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Project to which a security key can be assigned

The following shows the formats of projects to which a security key can be assigned.

- Workspace format for the GOT2000 series
- Single file format (*.GTX, *.GTXS)

(2) Number of security keys that can be assigned to a project

One security key can be assigned to one project.

Assigning a security key to the project again overwrites the already assigned security key.

(3) Project viewing availability according to security key assignment

The following shows the project viewing availability according to the security key assignment.

GT Designer3	Project	View of project
Security key assigned	Security key assigned (The security key matches the one on GT Designer3.)	Available
	Security key assigned (The security key does not match the one on GT Designer3.)	Not available
	No security key assigned	Available
No security key assigned	Security key assigned	Not available
	No security key assigned	Available

(4) Transferring data containing a protected project

Package data containing a protected project is written to drive C of the GOT only.

The package data cannot be directly opened from the data storage.

■4 GOT-related specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Version of the BootOS

To enable the security key authentication on the GOT, install version J or later of BootOS.

➟4.5.3 Installing the BootOS or the CoreOS to the GOT

(2) Number of security keys writable to the GOT

One security key can be written to one GOT.

(3) Project execution availability according to security key assignment

The following shows the project execution availability according to the security key assignment.

GOT	Project	Execution of project
Security key assigned	Security key assigned (The security key matches the one on the GOT.)	Available
	Security key assigned (The security key does not match the one on the GOT.)	Not available
	No security key assigned	Available
No security key assigned	Security key assigned	Not available
	No security key assigned	Available

(4) Communication method for writing/deleting a security key to/from the GOT

To write/delete a security key to/from the GOT, connect the personal computer to the GOT.
The security key cannot be written to the GOT via a data storage.

2.12.2 How to use the security key authentication

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to set the security key authentication to protect a project.

Step 1 To use the security key authentication, prepare a security key at first.
Create or import a security key.

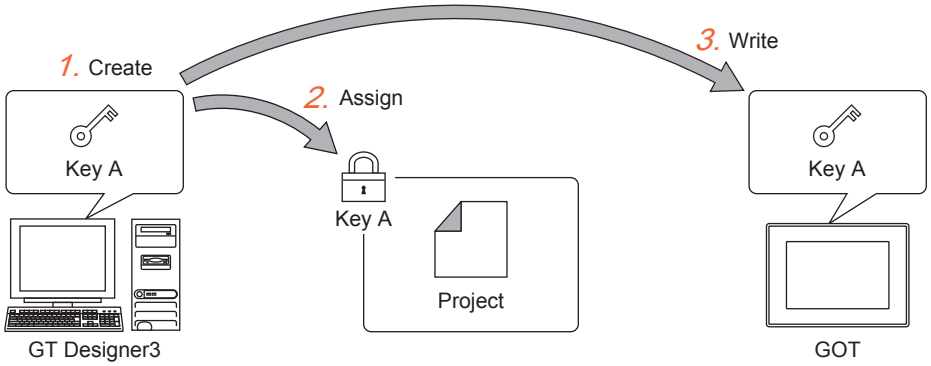
➟2.12.2 ■1 (1) Creating a security key
2.12.2 ■4 (2) Importing a security key

Step 2 Assign the security key to a project to be protected.

➟2.12.2 ■2 (1) Assigning a security key to a project

Step 3 Write the security key to the GOT that executes the protected project.

➟2.12.2 ■3 (1) Writing a security key to the GOT

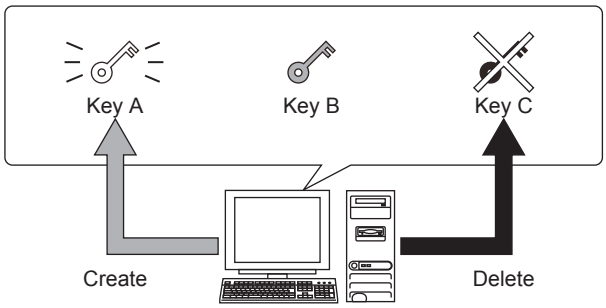


For how to delete, export, or import a security key, refer to the following.

➟■1 Creating or deleting a security key
■2 Assigning/deleting a security key to/from a project
■3 Writing/deleting a security key to/from the GOT
■4 Copying a security key

■1 Creating or deleting a security key

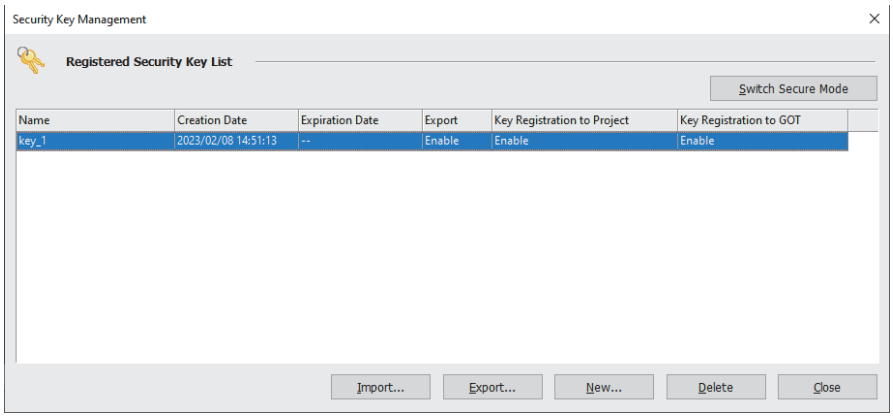
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



(1) Creating a security key

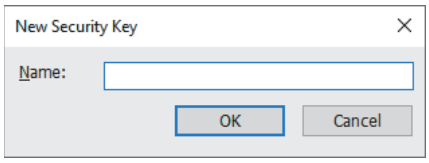
Step 1 Select [Project] → [Security] → [Security Key Management] from the menu to display the [Security Key Management] dialog.

➟2.12.5 [Security Key Management] dialog



Step 2 Click the [New] button to display the [New Security Key] dialog.

➟2.12.5 ■1 [New Security Key] dialog



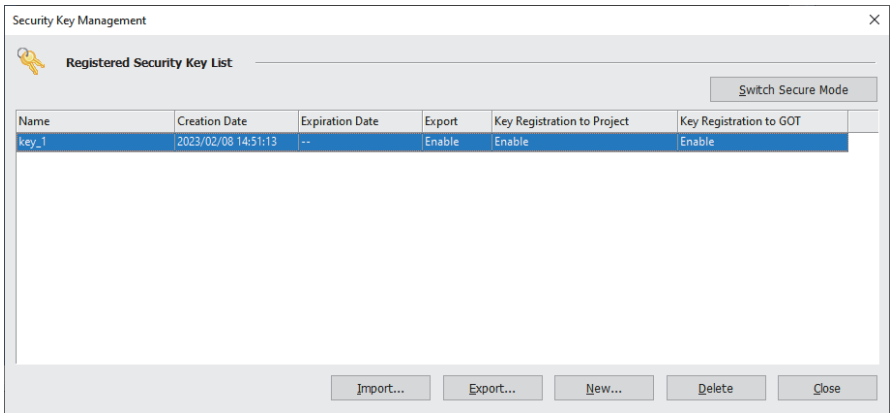
Step 3 Set [Name], and click the [OK] button to create a security key.

(2) Deleting a security key from GT Designer3

You cannot delete a security key, which is assigned to the project being edited.
When deleting a security key, you cannot view a project protected with the security key.
The deleted security key cannot be restored.
Even if you create a security key with the same name, the new one is recognized as a different security key.
If you need to restore the security key in case of a deletion, export the security key in advance.

Step 1 Select [Project] → [Security] → [Security Key Management] from the menu to display the [Security Key Management] dialog.

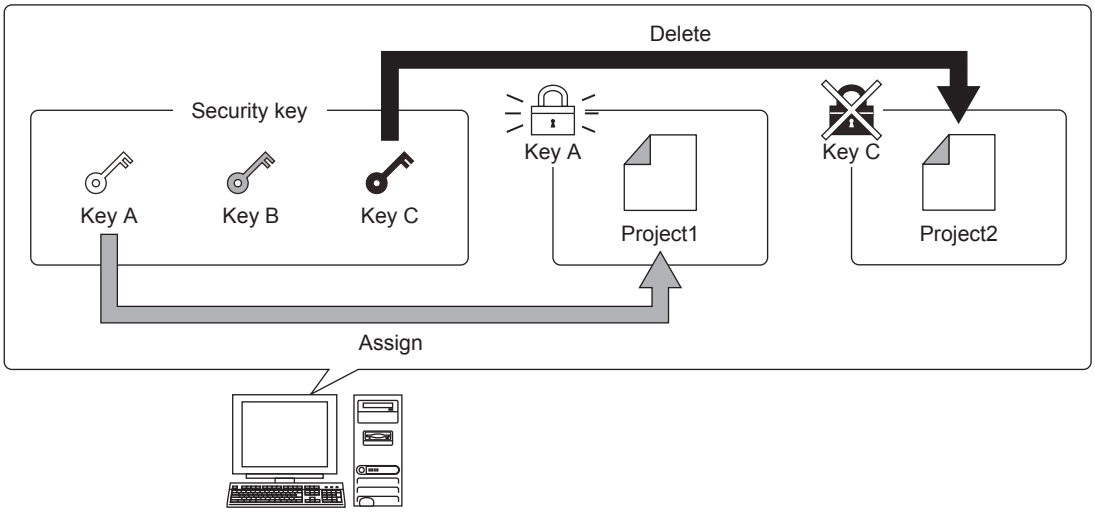
➟2.12.5 [Security Key Management] dialog



Step 2 Select a security key, and click the [Delete] button to delete the security key.

■2 Assigning/deleting a security key to/from a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



(1) Assigning a security key to a project

Step 1 Prepare a security key on GT Designer3.

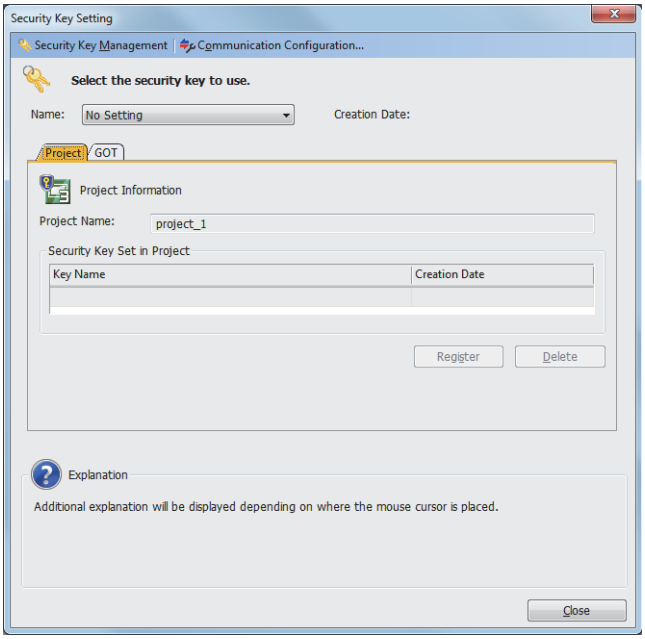
➟2.12.2 ■1 Creating or deleting a security key
2.12.2 ■4 (2) Importing a security key

Step 2 Open a project to which the security key is assigned.

➟2.3.2 ■1 Opening a project for GOT2000

Step 3 Select [Project] → [Security] → [Security Key Setting] from the menu to display the [Security Key Setting] dialog.

➟2.12.4 [Security Key Setting] dialog



Step 4 Select a security key in [Name], and click the [Register] button on the [Project] tab.

Step 5 The project is protected, and the assigned security key name appears in [Security Key Set in Project].

(2) Deleting a security key from a project

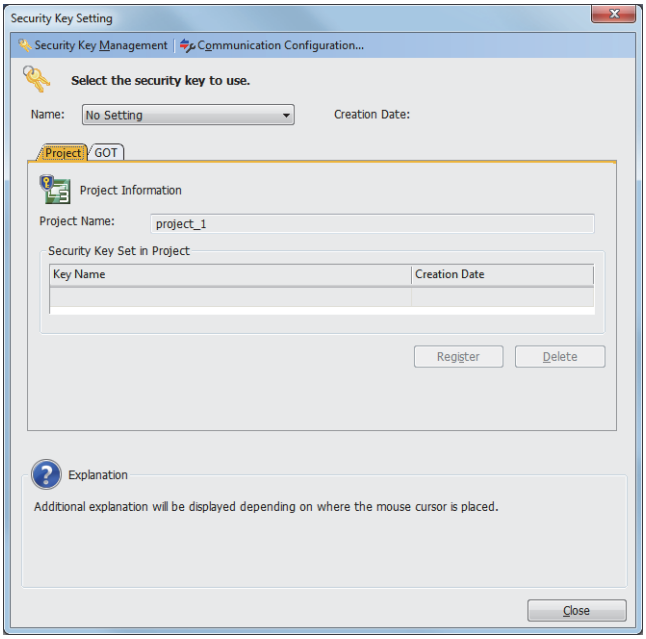
Step 1 Open a project from which a security key is deleted.

To open the project to which a security key is assigned, GT Designer3 must have the matched security key.

➟2.3.2 ■1 Opening a project for GOT2000

Step 2 Select [Project] → [Security] → [Security Key Setting] from the menu to display the [Security Key Setting] dialog.

➟2.12.4 [Security Key Setting] dialog

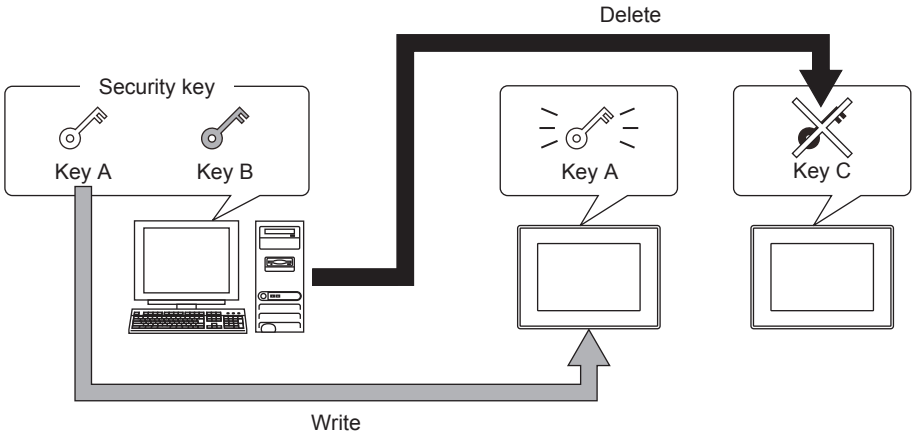


Step 3 Click the [Delete] button on the [Project] tab.

Step 4 The project is unprotected, and the field of [Security Key Set in Project] is blank.

■3 Writing/deleting a security key to/from the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



(1) Writing a security key to the GOT

Step 1 Connect the personal computer with the GOT.

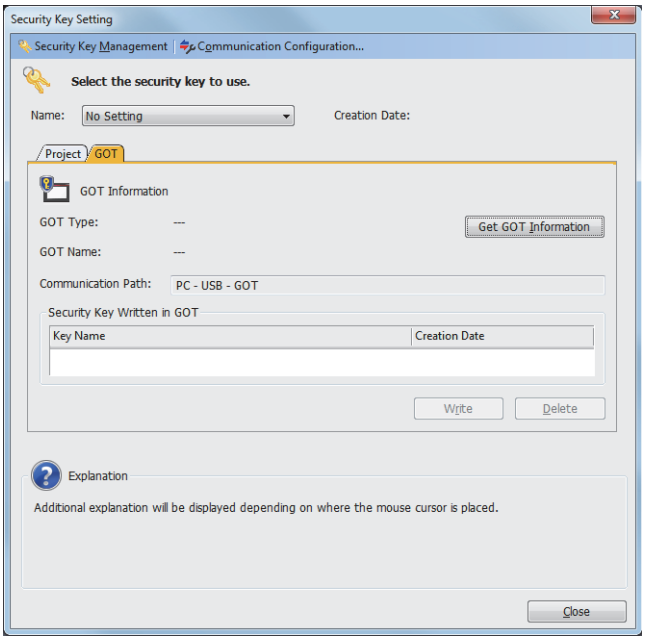
➟4.3 Transferring the Data between the Personal Computer and the GOT
4.4 Transferring the Data between the Personal Computer and the GOT via PLC CPU

Step 2 Prepare a security key on GT Designer3.

➟2.12.2 ■1 Creating or deleting a security key
2.12.2 ■4 (2) Importing a security key

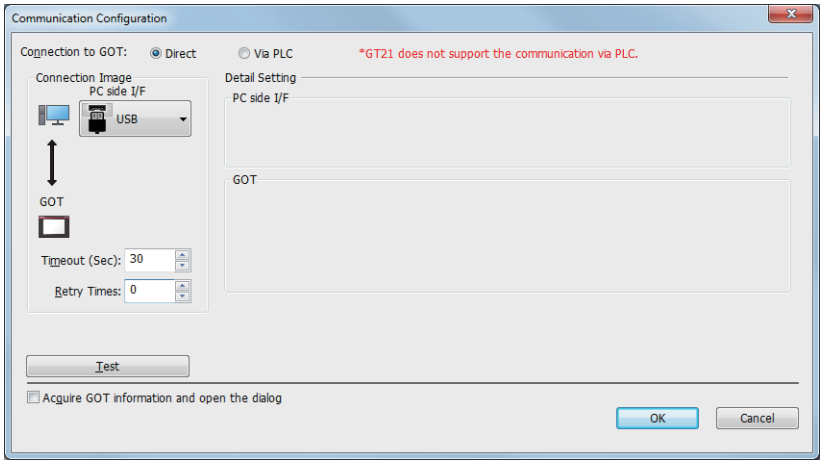
Step 3 Select [Project] → [Security] → [Security Key Setting] from the menu to display the [Security Key Setting] dialog.

➟2.12.4 [Security Key Setting] dialog



Step 4 Click the [Communication Configuration] button to display the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog



Step 5 Set the data transfer path, and click the [OK] button.

Step 6 On the [GOT] tab of the [Security Key Setting] dialog, click the [Get GOT Information] button to display the GOT information.

Step 7 Select a security key in [Name], and click the [Write] button.

Step 8 The security key is written to the GOT, and its name appears in [Security Key Written in GOT].

(2) Deleting a security key from the GOT

To delete a security key from the GOT, use GT Designer3 which does not need a security key matching the one on the GOT.

When the GOT has a project protected with a security key, deleting the security key from the GOT deletes data except the following ones from drive C of the GOT.

- BootOS
- Individual identification information (that is required for data transfer by Ethernet, such as the GOT IP address)

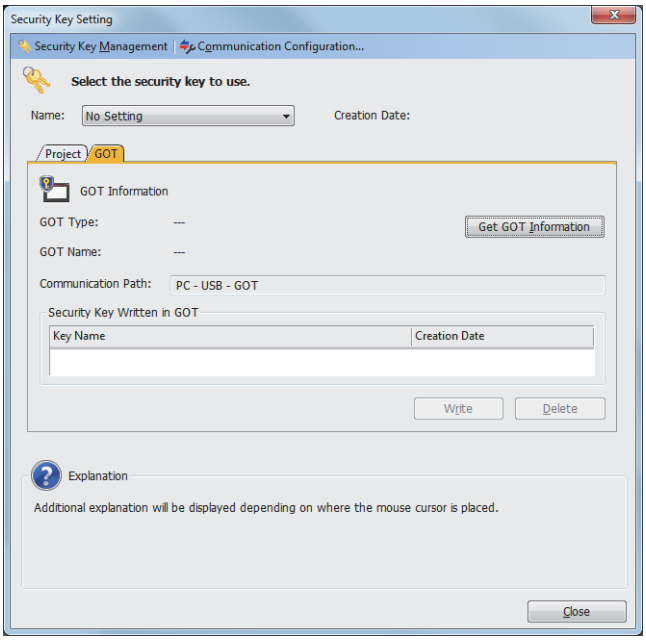
Read necessary data from the GOT in advance.

Step 1 Connect the personal computer to the GOT.

➟4.3 Transferring the Data between the Personal Computer and the GOT
4.4 Transferring the Data between the Personal Computer and the GOT via PLC CPU

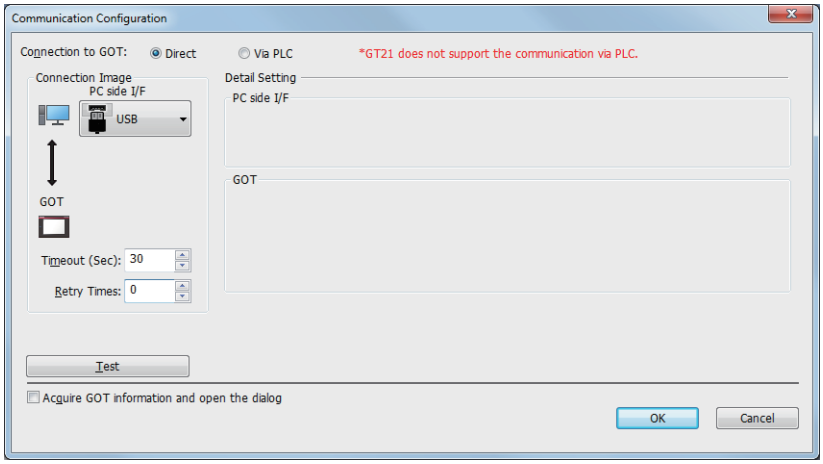
Step 2 Select [Project] → [Security] → [Security Key Setting] from the menu to display the [Security Key Setting] dialog.

➟2.12.4 [Security Key Setting] dialog



Step 3 Click the [Communication Configuration] button to display the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog



Step 4 Set the data transfer path, and click the [OK] button.

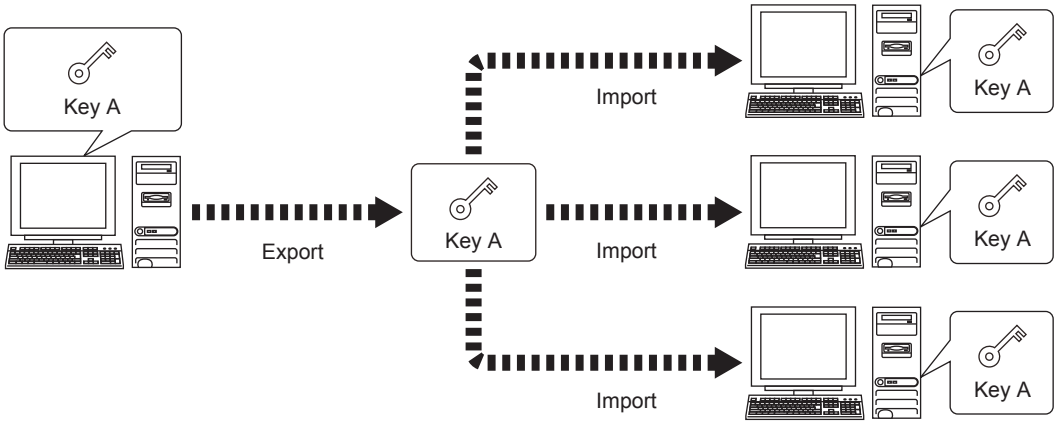
Step 5 On the [GOT] tab of the [Security Key Setting] dialog, click the [Get GOT Information] button to display the GOT information.

Step 6 Click the [Delete] button.

Step 7 The security key is deleted from the GOT, and the field of [Security Key Written in GOT] goes blank.

■4 Copying a security key

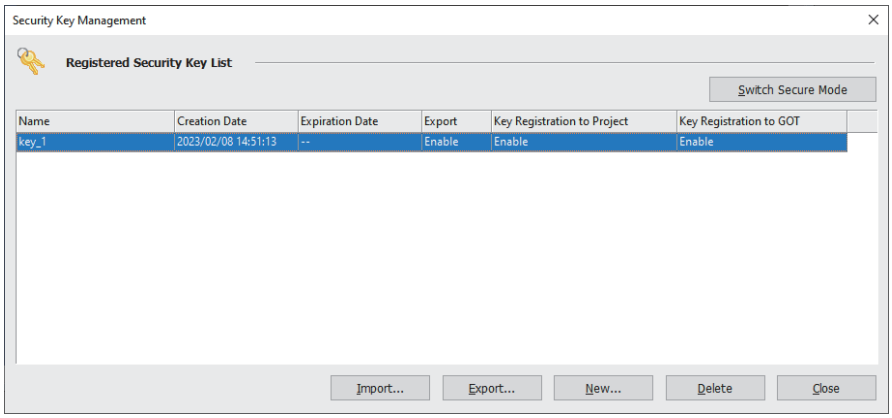
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



(1) Exporting a security key

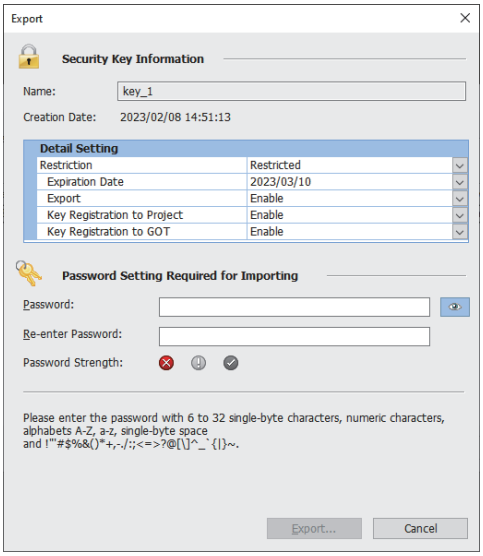
Step 1 Select [Project] → [Security] → [Security Key Management] from the menu to display the [Security Key Management] dialog.

➟2.12.5 [Security Key Management] dialog

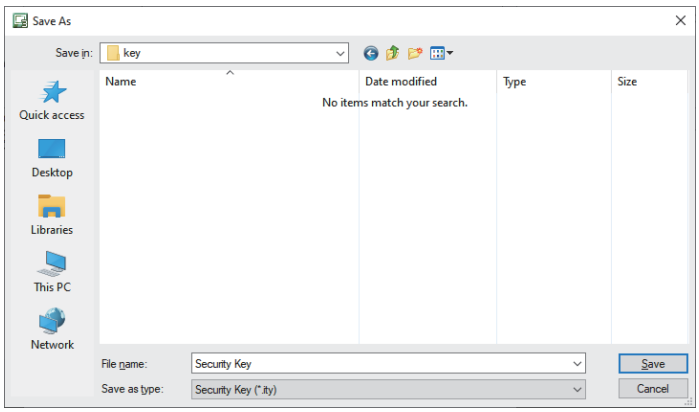


Step 2 Select a security key, and click the [Export] button to display the [Export] dialog.

➟2.12.5 ■3 [Export] dialog



Step 3 Set [Detail Setting], [Password], and [Re-enter Password]. Then, click the [Export] button to display the [Save As] dialog.



Step 4 Set [File name], and click the [Save] button to export the security key (*.ity).

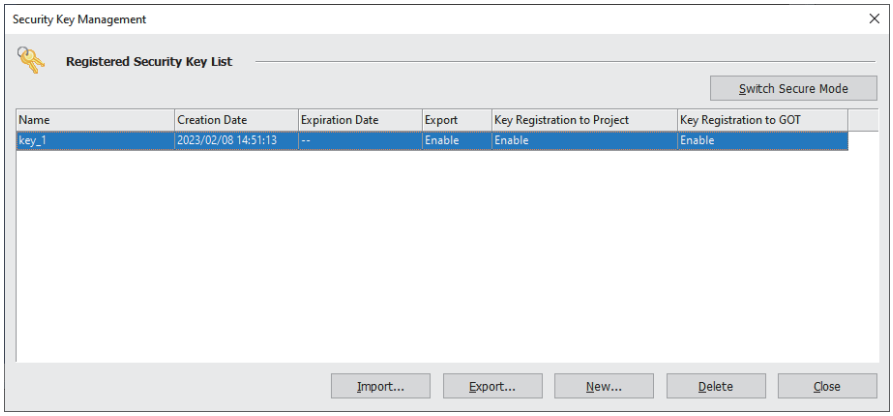
When secure mode is enabled, the extension of the security key is (*.ity2).

➟2.12.5 ■4 [Switch Secure Mode] dialog

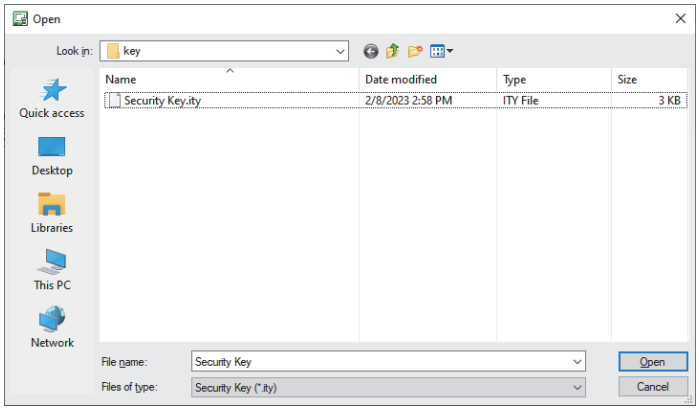
(2) Importing a security key

Step 1 Select [Project] → [Security] → [Security Key Management] from the menu to display the [Security Key Management] dialog.

➟2.12.5 [Security Key Management] dialog

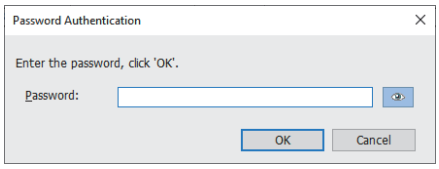


Step 2 Click the [Import] button to display the [Open] dialog.



Step 3 Select a file, and click the [Open] button to display the [Password Authentication] dialog.

➟2.12.5 ■2 [Password Authentication] dialog



Step 4 Enter the password, and click the [OK] button to import the security key.

2.12.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Loss of a security key

If losing a security key due to a deletion operation, personal computer failures, or others, you cannot view the protected project.
The lost security key cannot be restored by creating a new one with the same name.
Take enough measures, such as exporting security keys and backing up them on another personal computer.

■2 Management of a personal computer that has security keys

If a personal computer having security keys is stolen, it is difficult to prevent the unauthorized view and falsification of projects.
To prevent the unauthorized use of the personal computer including data, take theft-prevention measures and other measures enough, such as deleting unnecessary user accounts.

■3 Writing/deleting a security key to/from the GOT

(1) Data in the GOT when a security key is deleted

When the GOT has a project protected with a security key, deleting the security key from the GOT deletes data except the following ones from drive C of the GOT.

- BootOS
- Individual identification information (that is required for data transfer by Ethernet, such as the GOT IP address)

Read necessary data from the GOT in advance.

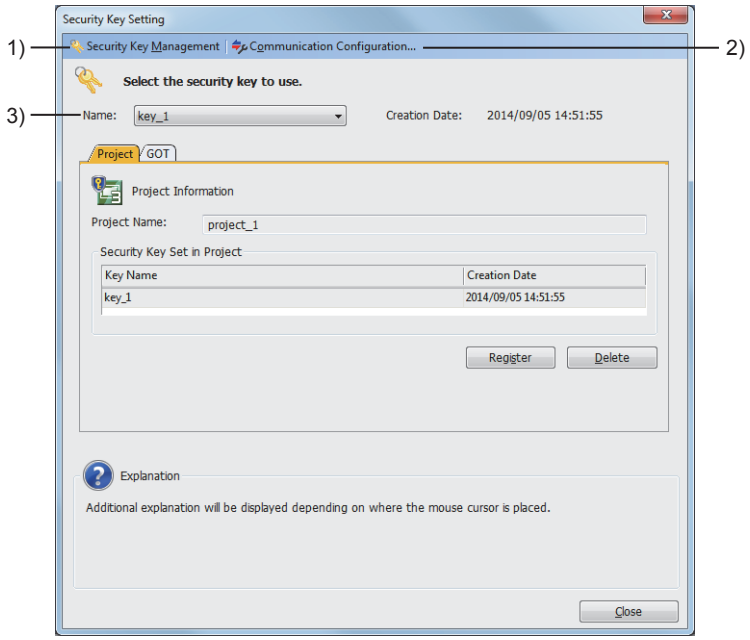
(2) Operation in the utility

When the GOT has a project protected with a security key in drive C, the following operations are disabled in the utility.

- [Package management]: Uploading data from drive C to the other drives
- [GOT data pkg. acquisition]: Copying data while the project in drive C is executed

2.12.4 [Security Key Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Key Management] button**
Displays the [Security Key Management] dialog.

➟2.12.5 [Security Key Management] dialog

2) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

3) **[Name]**
Select a security key to be assigned to a project or the GOT.
To create a security key, select [New].

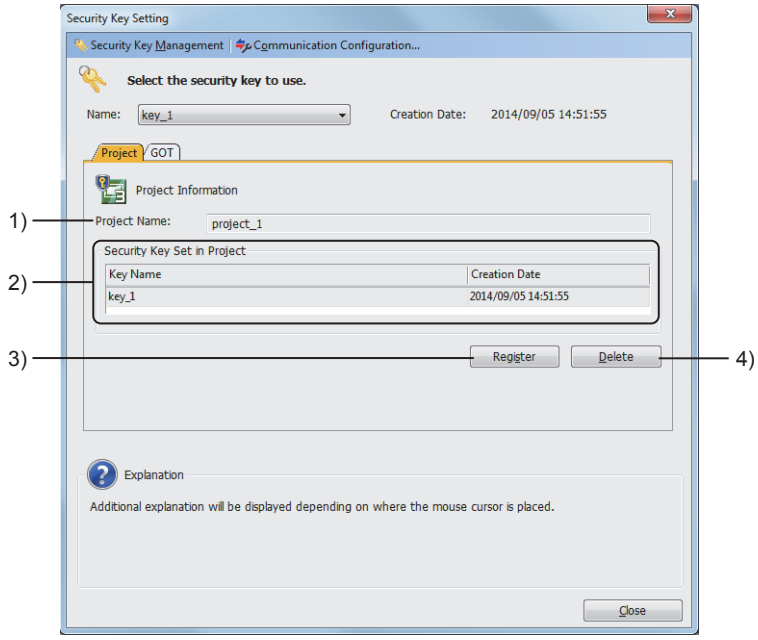
➟2.12.5 ■1 [New Security Key] dialog

Configure the security key setting for a project or the GOT by switching the tabs according to the assignment target.

➟■1 [Project] tab
■2 [GOT] tab

■1 [Project] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Project Name]**
Name of the project being edited

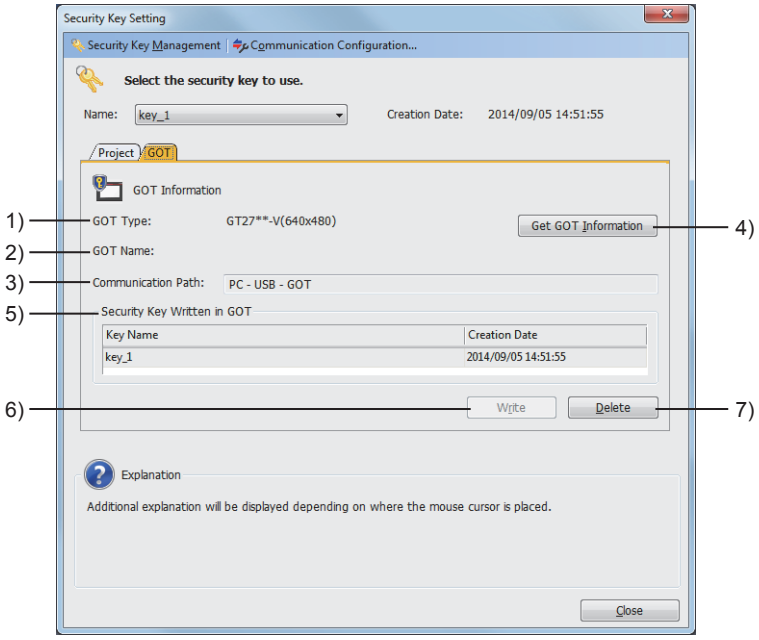
2) **[Security Key Set in Project]**
Name and creation date of the security key assigned to the project

3) **[Register] button**
Assigns a security key to the project.

4) **[Delete] button**
Deletes the security key assigned to the project.

■2 [GOT] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[GOT Type]**
GOT type information acquired from the GOT
When the GOT type information cannot be acquired, writing/deleting a security key to/from the GOT is disabled.

2) **[GOT Name]**
GOT name information acquired from the GOT

3) **[Communication Path]**
Communication path between the personal computer and the GOT

4) **[Get GOT information] button**
Acquires information from the GOT, and enables writing/deleting a security key to/from the GOT.

5) **[Security Key Written in GOT]**
Name and creation date of the security key written to the GOT

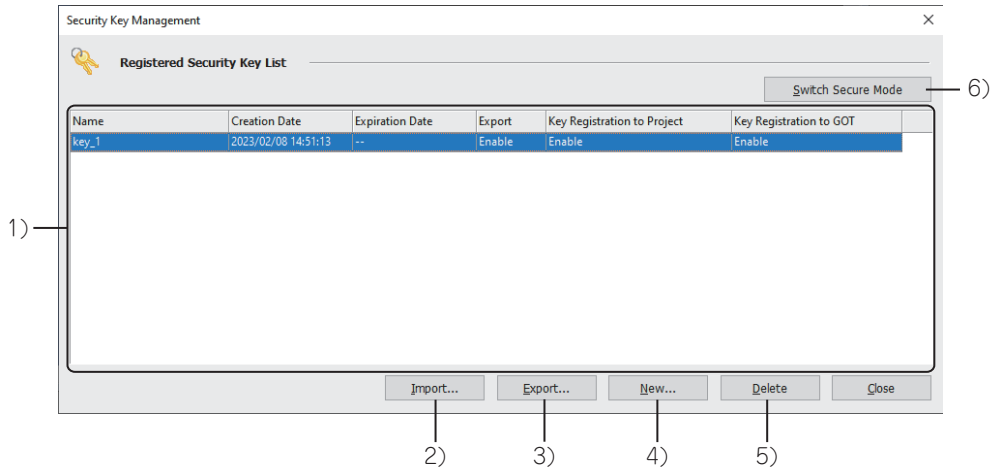
6) **[Write] button**
Writes a security key to the GOT.

7) **[Delete] button**
Deletes the security key from the GOT.
When the GOT has a project protected with a security key, deleting the security key from the GOT deletes data except the following ones from drive C of the GOT.
- BootOS
- Individual identification information (that is required for data transfer by Ethernet, such as the GOT IP address)

Read necessary data from the GOT in advance.

2.12.5 [Security Key Management] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Registered Security Key List]**
Lists security keys that can be used on GT Designer3, including the ones created with GX Works3.

Item	Description
[Name]	Name of the security key
[Creation Date]	Creation date and time of the security key
[Expiration Date]	Expiration date of the security key Upon expiry of the date, [Expired] is displayed.
[Export]	Displays the status whether exporting the security key is enabled.
[Key Registration to Project]	Displays the status whether assigning the security key to a project is enabled.
[Key Registration to GOT]	Displays the status whether writing the security key to the GOT is enabled.

2) **[Import] button**
Displays the [Open] dialog.
Import a security key.

3) **[Export] button**
Displays the [Export] dialog.
Export the security key selected in [Registered Security Key].

➟■3 [Export] dialog

4) **[New] button**
Displays the [New Security Key] dialog.
Create a security key.

➟■1 [New Security Key] dialog

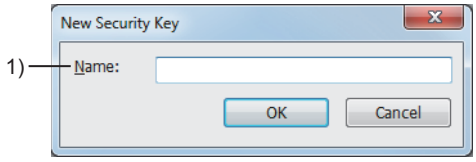
5) **[Delete] button**
Deletes the security key selected in [Registered Security Key].
You cannot delete a security key, which is assigned to the project being edited.
When deleting a security key, you cannot view a project protected with the security key.
The deleted security key cannot be restored.
Even if you create a security key with the same name, the new one is recognized as a different security key.
If you need to restore the security key in case of a deletion, export the security key in advance.

6) **[Switch Secure Mode] button**
Displays the [Switch Secure Mode] dialog.
Enables or disables secure mode.

➟■4 [Switch Secure Mode] dialog

■1 [New Security Key] dialog

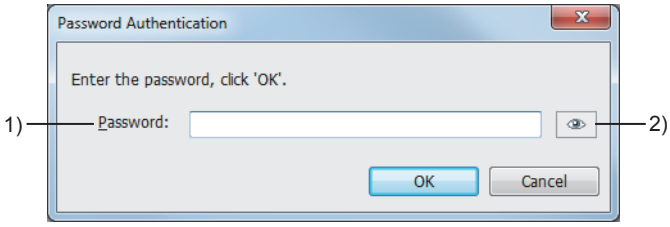
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Name]**
Specify the name for the security key.
Up to 128 characters can be set.
Spaces at the beginning or end of the name are deleted.
You cannot specify a name already used for another security key.

■2 [Password Authentication] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

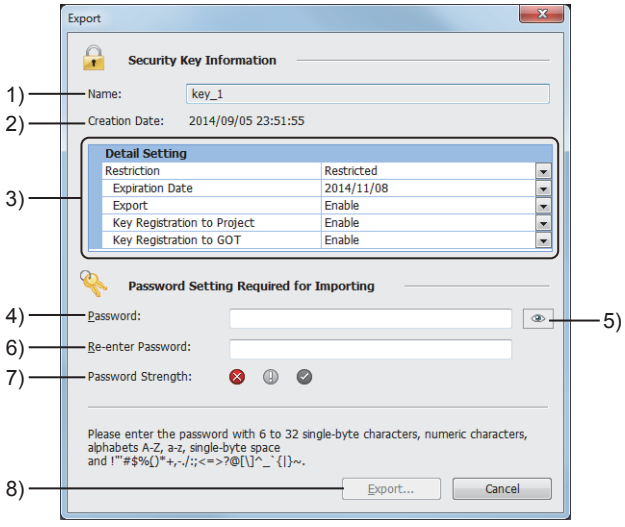


1) **[Password]**
Enter the password for the security key to be imported.

2) **Password display switching button**
Hides or displays the characters entered in [Password].

■3 [Export] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

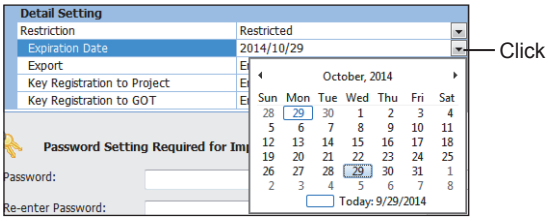


1) **[Name]**
Name of the security key to be exported

2) **[Creation Date]**
Creation date of the security key to be exported

3) **[Detail Setting]**

Set restrictions on the security key to be exported.

Item	Description
[Restriction]	Select whether to restrict the authority of the security key to be exported. The following shows the items to be selected. • [Restricted] • [Not Restricted]
[Expiration Date]	Set the expiration date of the security key in year/month/day format. Enter a date directly, or select a date from the popup calendar as shown below.  You cannot set a past date. When exporting an imported security key that has the expiration date, you cannot set a new expiration date later than the already set one.
[Export]	Select the authority to export the security key. The following shows the items to be selected. • [Enable] • [Disable]
[Key Registration to Project]	Select the authority to assign the security key to a project. The following shows the items to be selected. • [Enable] • [Disable]
[Key Registration to GOT]	Select the authority to write the security key to the GOT. The following shows the items to be selected. • [Enable] • [Disable]

4) **[Password]**

Set the password for importing the security key.

The password must be between 6 to 32 characters.

Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available.

!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~

Capital letters and small letters are distinguished.

It is recommended to make a complicated password by combining alphanumeric characters (capital letters and small letters) and symbols.

5) **Password display switching button**

Hides or displays the characters entered in [Password].

6) **[Re-enter Password]**

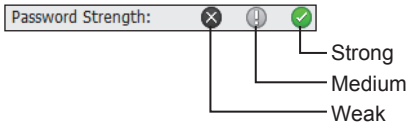
Input the same password as the one input in [Password].

When the password is not hidden, no re-entry is required.

7) **[Password Strength]**

Displays the strength of the password.

To export a security key, a medium or strong strength password is required.



8) **[Export] button**

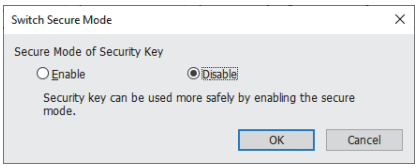
Displays the [Save As] dialog.

Set the file name and the storage destination, and then click the [Save] button to store the security key.

■4 [Switch Secure Mode] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When secure mode is enabled, the password information of the security key can be exported in an unanalyzable file format.



1) **[Secure Mode of Security Key]**
Set whether to enable or disable secure mode.
When a security key is registered in GT Designer3, secure mode switching is not available.
The following shows the items to be selected.
- [Enable]
- [Disable]

2.13 Protecting a Project by Registering Users

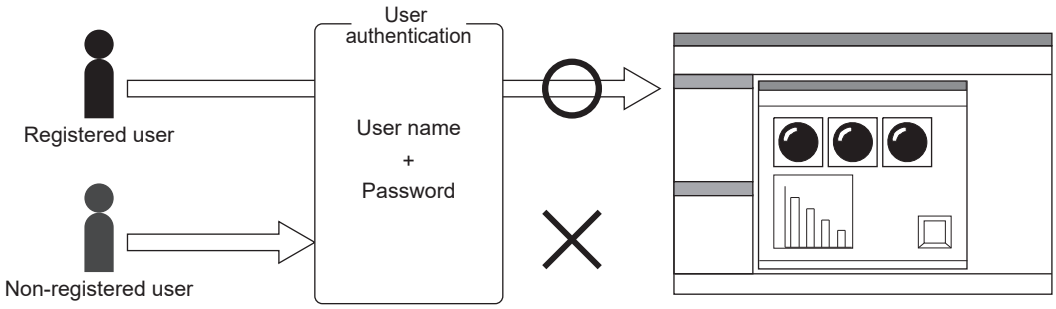
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Setting the project security restricts displaying and editing a project.
For specifications and settings of the project security, refer to the following.

➟2.13.1 Specifications of the project security
2.13.2 How to use the project security

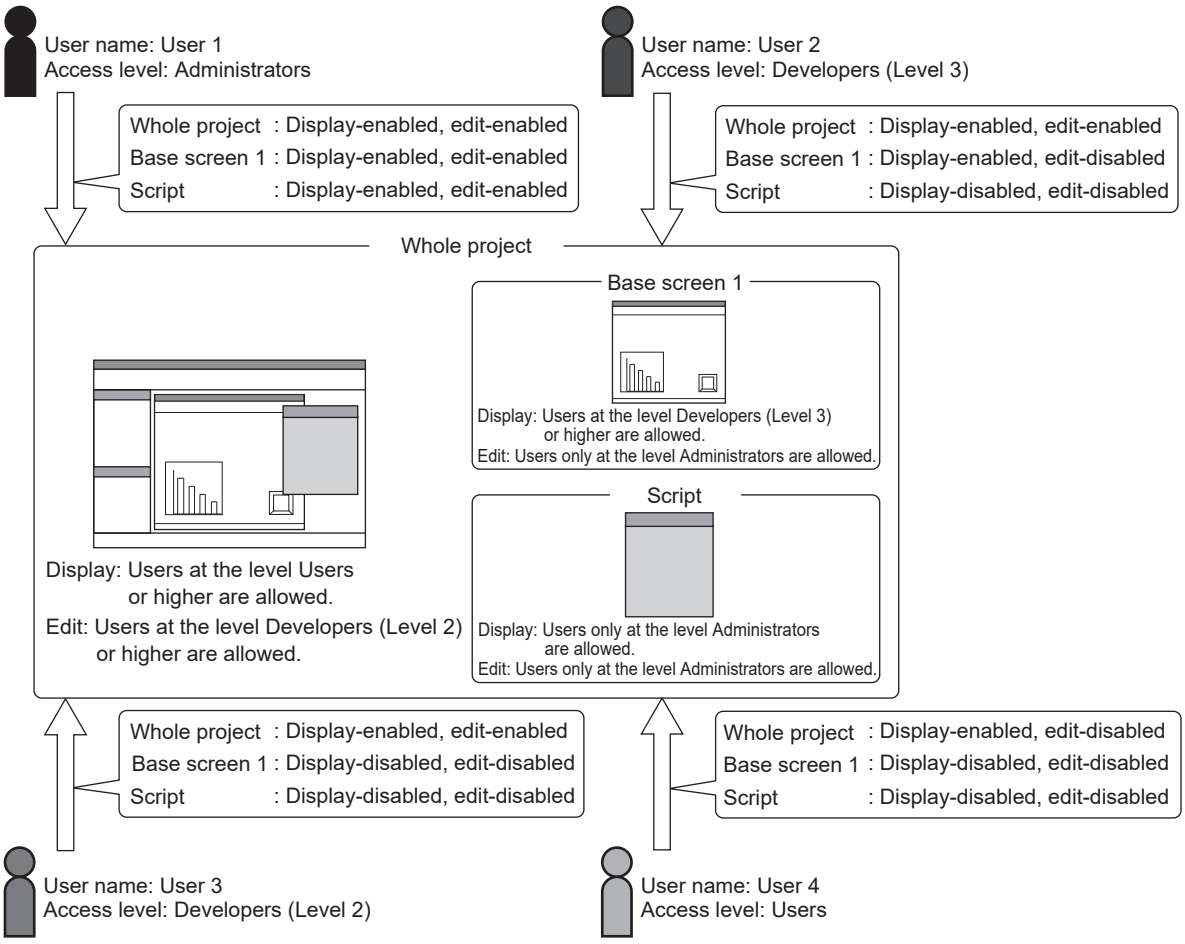
■1 Preventing a project from being browsed by unauthorized people

For the project which users are registered to, the user authentication is required for opening the project.
Only registered users can open the project.



■2 Restricting for displaying and editing a project according to the access level of users

You can set restriction for displaying and editing the settings of the project according to the user's access level.
You can set restriction for displaying and editing specific screens and scripts individually besides the whole project.



2.13.1 Specifications of the project security

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Operation restricted by the project security
■2 Concept of the project security
■3 Operating the project to which the project security is set
■4 Restricting the project operation by the access authority

■1 Operation restricted by the project security

The project security restricts the following operations.

- Viewing and editing a project on GT Designer3
- Viewing and editing a project by screen according to the user access level

To restrict operations other than the above, use the following security functions.
Using multiple security functions in combination further strengthens the security.

(1) Function restricting project operations

Function	Description
Security key authentication	Restricts a project to be viewed on GT Designer3 or executed on the GOT by protecting the project with a security key. ➥2.12 Protecting a Project with a Security Key

(2) Function restricting communication with the GOT

Function	Description
Data transfer security	Restricts data transfer between the personal computer (GT Designer3) and the GOT with a password. ➥5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])
IP filter	Restricts access to the GOT by Ethernet by registering IP addresses with the filtering list. ➥5.4.3 5.4.3 Setting the IP filter

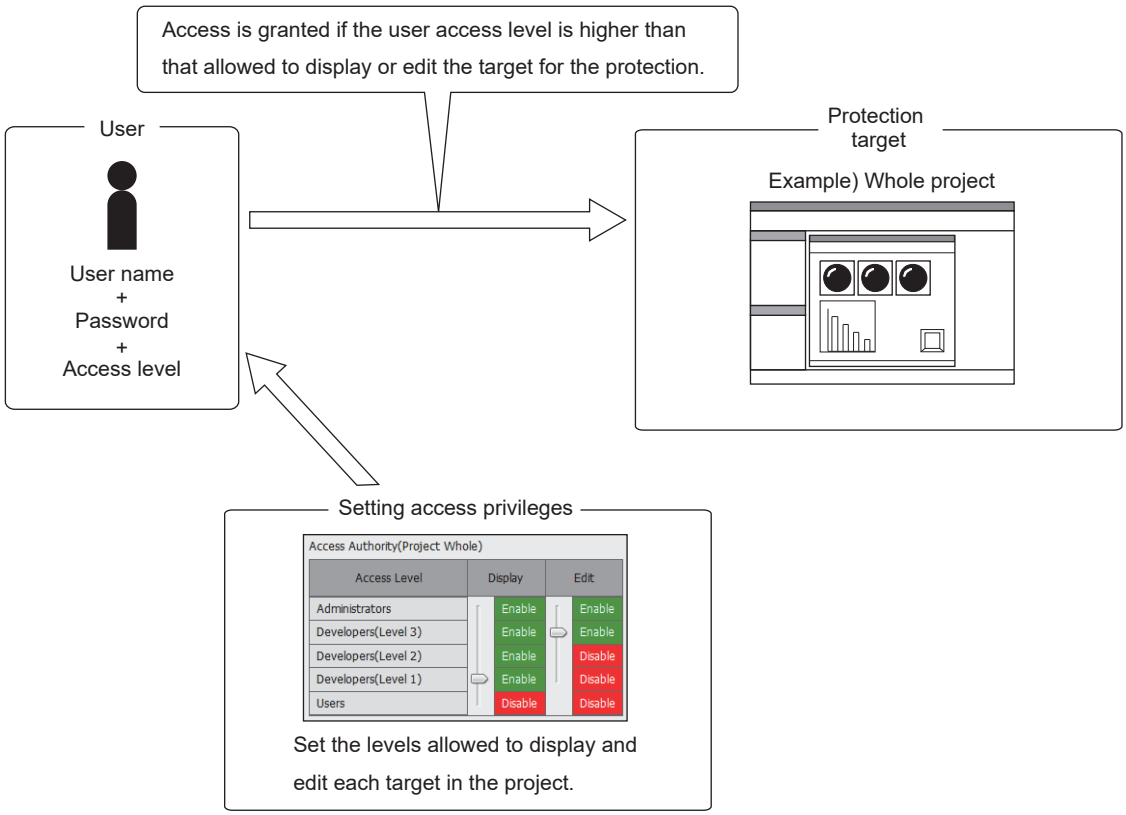
(3) Function restricting the GOT operations

Function	Description
Screen security	Restricts the display of screens and objects on the GOT by registering users with the GOT. ➥5.2.6 Configuring the security settings for the GOT screen ([Screen Security])
Functional operation security	Restricts the display of the utility, and operations of some monitor functions. ➥5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])

■2 Concept of the project security

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When registering users to the project, set their user names and passwords for authentication and their access level. The access privilege set for the project, screens, or others and the user's access level determine whether the user can display and edit the project or not.

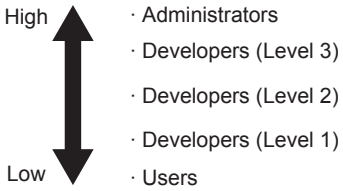


(1) Number of registrable users

Up to 128 users can be registered.

(2) Access level

The following five access levels are provided.



(3) Access privilege type

The following two access privileges are provided.

- Display

  Allows the user to display the project or screen settings.
  The users whose access levels do not allow them to display the project or settings cannot display the setting dialog or screen images.

- Edit

  Allows the user to edit, delete, and save the project or screen settings.
  The users whose access levels do not allow them to edit the project or settings can display the setting dialog or screen images, but cannot change the settings.
  If displaying is disabled, editing is always disabled.

(4) Setting access privileges

You can set a bottom access level for displaying and editing each target in the project.
If displaying is disabled, editing is always disabled.

Access Level	Access Privilege	
	Display	Edit
Administrators	Enable (fixed)	Enable (fixed)
Developers(Level3)	Select Enable or Disable.	Select Enable or Disable.
Developers(Level2)	Select Enable or Disable.	Select Enable or Disable.
Developers(Level1)	Select Enable or Disable.	Select Enable or Disable.
Users	Select Enable or Disable.	Disable (fixed)

(5) Protection target

The following shows the targets which you can set the access privileges for.

- Whole project
- Base screen, window screen, report screen, and mobile screen
- Script

Always set an access privilege for the whole project.
You can also set the access privilege for each base screen, window screen, report screen and mobile screen, or those screens by screen type, and the whole of scripts. This allows specific users to display or edit the relevant screens or scripts.

(a) Whole project

You can collectively protect all settings in a project (such as the screen setting and common setting).

(b) Base screen, window screen, report screen, and mobile screen

Setting restriction stronger than the access privilege set for the whole project to the screens allows specific users to display or edit the screens.
Access privileges can be set per screen.

(c) Script

Setting restriction stronger than the access privilege set for the whole project to the scripts allows specific users to display or edit the scripts.
The same access privilege is set for the project scripts, the screen scripts, the script symbols and the script list.
The scripts of script parts objects, object scripts, and object script symbols are not protected.
If access privileges are set for the scripts individually, the script data is always stored in the project (internal data).

■3 Operating the project to which the project security is set

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(1) Logging in to a project

To open the project to which the project security is set, the user authentication is required.
Input the registered user name and password to log in to the project.
To log in to the project with another user name, close the project and open it again.
If any password or user information is changed, the changes are effective in the next login.

(2) Package data transfer and the project security

(a) Writing the package data

The setting of the project security is written to the GOT with the package data.
If a project with the project security in the GOT is overwritten by writing package data with different project security into the GOT, the project security in the GOT is overwritten as well.
The project security can be set even after the package data is written to the GOT.

(b) Reading the package data

If the project security is set to a project in the GOT and the project is read from the GOT, the project security is read as well.
To open the project read from the GOT, the user authentication is required.
To restrict reading a project from the GOT, set a password for the data transfer beside the one for the project security.

➡5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

(3) Canceling the project security

Deleting all the registered users cancels the project security.

➟2.13.2 ■3 (2) Deleting a user

■4 Restricting the project operation by the access authority

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The following shows available operations and unavailable operations according to the user's access privilege.

(1) Operations for the project

(a) Display-allowed and edit-allowed users

The users can open the project to add, change, or delete screens or settings including the common setting and save the project.

The access privilege for the screen that has been newly added or overwritten is set as follows.

- The screen that has been newly added
  The same access privilege set for the whole project is applied to the screen that has been newly added.
- The screen that has been overwritten
  The same access privilege set for the screen that has been overwritten is applied to the target screen to be overwritten.

If the access authority is set for screens or scripts individually, the following operations are restricted.

Operation	Restriction	Condition
Changing the GOT type	In the [GOT Type Setting] dialog, the change of [Type] cannot be determined.	The project includes a screen or a script that cannot be edited by the user who is logging in.
Changing the communication settings	In the [Controller Setting] window, the changes of [Manufacturer] and [Type] cannot be determined.	
Verifying projects between the GOT and GT Designer3	The project in GT Designer3 cannot be verified with the one in the GOT.	The project includes a screen or a script that cannot be displayed by the user who is logging in.
Verifying the project being opened with the saved project	The project being opened cannot be verified with the saved project.	

(b) Display-allowed and edit-prohibited users

The users can open the project, but cannot add, change, and delete the settings and save the project.

Only the following operations are allowed for those users.

- Deleting a project
- Writing the package data to the GOT or the data storage
- Verifying projects between the GOT and GT Designer3
- Verifying the project being opened with the saved project
- Setting the project security
- Printing (Display-disabled screens or scripts cannot be printed.)

If the access authority is set for screens or scripts individually, the following operations are restricted.

Operation	Restriction	Condition
Verifying projects between the GOT and GT Designer3	The project in GT Designer3 cannot be verified with the one in the GOT.	The project includes a screen or a script that cannot be displayed by the user who is logging in.
Verifying the project being opened with the saved project	The project being opened cannot be verified with the saved project.	

(c) Display-prohibited and edit-prohibited users

The users cannot open the project.

The users cannot write the package data to the GOT or the data storage.

(2) Operations for the screens

(a) Display-allowed and edit-allowed users

The users can display, copy, change, and delete the screens.

If a screen to be displayed by the set overlay screen or in the window preview is display-disabled, a dummy screen will be displayed.

(b) Display-allowed and edit-prohibited users

The users can display and copy the screens, but cannot change or delete them.

The users can copy figures and objects on the screens, but cannot arrange, move, change, and delete them.
If a screen to be displayed by the set overlay screen or in the window preview is display-disabled, a dummy screen will be displayed.

(c) **Display-prohibited and edit-prohibited users**

The users cannot display, change, and delete the screens.
The information of the display-disabled screens is not displayed in the windows where the list of the settings is displayed such as the data browser.
The display-disabled screens are displayed when simulation is executed.

(3) Operations for the scripts

(a) **Display-allowed and edit-allowed users**

The users can display and change the script setting.
Even when the users are allowed to edit scripts, they cannot edit the screen script set on an edit-disabled screen.

(b) **Display-allowed and edit-prohibited users**

The user can display the script setting, but cannot add, change or delete the setting.

(c) **Display-prohibited and edit-prohibited users**

The user cannot display the script setting.
The information of the scripts is not displayed in the windows where the list of the settings is displayed such as the data browser.

(4) Operations for the libraries

Even the users who are not allowed to edit the project can register, change, and delete the library data.

2.13.2 How to use the project security

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➟■1 For the first setting of the project security
■2 Logging in to the project
■3 User management (addition, deletion, and change)
■4 Setting an access privilege
■5 Changing a password

■1 For the first setting of the project security

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

First, register a user whose access level is Administrators.

Step 1 Select [Project] → [Security] → [User Management] from the menu to display the [User Addition] dialog.
(After the first user is registered, the [User Management] dialog is displayed by the operation above.)

Step 2 Set [User Name], [Access Level], [Password], [Re-enter Password] and click the [OK] button.

➟2.13.4 [User Addition] dialog

Step 3 The set user is registered and the user is logged in the project.

Step 4 Overwrite the project.

➟2.15.1 Overwriting a project

Step 5 Add other users and set the access privilege of them.

➟■3 User management (addition, deletion, and change)
■4 Setting an access privilege

Point

User name and password management

Do not forget the user name and the password for Administrators.
If you do so, you cannot open the project.

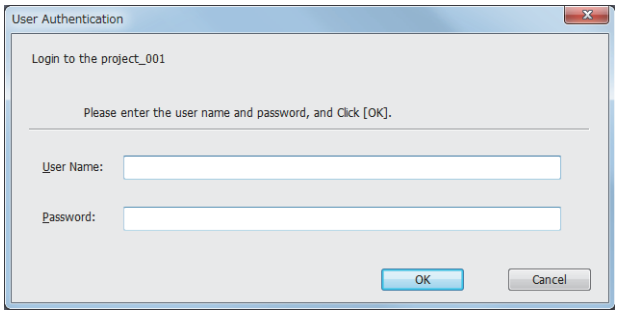
■2 Logging in to the project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Open the project with GT Designer3.

➟2.3.2 Opening a project

Step 2 The [User Authentication] dialog is displayed.
Input the user name and the password for logging in and click the [OK] button.



Step 3 When the user is authorized, the project opens.
The name of the user who is logged in the project is displayed on the status bar of GT Designer3.

■3 User management (addition, deletion, and change)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only the users who are allowed to edit the whole project can manage the user information.
The manageable range of users differs depending on the access level of the user who is logged in.

- Administrators
  The user can add other users and change the user information over the full range of the access levels.
- Developers(Level3), Developers(Level2), or Developers(Level1)
  The user can add other users or change the user information. However, the access level of the users to be added or changed must be lower than that of the user who is logged in.
- Users
  The user cannot add other users and change the user information.

(1) Adding a user

Step 1 Select [Project] → [Security] → [User Management] from the menu to display the [User Management] dialog.

➟2.13.5 [User Management] dialog

Step 2 Click the [Add] button to display the [User Addition] dialog.

➟2.13.4 [User Addition] dialog

Step 3 Set [User Name], [Access Level], [Password], [Re-enter Password] and click the [OK] button to register the set user.

Step 4 Click the [OK] button in the [User Management] dialog to determine the setting.

(2) Deleting a user

Step 1 Select [Project] → [Security] → [User Management] from the menu to display the [User Management] dialog.

➟2.13.5 [User Management] dialog

Step 2 Select a user to be deleted and click the [Delete] button to delete the user.

Step 3 Click the [OK] button in the [User Management] dialog to determine the change.

(3) Changing the user information

Step 1 Select [Project] → [Security] → [User Management] from the menu to display the [User Management] dialog.

➟2.13.5 [User Management] dialog

Step 2 Select a user to be changed and click the [Replace] button to display the [Change User Data] dialog.

➟2.13.6 [Change User Data] dialog

Step 3 Set [User Name] and [Access Level] and click the [OK] button to change the user information.

Step 4 Click the [OK] button in the [User Management] dialog to determine the change.

■4 Setting an access privilege

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only the users who are allowed to edit the whole project can set the access privilege.

Step 1 Select [Project] → [Security] → [Setup Access Authority] from the menu to display the [Setup Access Authority] dialog.

➟2.13.7 [Setup Access Authority] dialog

Step 2 Set the access privilege and click the [OK] button to determine the setting.

■5 Changing a password

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Only the users who are allowed to edit the whole project can change the passwords.

(1) Changing the password of the user currently logging in

Step 1 Select [Project] → [Security] → [Change Password] from the menu to display the [Change Password] dialog.

➟2.13.8 [Change Password] dialog

Step 2 Set [Old Password], [New Password], and [Re-enter Password] and click the [OK] button to change the password.

(2) Changing the password of the user who is managed by the project

Step 1 Select [Project] → [Security] → [User Management] from the menu to display the [User Management] dialog.

➟2.13.5 [User Management] dialog

Step 2 Select the user whose password is to be changed and click the [Password change] button to display the [Change Password] dialog.

➟2.13.8 [Change Password] dialog

Step 3 Set [New Password] and [Re-enter Password] and click the [OK] button to change the password.

Step 4 Click the [OK] button in the [User Management] dialog to determine the change.

2.13.3 Precautions

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■1 Protecting the script data

If the script data is stored to another file (external data), the script data is not protected.
To protect the script, store the script data in the project (internal data).

➟9.9.5 ■4 [Option] tab

■2 Protecting parts and scripts set for an edit-disabled screen

Even if users are disallowed to edit a screen, an edit-enabled part, script, or others set for the screen is not protected.

■3 Screen display for simulation

When simulation is executed, even the display-disabled screens are displayed.

■4 Converting the project security set by the old version of GT Designer3

If you convert a project in which the project security is set by GT Designer3 Version1.43V or older for GOT2000 series, the read-disabled setting is converted into the display-disabled setting, and the write-enabled setting into the edit-disabled setting.

■5 When you forget a user name and a password

When you forget a password, log in to the project as the user whose access level is Administrators and change the password.
If you forget the user name and the password for the user whose access level is Administrators, you cannot open the project.
Delete the project and create a new project.

2.13.4 [User Addition] dialog

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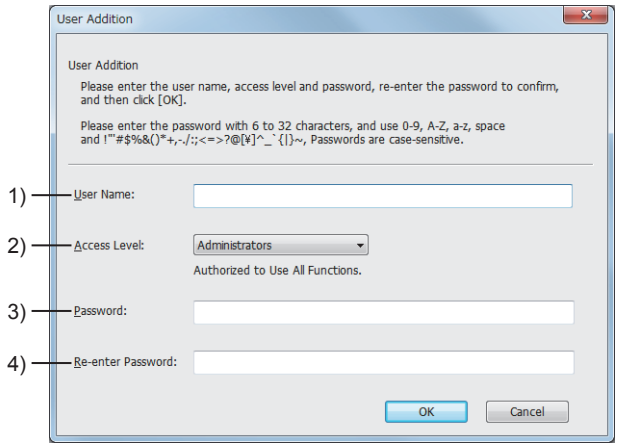


1) **[User Name]**
Set a user name for authentication.
Up to 20 characters can be set.
Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available.
!"#$%&()*+,-./:;<=>?@[\]^_`{|}~
Capital letters and small letters are distinguished.
You cannot place a one-byte space at the end of a user name.
You cannot set a user name which is already registered.

2) **[Access Level]**
Select an access level for the user to be set.
The following shows the items to be selected.

For the first setting of the project security, the user access level is fixed to [Administrators].
The selectable range of the access levels differs depending on the access level of the user who is logged in.

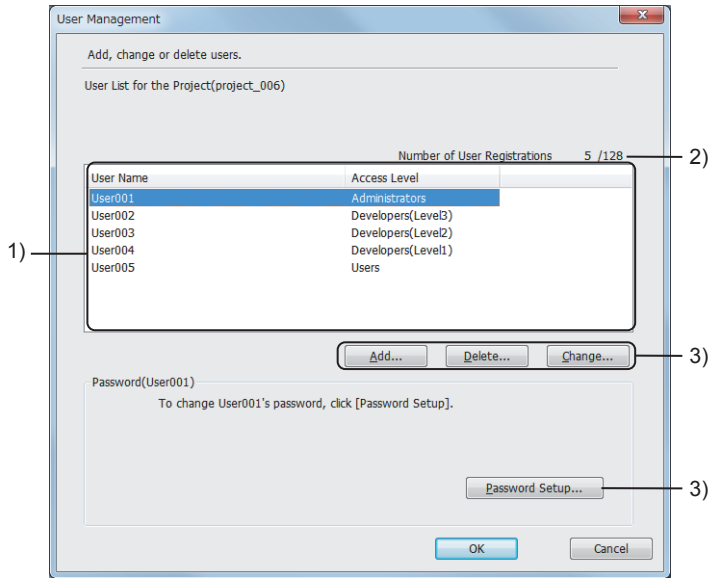
- Administrators
  The user can select one from all the access levels.
- Developers(Level3), Developers(Level2), or Developers(Level1)
  The user can select an access level which is lower than that of the user who is logged in.

3) **[Password]**
Set a password for authentication.
The password must be between 6 to 32 characters.
Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available.
!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~
Capital letters and small letters are distinguished.
The input password is displayed as asterisks.

4) **[Re-enter Password]**
Input the same password as the one input in [Password].
The input password is displayed as asterisks.

2.13.5 [User Management] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **User list**
Displays the user names and the access levels of the registered users.

2) **[Number of User Registrations]**
The number of the registered users

3) **Management button**
Use these buttons to manage the users.
The manageable range of users differs depending on the access level of the user who is logged in.

- Administrators
  The user can add other users and change the user information over the full range of the access levels.
- Developers(Level3), Developers(Level2), or Developers(Level1)
  The user can add other users or change the user information. However, the access level of the users to be added or changed must be lower than that of the user who is logged in.

Item	Description
[Add] button	Displays the [User Addition] dialog. Click this button to add a user. ➟2.13.4 [User Addition] dialog
[Delete] button	Deletes the user selected in the user list. Deleting all the registered users cancels the security setting.
[Replace] button	Displays the [Change User Data] dialog. You can change the access level and the password of the user selected in the user list. ➟2.13.6 [Change User Data] dialog
[Password Setup] button	Displays the [Change Password] dialog. You can change the password of the user selected in the user list. ➟2.13.8 [Change Password] dialog

2.13.6 [Change User Data] dialog

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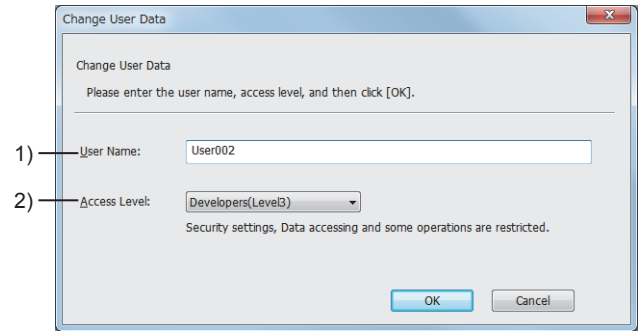

1) **[User Name]**

Set a user name for authentication.
Up to 20 characters can be set.
Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available.
!"#$%&()*+,-./:;<=>?@[\]^_`{|}~
Capital letters and small letters are distinguished.
You cannot place a one-byte space at the end of a user name.
You cannot set a user name which is already registered.

2) **[Access Level]**

Select an access level for the user to be set.
The following shows the items to be selected.

The selectable range of the access levels differs depending on the access level of the user who is logged in.

- Administrators
  The user can select one from all the access levels.
- Developers(Level3), Developers(Level2), or Developers(Level1)
  The user can select an access level which is lower than that of the user who is logged in.

2.13.7 [Setup Access Authority] dialog

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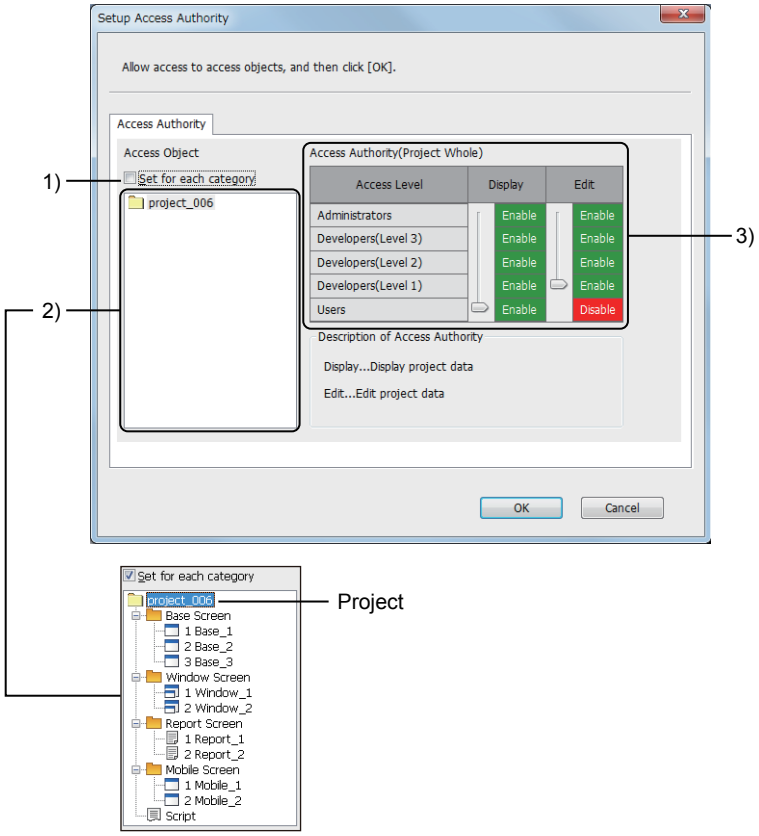


1) **[Set per Target]**
Allows you to set the access privilege for the base screens, window screens, report screens, mobile screens, or the whole of scripts.
Displays the targets for which the access privilege are set in the tree view in the access target list.

2) **Access target list**
Select a target for which the access privilege is set.

Item	Description
Project	Set an access privilege for the whole project. The display style of the project name differs depending on the project format. • Workspace format: Project name • Single file format: File name
[Base Screen], [Window Screen], [Report Screen], and [Mobile Screen]	Lists the base screens, window screens, report screens, and mobile screens. The access privilege is settable for each screen. To set the access privilege by screen type, select [Base Screen], [Window Screen], [Report Screen], or [Mobile Screen].
[Script]	Sets the same access privilege for the project scripts, screen scripts, script lists, and the whole script symbols. This setting is not applied to script parts, object scripts, and object script symbols.

3) **[Access Privilege]**
Move each slider up and down to set an access privilege for a target selected from the access target list.

Item	Description
[Display]	Set a bottom access level for displaying the target selected in the access target list.
[Edit]	Set a bottom access level for editing the target selected in the access target list.

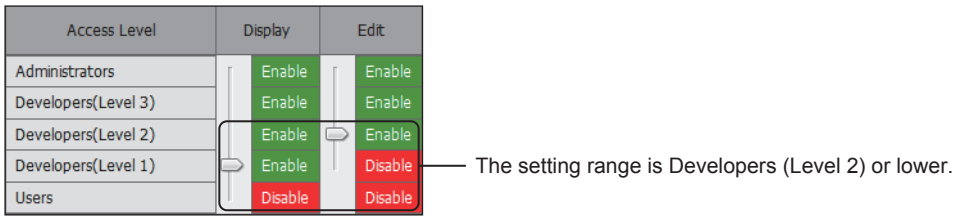
The settable range of the access privilege differs depending on the access level of the user who is logged in.
• Administrators

The user can set an access privilege for each target over the full range of the access levels.

• Developers(Level3), Developers(Level2), or Developers(Level1)

The user can set an access privilege for each target within the range of the access level of the user who is logged in or the lower level.

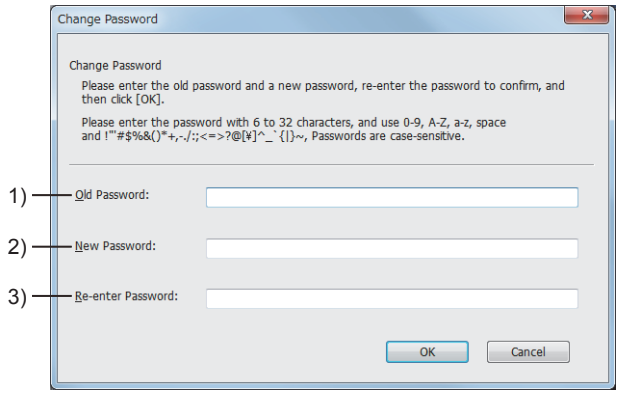
Example) For the user whose access level is Developers(Level2)



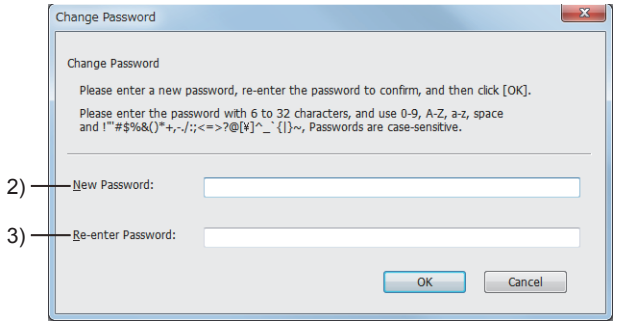
If the access privilege is set for the screens and scripts individually, only the user who is allowed to edit the screens or the scripts can change their access levels.

2.13.8 [Change Password] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When the password of a login user is changed



When the password of a user who is not logged in is changed

1) **[Old Password]**

Input the current password for authentication.

The input password is displayed as asterisks.

2) **[New Password]**

Set a new password.

The password must be between 6 to 32 characters.

Numeric characters, A to Z, a to z, a one-byte space, and the following symbols are available.

!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~

Capital letters and small letters are distinguished.

The input password is displayed as asterisks.

3) **[Re-enter Password]**

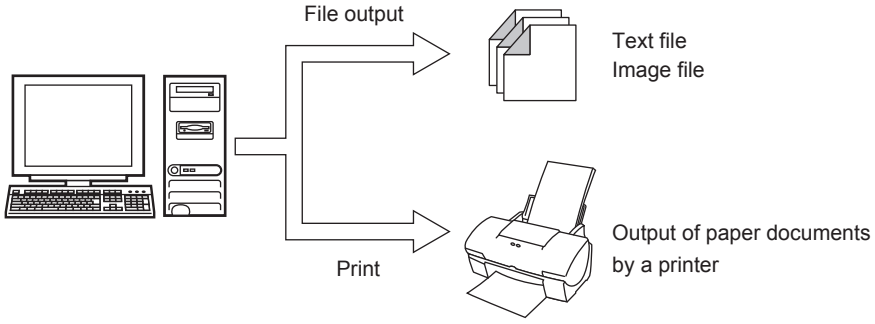
Input the same password as the one input in [New Password].

The input password is displayed as asterisks.

2.14 Printing or Outputting a Project to a File

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The settings and screen images of the created project can be printed or output to a file.
The data output to a file can be edited and used for each type of documents.



➟2.14.1 Specifications for printing and outputting files
2.14.2 How to print and output files
2.14.3 Precautions
2.14.4 [Page Settings] dialog
2.14.5 [Print Preview] window
2.14.6 [Print] dialog

2.14.1 Specifications for printing and outputting files

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications for printing
■2 Specifications for outputting files

■1 Specifications for printing

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The following shows the contents to be printed.

[Items for Print]	Content to be printed
[Cover]	Outputs the title, date, and/or other items set in the [Print] dialog.
[Screen Name]	Outputs the screen title.
[Screen Image List]	Outputs the list of the screen images.
[Screen Image/Setting]	Outputs the screen properties and designs, the settings of the objects on the screens, and the startup logo image.
[Common]	Outputs the project information and common settings (including type setting and controller setting).
[Recipe Setting]	Outputs the recipe common setting and recipe setting.
[Logging Setting]	Outputs the logging setting.
[Device Data Transfer]	Outputs the device data transfer setting.
[Device]	Outputs the list of the devices used in the project and the positions of each device.
[Label (GT Designer3)]	Outputs the list of registered label groups, or the list of labels (GT Designer3) registered in a label group.
[Comment]	Outputs the registered comments and attributes.
[Parts]	Outputs the parts settings and details of the registered parts (part numbers, names, and images).
[Script]	Outputs the script settings (script settings, script symbols, and script options).
[Sound]	Outputs the sound file list and the touch key sound setting.
[Category]	Outputs shapes, objects, and screen numbers and coordinates where each shape or object is arranged for each category.
[My Library]	Outputs screen numbers, names, and images of the shapes and objects registered for each folder in my library.

■2 Specifications for outputting files

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) File formats for output

(a) Setting

The settings of the project can be output in the following formats.

- CSV format
- Unicode text format

(b) Screen image

The images of base screens, window screens, report screens, and mobile screens can be output in the following formats.

- BMP format
- JPEG format

(2) Files to be output

(a) Text file

The following table lists the targets to be output to a text file and those file names.

When [Add project name to the file name] is selected, the following is prepended to a file name.

- For a workspace format project: Project name
- For a single file format project: Project file name (excluding its extension .GTX)

Example) When [Cover] is selected for [Items for Print] and the project file name is "Project1.GTX"
In this case, the file name is "Project1-Cover.CSV" or "Project1-Cover.TXT".

[Items for Print]	Files to be output	Content to be printed
[Cover]	Cover.CSV/TXT	Outputs the title, date, and other items set in the [Print] dialog.
[Screen Name]	Screen Name.CSV/TXT	Outputs the screen title.
[Screen Image/Setting]	Screen Image Setting.CSV/TXT	Outputs the screen properties and designs, and the settings of the objects on the screens.
[Common]	Common Setting.CSV/TXT	Outputs the project information and common settings (including type setting and controller setting).
[Recipe Setting]	Recipe Common.CSV/TXT	Outputs the recipe common setting.
	Recipe Setting-*****.CSV/TXT	Outputs the recipe setting. [*****] indicates the recipe No. to be output.
[Logging Setting]	Logging Setting-*****.CSV/TXT	Outputs the logging setting. [*****] indicates the logging ID to be output.
[Device Data Transfer]	Device Data Transfer-*****.CSV/TXT	Outputs the device data transfer setting. [*****] indicates the device data transfer ID to be output.
[Device] ([List])	Device List-CH*.CSV/TXT	Outputs the controller devices used in the project for each channel. [*] indicates CH No. to be output.
	Device List-GOT.CSV/TXT	Outputs the GOT internal devices used in the project.
[Device]([Detail])	Device Detail-CH*.CSV/TXT	Outputs the controller devices used in the project and the positions of each device for each channel. [*] indicates CH No. to be output.
	Device Detail-GOT.CSV/TXT	Outputs the GOT internal devices used in the project and the positions of each device.
[Label (GT Designer3)]	Label Group List.CSV/TXT	Outputs the list of registered label groups.
	Label Group-***.CSV/TXT	Outputs the list of labels (GT Designer3) registered in a label group. [***] indicates the label group number.
[Comment]	Comment List-***.CSV/TXT	Outputs the registered comments. [***] indicates group No. to be output.
	Comment List-***Attribute.CSV/TXT	Outputs the comment attributes. [***] indicates group No. to be output.
[Parts]	Parts.CSV/TXT	Outputs the parts settings and details of the registered parts (part numbers and names).
[Script]	Script.CSV/TXT	Outputs the script settings (script settings, script symbols, and script options).

[Items for Print]	Files to be output	Content to be printed
[Sound]	Sound Files.CSV/TXT	Outputs the sound file list and the touch key sound setting.
[Category]	Category.CSV/TXT	Outputs shapes, objects, and screen numbers and coordinates where each shape or object is arranged for each category.
[My Library]	My Library.CSV/TXT	Outputs screen numbers and names of the shapes and objects registered for each folder in my library.

(b) **Image file**

The following table lists the targets to be output to an image file and those file names.

[Items for Print]	Files to be output	Content to be printed
[Screen Image/Setting] (Base screen)	Base ON-*****.BMP/JPEG	Outputs the image of the ON-state base screen. [*****] indicates the screen number.
	Base OFF-*****.BMP/JPEG	Outputs the image of the OFF-state base screen. [*****] indicates the screen number.
	Base ON Object ID-*****.BMP/JPEG	Outputs the image of the ON-state base screen with the object IDs visible. [*****] indicates the screen number.
	Base OFF Object ID-*****.BMP/JPEG	Outputs the image of the OFF-state base screen with the object IDs visible. [*****] indicates the screen number.
	Base ON Device-*****.BMP/JPEG	Outputs the image of the ON-state base screen with the devices visible. [*****] indicates the screen number.
	Base OFF Device -*****.BMP/JPEG	Outputs the image of the OFF-state base screen with the devices visible. [*****] indicates the screen number.
[Screen Image/Setting] (Window screen)	Window ON-*****.BMP/JPEG	Outputs the image of the ON-state window screen. [*****] indicates the screen number.
	Window OFF-*****.BMP/JPEG	Outputs the image of the OFF-state window screen. [*****] indicates the screen number.
	Window ON Object ID-*****.BMP/JPEG	Outputs the image of the ON-state window screen with the object IDs visible. [*****] indicates the screen number.
	Window OFF Object ID-*****.BMP/JPEG	Outputs the image of the OFF-state window screen with the object IDs visible. [*****] indicates the screen number.
	Window ON Device-*****.BMP/JPEG	Outputs the image of the ON-state window screen with the devices visible. [*****] indicates the screen number.
	Window OFF Device-*****.BMP/JPEG	Outputs the image of the OFF-state window screen with the devices visible. [*****] indicates the screen number.
[Screen Image/Setting] (Report screen)	Report-*****.BMP/JPEG	Outputs the screen images of report screens. [*****] indicates the screen number.
	Report Object ID-*****.BMP/JPEG	Outputs the image of a report screen with the object IDs visible. [*****] indicates the screen number.
	Report Device-*****.BMP/JPEG	Outputs the image of a report screen with the devices visible. [*****] indicates the screen number.

[Items for Print]	Files to be output	Content to be printed
[Screen Image/Setting] (Mobile screen)	Mobile ON-*****.BMP/JPEG	Outputs the image of the ON-state mobile screen. [*****] indicates the screen number.
	Mobile OFF-*****.BMP/JPEG	Outputs the image of the OFF-state mobile screen. [*****] indicates the screen number.
	Mobile ON Object ID-*****.BMP/JPEG	Outputs the image of the ON-state mobile screen with the object IDs visible. [*****] indicates the screen number.
	Mobile OFF Object ID-*****.BMP/JPEG	Outputs the image of the OFF-state mobile screen with the object IDs visible. [*****] indicates the screen number.
	Mobile ON Device-*****.BMP/JPEG	Outputs the image of the ON-state mobile screen with the devices visible. [*****] indicates the screen number.
	Mobile OFF Device-*****.BMP/JPEG	Outputs the image of the OFF-state mobile screen with the devices visible. [*****] indicates the screen number.
[Screen Image/Setting] (Startup logo)	Startup Logo.BMP or JPEG	Outputs the image of the startup logo.
[Parts]	Parts-*****.BMP/JPEG	Outputs the images of the registered parts. [*****] indicates the parts number.
[My Library]	My Library-***-***.BMP/JPEG	Outputs the images of the shape and objects registered in my library. [***-***] indicates [the library folder number - the library data number].

2.14.2 How to print and output files

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■1 Setting the page layout or color tone

Step 1 Select [Project] → [Page Settings] from the menu to display the [Page Settings] dialog.

➟2.14.4 [Page Settings] dialog

Step 2 Click the [OK] button after the required settings to complete the setting.

■2 Outputting

Step 1 Select [Project] → [Print] from the menu to display the [Print] dialog.

➟2.14.6 [Print] dialog

Step 2 Click the [Print] button after setting output targets in [Items for Print] to display a dialog according to the setting of the output destination.

- For the printer output, the setting dialog to be displayed depends on the printer driver of the OS used.
- For the file output, the [Save Specified Folder] dialog is displayed.

Step 3 Output the pages by the following operations in the setting dialog.

- For the printer output, click the [OK] button after the required settings.
- For the file output, click the [Save] button after specifying the destination to save the file.

2.14.3 Precautions

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■1 Outputting a project for which the project security is set

The screen for which displaying is prohibited cannot be output.

2.14.4 [Page Settings] dialog

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➟■1 [Page Settings] tab
■2 [Screen Image] tab

■1 [Page Settings] tab

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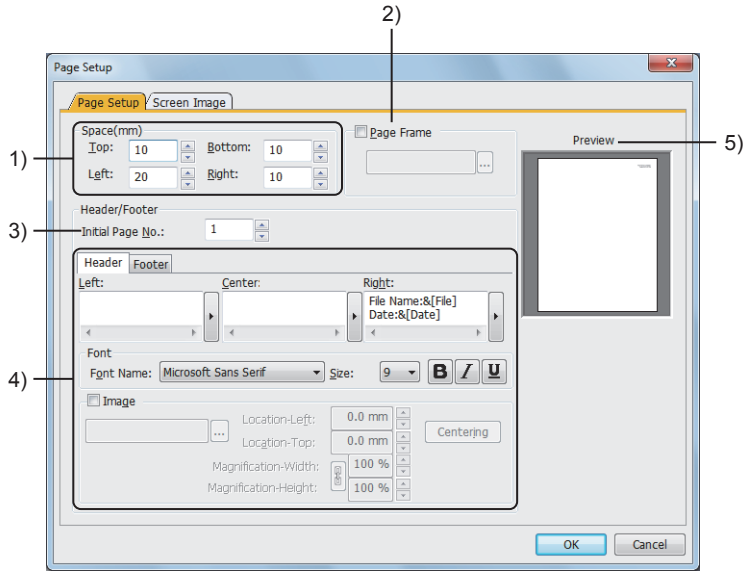
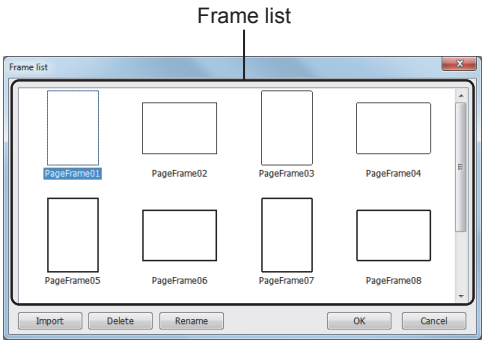


1) **[Margin (mm)]**
Set page margins for each direction (up/down/left/right).
The setting range is [0] mm to [100] mm.

2) **[Frame]**
Select this item to display a frame in the page.
Click the [...] button to display the [Frame List] dialog.
Select a frame pattern.



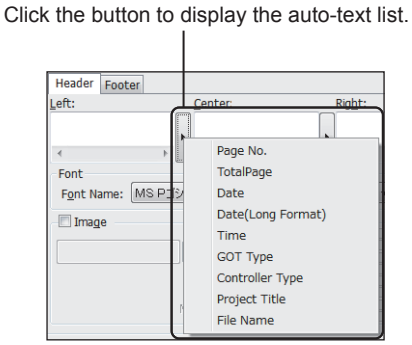
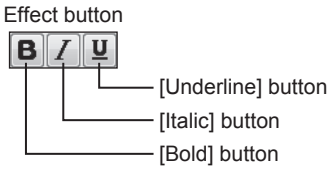
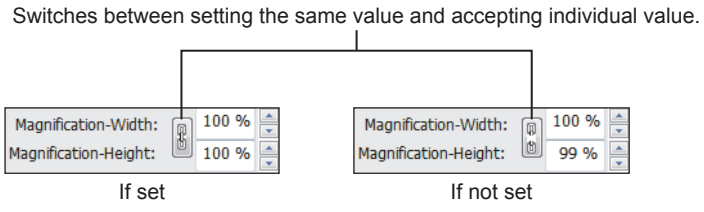
- **Frame list**
  Displays frame images.
- **[Import] button**
  Imports frame images.
  The following shows available file formats for importing frame images.
  - WMF format
  - EMF format

  The imported files are displayed in the frame list.
- **[Delete] button**
  Deletes the selected frame from the frame list.
- **[Replace Name] button**
  Changes the name of the selected frame in the frame list.

3) **[Initial Page No.]**
Set an initial value of the page number.
The setting range is [1] to [9999].

4) **[Header] tab, [Footer] tab**

Switches the target to be set (header or footer).

Item	Description
[Left], [Center], [Right]	Set text to be displayed in the left side, center, or right side of the header or footer. Up to 512 characters including two lines can be set. A line feed is counted as two characters. A line feed is counted as two characters. You can also select and input text from the auto-text list. 
[Font]	Set a font name, text size, and an effect for the text displayed in the header or footer. The same font setting is applied to all the texts in [Left], [Center], and [Right]. • [Font Name] Select a font. • [Size] Select a text size. • Effect button Set an effect for the text.  • [Bold] button Boldifies the text. • [Italic] button Leans the text. • [Underline] button Underlines the text.
[Image]	Select this item to set an image file to be displayed in the header or footer. The image is displayed behind the text set in [Left], [Center], and [Right]. Click the [...] button to display the [Screen Selection] dialog. The BMP, JPEG, WMF, and EMF file formats can be read. • [Position-Left] Set the display position of the image in the horizontal direction with the origin at the left edge of the header area. The setting range is [-999.9mm] to [999.9mm]. • [Position-Up] Set the display position of the image in the vertical direction with the origin at the top edge of the header area. The setting range is [-999.9mm] to [999.9mm]. • [Magnification-Width], [Magnification-Height] Set the display magnification of the image. The setting range is [0%] to [100%]. You can set whether to set the same value for both [Magnification-Width] and [Magnification-Height] or not.  • [Centering] button Sets the display position of the image in the center of the header or footer.

5) **[Preview]**

Displays a preview of the settings.

■2 [Screen Image] tab

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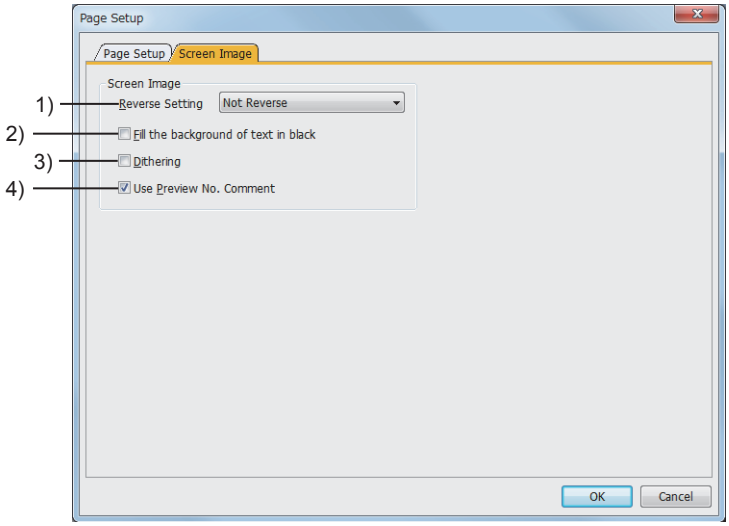
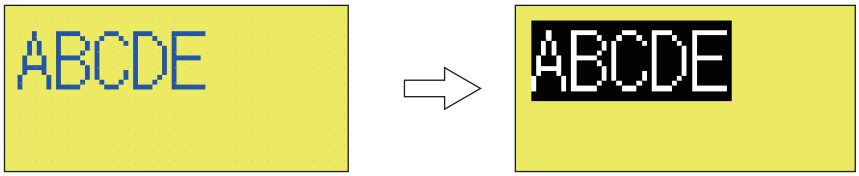


1) **[Rev Setting]**
Select the reverse processing of color tones of the screen image.
The following shows the items to be selected.
- [No Invert]
- [Invert]
- [Tone Invert]

2) **[Fill the background of text in black]**
Sets the text color to white and the background color to black for outputting the screen image.

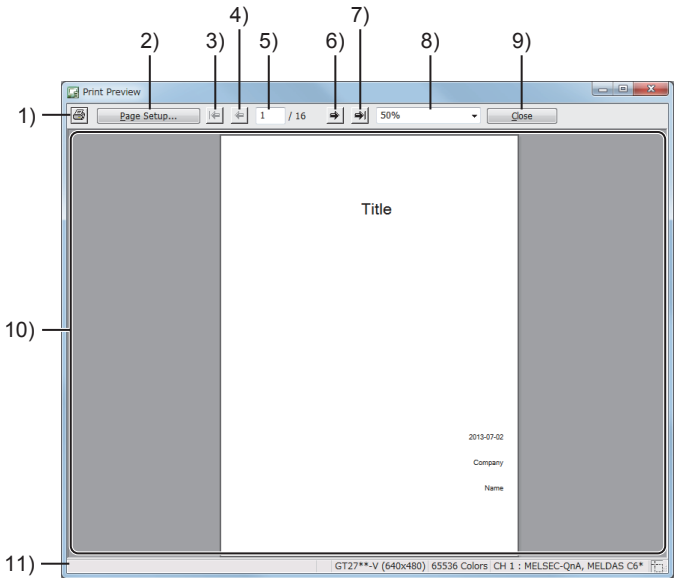


View on the screen editor　　Preview

3) **[Dithering]**
Sets the screen image to monochrome with the neutral color tone for outputting the screen image.

4) **[Display comments with Preview No.]**
Displays the comment of the comment column No. which is set as the preview number for outputting the screen image.

2.14.5 [Print Preview] window



1) **Print button**
Displays the [Print] dialog.
➟2.14.6 [Print] dialog

2) **[Page Settings] button**
Displays the [Page Settings] dialog.
➟2.14.4 [Page Settings] dialog

3) **[First Page] button**
Moves to the top page.

4) **[Previous Page] button**
Moves to the previous page.

5) **[Page specification]**
Displays the page whose preview image is currently displayed.
Press the [Enter] key after setting the page number to move to the set page.

6) **[Next Page] button**
Moves to the next page.

7) **[Final Page] button**
Moves to the last page.

8) **[Size Specification]**
Select a display size or display method of the pages.
The following shows the items to be selected.
- [400%]
- [300%]
- [200%]
- [150%]
- [100%]
- [75%]
- [50%]
- [25%]
- [10%]
- [Display All Page]
- [Adjust Width]
- [1Page display]
- [2Page display]
- [4Page display]

• [8Page display]

9) **[Close] button**
Closes the [Print Preview] window.

10) **Preview**
A preview of the print image.

11) **Status bar**
Displays the GOT type and channel settings of the project.

2.14.6 [Print] dialog

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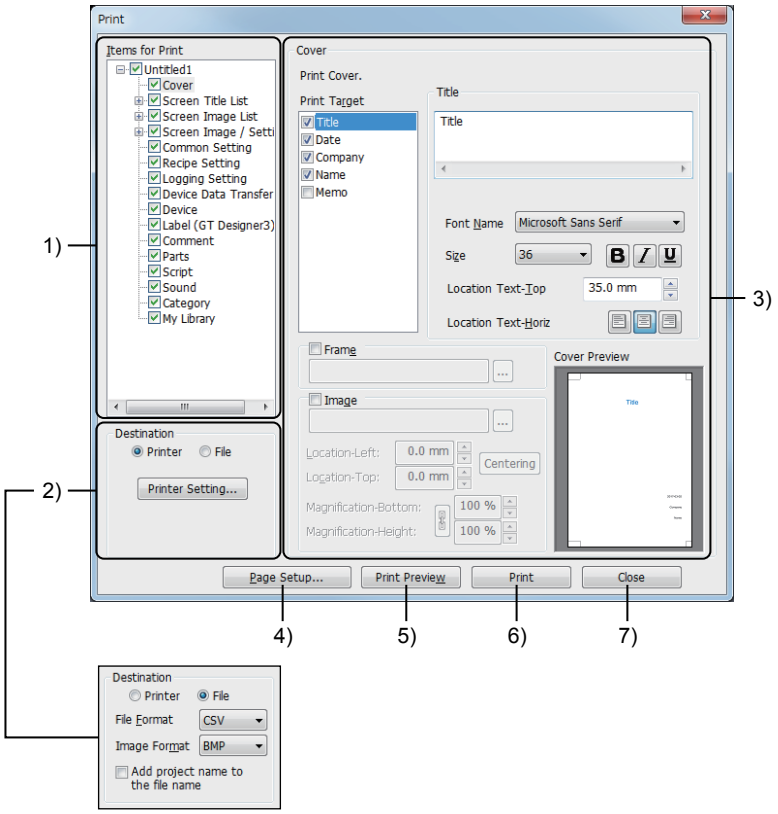


1) **[Items for Print]**
Set targets to be output.
For the details of the contents to be output, refer to the following.

➟2.14.1 Specifications for printing and outputting files

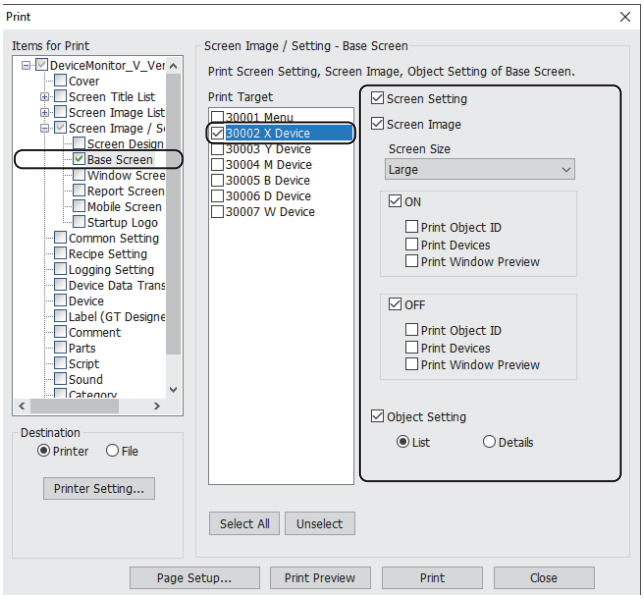
2) **[Destination]**
Select an output destination.

Item	Description
[Printer]	Sets the output destination to the printer. Click the [Printer Settings] button to configure the printer settings. The contents of the printer setting depend on the printer driver of the OS used.
[File]	Sets the output destination to the file. Select an output format of the settings of the project in [File Type]. The following shows the setting range. • [CSV]: Outputs the settings in the CSV format. • [TXT]: Outputs the settings in the Unicode text format. Select an output format of the screen image in [Screen Type]. The following shows the setting range. • [BMP]: Outputs the settings in the BMP format. • [JPEG]: Outputs the settings in the JPEG format.
[Add project name to the file name]	Adds a project file name at the beginning of the file name.

3) **Setting of the print items**
Setting items depend on the setting of [Items for Print].
For details, refer to the following.

➟■1 [Cover]
■2 [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen] of [Screen Image List]
■3 [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen] of [Screen Image/Setting]
■4 [Recipe Setting], [Logging Setting], [Device Data Tansfer], [Label (GT Designer3)], [Comment], and [Category]
■5 [Device]

Example) When printing the data of a specific screen out of multiple base screens
Select [Base Screen] from the subitems of [Screen Image/Setting] in [Items for Print], select the items to be printed for [Print Target] which is displayed on the right of the screen, and set the details.



4) **[Page Settings] button**
Displays the [Page Settings] dialog.
➟2.14.4 [Page Settings] dialog

5) **[Print Preview] button**
Displays the [Print Preview] window.
➟2.14.5 [Print Preview] window

6) **[Print] button**
Outputs the settings.

7) **[Close] button**
Closes the [Print] dialog.

■1 [Cover]

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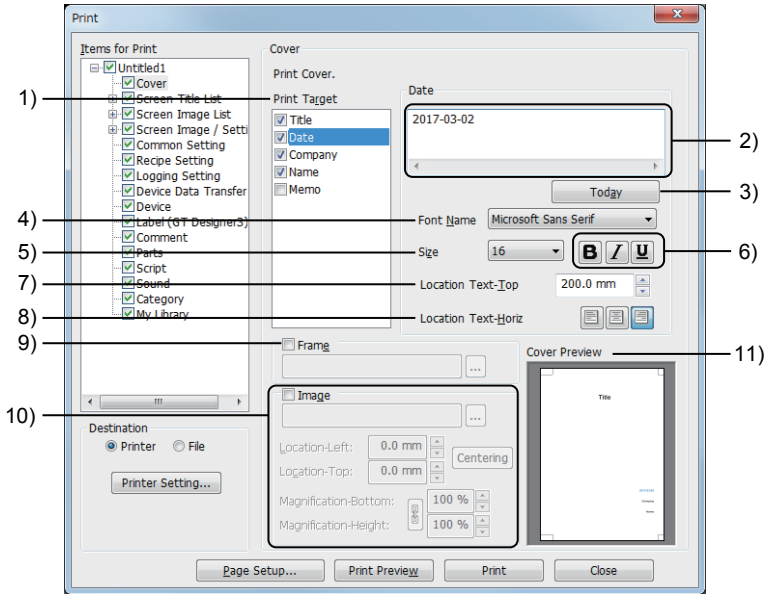


1) **[Print Target]**
Set targets to be output.

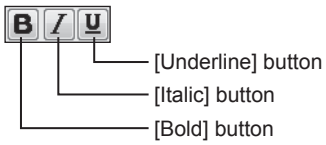
2) **Text**
Input character strings to be displayed as the item selected in [Print Target].
Up to 512 characters including three lines can be set. A line feed is counted as two characters.
A line feed is counted as two characters.

3) **[Today's Date] button**
Displayed when [Date] is selected in [Print Target].
Input today's date.

4) **[Font Name]**
Select a font of the item selected in [Print Target].

5) **[Size]**
Set a text size of the item selected in [Print Target].

6) **Effect button**
Set an effect for the text.



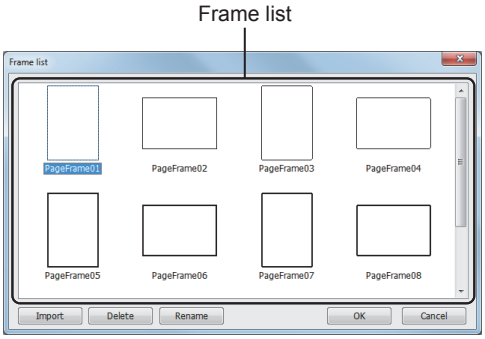
- **[Bold] button**
  Boldifies the text.
- **[Italic] button**
  Leans the text.
- **[Underline] button**
  Underlines the text.

7) **[Position-Up]**
Set the display position of the text in the vertical direction with the origin at the top edge of the print area.
The setting range is [0.0mm] to [999.9mm].

8) **[Position-Horizontal]**
Set the horizontal position of the text.

9) **[Frame]**
Displays a frame on the cover.
Click the [...] button to display the [Frame List] dialog.

Select a frame pattern.



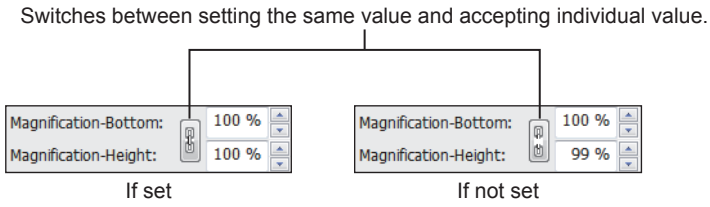
- **Frame list**
  Displays frame images.
- **[Import] button**
  Imports frame images.
  The following shows available file formats for importing frame images.
  - WMF format
  - EMF format

  The imported files are displayed in the frame list.
- **[Delete] button**
  Deletes the selected frame from the frame list.
- **[Replace Name] button**
  Changes the name of the selected frame in the frame list.

10) **[Image]**

Set an image file to be displayed on the cover.
Click the [...] button to display the [Screen Selection] dialog.
The BMP, JPEG, WMF, and EMF file formats can be read.

- [Position-Left]
  Set the display position of the image in the horizontal direction with the origin at the left edge of the print area.
  The setting range is [-999.9mm] to [999.9mm].
- [Position-Up]
  Set the display position of the image in the vertical direction with the origin at the top edge of the print area.
  The setting range is [-999.9mm] to [999.9mm].
- [Magnification-Width], [Magnification-Height]
  Set the display magnification of the image.
  The setting range is [0%] to [100%].
  You can set whether to set the same value for both [Magnification-Width] and [Magnification-Height] or not.



- [Centering] button
  Sets the display position of the image in the center of the print area.

11) **[Cover Preview]**

Displays a preview of the settings.

■2 [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen] of [Screen Image List]

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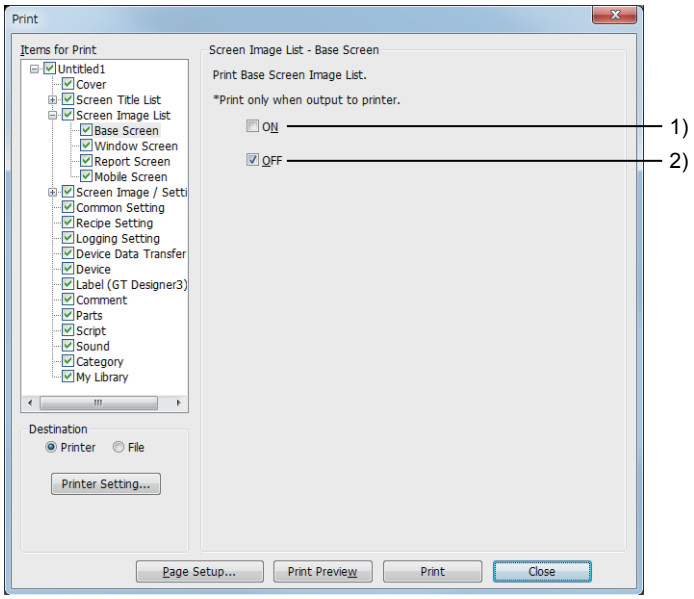

1) **[ON]**
Sets the images of when the devices of each screen are on as the targets to be output.
This item can be set only when [Printer] is selected in [Destination].

2) **[OFF]**
Sets the images of when the devices of each screen are off as the targets to be output.
This item can be set only when [Printer] is selected in [Destination].

■3 [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen] of [Screen Image/ Setting]

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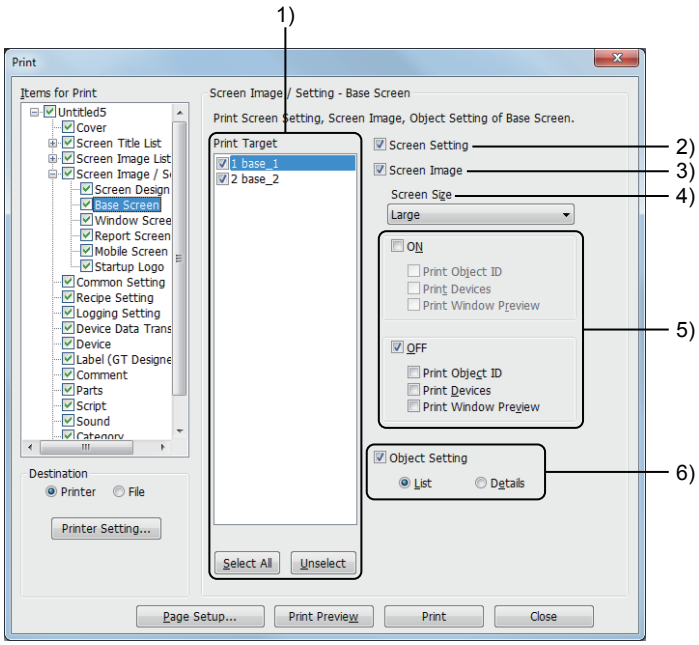

1) **[Print Target]**

Set targets to be output.

Item	Description
[Select All] button	Selects all the items in [Print Target].
[Unselect] button	Deselects all the items in [Print Target].

2) **[Screen Setting]**

Select this item to set the screen setting as the target to be output.

3) **[Screen Image]**

Select this item to set the screen image as the target to be output.

4) **[Screen Size]**

Select a size of the screen image to be output.

This item can be selected only when [Printer] is selected in [Destination].

The following shows the items to be selected.

- [Large]
- [Medium]
- [Small]
- [Based Upon Base Screen]:

Outputs the screen image in the same size as that of the setting of [Screen Size] in [Base Screen].

[Based Upon Base Screen] can be set only in [Window Screen] of [Screen Image / Setting].

When [Base Screen] in [Screen Image / Setting] is not selected, the screen image is output in the size of [Large].

5) **[ON], [OFF]**

Select these items to set the settings of when the devices of each screen are on or off as the targets to be output.

Item	Description
[Print Object ID]	Displays object IDs on the screen image.
[Print Devices]	Displays devices on the screen image.
[Print Window Preview]	Displays a preview of the window screen on the screen image.

6) **[Object Setting]**

Select this item to set the object setting as the target to be output.

- [List]: Outputs the list of objects arranged on each screen.
- [Detail]: Outputs the detail settings of the objects and the figures (having the device setting) arranged on each screen.

■4 [Recipe Setting], [Logging Setting], [Device Data Tansfer], [Label (GT Designer3)], [Comment], and [Category]

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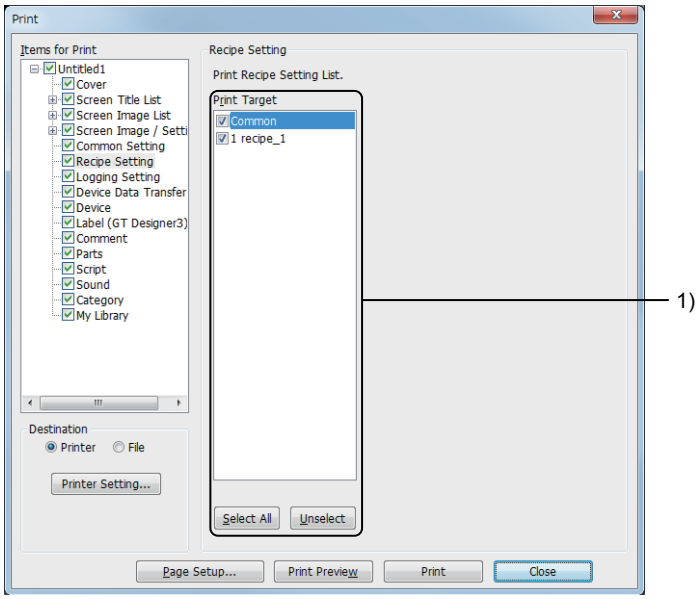

1) **[Print Target]**

Set targets to be output.

Item	Description
[Select All] button	Selects all the items in [Print Target].
[Unselect] button	Deselects all the items in [Print Target].

■5 [Device]

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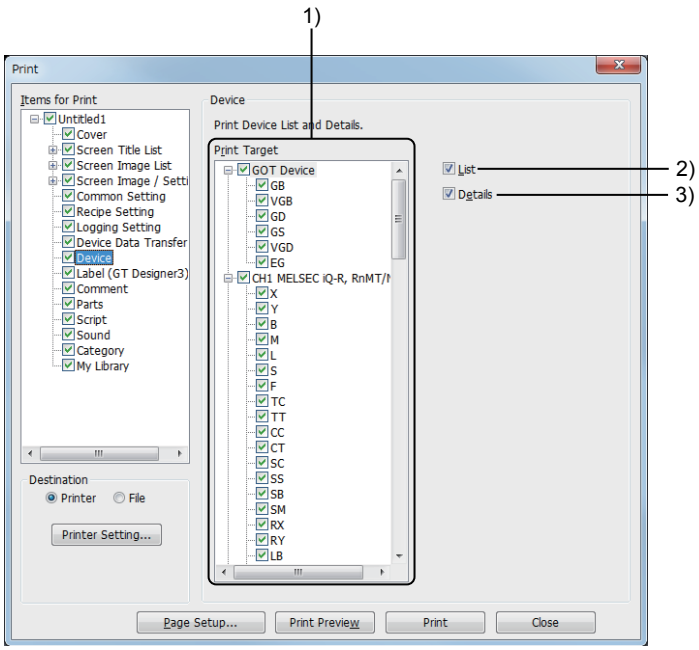

1) **[Print Target]**
Set targets to be output.

2) **[List]**
Select this item to set the device list as the target to be output.

3) **[Detail]**
Select this item to set the details of the devices as the targets to be output.

2.15 Saving a Project

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GT Designer3 saves a project in the following formats.

- Workspace format
- A single file format (*.GTX, *.GTXS)

➟2.15.1 Overwriting a project
2.15.2 Saving a project in the workspace or the single file format (*.GTX)
2.15.3 Saving a project in the single file format (*.GTXS) with system applications

2.15.1 Overwriting a project

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Select [Project] → [Save] from the menu to overwrite a project.
However, when the currently edited project is in any of the following conditions, the [Save As Project] dialog is displayed.

- A project which has never been saved
- A single file format (*.GTXS, *.G2) project
- A project for the GOT1000 series which opened after converted to a project for the GOT2000 series

➟2.15.2 ■1 [Save As Project] dialog (workspace format)
2.15.2 ■2 [Save As Project] dialog (single file format)

2.15.2 Saving a project in the workspace or the single file format (*.GTX)

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Step 1 Select [Project] → [Save As] from the menu to display the [Save As Project] dialog.
Switch the screens according to the saving format of the project.

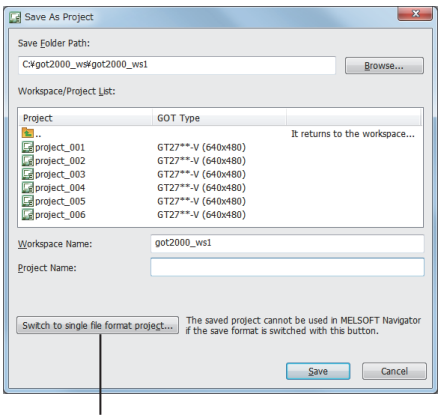
- Workspace format: Save the project in the [Save As Project] dialog (workspace format).

➟■1 [Save As Project] dialog (workspace format)

- Single file format : Save the project in the [Save As Project] dialog (single file format).

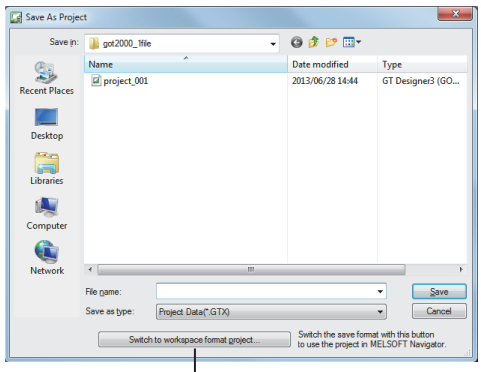
➟■2 [Save As Project] dialog (single file format)

[Save As Project] dialog (workspace format)



Switching to [Save As Project] dialog (single file format)

[Save As Project] dialog (single file format)



Switching to [Save As Project] dialog (workspace format)

Step 2 Click the [Save] button after the required settings to save the project.

Point

(1) **Manipulation of the setting file for calling the PX Developer function**

When you save the project for GT SoftGOT2000 in the single file format (*.GTX), a setting file (*.dat) for calling the PX Developer function is created in the same folder.
Do not delete the setting file (*.dat).

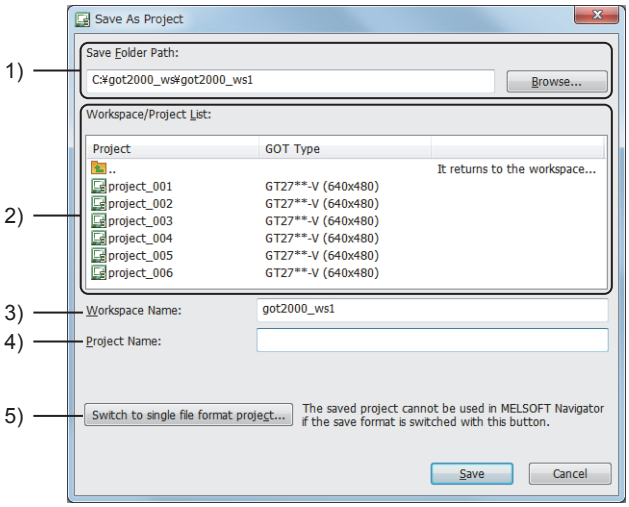
If you copy or move the project to another folder, also copy or move the setting file (*.dat) to the folder.

(2) **Operating on iQ Works**

Save a project with a different name, a project cannot be saved with a different name.
Only overwriting is available.
To save a project with a different name, save the project with the workspace from MELSOFT Navigator.

■1 [Save As Project] dialog (workspace format)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Save Folder Path]**

Set the destination path to save the project.
The path can be set from the [Browse] button.
Do not save the project in the following path.

- <Installation path>\GTD3_2000\App
- <Installation path>\GTD3

2) **[Workspace/Project List]**

Displays a workspace and project which exist in the destination path to save the project.
If a workspace is double-clicked, the projects in the workspace are displayed.

3) **[Workspace Name]**

Set a workspace name to save the project.
When the set workspace does not exist in [Workspace/Project List], a workspace with the set name is created when the project is saved.

4) **[Project Name]**

Set a project name to be saved.
Up to 200 characters can be used for the total number of the characters of [Save Folder Path], [Workspace Name], and [Project Name].
"\" at the end of the project name is not counted as a character.
Click the [Save] button to save the project with the set project name.

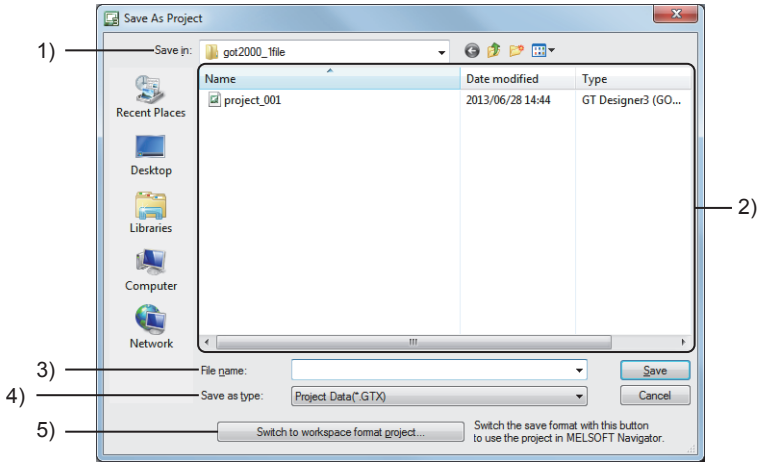
5) **[Switch to single file format project] button**

Switches the dialog to the [Save As Project] dialog (single file format).

➥■2 [Save As Project] dialog (single file format)

■2 [Save As Project] dialog (single file format)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Save in]**
Select the destination to save the project.
Do not save the project in the following path.
- <Installation path>\GTD3_2000\App
- <Installation path>\GTD3

2) **File list**
Lists files in the destination to save the project.

3) **[File name]**
Set a file name of the project to be saved.
Click the [Save] button to save the project with the set file name.

4) **[Files of type]**
Select a file type of the project to be saved.
- [Project Data(*.GTX)]
  Saves a file in the single file format (*.GTX).
  The single file format (*.GTX) files are displayed in the file list.
  The file is displayed only when the [Save As Project] dialog (single file format) is opened by selecting [Project] → [Save As] from the menu.
- [Package Data(*.GTXS)]
  Saves a file in the single file format (*.GTXS).
  The single file format (*.GTXS) files are displayed in the file list.
  The file is displayed only when the [Save As Project] dialog (single file format) is opened by selecting [Project] → [Save As Single File Format Project (Package Data)] from the menu.

5) **[Switch to workspace format project] button**
Switches the dialog to the [Save As Project] (workspace format) dialog.
➟■1 [Save As Project] dialog (workspace format)
The file is displayed only when the [Save As Project] dialog (workspace format) is opened by selecting [Project] → [Save As] from the menu.

■3 Folder and file operations of the workspace format project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If you operate (migrate, rename, or delete) the folders or files in the workspace by using Windows Explorer or others, the project cannot be opened.
Operate a workspace format project by the following procedures on GT Designer3.

(1) Moving a project

Step 1 Open a project to be moved.

Step 2 Select [Project] → [Save As] from the menu to save the project in the destination folder.

Step 3 Delete the original project.

(2) Changing a project name

Step 1 Open the project to change the name.

Step 2 Select [Project] → [Save As] from the menu to save the project after changing the name.

Step 3 Delete the original project.

(3) Copying a project

Step 1 Open the project to be copied.

Step 2 Select [Project] → [Save As] from the menu to save the project after changing the name.

(4) Deleting a project

➟2.3.4 ■1 Deleting a workspace format project

2.15.3 Saving a project in the single file format (*.GTXS) with system applications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

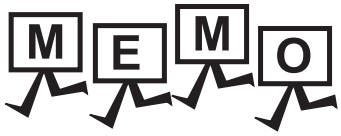
Step 1 Select [Project] → [Save Package Data] from the menu to display the [Save As Package] dialog.

Step 2 Set [File name] and click the [Save] button after the required settings to save the project.

Point

(1) **Saving the package data**

The project in the single file format (*.GTXS) is saved as the package data with the system application and communication driver of GT Designer3 in which the project is saved.
When the project which was saved as the package data is edited and saved, the system application and communication driver of the package data are updated with the information of the system application and communication driver of the GT Designer3 which is used to save the project.
The functions which are not compatible with the GT Designer3 which is used to save the project are deleted.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3. SIMULATION

3.1 Specifications . . . . . 3 - 2
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3.5 Screen Layout of GT Simulator3 . . . . . 3 - 77
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3.8 Troubleshooting . . . . . 3 - 116

3.1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡3.1.1 Simulation-supported GOTs
3.1.2 Monitoring-supported Controllers
3.1.3 Available devices for monitoring
3.1.4 Simulation-supported/unsupported functions
3.1.5 Destination to save data

For the overview of the simulation function, refer to the following.

➡1.1 ■2 Simulation

GT Simulator3 requires the same operating environment as GT Designer3.
For details, refer to the following.

➡1.1.1 Operating environment

3.1.1 Simulation-supported GOTs

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following lists the GOTs that are compatible with simulation by GT Simulator3 Version1.

Point

Display color

The actual display color on the GOT may differ from the display color on GT Simulator3.
Check the actual display color on the GOT by [Preview] in GT Designer3.

➡2.9.1 Displaying a preview

■1 GOT2000 series (GT27) simulator

Name	Resolution (dot)	Display color	Memory capacity *1
GT27**-X	1024 × 768	65536 colors *2	57 MB
GT27**-S	800 × 600	65536 colors *2	57 MB
GT27**-V	640 × 480	65536 colors *2	57 MB
GT2705-V	640 × 480	65536 colors *2	32 MB

*1 Capacity of the GOT user area where package data is stored.
*2 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

■2 GOT2000 series (GT25) simulator

Name	Resolution (dot)	Display color	Memory capacity *1
GT25**-WX	1280 × 800	65536 colors *2	32 MB
GT25**-W	800 × 480	65536 colors *2	32 MB
GT25**-S	800 × 600	65536 colors *2	32 MB
GT25**-V	640 × 480	65536 colors *2	32 MB
GT2505-V	640 × 480	65536 colors *2	32 MB

*1 Capacity of the GOT user area where package data is stored.
*2 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

■3 GOT2000 series (GT23) simulator

Name	Resolution (dot)	Display color	Memory capacity *1
GT23**-V	640 × 480	65536 colors *2	10 MB

*1 Capacity of the GOT user area where package data is stored.
*2 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

■4 GOT2000 series (GT21) simulator

Name	Resolution (dot)	Display color	Memory capacity *1
GT2107-W	800 × 480	65536 colors *2	15 MB
GT2105-Q	320 × 240	65536 colors *2 or 32-level monochrome	9 MB
GT2104-R	480 × 272	65536 colors *2	9 MB
GT2104-P	384 × 128	32-level monochrome	6 MB
GT2103-P	320 × 128	32-level monochrome	3 MB

*1 Capacity of the GOT user area where package data is stored.
*2 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

■5 GOT SIMPLE series (GS25, GS21) simulator

Name	Resolution (dot)	Display color	Memory capacity *1
GS25**-WX	1280 × 800	65536 colors *2	32 MB
GS21**-W-N	800 × 480	65536 colors *2	15 MB
GS21**-W	800 × 480	65536 colors *2	9 MB

*1 Capacity of the GOT user area where package data is stored.
*2 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

3.1.2 Monitoring-supported Controllers

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Controller simulator
■2 Mitsubishi Electric products
■3 Non-Mitsubishi Electric products

■1 Controller simulator

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this section, the controller simulator refers to the following software.

- GX Simulator
- GX Simulator2
- GX Simulator3
- MT Simulator2

GT Simulators3 connecting to the controller simulator enables monitoring the following virtual controllers.
Non-Mitsubishi Electric PLCs are handled as A4UCPU, and their specific devices cannot be monitored.
Non-Mitsubishi Electric PLCs are not supported by GX Simulator2 or GX Simulator3.

➟(1) Mitsubishi Electric products
(2) Non-Mitsubishi Electric PLCs

Point

For the devices that can be monitored by GT Simulator3, refer to the following.

➟3.1.3 Available devices for monitoring

(1) Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Type	Model			
MX-R*5*8*13*14	MXR300-16	MXR300-32	MXR300-64	MXR500-128
	MXR500-256			
MX-F*5*8*13*14	MXF100-8-N32	MXF100-8-P32	MXF100-16-N32	MXF100-16-P32
RCPU*5	R00CPU	R01CPU	R02CPU	R04CPU
	R08CPU	R16CPU	R32CPU	R120CPU
	R08PCPU *11	R16PCPU *11	R32PCPU *11	R120PCPU *11
	R08SFCPU	R16SFCPU	R32SFCPU	R120SFCPU
	R08PSFCPU	R16PSFCPU	R32PSFCPU	R120PSFCPU
	R04ENCPU	R08ENCPU	R16ENCPU	R32ENCPU
	R120ENCPU			
	R12CCPU-V *8			
LHCPU *5	L04HCPU	L08HCPU	L16HCPU	L32HCPU

Type			Model			
QCPU[*7]		QCPU (Q Mode)	Q00JCPU	Q00CPU	Q01CPU	Q02CPU
			Q02HCPU	Q06HCPU	Q12HCPU	Q25HCPU
			Q02PHCPU [*2]	Q06PHCPU [*2]	Q12PHCPU [*2]	Q25PHCPU [*2]
			Q12PRHCPU [*2]	Q25PRHCPU [*2]		
			Q00UJCPU	Q00UJCPU-S8	Q00UCPU	Q01UCPU
			Q02UCPU	Q03UDCPU	Q04UDHCPU	Q06UDHCPU
			Q10UDHCPU	Q13UDHCPU	Q20UDHCPU	Q26UDHCPU
			Q03UDECPU	Q04UDEHCPU	Q06UDEHCPU	Q10UDEHCPU
			Q13UDEHCPU	Q20UDEHCPU	Q26UDEHCPU	Q50UDEHCPU
			Q100UDEHCPU			
			Q03UDVCPU[*1]	Q04UDVCPU[*1]	Q06UDVCPU[*1]	Q13UDVCPU[*1]
			Q26UDVCPU[*1]			
			Q04UDPVCPU[*1]	Q06UDPVCPU[*1]	Q13UDPVCPU[*1]	Q26UDPVCPU[*1]
		QCPU(A Mode)[*2]	Q02CPU-A	Q02HCPU-A	Q06HCPU-A	
LCPU[*1*7]			L02CPU	L02CPU-P	L02SCPU	L02SCPU-P
			L06CPU	L06CPU-P	L26CPU	L26CPU-BT
			L26CPU-P	L26CPU-PBT		
QnACPU[*2*7]		QnACPU type	Q2ACPU	Q2ACPU-S1	Q3ACPU	Q4ACPU
			Q4ARCPU			
		QnASCPU type	Q2ASCPU	Q2ASCPU-S1	Q2ASHCPU	Q2ASHCPU-S1
ACPU[*2*7]	AnCPU type	AnUCPU	A2UCPU	A2UCPU-S1	A3UCPU	A4UCPU
		AnACPU	A2ACPU	A2ACPUP21	A2ACPUR21	A2ACPU-S1
			A2ACPUP21-S1	A2ACPUR21-S1	A3ACPU	A3ACPUP21
			A3ACPUR21			
		AnNCPU	A1NCPU	A1NCPUP21	A1NCPUR21	A2NCPU
			A2NCPUP21	A2NCPUR21	A2NCPU-S1	A2NCPUP21-S1
			A2NCPUR21-S1	A3NCPU	A3NCPUP21	A3NCPUR21
	AnSCPU type	AnUS(H)CPU	A2USCPU	A2USCPU-S1	A2USHCPU-S1	
		AnS(H)CPU	A1SCPU	A1SCPU-S1	A1SCPUC24-R2	A2SCPU
			A1SHCPU	A2SHCPU		
		A1SJ(H)CPU	A1SJCPU	A1SJCPU-S3	A1SJHCPU	
	A1FXCPU		A1FXCPU			
	A0J2HCPU		A0J2HCPU			
	A2CCPU		A2CCPU	A2CCPUC24	A2CJCPU	
MELSEC iQ-F[*5]			FX5U	FX5UC	FX5UJ	
FXCPU[*7]			FX0 series	FX0N series	FX0S series	
			FX1 series	FX1N series	FX1NC series	FX1S series
			FX2 series	FX2C series	FX2N series	FX2NC series
			FX3G series	FX3GC series[*1]	FX3GE series[*1*2*9]	
			FX3U series	FX3UC series	FX3S series[*1]	
MELSECNET/H remote I/O station[*7]			QJ72LP25-25	QJ72LP25G	QJ72BR15	
Motion CPU[*7]		Q series[*1*2]	Q170MCPU[*3*4*6]	Q170MSCPU[*3*4*6]	Q170MSCPU-S[*3*4*6]	
			Q172DSCPU	Q173DSCPU		
		A series[*2*3]	A171SHCPU	A172SHCPU	A173UHCPU	A173UHCPU-S1
			A273UHCPU	A273UHCPU-S3		
MELIPC [*5*8]			MI5122-VW			

Type		Model			
CNC*12	CNC C80*5*8	R16NCCPU-S1			
	CNC C70*5*7	Q173NCCPU			
	MELDAS C6/ C64*2*7*10	FCA C6	FCA C64		
Robot controller		CR800-R (R16RTCPU)*5*8	CR800-D*5*8	CRnQ-700 (Q172DRCPU)*7	CR800-Q (Q172DSRCPU) *5*7

*1 GX Simulator does not support the CPU.
*2 GX Simulator2 does not support the CPU.
*3 MT Simulator2 does not support the CPU.
*4 Only the PLC CPU area (CPU No.1) can be connected.
*5 To perform a simulation using GX Simulator or GX Simulator2, set the CPU as a QCPU. In this case, only the devices of QCPU can be simulated.
*6 To perform a simulation using GX Simulator or GX Simulator2, set the CPU as a Q03UDCPU.
*7 GX Simulator3 does not support the CPU.
*8 To perform a simulation using GX Simulator3, set the CPU as an RCPU. In this case, only the devices of RCPU can be simulated.
*9 To perform a simulation using GX Simulator or GX Simulator2, set the CPU as an FX3GCPU.
*10 To perform a simulation using GX Simulator, set the controller as a Q4ACPU.
*11 The MELSEC redundant system is configurable by mounting the redundant function module (R6RFM).
*12 Not available to GT21 and GS21.
*13 Simulation with GT Simulator3 is not supported for projects created in GX Works3 when the applicable PLC is specified. Create a project for the MELSEC iQ-R series (general CPU) in GX Works3, and perform a simulation with GT Simulator3.
*14 In GX Works2, a project cannot be created when the applicable PLC is specified. Create a project for the MELSEC-Q in GX Works2, and perform a simulation with GT Simulator3.

The following shows the versions of the controller simulators or the software applications in which controller simulators are included.

(a) **GX Simulator**

PLC CPU compatible with simulation	Version of GX Simulator
QCPU (A mode), ACPU, Motion CPU (A series)	Version5.00A or later
QnACPU	Version5.40E or later
FX0 series, FX0N series, FX0S series, FX1 series, FX1N series, FX1NC series, FX1S series, FX2 series, FX2C series, FX2N series, FX2NC series	Version5.40E or later
QCPU (Q mode) (except for Q00J, Q00, and Q01CPU)	Version5.40E or later
Q00JCPU, Q00CPU, Q01CPU	Version6.00A or later
Q02PHCPU, Q06PHCPU	Version7.20W or later
Q12PHCPU, Q25PHCPU	Version6.10L or later
Q12PRHCPU, Q25PRHCPU	Version6.20W or later
FX3U series, FX3UC series	Version7.08J or later
FX3G series	Version7.22Y or later
Q00UJCPU, Q00UJCPU-S8, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU	Version7.23Z or later

(b) **GX Simulator2**

PLC CPU compatible with simulation	Version of GX Works2
FX0 series, FX0N series, FX0S series, FX1 series, FX1N series, FX1NC series, FX1S series, FX2 series, FX2C series, FX2N series, FX2NC series	Version1.24A or later
QCPU (Q mode) (except for Q00J, Q00, and Q01CPU)	Version1.12N or later
Q00JCPU, Q00CPU, Q01CPU	Version1.12N or later
QnPHCPU	Version1.87R or later
FX3U , FX3UC, FX3G series	Version1.24A or later
FX3GC series	Version1.77F or later
FX3S series	Version1.492N or later

PLC CPU compatible with simulation	Version of GX Works2
Q00UJCPU, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU, Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU	Version1.12N or later
Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU	Version1.492N or later
L02CPU, L26CPU-BT	Version1.24A or later
L02CPU-P, L26CPU-PBT	Version1.62Q or later
L06CPU	Version1.98C or later
L02SCPU, L26CPU	Version1.98C or later
L02SCPU-P, L06CPU-P, L26CPU-P	Version1.492N or later
Q50UDEHCPU, Q100UDEHCPU	Version1.31H or later

(c) **GX Simulator3**

PLC CPU compatible with simulation	Version of GX Works3
R00CPU, R01CPU, R02CPU	Version1.045X or later
R04CPU, R08CPU, R16CPU, R32CPU, R120CPU	Version1.007H or later*1
R08PCPU, R16PCPU, R32PCPU, R120PCPU	Version1.010L or later*1
R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU	Version1.020W or later*1
R08PSFCPU, R16PSFCPU, R32PSFCPU, R120PSFCPU	Version1.045X or later
R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU	Version1.020W or later*1
L04HCPU, L08HCPU, L16HCPU	Version1.065T or later
FX5U series, FX5UC series	Version1.025B or later
FX5UJ	Version1.065T or later

*1 When global labels are set, use GX Works3 version 1.040S or later.

(d) **MT Simulator2**

Motion CPU compatible with simulation	Version of MT Works2
Q172DSCPU, Q173DSCPU	Version1.70Y or later

(2) Non-Mitsubishi Electric PLCs

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following lists available PLCs.

- OMRON PLC
- KEYENCE PLC
- KOYO EI PLC*2
- JTEKT PLC*2
- SHARP PLC*2
- TOSHIBA PLC*2
- SHIBAURA MACHINE PLC
- Panasonic IDS PLC
- HITACHI IES PLC*2
- HITACHI PLC*2*4
- FUJI PLC
- YASKAWA PLC
- YASKAWA robot controller
- YOKOGAWA PLC*2*3
- ALLEN-BRADLEY PLC*1
- GE PLC*2
- LS IS PLCS
- SICK PLC
- SIEMENS PLC

*1 When simulated by GX Simulator, bit devices and word devices cannot be monitored. Only internal devices can be monitored.

*2 The GT21 and GS21 simulators cannot monitor the devices of the PLC.

*3 The multiple CPU system cannot be monitored.

*4 S10VE cannot be monitored.

■2 Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows Mitsubishi Electric products that can be monitored by GT Simulator3.

Type		Model			
MX-R		MXR300-16	MXR300-32	MXR300-64	MXR500-128
		MXR500-256			
MX-F		MXF100-8-N32	MXF100-8-P32	MXF100-16-N32	MXF100-16-P32
RCPU		R00CPU	R01CPU	R02CPU	R04CPU
		R08CPU	R16CPU	R32CPU	R120CPU
		R08PCPU *6	R16PCPU *6	R32PCPU *6	R120PCPU *6
		R08SFCPU	R16SFCPU	R32SFCPU	R120SFCPU
		R08PSFCPU *11	R16PSFCPU *11	R32PSFCPU *11	R120PSFCPU *11
		R04ENCPU *12	R08ENCPU *12	R16ENCPU *12	R32ENCPU *12
		R120ENCPU *12			
		R12CCPU-V *4			
LHCPU		L04HCPU	L08HCPU	L16HCPU	L32HCPU
QCPU	QCPU (Q mode)	Q00JCPU	Q00CPU	Q01CPU	Q02CPU
		Q02HCPU	Q06HCPU	Q12HCPU	Q25HCPU
		Q02PHCPU	Q06PHCPU	Q12PHCPU	Q25PHCPU
		Q12PRHCPU	Q25PRHCPU		
		Q00UJCPU	Q00UJCPU-S8	Q00UCPU	Q01UCPU
		Q02UCPU	Q03UDCPU	Q04UDHCPU	Q06UDHCPU
		Q10UDHCPU	Q13UDHCPU	Q20UDHCPU	Q26UDHCPU
		Q03UDECPU	Q04UDEHCPU	Q06UDEHCPU	Q10UDEHCPU
		Q13UDEHCPU	Q20UDEHCPU	Q26UDEHCPU	Q50UDEHCPU
		Q100UDEHCPU			
		Q03UDVCPU	Q04UDVCPU	Q06UDVCPU	Q13UDVCPU
		Q26UDVCPU			
		Q04UDPVCPU	Q06UDPVCPU	Q13UDPVCPU	Q26UDPVCPU
	QCPU (A mode)	Q02CPU-A	Q02HCPU-A	Q06HCPU-A	
LCPU		L02CPU	L02CPU-P	L02SCPU	L02SCPU-P
		L06CPU	L06CPU-P	L26CPU	L26CPU-BT
		L26CPU-P	L26CPU-PBT		
QnACPU	QnACPU type	Q2ACPU	Q2ACPU-S1	Q3ACPU	Q4ACPU
		Q4ARCPU			
	QnASCPU type	Q2ASCPU	Q2ASCPU-S1	Q2ASHCPU	Q2ASHCPU-S1

Type			Model			
ACPU	AnCPU type	AnUCPU	A2UCPU	A2UCPU-S1	A3UCPU	A4UCPU
		AnACPU	A2ACPU	A2ACPUP21	A2ACPUR21	A2ACPU-S1
			A2ACPUP21-S1	A2ACPUR21-S1	A3ACPU	A3ACPUP21
			A3ACPUR21			
		AnNCPU	A1NCPU	A1NCPUP21	A1NCPUR21	A2NCPU
			A2NCPUP21	A2NCPUR21	A2NCPU-S1	A2NCPUP21-S1
			A2NCPUR21-S1	A3NCPU	A3NCPUP21	A3NCPUR21
	AnSCPU type	AnUS(H)CPU	A2USCPU	A2USCPU-S1	A2USHCPU-S1	
		AnS(H)CPU	A1SCPU	A1SCPU-S1	A1SCPUC24-R2	A2SCPU
			A1SHCPU	A2SHCPU		
		A1SJ(H)CPU	A1SJCPU	A1SJCPU-S3	A1SJHCPU	
	A1FXCPU		A1FXCPU			
			A0J2HCPU	A2CCPU	A2CCPUC24	A2CJCPU
MELSEC iQ-F			FX5U	FX5UC	FX5UJ	
FXCPU			FX0 series	FX0N series	FX0S series	
			FX1 series	FX1N series	FX1NC series	FX1S series
			FX2 series	FX2C series	FX2N series	FX2NC series
			FX3G series	FX3GC series	FX3GE series	
			FX3U series	FX3UC series	FX3S series	
MELSECNET/H remote I/O station			QJ72LP25-25	QJ72LP25G	QJ72BR15	
CC-Link IE Field Network head unit			RJ72GF15-T2	LJ72GF15-T2		
Motion CPU		MELSEC iQ-R series	R16MTCPU	R32MTCPU	R64MTCPU	
		Q series	Q170MCPU *1	Q170MSCPU *1	Q170MSCPU-S1 *1	
		A series	A171SHCPU *2	A172SHCPU *2	A173UHCPU *3	A173UHCPU-S1 *3
			A273UHCPU *3	A273UHCPU-S3 *3		
CNC*9		CNC C80 *4	R16NCCPU-S1			
		CNC C70 *5	Q173NCCPU			
		MELDAS C6/C64	FCA C6	FCA C64		
Robot controller			CR800-R (R16RTCPU) *4	CRnQ-700 (Q172DRCPU) *10	CR800-Q (Q172DSRCPU) *5	
MELSERVO-J4 *7*8			MR-J4(W)-*B(-RJ)			
MELSERVO-JE *8			MR-JE-*B	MR-JE-*BF		

*1 Only the PLC CPU area (CPU No.1) can be connected.
*2 Only the devices of A2SHCPU can be monitored.
*3 Only the devices of A3UCPU can be monitored.
*4 Monitor the module via an RCPU in the multiple CPU system.
*5 Monitor the module via a QCPU in the multiple CPU system.
*6 The MELSEC redundant system is configurable by mounting the redundant function module (R6RFM).
*7 Monitor the controller via a Motion CPU in the multiple CPU system.
Use a MELSEC iQ-R series Motion CPU.
*8 Monitor the controller via a MELSEC iQ-R or MELSEC iQ-F series simple motion module.
*9 Not available to GT21.
*10 For the direct CPU connection (serial), use the serial port of the QCPU in a multiple CPU system.
*11 To monitor the module, a SIL2 function module and a redundant function module are required.
*12 The multiple CPU system cannot be monitored.

Point

For the devices that can be monitored by GT Simulator3, refer to the following.

➟3.1.3 Available devices for monitoring

■3 Non-Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the PLC CPUs that can be monitored by GT Simulator3.

➟(1) OMRON PLC CPU

(1) OMRON PLC CPU

Type	Model			
PLC CPU*1*2	CPM2A			
	C200HX	C200HG	C200HE	
	CQM1	CQM1H		
	CS1H	CS1G	CS1D	
	CJ1H	CJ1G	CJ1M	CJ2H
	CJ2M			
	CP1E			
	CV500	CV1000	CV2000	
	CVM1			

*1 Simulation is available only by using the direct CPU connection (RS-232).

*2 GX Simulator can be used instead of GT Simulator3.
However, when GX Simulator is used, the set devices are handled as the ones of A4UCPU, and OMRON original devices are ignored.

To connect the PLC CPU to GT Simulator3, set the PLC CPU as follows.* 1

Item	Set value
Baud rate	9600 bps
Data length	7 bits
Stop bit	2 bits
Parity	Even number
Communicating condition format	Individual setting
Host link station No.	00

*1 For the setting of the PLC CPU, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Electric Products 1) For GT Works3 Version1

Point

For the devices that can be monitored by GT Simulator3, refer to the following.

➟3.1.3 Available devices for monitoring

3.1.3 Available devices for monitoring

➟■1 When connected to the controller simulator
■2 Connecting with Mitsubishi Electric products
■3 Connecting with non-Mitsubishi Electric products

■1 When connected to the controller simulator

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the devices that can be monitored by GT Simulator3 when the GOT is connected to a controller simulator.
For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

(1) Mitsubishi Electric products

Devices that satisfy all of the following conditions can be monitored.

Condition	Reference
Devices supported by the controller simulator	➟GX Simulator Version □ Operating Manual GX Works2 Version □ Operating Manual (Common) GX Works3 Operating Manual MT Developer2 Help
Devices that can be monitored by the GOT (Except the timer set value (TS) and counter set value (CS) of the Mitsubishi Electric PLC)	➟12.3 Device Range and Settings of Mitsubishi Electric Equipment

(2) OMRON PLC (OMRON SYSMAC)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O relay/Internal auxiliary relay (..)	..000000 to ..614315	..000000 to ..008115
	Data link relay (LR)	LR00000 to LR19915	LR00000 to LR08115
	Auxiliary memory relay (AR)	AR00000 to AR95915	-
	Holding relay (HR)	HR00000 to HR51115	HR00000 to HR08115
	Internal auxiliary relay/Work relay (WR)	WR00000 to WR51115	WR00000 to WR08115
	Timer contact (TIM)	TIM0000 to TIM4095	TIM0000 to TIM0255
	Counter contact (CNT)	CNT0000 to CNT4095	CNT0000 to CNT0255
	Bit-specified word device*2	Monitoring available range of each word device	Monitoring available range of each word device
Word device	I/O relay/Internal auxiliary relay (..)	..0000 to ..6143	..0000 to ..0081
	Data link relay (LR)	LR000 to LR199	LR000 to LR081
	Auxiliary memory relay (AR)	AR000 to AR959	-
	Holding relay (HR)	HR000 to HR511	HR000 to HR081
	Internal auxiliary relay/Work relay (WR)	WR000 to WR511	WR000 to WR081
	Data memory (DM)	DM00000 to DM32767	DM0000 to DM8191
	Timer (current value) (TIM)	TIM0000 to TIM4095	TIM0000 to TIM0255
	Counter (current value) (CNT)	CNT0000 to CNT4095	CNT0000 to CNT0255
	Extended data memory (EM current bank)	EM00000 to EM32767	-
	Extended data memory (EM banks 0 to 13)	E000000 to E032767	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

*2 Except for the data link relay, auxiliary memory relay, holding relay, and internal auxiliary relay

(3) OMRON PLC (OMRON SYSMAC CS/CJ)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O relay/Internal auxiliary relay (..)	..000000 to ..614315	..000000 to ..008115
	Data link relay (LR)	LR00000 to LR19915	LR00000 to LR08115
	Auxiliary memory relay (AR)	AR00000 to AR147115 AR1000000 to AR1153515	-
	Holding relay (HR)	HR00000 to HR51115	HR00000 to HR08115
	Internal auxiliary relay/Work relay (WR)	WR00000 to WR51115	WR00000 to WR08115
	Timer contact (TIM)	TIM0000 to TIM4095	TIM0000 to TIM0255
	Counter contact (CNT)	CNT0000 to CNT4095	CNT0000 to CNT0255
	Bit-specified word device*2	Monitoring available range of each word device	Monitoring available range of each word device
Word device	I/O relay/Internal auxiliary relay (..)	..0000 to ..6143	..0000 to ..0081
	Data link relay (LR)	LR000 to LR199	LR000 to LR081
	Auxiliary memory relay (AR)	AR000 to AR959	-
	Holding relay (HR)	HR000 to HR511	HR000 to HR081
	Internal auxiliary relay/Work relay (WR)	WR000 to WR511	WR000 to WR081
	Data memory (DM)	DM00000 to DM32767	DM0000 to DM8191
	Timer (current value) (TIM)	TIM0000 to TIM4095	TIM0000 to TIM0255
	Counter (current value) (CNT)	CNT0000 to CNT4095	CNT0000 to CNT0255
	Extended data memory (EM current bank)	EM00000 to EM32767	-
	Extended data memory (EM banks 0 to 13)	E000000 to E032767	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

*2 Except for the data link relay, auxiliary memory relay, holding relay, and internal auxiliary relay

(4) KEYENCE PLC (KEYENCE KV-700/1000/3000/5000/7000/8000)

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Relay (..)	..000000 to ..199915	..00000 to ..51115
	Internal AUX relay (MR)	MR000000 to MR399915	MR00000 to MR51115
	Latch relay (LR)	LR00000 to LR99915	LR00000 to LR51115
	Link relay (B)	B0000 to B7FFF	-
	Work relay (VB)	VB0000 to VBF9FF	-
	Timer (contact) (T)	T0000 to T3999	T0000 to T0255
	Counter (contact) (C)	C0000 to C3999	C0000 to C0255
	High-speed counter comparators (contact) (CTC)	CTC0 to CTC7	-
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	Data memory (DM)	DM00000 to DM65534	DM0000 to DM8191
	Extension data memory (EM)	EM00000 to EM65534	-
	Extension data memory 2 (FM)	FM00000 to FM32767	-
	File register (ZF)	ZF000000 to ZF032767 ZF032768 to ZF065535 ZF065536 to ZF098303 ZF098304 to ZF131071 ZF131072 to ZF163839 ZF163840 to ZF196607 ZF196608 to ZF229375 ZF229376 to ZF262143 ZF262144 to ZF294911 ZF294912 to ZF327679 ZF327680 to ZF360447 ZF360448 to ZF393215 ZF393216 to ZF425983 ZF425984 to ZF458751 ZF458752 to ZF491519 ZF491520 to ZF524287	-
	Link register (W)	W0000 to W7FFF	-
	Control memory (CM)	CM00000 to CM11998	-
	Temporary data memory (TM)	TM000 to TM511	-
	Work memory (VM)	VM00000 to VM63999	-
	Index register (Z)	Z01 to Z12	Z01 to Z06
Double word device	Timer (current value) (TC)	TC0000 to TC3999	TC0000 to TC0254
	Timer (set value) (TS)	TS0000 to TS3999	-
	Counter (current value) (CC)	CC0000 to CC3999	CC0000 to CC0254
	Counter (set value) (CS)	CS0000 to CS3999	-
	High-speed counter (current value) (CTH)	CTH0 to CTH3	-
	High-speed counter comparators (set value) (CTC)	CTC0 to CTC7	-
	Index register (DZ)	DZ01 to DZ12	-
	Digital trimmer (TRM)	TRM0 to TRM7	-

*1 Except for the timer (current value), timer (set value), counter (current value), counter (set value), high-speed counter (current value), high-speed counter comparators (set value), control memory, temporary data memory, index register, and digital trimmer

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(5) KOYO EI PLC (KOYO KOSTAC/DL)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input (I)	I0 to I1777	I0 to I1777
	Output (Q)	Q0 to Q1777	Q0 to Q1777
	Link relay (GI)	GI0 to GI3777	GI0 to GI3777
	Link output (GQ)	GQ0 to GQ3777	-
	Internal relay (M)	M0 to M3777	M0 to M3777
	Stage (S)	S0 to S1777	-
	Timer (T)	T0 to T377	T0 to T377
	Counter (C)	C0 to C377	C0 to C377
	Special relay (SP)	SP0 to SP777	-
Word device	Timer (current value) (R)	R0 to R377	R0 to R377
	Preparatory register (R)	R400 to R677	R400 to R677
	Special register 1 (R)	R700 to R777	R700 to R777
	Counter (current value) (R)	R1000 to R1377	R1000 to R1377
	Data register 1 (R)	R1400 to R7377	R1400 to R7377
	Special register 2 (R)	R7400 to R7777	R7400 to R7777
	Data register 2 (R)	R10000 to R36777	R10000 to R36777
	Special register 3 (R)	R37000 to R37777	R37000 to R37777
	Link relay (R)	R40000 to R40177	R40000 to R40177
	Link output (R)	R40200 to R40377	R40200 to R40377
	Input (R)	R40400 to R40477	R40400 to R40477
	Output (R)	R40500 to R40577	R40500 to R40577
	Internal relay (R)	R40600 to R40777	R40600 to R40777
	Stage (R)	R41000 to R41077	R41000 to R41077
	Timer (R)	R41100 to R41117	R41100 to R41117
	Counter (R)	R41140 to R41157	R41140 to R41157
	Special relay (R)	R41200 to R41237	R41200 to R41237

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(6) JTEKT PLC (JTEKT TOYOPUC-PC)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input (X)	X000 to X7FF	X000 to X7FF
	Output (Y)	Y000 to Y7FF	Y000 to Y7FF
	Link relay (L)	L000 to L7FF	L000 to L7FF
	Internal relay (M)	M000 to M7FF	M000 to M7FF
	Keep relay (K)	K000 to K2FF	-
	Edge detection (P)	P000 to P1FF	-
	Timer (T)	T000 to T1FF	T000 to T1FF
	Counter (C)	C000 to C1FF	C000 to C1FF
	Special relay (V)	V000 to V0FF	-
	Extended input (EX)	EX000 to EX7FF	-
	Extended output (EY)	EY000 to EY7FF	-
	Extended internal relay (EM)	EM0000 to EM1FFF	-
	Extended keep-relay (EK)	EK000 to EKFFF	-
	Extended special relay (EV)	EV000 to EVFFF	-
	Extended timer (ET)	ET000 to ET7FF	-
	Extended counter (EC)	EC000 to EC7FF	-
	Extended link relay (EL)	EL0000 to EL1FFF	-
	Extended edge detection (EP)	EP000 to EPFFF	-
	Extended input 2 (GX)	GX0000 to GXFFFF	-
	Extended output 2 (GY)	GY0000 to GYFFFF	-
	Extended internal relay (GM)	GM0000 to GMFFFF	-
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Data register (D)	D0000 to D2FFF	D0000 to D2FFF
	Link register (R)	R0000 to R07FF	R0000 to R07FF
	Setup value register (N)	N0000 to N01FF	N0000 to N01FF
	Special register (S)	S0000 to S03FF	-
	File register (B)	B0000 to B1FFF	B0000 to B1FFF
	Extended present value register (EN)	EN0000 to EN07FF	-
	Extended setup value register (H)	H0000 to H07FF	-
	Extended special register (ES)	ES0000 to ES07FF	-
	Extended data register (U)	U0000 to U7FFF	-
	Extended buffer register (EB)	EB00000 to EB07FFF EB08000 to EB0FFFF EB10000 to EB17FFF EB18000 to EB1FFFF	-
	Setup value register (TCS)	TCS0000 to TCS01FF	-
	Word-specified bit devices	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 Except for the extended buffer register and setup value register

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(7) SHARP PLC (SHARP JW)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O relay	..00000 to ..15777 ..20000 to ..75777	..00000 to ..15777
	Timer (contact) (T)	T0000 to T1777	T0000 to T0377
	Counter (contact)	C0000 to C1777	C0000 to C0377
	Bit-specified word device	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Timer (present value) (T)	T0000 to T1777	T0000 to T0377
	Counter (current value) (C)	C0000 to C1777	C0000 to C0377
	Register (09 to E7)	09000 to 09776	09000 to 09776
		19000 to 19776	19000 to 19776
		29000 to 29776	29000 to 29776
		39000 to 39776	39000 to 39776
		49000 to 49776	49000 to 49776
		59000 to 59776	59000 to 59776
		69000 to 69776	69000 to 69776
		79000 to 79776	79000 to 79776
		89000 to 89776	89000 to 89776
		99000 to 99776	99000 to 99776
		E0000 to E0776	E0000 to E0776
		E1000 to E1776	E1000 to E1776
		E2000 to E2776	E2000 to E2776
		E3000 to E3776	E3000 to E3776
		E4000 to E4776	E4000 to E4776
		E5000 to E5776	E5000 to E5776
		E6000 to E6776	-
		E7000 to E7776	E7450 to E7776
	File register (1 to 7)	1000000 to 1177776 2000000 to 2177776 3000000 to 3177776 4000000 to 4177776 5000000 to 5177776 6000000 to 6177776 7000000 to 7177776	-
	Word-specified bit devices*1	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 Except for the timer and counter.

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(8) TOSHIBA PLC

Not available to GT21 and GS21.

(a) TOSHIBA PROSEC T/V

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	External input (X)	X0000 to X511F	X0000 to X511F
	External output (Y)	Y0000 to Y511F	Y0000 to Y511F
	Internal relay (R)	R0000 to R4095F	R0000 to R0511F
	Special relay (S)	S0000 to S511F	-
	Link register relay (Z)	Z0000 to Z999F	Z0000 to Z511F
	Link relay (L)	L0000 to L255F	-
	Timer (contact) (T)	T0 to T999	T0 to T255
	Counter (contact) (C)	C0 to C511	C0 to C255
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	External input (XW)	XW0 to XW511	XW0 to XW511
	External output (YW)	YW0 to YW511	YW0 to YW511
	Internal relay (RW)	RW0 to RW4095	RW0 to RW4095
	Special relay (SW)	SW0 to SW511	-
	Link relay (LW)	LW0 to LW255	-
	Timer (present value) (T)	T0 to T999	T0 to T255
	Counter (current value) (C)	C0 to C511	C0 to C255
	Data register (D)	D0 to D8191	D0 to D8191
	Link register (W)	W0 to W2047	W0 to W2047
	File register (F)	F0 to F32767	-

*1 Except for the data register (D), link register (W), and file register (F)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(b) TOSHIBA Unified Controller nv

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	External input (X)	X000000 to X16383F	X0000 to X511F
	External output (Y)	Y000000 to Y16383F	Y0000 to Y511F
	Internal relay (R)	R00000 to R8191F	R0000 to R2047F
	Input variable (I)	I000000 to I16383F	-
	Output variable (Q)	Q000000 to Q16383F	-
	Special relay (S)	S00000 to S1023F	S00000 to S000000FF
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	External input (XW)	XW0 to XW16383	-
	External output (YW)	YW0 to YW16383	-
	Internal relay (RW)	RW0 to RW8191	-
	Special relay (SW)	SW0 to SW1023	SW0 to SW255
	Data register (D)	D0 to D8191	D0 to D8191
	File register (F)	F0 to F32767	F0 to F32767
	Input variable (IW)	IW0 to IW16383	IW0 to IW1
	Output variable (QW)	QW0 to QW16383	-
	User global (UG)	UG0 to UG262143	-

*1 Except the external input (XW), external output (YW), internal relay (RW), special relay (SW), input variable (IW), and output variable (QW)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(9) SHIBAURA MACHINE PLC (SHIBAURA MACHINE TCmini)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input relay 1 (X)	X0000 to X511F	X0000 to X511F
	Input relay 2 (I)	I000 to IF7F	-
	Output relay 1 (Y)	Y000 to YF7F	Y000 to YF7F
	Output relay 2 (O)	O000 to OF7F	-
	Internal relay (R)	R000 to R77F	R000 to R77F
	Extended internal relay 1 (GR)	GR000 to GRF7F	-
	Extended internal relay 2 (H)	H000 to HF7F	-
	Extended internal relay 3 (J)	J000 to JF7F	-
	Extended internal relay 4 (K)	K000 to KF7F	-
	Timer (contact) (T)	T000 to T77F	T000 to T17F
	Counter (contact) (C)	C000 to C77F	C000 to C17F
	Shift relay (S)	S000 to S07F	-
	Latch relay (L)	L000 to L07F	L000 to L07F
	Edge relay (E)	E000 to E77F	E000 to E77F
	Special aux relay (A)	A000 to A16F	A000 to A16F
Word device	Input register 1 (XW)	XW00 to XWF7	XW00 to XWF7
	Input register 2 (IW)	IW00 to IWF7	-
	Output register 1 (YW)	YW00 to YWF7	YW00 to YWF7
	Output register 2 (OW)	OW00 to OWF7	
	Internal register (RW)	RW00 to RW77	RW00 to RW77
	Extended internal register 1 (GW)	GW00 to GWF7	-
	Extended internal register 2 (HW)	HW00 to HWF7	-
	Extended internal register 3 (JW)	JW00 to JWF7	-
	Extended internal register 4 (KW)	KW00 to KWF7	-
	Timer contact register (TW)	TW00 to TW77	TW00 to TW17
	Counter contact register (CW)	CW00 to CW77	CW00 to CW17
	Shift register (SW)	SW00 to SW07	-
	Latch register (LW)	LW00 to LW07	LW00 to LW07
	Edge register (EW)	EW00 to EW77	EW00 to EW77
	Special aux register (AW)	AW00 to AW16	AW00 to AW16
	Generic register 1 (D)	D000 to DF7F	D000 to DF7F
	Generic register 2 (B)	B000 to BF7F	-
	Generic register 3 (U)	U000 to UF7F	-
	Generic register 4 (M)	M000 to MF7F	-
	Generic register 5 (Q)	Q000 to QF7F	-
	Timer/Counter current value (P)	P000 to P77F	P000 to P17F
	Timer/Counter set value (V)	V000 to V77F	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(10)PANASONIC PLC (Panasonic MEWNET-FP)

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input relay (X)	X0000 to X511F	X0000 to X511F
	Output relay (Y)	Y0000 to Y511F	Y0000 to Y511F
	Internal relay (R)	R0000 to R886F	R0000 to R511F
	Special relay (R)	R9000 to R951F	R9000 to R910F
	Link relay (L)	L0000 to L639F	L0000 to L511F
	Timer contact (T)	T0 to T3071	T0 to T255
	Counter contact (C)	C0 to C3071	C0 to C255
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Input relay (WX)	WX000 to WX511	WX000 to WX511
	Output relay (WY)	WY000 to WY511	WY000 to WY511
	Internal relay (WR)	WR000 to WR886	WR000 to WR511
	Special relay (WR)	WR900 to WR951	WR900 to WR910
	Link relay (WL)	WL000 to WL639	WL000 to WL511
	Timer/counter (elapsed value) (EV)	EV0 to EV3071	EV0 to EV255
	Counter contact (set value) (SV)	SV0 to SV3071	-
	Data register (DT)	DT0 to DT65532	DT0 to DT8191
	Special data register (DT)	DT90000 to DT90999	-
	Link register (LD)	LD0 to LD8447	LD0 to LD8191
	File register (FL)	FL0 to FL32764	-

*1 Except for the input relay (WX), output relay (WY), internal relay (WR), special relay (WR), and link relay (WL)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(11)HITACHI IES PLC (HITACHI HIDIC H series)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	External input (X)	X00000 to X05A95	X00000 to X05A95
	External output (Y)	Y00000 to Y05A95	Y00000 to Y05A95
	Remote external input (X)	X10000 to X49995	-
	Remote external output (Y)	Y10000 to Y49995	-
	First CPU link (L)	L0000 to L3FFF	L0000 to L3FFF
	Second CPU link (L1)	L10000 to L13FFF	-
	Data area (M)	M0000 to M3FFF	M0000 to M3FFF
	On-delay timer (TD)	TD0 to TD1023	-
	Single-shot timer (SS)	SS0 to SS1023	-
	Watchdog timer (WDT)	WDT0 to WDT1023	-
	Monostable timer (MS)	MS0 to MS1023	-
	Retentive timer (TMR)	TMR0 to TMR1023	-
	Up counter (CU)	CU0 to CU2047	-
	Ring counter (RCU)	RCU0 to RCU2047	-
	Up/down counter (CT)	CT0 to CT2047	CT0 to CT2047
	Bit internal output (R)	R0 to R7BF	R0 to R7BF
	Leading edge detection (DIF)	DIF0 to DIF511	-
	Trailing edge detection (DFN)	DFN0 to DFN511	-
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	External input (WX)	WX0000 to WX05A7	-
	External output (WY)	WY0000 to WY05A7	-
	Remote external input (WX)	WX1000 to WX4997	-
	Remote external output (WY)	WY1000 to WY4997	-
	First CPU link (WL)	WL000 to WL3FF	WL000 to WL3FF
	Second CPU link (WL1)	WL1000 to WL13FF	-
	Data area (WM)	WM000 to WM3FF	WM000 to WM1FF
	Timer/counter (elapsed value) (TC)	TC0 to TC2047	TC0 to TC2047
	Word internal output (WR)	WR000 to WRC3FF	WR000 to WRC3FF

*1 Only for timer/counter (elapsed value) (TC) and word internal output (WR)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(12)HITACHI IES PLC (HITACHI EHV series)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	External input (X)	X00000 to X05A95	X00000 to X01FFF
	External output (Y)	Y00000 to Y05A95	Y00000 to Y01FFF
	Remote external input (X)	X10000 to X49A95	-
	Remote external output (Y)	X10000 to X49A95	-
	Extended external input	EX00000 to EX5A7FF	-
	Extended external output	EY00000 to EY5A7FF	-
	First CPU link (L)	L0000 to L3FFF	L0000 to L1FFF
	Second CPU link (L1)	L10000 to L13FFF	-
	3rd CPU link (L2)	L20000 to L23FFF	-
	4th CPU link (L3)	L30000 to L33FFF	-
	5th CPU link (L4)	L40000 to L43FFF	-
	6th CPU link (L5)	L50000 to L53FFF	-
	7th CPU link (L6)	L60000 to L63FFF	-
	8th CPU link (L7)	L70000 to L73FFF	-
	Data area (M)	M00000 to M7FFFF	M00000 to M01FFF
	On-delay timer (TD)	TD0 to TD2559	TD0 to TD255
	Off-delay timer (TDN)	TDN0 to TDN2559	-
	Single-shot timer (SS)	SS0 to SS2559	-
	Watchdog timer (WDT)	WDT0 to WDT2559	-
	Monostable timer (MS)	MS0 to MS2559	-
	Retentive timer (TMR)	TMR0 to TMR2559	-
	Up counter (CU)	CU0 to CU511	-
	Ring counter (RCU)	RCU0 to RCU511	-
	Up/down counter (CT)	CT0 to CT511	-
	Up coil up/down counter (CTU)	CTU0 to CTU511	-
	Down coil up/down counter (CTD)	CTD0 to CTD511	-
	Counter clear (CL)	CL0 to CL2559	-
	Bit internal output (R)	R000 to R7BF	-
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	External input (WX)	WX0000 to WX05A7	-
	External output (WY)	WY0000 to WY05A7	-
	Remote external input (WX)	WX1000 to WX49A7	-
	Remote external output (WY)	WY1000 to WY49A7	-
	Extended external input	WEX0000 to WEX5A7F	-
	Extended external output	WEY0000 to WEY5A7F	-
	First CPU link (WL)	WL000 to WL3FF	-
	Second CPU link (WL1)	WL1000 to WL13FF	-
	3rd CPU link (WL2)	WL2000 to WL23FF	-
	4th CPU link (WL3)	WL3000 to WL33FF	-
	5th CPU link (WL4)	WL4000 to WL43FF	-
	6th CPU link (WL5)	WL5000 to WL53FF	-
	7th CPU link (WL6)	WL6000 to WL63FF	-
	8th CPU link (WL7)	WL7000 to WL73FF	-
	Data area (WM)	WM0000 to WM7FFF	-
	Timer/counter (elapsed value) (TC)	TC0 to TC2559	TC0 to TC255
	Word internal output (WR)	WR0000 to WREFFF	WR0000 to WR8191
	Internal output (WN)	WN00000 to WN1FFFF	-

*1 Only for word internal output (WR) and internal output (WN)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(13)HITACHI PLC (Hitachi S10mini/S10V)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	External input (X)	X000 to XFFF	X000 to XFFF
	External output (Y)	Y000 to YFFF	Y000 to YFFF
	Internal register (R)	R000 to RFFF	R000 to RFFF
	Keep relay (K)	K000 to KFFF	K000 to KFFF
	Extended internal register (M)	M000 to MFFF	-
	Extended internal register (A)	A000 to AFFF	-
	On-delay timer (T)	T000 to T1FF	T000 to T0FF
	One-shot timer (U)	U000 to U0FF	-
	Up-down counter (C)	C00 to CFF	C00 to CFF
	Global link register (G)	G000 to GFFF	G000 to GFFF
	Event register (E)	E000 to EFFF	E000 to E7FF
	System register (S)	S000 to SBFF	S000 to S0FF
	Transfer register (J)	J000 to JFFF	-
	Receive register (Q)	Q000 to QFFF	-
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	External input (XW)	XW000 to XWFF0	XW000 to XWFF0
	External output (YW)	YW000 to YWFF0	YW000 to YWFF0
	Internal register (RW)	RW000 to RWFF0	RW000 to RWFF0
	Extended internal register (MW)	MW000 to MWFF0	-
	Extended internal register (AW)	AW000 to AWFF0	-
	Keep relay (KW)	KW000 to KWFF0	KW000 to KWFF0
	On-delay timer (TW)	TW000 to TW1F0	TW000 to TW0F0
	One-shot timer (UW)	UW000 to UW0F0	-
	Up-down counter (CW)	CW00 to CWF0	CW00 to CWF0
	Global link register (GW)	GW000 to GWFF0	GW000 to GWFF0
	Event register (EW)	EW000 to EWFF0	EW000 to EW7F0
	System register (SW)	SW000 to SWBF0	SW000 to SW0F0
	Transfer register (JW)	JW000 to JWFF0	-
	Receive register (QW)	QW000 to QWFF0	-
	On-delay timer (current value) (TC)	TC000 to TC1FF	TC000 to TC0FF
	On-delay timer (current value) (TS)	TS000 to TS1FF	-
	One-shot timer (current value) (UC)	UC000 to UC0FF	-
	One-shot timer (current value) (US)	US000 to US0FF	-
	Up-down counter (current value) (CC)	CC00 to CCFF	CC00 to CCFF
	Up-down counter (current value) (CS)	CS00 to CSFF	-
	Function data register (DW)	DW000 to DWFFF	DW000 to DWFFF
	Function work register (FW)	FW000 to FWBFF	-
	Extended function work register (LWW)	LWW0000 to LWWFFFF	-
	Backup work register (LXW)	LXW0000 to LXW3FFF	-
	Long-word work register (LLL)	LLL0000 to LLL1FFF	-
	Backup long-word work register (LML)	LML0000 to LML1FFF	-
	Floating-point work register (LF)	LF0000 to LF1FFF	-
	Backup single-precision floating-point work register (LG)	LG0000 to LG1FFF	-

*1 Except for the external input (XW), external output (YW), internal register (RW), extended internal register (MW), extended internal register (AW), keep relay (KW), on-delay timer (TW), one-shot timer (UW), up-down counter (CW), global link register (GW), event register (EW), system register (SW), transfer register (JW), receive register (QW), long-word work register (LLL), floating-point work register (LF), backup single-precision floating-point work register (LG)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(14)FUJI PLC (FUJI MICREX-F series)

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O relay (B)	B0000 to B511F	B0000 to B511F
	Auxiliary relay (M)	M0000 to M511F	M0000 to M511F
	Keep relay (K)	K0000 to K063F	K0000 to K063F
	Special relay (F)	F0000 to F125F	F0000 to F015F
	Annunciator relay (A)	A0000 to A045F	A0000 to A045F
	Differential relay (D)	D0000 to D036F	-
	Link memory (L)	L0000 to L511F	L0000 to L511F
	Timer output (0.01second) (T)	T000 to T511	T000 to T255
	Timer output (0.1second) (T)	T512 to T999	-
	Counter output (C)	C000 to C511	C000 to C255
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	I/O relay (WB)	WB000 to WB511	WB000 to WB511
	Auxiliary relay (WM)	WM000 to WM511	WM000 to WM511
	Keep relay (WK)	WK000 to WK063	WK000 to WK063
	Special relay (WF)	WF000 to WF125	WF000 to WF015
	Annunciator relay (WA)	WA000 to WA045	WA000 to WA045
	Differential relay (WD)	WD000 to WD063	-
	Link memory (WL)	WL000 to WL511	WL000 to WL511
	Direct access (W24)	W24: 0000 to W24: 0255	-
	User file (W30) User file (W31) : User file (W108) User file (W109)	W30: 0000 to W30: 4095 W31: 0000 to W31: 4095 W108: 0000 to W108: 4095 W109: 0000 to W109: 4095	-
	Data memory (BD)	BD0 to BD4095	BD0 to BD4095
	Timer set value (0.01second) (TS)	TS0 to TS511	-
	Timer current value (0.01second) (TR)	TR0 to TR511	TR000 to TR254
	Timer current value (0.1second) (W9)	W9: 0000 to W9: 0487	-
	Counter set value (CS)	CS0 to CS511	-
	Counter current value (CR)	CR0 to CR511	CR0 to CR254

*1 Except for the I/O relay (WB), auxiliary relay (WM), keep relay (WK), special relay (WF), annunciator relay (WA), differential relay (WD), link memory (WL), data memory (BD), timer set value (0.01second) (TS), timer current value (0.01second) (TR), timer current value (0.1second) (W9), counter set value (CS), and counter current value (CR)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(15)YASKAWA PLC

(a) YASKAWA GL/PROGIC8

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Coil (O)	O1 to O63424	O1 to O8176
	Input relay (I)	I1 to I63424	I1 to I8176
	Link coil (D)	D1 to D2048	D1 to D2048
		D10001 to D12048 D20001 to D22048	-
	Bit-specified word device	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	Input register (Z)	Z1 to Z31840	Z1 to Z8192 Z9000 to Z9256
	Holding register (W)	W1 to W28291	-
		SW1 to SW28291	-
	Link register (R, SR)	R1 to R2048	R1 to R2048
		R10001 to R12048 R20001 to R22048	-
		SR1 to SR2048	-
		SR10001 to SR12048 SR20001 to SR22048	-
	Constant register (K)	K1 to K4096	K1 to K6
	Word-specified bit devices*1	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 Except for the coil (O) and input relay (I)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(b) YASKAWA CP-9200SH/MP900 series

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Coil (MB)	MB000000 to MB32767F	MB000000 to MB00511F
	Input relay (IB)	IB0000 to IBFFFF	IB0000 to IB1FFF
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Input register (IW)	IW0000 to IW7FFF	IW0000 to IW1FFF
	Holding register (MW)	MW0 to MW32767	-
	Coil (MB)	MB0 to MB32767	MB0 to MB511
	Input relay (IB)	IB000 to IBFFF	IB000 to IBFFF

*1 Except for the coil (MB) and input relay (IB)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(c) YASKAWA CP-9200(H)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Coil (OB)	MB000000 to MB32767F	MB000000 to MB00511F
	Input relay (IB)	IB0000 to IBFFFF	IB0000 to IB1FFF
	Bit-specified word device	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Input register (IW)	IW00 to IW7F	-
	Output register (OW)	OW00 to OW7F	-
	Data register (DW, ZD)	DW0 to DW2047	-
		ZD0 to ZD2047	ZD0 to ZD6
	Common register (MW)	MW0 to MW7694	-
	Word-specified bit devices	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(d) YASKAWA CP-9300MS (MC compatible)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Coil (OB)	OB0 to OB1023	OB0 to OB1023
	Input relay (IB)	IB0 to IB1023	IB0 to IB1023
	Bit-specified word device	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Input register (I)	I0 to I63	-
	Data register (M)	M0 to M2047	-
	Output register (O)	O0 to O63	-
	Word-specified bit devices	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(16)YASKAWA robot controller

Not available to GT21 and GS21.

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	IO Data (IO)	IO10 to IO87207	IO0 to IO8191
Byte device	Byte Variable (B)	B0 to B1999	-
Word device	Integer Variable (I)	I0 to I1999	I0 to I255
	Resister Data (M)	M0 to M999	-
	Robot Control (RC)	RC0 to RC8720	-
	Double Int Variable (D)	D0 to D1999	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(17)YOKOGAWA PLC

Not available to GT21 and GS21.

(a) FA500/FA-M3

Device name		GOT monitoring available range*3	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input relay (X)	X00201 to X71664	X00201 to X71664
	Output relay (Y)	Y00201 to Y71664	Y00201 to Y71664
	Internal relay (I)	I1 to I65535	-
	Link relay (L)	L1 to L71024	L1 to L71024
	Shared relay (E)	E1 to E4096	-
	Special relay (M)	M1 to M9984	M1 to M256
	Timer (TU)	TU1 to TU3072	TU1 to TU256
	Counter (CU)	CU1 to CU3072	CU1 to CU256
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*3	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	Timer (TP)	TP1 to TP3072	TP1 to TP256
	Timer (TS)	TS1 to TS3072	-
	Counter (CP)	CP1 to CP3072	CP1 to CP256
	Counter (CS)	CS1 to CS3072	-
	File register (B)	B1 to B262144	-
	Data register (D)	D1 to D8192	D1 to D8192
	Shared register (R)	R1 to R4096	-
	Index register (V)	V1 to V256	-
	Link register (W)	W1 to W71024	W1 to W71024
	Special register (Z)	Z1 to Z512	Z1 to Z256
	Word-specified bit devices*2	Monitoring available range of each bit device	Monitoring available range of each bit device

*1 Except for the timer (TP), timer (TS), counter (CP), and counter (CS)
*2 Except for the timer (TU) and counter (CU)
*3 For the precautions for using devices that can be monitored with the GOT, refer to the following.
➟12.4 Device Range and Settings of Each Controller

(18)ALLEN-BRADLEY PLC

(a) AB SLC500

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Bit (B)	B3: 0/0 to B3: 255/15 B10: 0/0 to B255: 255/15	-
	Timer (timing bit) (T)	T4: 0/14 (TT) to T4: 255/14 (TT) T10: 0/14 (TT) to T255: 255/14 (TT)	-
	Timer (timing bit) (T)	T4: 0/13 (DN) to T4: 255/13 (DN) T10: 0/13 (DN) to T255: 255/13 (DN)	-
	Counter (up counter) (C)	C5: 0/15 (CU) to C5: 255/15 (CU) C10: 0/15 (CU) to C255: 255/15 (CU)	-
	Counter (down counter) (C)	C5: 0/14 (CD) to C5: 255/14 (CD) C10: 0/14 (CD) to C255: 255/14 (CD)	-
	Counter (completion bit) (C)	C5: 0/13 (DN) to C5: 255/13 (DN) C10: 0/13 (DN) to C255: 255/13 (DN)	-
	Integer (N)	N7: 0 to N7: 255 N10: 0 to N255: 255	-
Word device	Bit (B)	B3: 0 to B3: 255 B10: 0 to B255: 255	-
	Timer (set value) (T)	T4: 0.1 (PRE) to T4: 255.1 (PRE) T10: 0.1 (PRE) to T255: 255.1 (PRE)	-
	Timer (present value) (T)	T4: 0.2 (ACC) to T4: 255.2 (ACC) T10: 0.2 (ACC) to T255: 255.2 (ACC)	-
	Counter (set value) (C)	C5: 0.1 (PRE) to C5: 255.1 (PRE) C10: 0.1 (PRE) to C255: 255.1 (PRE)	-
	Counter (current value) (C)	C5: 0.2 (ACC) to C5: 255.2 (ACC) C10: 0.2 (ACC) to C255: 255.2 (ACC)	-
	Integer (N)	N7: 0 to N7: 255 N10: 0 to N255: 255	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.
➟12.4 Device Range and Settings of Each Controller

(b) **AB MicroLogix**

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Bit (B)	B3: 0/0 to B255: 255/15	-
	Timer (timing bit) (T)	T3: 0/14 (TT) to T255: 255/14 (TT)	-
	Counter (completion bit) (C)	T3: 0/13 (DN) to T255: 255/13 (DN)	-
	Counter (up counter) (C)	C3: 0/15 (CU) to C255: 255/15 (CU)	-
	Counter (down counter) (C)	C3: 0/14 (CD) to C255: 255/14 (CD)	-
	Counter (completion bit) (C)	C3: 0/13 (DN) to C255: 255/13 (DN)	-
	Integer (N)	N3: 0/0 to N255: 255/15	-
Word device	Bit (B)S	B3: 0 to B255: 255	-
	Timer (set value) (T)	T3: 0.1 (PRE) to T255: 255.1 (PRE)	-
	Timer (present value) (T)	T3: 0.2 (ACC) to T255: 255.2 (ACC)	-
	Counter (set value) (C)	C3: 0.1 (PRE) to C255: 255.1 (PRE)	-
	Counter (current value) (C)	C3: 0.2 (ACC) to C255: 255.2 (ACC)	-
	Integer (N)	N3: 0 to N255: 255	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(c) **AB MicroLogix (Extended)**

For the details of the communication drivers, contact our company.

(d) **AB Control/CompactLogix**

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	BOOL	BOOL0[0] to BOOL999[31999]	-
Word device	INT	INT0[0] to INT999[999]	-
	DINT	DINT0[0] to DINT999[999]	-
	REAL	REAL0[0] to REAL999[999]	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(19)GE PLC (GE Series 90)

Not available to GT21 and GS21.

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	input(I)	I00001 to I12288	I00001 to I08192
	output(Q)	Q00001 to Q12288	Q00001 to Q08192
	internal(M)	M00001 to M12288	M00001 to M08192
	temporary(T)	T001 to T256	-
	system status(S)	S001 to S128	-
	system status(SA)	SA001 to SA128	-
	system status(SB)	SB001 to SB128	-
	system status(SC)	SC001 to SC128	-
	global data(G)	G0001 to G7680	-
Word device	system register(R)	R00001 to R32640	R00001 to R08192
	analog input register(AI)	AI0001 to AI32640	-
	analog output register(AQ)	AQ0001 to AQ32640	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(20)LS IS PLC (LS Industrial Systems XGK)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O Relay (P)	P00000 to P4095F	P0 to P5110
	Auxiliary relay (M)	M00000 to M4095F	M0 to M8191
	Keep Relay (K)	K00000 to K4095F	K0 to K8191
	Link relay (L)	L000000 to L11263F	L0 to L8191
	Special Relay (F)	F00000 to F4095F	-
	Timer contact (T)	T0000 to T8191	T0 to T255
	Counter contact (C)	C0000 to C4095	C0 to C255
Word device	Data Register (D)	D000000 to D524287	D0 to D8191
	File Register (R)	R00000 to R32767	-
	File Register (ZR)	ZR000000 to ZR524287	-
	Analog Data Register (U)	U00.00 to U7F.31	-
	Comm. Data Register (N)	N00000 to N21503	N0 to N8191
	Index Register (Z)	Z000 to Z255	Z0 to Z6
	Timer current value (T)	T0000 to T8191	T0 to T255
	Counter current value (C)	C0000 to C4095	C0 to C255

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(21)LS IS PLC (LS Industrial Systems MASTER-K)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	I/O relay (P)	P0000 to P063F	P0000 to P063F
	Auxiliary relay (M)	M0000 to M191F	M0000 to M191F
	Keep relay (K)	K0000 to K031F	K0000 to K031F
	Link relay (L)	L0000 to L063F	L0000 to L063F
	Special relay (F)	F0000 to F063F	F0000 to F015F
	Timer contact (T)	T0 to T255	T0 to T255
	Counter contact (C)	C0 to C255	C0 to C255
Word device	I/O relay (P)	P000 to P063	P000 to P063
	Auxiliary relay (M)	M000 to M191	M000 to M191
	Keep relay (K)	K000 to K031	K000 to K031
	Link relay (L)	L000 to L063	L000 to L063
	Special relay (F)	F000 to F063	F000 to F015
	Timer current value (T)	T0 to T255	T0 to T255
	Counter current value (C)	C0 to C255	C0 to C255
	Step controller (S)	S0 to S99	-
	Data register (D)	D0 to D9999	D0 to D8191

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(22)SICK safety controller (SICK Flexi Soft)

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input (I)	I1.1 to I12.8	I1.1 to I12.8
	Output (Q)	Q1.1 to Q12.8	Q1.1 to Q12.8
	Logic result (LQ)	LQ0.0 to LQ3.7	LQ0.0 to LQ3.7
	Logic input (LI)	LI0.0 to LI3.7	LQ0.0 to LQ3.7
	Bit-specified word device	Monitoring available range of each word device	Monitoring available range of each word device
Word device	Data (byte) (D)	D0 to D99	D0 to D99
	Data (word) (W)	W0 to W49	W0 to W49
	EFI input (byte) (EI)	EI110 to EI233	EI110 to EI133
	EFI output (byte) (EQ)	EQ10 to EQ22	EQ10 to EQ12
	Logic input (byte) (LD)	LD0 to LD3	-
	Logic input (word) (LW)	LW0 to LW1	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(23)SIEMENS PLC

(a) SIEMENS S7-300/400 series

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Input relay (I)	I0000 to I5117	I0000 to I5117
	Output relay (Q)	Q0000 to Q5117	Q0000 to Q5117
	Bit memory (M)	M00000 to M20477	M00000 to M10237
	Bit-specified word device*1	Monitoring available range of each word device	Monitoring available range of each word device

Device name		GOT monitoring available range*2	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Word device	Input relay (IW)	IW0 to IW510	IW0 to IW510
	Output relay (QW)	QW0 to QW510	QW0 to QW510
	Bit memory (MW)	MW0 to MW2046	MW0 to MW1022
	Timer (present value) (T)	T0 to T511	T0 to T255
	Counter (current value) (C)	C0 to C511	C0 to C255
	Data register (DB)	DB1.DBW0 to DB1.DBW65534 DB2.DBW0 to DB2.DBW65534 : DB4094.DBW0 to DB4094.DBW65534 DB4095.DBW0 to DB4095.DBW65534	-

*1 Except for the input relay (IW), output relay (QW), bit memory (MW), timer (present value) (T), and counter (present value) (C)

*2 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

(b) **SIEMENS S7-200 series**

Device name		GOT monitoring available range*1	GT Simulator3 monitoring available range (operable range on GX Simulator or GX Simulator2)
Bit device	Variable memory (V)	V0 to V51197	-
	Input relay (I)	I00 to I77	I00 to I77
	Output relay (Q)	Q00 to Q77	Q00 to Q77
	Bit memory (M)	M000 to M317	M000 to M317
	Special memory (SM)	SM0000 to SM1947	-
	Timer (T)	T0 to T255	T0 to T255
	Counter (C)	C0 to C255	C0 to C255
	Sequence control relay (S)	S000 to S317	-
Word device	Variable memory (VW)	VW0 to VW5118	VW0 to VW1022
	Input relay (IW)	IW0 to IW6	IW0 to IW6
	Output relay (QW)	QW0 to QW6	QW0 to QW6
	Analog input (AIW)	AIW0 to AIW30	-
	Analog output (AQW)	AQW0 to AQW30	-
	Bit memory (MW)	MW0 to MW30	MW0 to MW30
	Special memory (SMW)	SMW0 to SMW192	-
	Timer (T)	T0 to T255	T0 to T255
	Counter (C)	C0 to C255	C0 to C255
	High speed counter (HC)	HC0 to HC2	-
	Sequence control relay (SW)	SW0 to SW30	-

*1 For the precautions for using devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

■2 Connecting with Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GT Simulator3 can monitor the devices that are monitored by the GOT.
For the devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

For the following controllers, some of their devices cannot be monitored through a motion controller, simple motion module, or PLC.

• MR-J4-GF(-RJ)

Controller to be routed	Monitoring target	Devices that cannot be monitored
Motion controller Simple motion module	MR-J4-GF(-RJ)	PF49 to PF64, PF1049 to PF1064 PC65 to PC80, PC1065 to PC1080 MD11 to MD18 PT1 to PT80, PT1001 to PT1080 PN1 to PN32, PN1001 to PN1032 POS1 to POS255, POS1001 to POS1255 SPD1 to SP255, SPD1001 to SP1255 ACT1 to ACT255, ACT1001 to ACT1255 DCT1 to DCT255, DCT1001 to DCT1255 DWL1 to DWL255, DWL1001 to DWL1255 AUX1 to AUX255, AUX1001 to AUX1255

• Inverter

Controller to be routed	Monitoring target	Devices that cannot be monitored
PLC	Inverter	IOST0 to IOST127 CMD0 to CMD47 AL0 to AL899 LPr0 to LPr1500 OP0 to OP4 PV1 to PV143

For the PLC CPUs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

■3 Connecting with non-Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GT Simulator3 can monitor the devices that are monitored by the GOT.
For the devices that can be monitored with the GOT, refer to the following.

➟12.4 Device Range and Settings of Each Controller

For the non-Mitsubishi Electric equipment that can be monitored with GT Simulator3, refer to the following.

➟■3 Non-Mitsubishi Electric products

3.1.4 Simulation-supported/unsupported functions

The following shows the functions that are compatible and incompatible with simulation by GT Simulator3 Version1.

■1 GT27

(1) Common function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System font display	○	Multi-channel connection	-
Option font display	○	Vertical display	○
Superimposition of objects	○	Touch panel and touch key	○
Base screen display	○	Numerical display/input	○
Overlap window display	○	Text display/input	○
Superimpose window display	○	Historical data list display	○
Key window display	○	Clock display	○
Set overlay screen	○	Comment display	○
Screen Switching	○	Alarm display	○
Station No. Switching	○	Alarm popup display	○
Buffer Memory Unit No. Switching	○	Recipe display (record list)	○
Language Switching	○	Graphical meter	○
System information	○	Panelmeter	○
Security authentication	○	Historical trend graph	○
Status observation	○	Line graph	○
Time action	○	Bar graph	○
Hard copy function	○	Scatter graph	○
Comment	○	Statistics graph	○
Figure	○	Level display	○
Internal device	○	Touch switch	○
Cursor movement	○	Slider	○
Operation Log	○	Video/RGB display object	-
Logging	○	Script parts	○
Recipe	○	Mobile screen display	-
Script	○	Hyperlink	-

(2) Utility function

○: Supported, -: Unsupported

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[GOT basic set]	[Display]	○	[Time]	-
	[Language]	○	[Controller]	-
	[Specific Information]	-	[Ethernet Communication]	-
	[IP Address]	-	[Transparent Mode]	-
	[IP filter setting]	-	[GOT Internal Device Monitor]	-
	[Operation]	○	[Security]	○
	[Utility Call Key]	○	[Operator Authentication]	○
	[USB Host]	-		
[Ext. func. Set]	[SoftGOT-GOT Link Function]	-	[Wireless LAN Setting]	-
	[VNC Server Function]	-	[System launcher]	-
	[Sequence Program Monitor]	-	[iQSS utility]	-
	[Backup Restoration]	-	[ANDON Setting]	-
	[License Management]	-	[Ethernet printer]	-
	[Video/RGB]	-	[Network Drive]	-
	[Multimedia]	-		
[Maintenance]	[Batch Self Check]	-	[Font check]	-
	[USB Device Management]	-	[Touch panel check]	-
	[Clean/Display Screen]	-	[I/O check]	-
	[Touch panel calibration]	-	[Ethernet Status Check]	-
	[System Alarm]	○	[GOT Information]	-
	[Drawing check]	-	[GOT Mobile information]	-
[Monitor]	[System launcher]	-	[Q Motion SFC monitor]	-
	[Device monitor]	-	[Log viewer]	-
	[Seq. program monitor(Ladder)]	-	[Network status display]	-
	[Seq. program mon.(iQ-R/iQ-L Ladder)]	-	[FX list editor]	-
	[Seq. program mon.(iQ-F Ladder)]	-	[CNC Machining Program Edit]	-
	[FX Ladder monitor]	-	[CNC data I/O]	-
	[Network monitor]	-	[Motion program editor]	-
	[Intelligent module monitor]	-	[Motion program I/O]	-
	[Servo amp Monitor]	-	[MELSEC-L Troubleshooting]	-
	[Q Motion monitor]	-	[iQSS utility]	-
	[R Motion monitor]	-	[Drive recorder]	-
	[CNC monitor]	-	[CC-Link IE diagnostics]	-
	[CNC monitor2]	-	[Servo amplifier graph]	-
	[Seq. program monitor(SFC)]	-	[Vision sensor monitor]	-
	[R Motion SFC monitor]	-		
[Data mng.]	[Alarm information]	○	[Package Management]	○ *1
	[Image File Management]	○	[Backup Restoration]	-
	[Recipe Information]	○	[SRAM control]	○ *2
	[Logging information]	○	[Memory card format]	-
	[Operation log information]	○	[Memory check]	-
	[File manager]	-	[GOT Pkg. acquisition]	-
	[File print]	○ *3		

*1 [Delete all labels] and [Sort out labels] are supported.
*2 [Initialize all] and [Initialize selected area] are supported.
*3 Only [Preview] is supported.

(3) Extended function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Screen gesture	-	MES Interface	-
Object gesture	-	Device monitor	-
Kana-Kanji/Pinyin conversion	○	Network monitor	-
Wireless LAN	-	Log viewer	-
SoftGOT-GOT Link Function	-	iQSS Utility	-
System Launcher	-	Intelligent module monitor	-
Sequence Program Monitor(Ladder)	-	Servo amplifier monitor	-
Sequence Program Monitor (iQ-R/iQ-L Ladder)	-	Drive Recorder	-
Sequence Program Monitor (iQ-F Ladder)	-	R motion monitor	-
Sequence Program Monitor(SFC)	-	Q motion monitor	-
FX Ladder Monitor	-	CNC Monitor	-
Backup/restore	-	CNC Data I/O	-
Gateway(Server, Client)	-	CNC Manufacturing Program Editor	-
Gateway(Mail)	-	CNC Monitor 2	-
Gateway(FTP Server)	-	Motion Program Editor	-
File Transfer	-	Motion Program Input/Output	-
Barcode	-	R Motion SFC Monitor	-
RFID	-	Q Motion SFC Monitor	-
Remote personal computer operation (Serial)	-	FX list editor	-
Remote personal computer operation (Ethernet)	-	Vision sensor monitor	-
VNC server	-	CC-Link IE TSN/CC-Link IE Field Network diagnostics	-
Video display	-	Recipe Operation	○
RGB display	-	Recipe Display (Record List)	○
Multimedia	-	Operation log screen image	-
Operation panel	-	Operator authentication	○
External I/O	-	File Manager	-
Report	○	File print	○ *1
Printer	-	Document Display	○
Sound Output	○	MELSEC-L Troubleshooting Function	-
GOT Network Interaction	-	Video/RGB display object	-
GOT Mobile Setting	-	GOT Platform Library	-
Device Data Transfer	○	Network Drive	○ *2
Servo amplifier graph	-	Base screen size expansion	○

*1 Only [Preview] is supported.
*2 In the simulation, files can be saved into virtual drives only.

■2 GT25 and GS25

(1) Common function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System font display	○	Multi-channel connection	-
Option font display	○	Vertical display	○ *1
Superimposition of objects	○	Touch panel and touch key	○
Base screen display	○	Numerical display/input	○
Overlap window display	○	Text display/input	○
Superimpose window display	○	Historical data list display	○
Key window display	○	Clock display	○
Set overlay screen	○	Comment display	○
Screen Switching	○	Alarm display	○
Station No. Switching	○	Alarm popup display	○
Buffer Memory Unit No. Switching	○	Recipe display (record list)	○
Language Switching	○	Graphical meter	○
System information	○	Panelmeter	○
Security authentication	○	Historical trend graph	○
Status observation	○	Line graph	○
Time action	○	Bar graph	○
Hard copy function	○	Scatter graph	○
Comment	○	Statistics graph	○
Figure	○	Level display	○
Internal device	○	Touch switch	○
Cursor movement	○	Slider	○
Operation Log	○	Script parts	○
Logging	○	Mobile screen display	-
Recipe	○	Hyperlink	-
Script	○		

*1 In simulation of GT2505-V, the utility screen is displayed in inversed orientation as compared with the utility screen displayed on the physical GT2505-V.

(2) Utility function

○: Supported, -: Unsupported

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[GOT basic set]	[Display]	○	[Time]	-
	[Language]	○	[Controller]	-
	[Specific Information]	-	[Ethernet Communication]	-
	[IP Address]	-	[Transparent Mode]	-
	[IP filter setting]	-	[GOT Internal Device Monitor]	-
	[Operation]	○	[Security]	○
	[Utility Call Key]	○	[Operator Authentication]	○
	[USB Host]	-		
[Ext. func. Set]	[SoftGOT-GOT Link Function]	-	[Wireless LAN Setting]	-
	[VNC Server Function]	-	[System launcher]	-
	[Sequence Program Monitor]	-	[iQSS utility]	-
	[Backup Restoration]	-	[ANDON Setting]	-
	[License Management]	-	[Ethernet printer]	-
	[Video/RGB]	-	[Network Drive]	-
	[Multimedia]	-		
[Maintenance]	[Batch Self Check]	-	[Font check]	-
	[USB Device Management]	-	[Touch panel check]	-
	[Clean/Display Screen]	-	[I/O check]	-
	[Touch panel calibration]	-	[Ethernet Status Check]	-
	[System Alarm]	○	[GOT Information]	-
	[Drawing check]	-	[GOT Mobile information]	-
[Monitor]	[System launcher]	-	[Q Motion SFC monitor]	-
	[Device monitor]	-	[Log viewer]	-
	[Seq. program monitor(Ladder)]	-	[Network status display]	-
	[Seq. program mon.(iQ-R/iQ-L Ladder)]	-	[FX list editor]	-
	[Seq. program mon.(iQ-F Ladder)]	-	[CNC Machining Program Edit]	-
	[FX Ladder monitor]	-	[CNC data I/O]	-
	[Network monitor]	-	[Motion program editor]	-
	[Intelligent module monitor]	-	[Motion program I/O]	-
	[Servo amp Monitor]	-	[MELSEC-L Troubleshooting]	-
	[Q Motion monitor]	-	[iQSS utility]	-
	[R Motion monitor]	-	[Drive recorder]	-
	[CNC monitor]	-	[CC-Link IE diagnostics]	-
	[CNC monitor2]	-	[Servo amplifier graph]	-
	[Seq. program monitor(SFC)]	-	[Vision sensor monitor]	-
	[R Motion SFC monitor]	-		
[Data mng.]	[Alarm information]	○	[Package Management]	○ *1
	[Image File Management]	○	[Backup Restoration]	-
	[Recipe Information]	○	[SRAM control]	○ *2
	[Logging information]	○	[Memory card format]	-
	[Operation log information]	○	[Memory check]	-
	[File manager]	-	[GOT Pkg. acquisition]	-
	[File print]	○ *3		

*1 [Delete all labels] and [Sort out labels] are supported.
*2 [Initialize all] and [Initialize selected area] are supported.
*3 Only [Preview] is supported.

(3) Extended function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Kana-Kanji/Pinyin conversion	○	Network monitor	-
Wireless LAN	-	Log viewer	-
SoftGOT-GOT Link Function	-	iQSS Utility	-
System Launcher	-	Intelligent module monitor	-
Sequence Program Monitor(Ladder)	-	Servo amplifier monitor	-
Sequence Program Monitor (iQ-R/iQ-L Ladder)	-	Drive Recorder	-
Sequence Program Monitor (iQ-F Ladder)	-	Servo amplifier graph	-
Sequence Program Monitor(SFC)	-	R motion monitor	-
FX Ladder Monitor	-	Q motion monitor	-
Backup/restore	-	CNC Monitor	-
Gateway(Server, Client)	-	CNC Data I/O	-
Gateway(Mail)	-	CNC Manufacturing Program Editor	-
Gateway(FTP Server)	-	CNC Monitor 2	-
File Transfer	-	Motion Program Editor	-
Barcode	-	Motion Program Input/Output	-
RFID	-	R Motion SFC Monitor	-
Remote personal computer operation (Serial)	-	Q Motion SFC Monitor	-
Remote personal computer operation (Ethernet)	-	FX list editor	-
VNC server	-	CC-Link IE TSN/CC-Link IE Field Network diagnostics	-
Video display	-	Vision sensor monitor	-
RGB display	-	Recipe Operation	○
Multimedia	-	Recipe Display (Record List)	○
Operation panel	-	Operation log screen image	-
Report	○	Operator authentication	○
External I/O	-	File Manager	-
Printer	-	File print	○ *2
Sound Output	○ *1	Document Display	○
GOT Network Interaction	-	MELSEC-L Troubleshooting Function	-
GOT Mobile Setting	-	GOT Platform Library	-
Device Data Transfer	○	Network Drive	○ *3
MES Interface	-	Base screen size expansion	○
Device monitor	-		

*1 Not available to GT2505-V and GT25HS-V.
*2 Only [Preview] is supported.
*3 In the simulation, files can be saved into virtual drives only.

■3 GT23

(1) Common function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System font display	○	Script	○
Option font display	○	Multi-channel connection	-
Superimposition of objects	○	Vertical display	○
Base screen display	○	Touch panel and touch key	○
Overlap window display	○	Numerical display/input	○
Superimpose window display	○	Text display/input	○
Key window display	○	Historical data list display	○
Set overlay screen	○	Clock display	○
Screen Switching	○	Comment display	○
Station No. Switching	○	Alarm display	○
Buffer Memory Unit No. Switching	○	Alarm popup display	○
Language Switching	○	Recipe display (record list)	○
System information	○	Graphical meter	○
Security authentication	○	Panelmeter	○
Status observation	○	Historical trend graph	○
Time action	○	Line graph	○
Hard copy function	○	Bar graph	○
Comment	○	Scatter graph	○
Figure	○	Statistics graph	○
Internal device	○	Level display	○
Cursor movement	○	Touch switch	○
Operation Log	○	Slider	○
Logging	○	Script parts	○
Recipe	○		

(2) Utility function

○: Supported, -: Unsupported

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[GOT basic set]	[Display]	○	[Time]	-
	[Language]	○	[Controller]	-
	[Specific Information]	-	[Ethernet Communication]	-
	[IP Address]	-	[Transparent Mode]	-
	[IP filter setting]	-	[GOT Internal Device Monitor]	-
	[Operation]	○	[Security]	○
	[Utility Call Key]	○	[Operator Authentication]	○
	[USB Host]	-		
[Ext. func. Set]	[Backup Restoration]	-	[Ethernet printer]	-
	[System launcher]	-		

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[Maintenance]	[Batch Self Check]	-	[Font check]	-
	[USB Device Management]	-	[Touch panel check]	-
	[Clean/Display Screen]	-	[I/O check]	-
	[Touch panel calibration]	-	[Ethernet Status Check]	-
	[System Alarm]	○	[GOT Information]	-
	[Drawing check]	-		
[Monitor]	[System launcher]	-	[Device monitor]	-
[Data mng.]	[Alarm information]	○	[Package Management]	○ *1
	[Image File Management]	○	[Backup Restoration]	-
	[Recipe Information]	○	[SRAM control]	○ *2
	[Logging information]	○	[Memory card format]	-
	[Operation log information]	○	[Memory check]	-
	[File manager]	-	[GOT data pkg. acquisition]	-
	[File print]	○ *3		

*1 [Delete all labels] and [Sort out labels] are supported.
*2 [Initialize all] and [Initialize selected area] are supported.
*3 Only [Preview] is supported.

(3) Extended function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System Launcher	-	Device monitor	-
Backup/restore	-	FX list editor	-
Gateway(FTP Server)	-	Recipe Operation	○
File Transfer	-	Recipe Display (Record List)	○
Barcode	-	Operation log screen image	-
RFID	-	Operator authentication	-
Report	○	File Manager	-
Printer	-	File print	○ *1
GOT Network Interaction	-	GOT Platform Library	-
Device Data Transfer	○		

*1 Only [Preview] is supported.

■4 GT21 and GS21

(1) Common function

○: Supported, -: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System font display	○	Numerical display/input	○
Option font display	○	Text display/input	○
Superimposition of objects	○	Historical data list display	○
Base screen display	○	Clock display	○
Overlap window display	○	Comment display	○
Superimpose window display	○	Alarm display	○
Key window display	○	Alarm popup display	○

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Set overlay screen	○	Panelmeter	○
Screen Switching	○	Historical trend graph	○
Station No. Switching	○	Line graph	○
Buffer Memory Unit No. Switching	○	Bar graph	○
Language Switching	○	Scatter graph	○
System information	○	Statistics graph	○
Security authentication	○	Level display	○
Status observation	○	Touch switch	○
Time action	○	Slider	○
Hard copy function	○	Script parts	○
Comment	○	Gateway(FTP Server)	-
Figure	○	File Transfer	-
Internal device	○	Backup/restore	-
Cursor movement	○	Barcode	-
Operation Log	○*1	RFID	-
Script	○	Report	○
Recipe	○	Printer	-
Multi-channel connection	-	Device Data Transfer	○
Vertical display	○	Operator authentication	○
Touch panel and touch key	○		

*1 [Shift to GOT offline mode] is not supported.

(2) Utility function

○: Supported, -: Unsupported

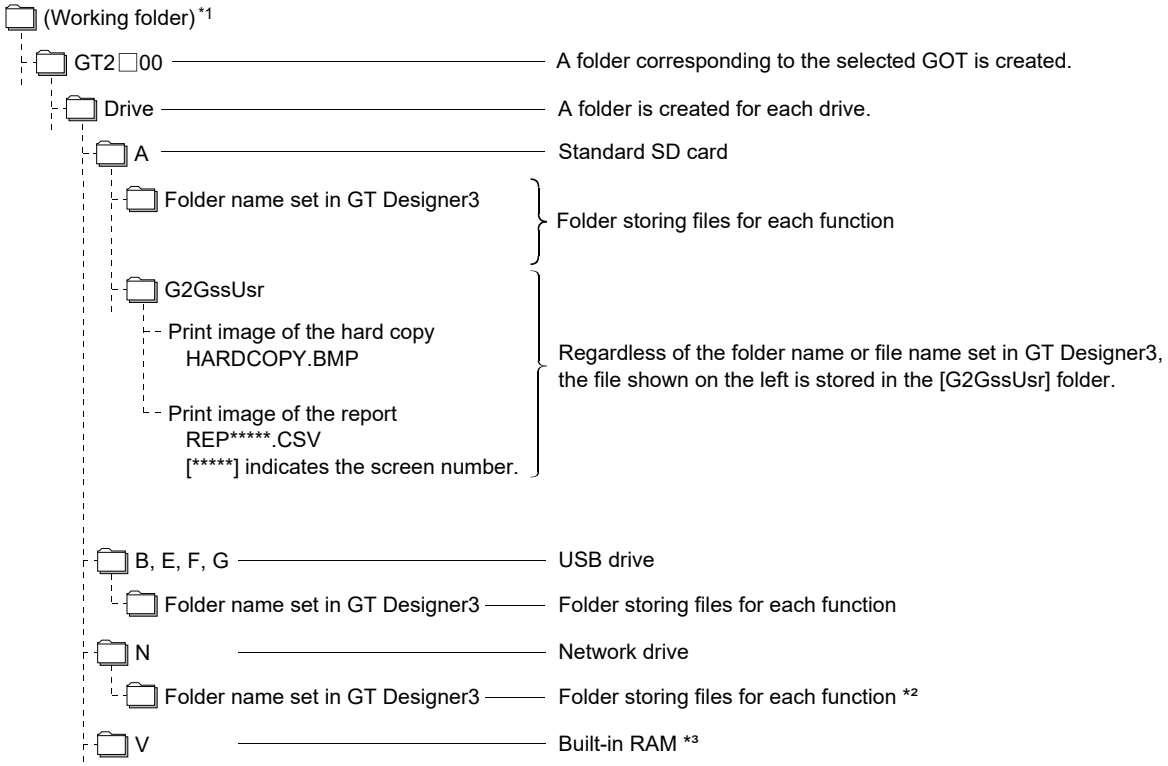
Function		Supported/ Unsupported	Function	Supported/ Unsupported
[Language]	-	○		
[Comm. Setting]	[Standard I/F]	-	[Ethernet check]	-
	[GOT IP Address]	-	[Transparent mode]	-
	[Comm. Monitor]	-	[Keyword]	-
	[IP filter setting]			
[GOT setup]	[Display]	○	[Unique info]	-
	[Operation]	○	[GOT Internal Device Monitor]	-
[Security setting]	[Security level]	○	[Login/Logout]	○
	[Operator]	○		
[Time setting]	[Time setting]	-		
[Data]	[OS information]	-	[SD card access]	-
	[Alarm info.]	-	[Memory card format]	-
	[Recipe info.]	-	[Clear data]	-
	[Logging info.]	-	[Backup/Restore Function]	-
[Debug]	[Device monitor]	-	[FX3U-ENET-ADP]	-
	[FX list editor]	-		
[Maintenance]	[Calibration]	-	[Panel check]	-
	[Clean]	-		

3.1.5 Destination to save data

GT Simulator3 uses the folders on the hard drive of the personal computer as virtual drives.

■1 For functions saving data into a data storage or file server

When a data storage or file server is specified to save the files for functions including object functions and extended functions, data is saved onto the hard drive of the personal computer.
The files for each function are saved into the folders as shown below.



The drive unavailable to the simulation target GOT is not usable.

*1 For the working folder, refer to the following.

➟■3 Working folder

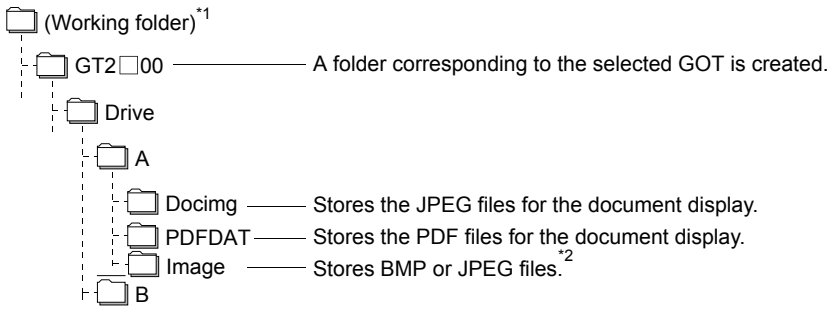
*2 In the simulation, files can be saved into virtual drives only.

*3 For details on drive V, refer to the following.

➟3.3.1 ■12 Virtual drive V

■2 For functions requiring the user to save data into a data storage

When registering BMP files or JPEG files used as parts or data for document display, save them in the hard disk of the personal computer.
Store each data in the following (user-created) folders.
(The drive to be used depends on the specifications of the object or setting.)



*1 For the working folder, refer to the following.

➟■3 Working folder

*2 You can change the file name.
For how to use BMP files or JPEG files, refer to the following.

➟5.9.3 How to use parts ([Parts])

■3 Working folder

The following shows a working folder.
Users\(user name)\AppData\Local\MITSUBISHI\GSS3

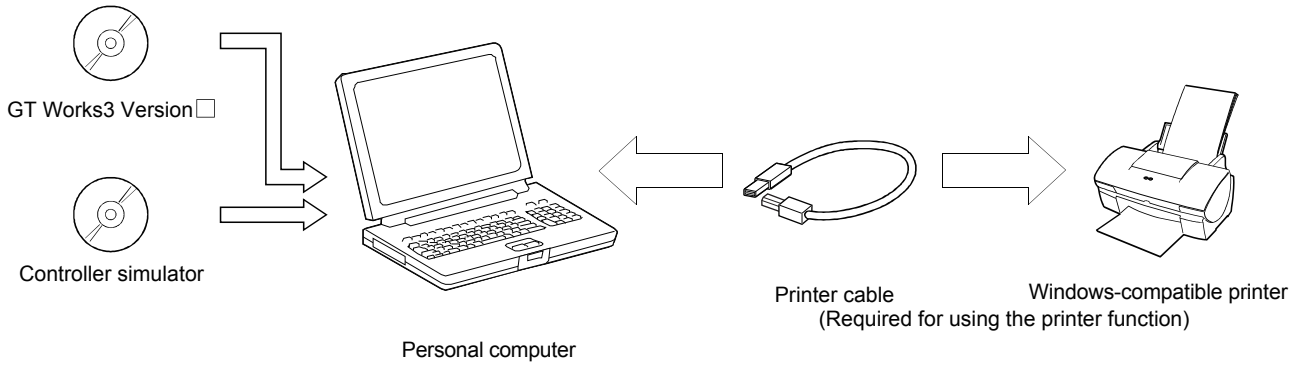
3.2 Connecting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟3.2.1 Connecting with the controller simulators
3.2.2 Connecting with Mitsubishi Electric products
3.2.3 Connecting with non-Mitsubishi Electric products

3.2.1 Connecting with the controller simulators

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



Install a controller simulator to be connected.

■1 When connecting with GX Simulator

- GX Developer
- GX Simulator

For how to install GX Developer or GX Simulator, refer to the following.

➟GX Developer Version□ Operating Manual (Startup)

■2 When connecting with GX Simulator2

- GX Works2

For how to install GX Works2, refer to the following.

➟GX Works2 Installation Procedure Manual

■3 When connecting with GX Simulator3

- GX Works3

For how to install GX Works3, refer to the following.

➟GX Works3 Installation Instructions

■4 When connecting with MT Simulator2

- MT Developer2

For how to install MT Developer2, refer to the following.

➟MELSOFT MT Works2 Installation Instructions

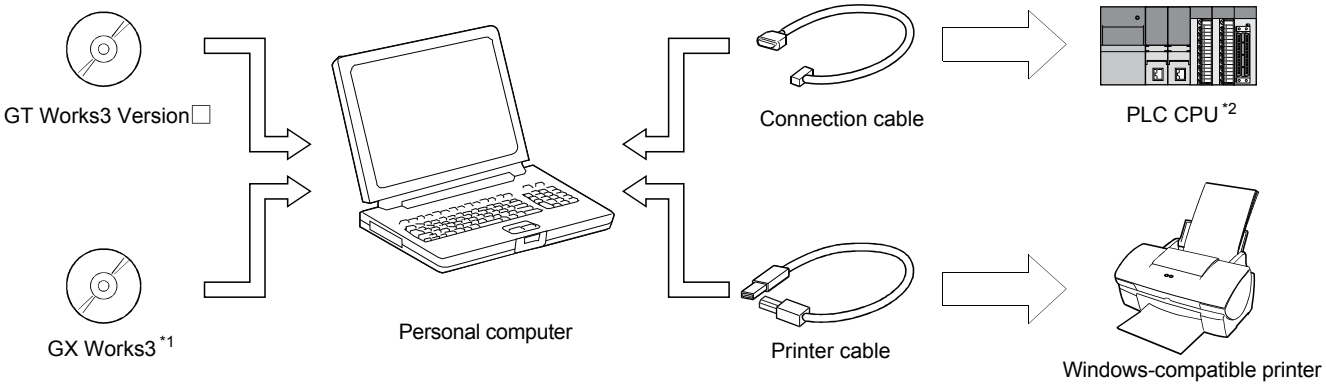
3.2.2 Connecting with Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Connecting with RCPU or MELSEC iQ-R series Motion CPU
■2 Connecting with LHCPU
■3 Connecting with QCPU or Q series Motion CPU
■4 Connecting with LCPU
■5 Connecting with QnACPU, ACPU, Motion CPU (A series), or FXCPU
■6 Connecting with MELSEC iQ-F
■7 Connecting with the MELSECNET/H remote I/O station
■8 Connecting with CC-Link IE Field Network head unit
■9 Connecting with MELDAS C6/C64

■1 Connecting with RCPU or MELSEC iQ-R series Motion CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Works3, refer to the following.

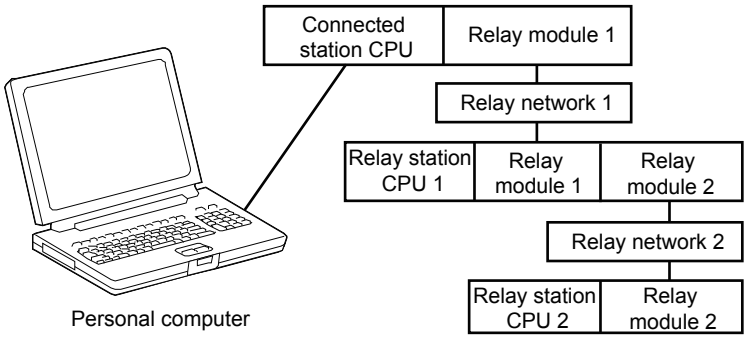
➟GX Works3 Installation Instructions

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

(1) Access range

The following shows the access range for the direct CPU connection (USB) in the following configuration.



(a) **Single network**

○: Accessible, -: Inaccessible

Connected station	Relay station									
RCPU	Relay network 1	Relay CPU								
		RCPU	LHCPU	LCPU	QnCPU	QSCPU*1	QCPU (A mode)	QnACPU	ACPU	FX5CPU
○	Mnet/10(H)	-	-	-	-	-	-	-	-	-
	Ethernet	○	-	○	○	○	-	-	-	-
	CC IE Cont	○	-	-	○	○	-	-	-	-
	CC IE Field	○	-	○	○	○	-	-	-	○*2

*1 The routing parameter cannot be set for a QSCPU, and therefore the GOT cannot access the networks on which the CPU is not located.

*2 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.

(b) **Multiple networks**

○: Accessible, -: Inaccessible

Connected station	Relay station									
RCPU	Relay network 1	Relay network 2	Relay CPU								
			RCPU	LHCPU	LCPU	QnCPU	QSCPU*1	QCPU (A mode)	QnACPU	ACPU	FX5CPU
○	Mnet/10(H)	Mnet/10(H)	-	-	-	-	-	-	-	-	-
		Ethernet	-	-	-	-	-	-	-	-	-
		CC IE Cont	-	-	-	-	-	-	-	-	-
		CC IE Field	-	-	-	-	-	-	-	-	-
○	Ethernet	Mnet/10(H)*3	-	-	-	○	○	-	-	-	-
		Ethernet	○	-	○	○	○	-	-	-	-
		CC IE Cont*4	○	-	-	○	○	-	-	-	-
		CC IE Field	○	-	○	○*2	○	-	-	-	-
○	CC IE Cont	Mnet/10(H)*3	-	-	-	○	○	-	-	-	-
		Ethernet	○	-	○	○	○	-	-	-	-
		CC IE Cont*4	○	-	-	○	○	-	-	-	-
		CC IE Field	○	-	○	○*2	○	-	-	-	-
○	CC IE Field*1	Mnet/10(H)*3*5	-	-	-	○	○	-	-	-	-
		Ethernet*5	○	-	○	○	○	-	-	-	-
		CC IE Cont*4*5	○	-	-	○	○	-	-	-	-
		CC IE Field*5	○	-	○	○*2	○	-	-	-	-

*1 The routing parameter cannot be set for a QSCPU, and therefore the GOT cannot access the networks on which the CPU is not located.

*2 Only the universal model is applicable.

*3 This network is inaccessible when an RCPU or LCPU is used in relay station No. 1.

*4 This network is inaccessible when an LCPU is used in relay station No. 1.

*5 This network is inaccessible when an FX5CPU is used in relay station No. 1.

(2) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.

USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(b) When using a USB cable manufactured by BUFFALO KOKUYO SUPPLY INC.

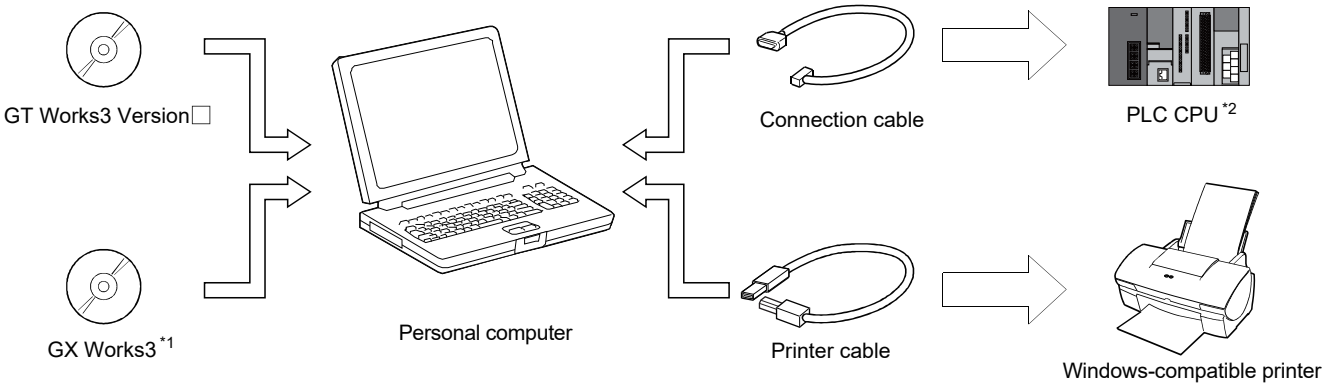
USB cable/USB conversion adapter
Personal computer side: USB TYPE-A Controller side: USB Mini-B   AU2-30 (3 m) + AUXUBM5

(c) When using a USB cable manufactured by SANWA SUPPLY INC.

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A Controller side: USB Mini-B   KU-AMB530 (3 m) or KU-AMB550 (5 m)

■2 Connecting with LHCPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Works3, refer to the following.

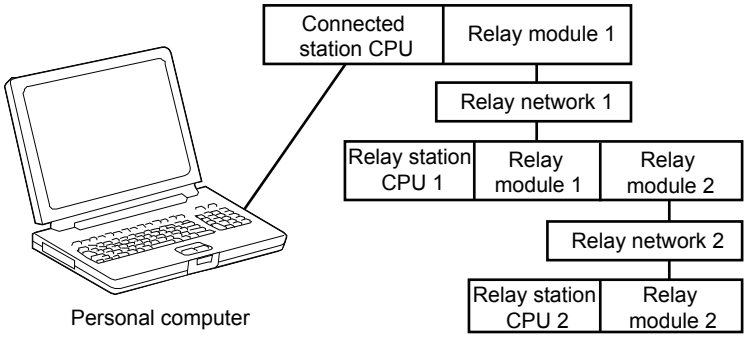
➟GX Works3 Installation Instructions

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

(1) Access range

The following shows the access range for the direct CPU connection (USB) in the following configuration.



(a) **Single network**

For the direct CPU connection (USB), the CPUs on relay network 1 are inaccessible.

(b) **Multiple networks**

For the direct CPU connection (USB), the CPUs on relay network 1 and relay network 2 are inaccessible.

(2) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) **When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.**

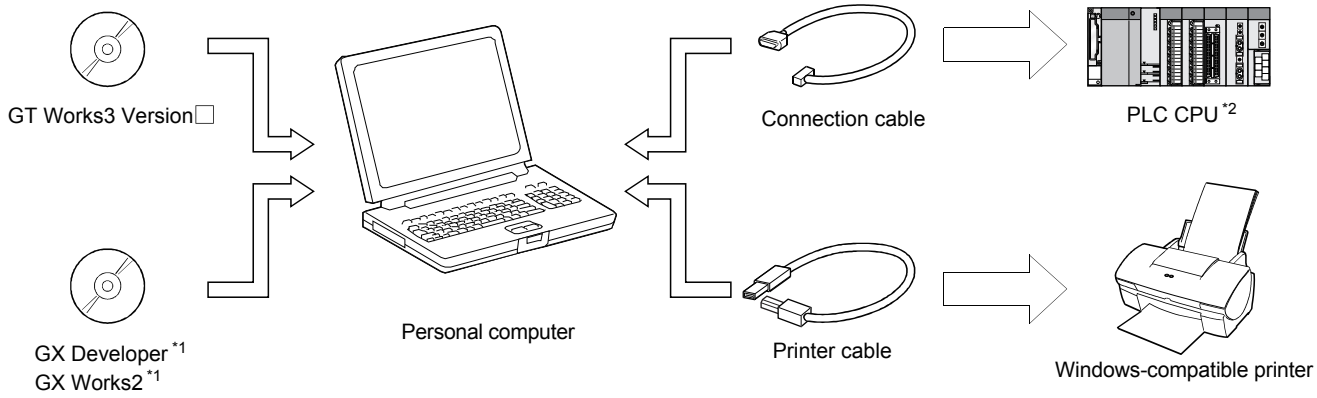
USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(b) **When using a USB cable manufactured by SANWA SUPPLY INC.**

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A Controller side: USB Mini-B   KU-AMB530 (3 m) or KU-AMB550 (5 m)

■3 Connecting with QCPU or Q series Motion CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Developer or GX Works2, refer to the following.

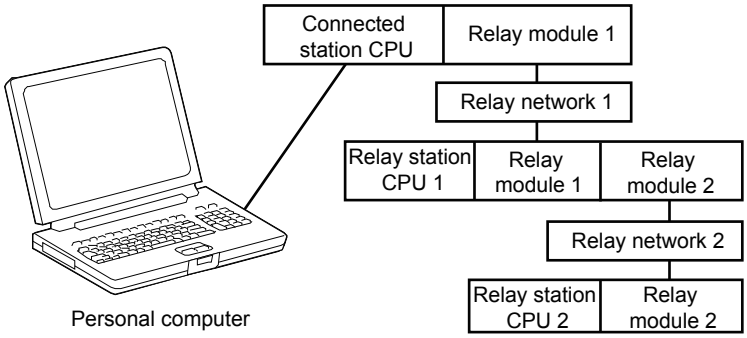
➟GX Developer Version□ Operating Manual (Startup)
GX Works2 Installation Procedure Manual

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

(1) Access range

The following shows the access range for the direct CPU connection (serial) in the following configuration.



(a) Single network

○: Accessible, -: Inaccessible, ▲: Accessible when the connected CPU is the control station

Connected station	Relay station								
QCPU, QSCPU*3	Relay network 1	Relay CPU							
		RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU*2	ACPU*4	FX5CPU
○	Mnet/10(H)	-	-	-	○	○	○	○	○	-
	Ethernet	-	-	○	○	○	-	○	-	-
	CC IE Cont	-	-	-	○	○	-	-	-	-
	CC IE Field*1	-	-	○	○*1	○	-	-	-	-

*1 Only the universal model is applicable.
2 MELDAS C6 is not applicable.
*3 When QSCPU is connected by USB, access to other stations or other PLCs is unavailable.
*4 Depending on the CPU type, the access range is different.
Refer to the following table.

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
QnCPU	▲	○	-	○

(b) Multiple networks

○: Accessible, -: Inaccessible, ▲: Accessible when the connected CPU is the control station

Connected station	Relay station									
QCPU, QSCPU*3	Relay network 1	Relay network 2	Relay CPU								
			RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU*2	ACPU*4	FX5CPU
○	Mnet/10(H)	Mnet/10(H)	-	-	-	○	○	○	○	○	-
		Ethernet	-	-	○	○	○	-	○	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○	○	-	-	-	-
○	Ethernet	Mnet/10(H)	-	-	-	○	○	-	○	-	-
		Ethernet	-	-	○	○	○	-	○	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○	○	-	-	-	-
○	CC IE Cont	Mnet/10(H)	-	-	-	○	○	-	-	-	-
		Ethernet	-	-	○	○	○	-	-	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○	○	-	-	-	-
○	CC IE Field*1	Mnet/10(H)	-	-	-	○	○	-	-	-	-
		Ethernet	-	-	○	○	○	-	-	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○*1	○	-	-	-	-

*1 Only the universal model is applicable.
2 MELDAS C6 is not applicable.
*3 When QSCPU is connected by USB, access to other stations or other PLCs is unavailable.
*4 Depending on the CPU type, the access range is different.
Refer to the following table.

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
QnCPU	▲	○	-	○

(2) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) When using an RS-232 cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.

RS-232 cable*1	
Personal computer side: 9-pin D-sub connector	Controller side: MINI-DIN6-pin
GT01-C30R2-6P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)	

*1 Only the PLC CPU area (CPU No. 1) of Q170MCPU, Q170MSCPU, and Q170MSCPU-S1 (Q series Motion CPU) can be connected.

(b) **When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.**

• When using a Universal model QCPU

USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(c) **When using a USB cable manufactured by ELECOM CO., LTD.**

• When using a Universal model QCPU

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A Controller side: USB Mini-B   USB-M53 (3 m)
Personal computer side: USB TYPE-A Controller side: USB Mini-B   USB2-30 (3 m) + AD-USBBFTM5M

• When using a Basic model QCPU, High Performance model QCPU, Process CPU, or Redundant CPU

USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   USB2-30 (3 m)

(d) **When using a USB cable manufactured by BUFFALO KOKUYO SUPPLY INC.**

• When using a Universal model QCPU

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A Controller side: USB Mini-B   AU2-30 (3 m) + AUXUBM5

• When using a Basic model QCPU, High Performance model QCPU, Process CPU, or Redundant CPU

USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   USB2-30 (3 m)

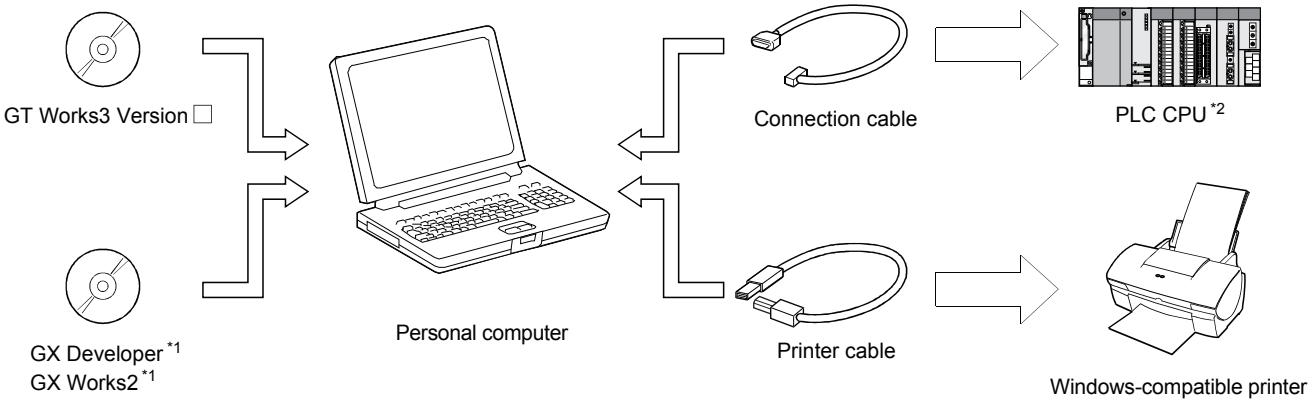
(e) **When using a LOAS USB cable**

• When using a Universal model QCPU

USB cable
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B
ZUM-430 (3 m)

■4 Connecting with LCPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Developer, GX Simulator, or GX Simulator2, refer to the following.

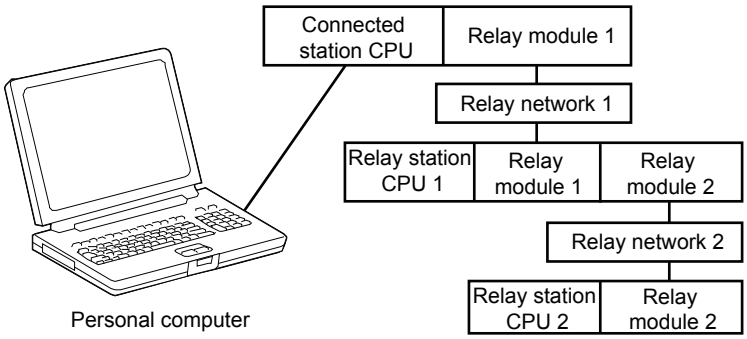
➟GX Developer Version□ Operating Manual (Startup)
GX Works2 Installation Procedure Manual

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 ■2 Mitsubishi Electric products

(1) Access range

The following shows the access range for the direct CPU connection (serial) in the following configuration.



(a) **Single network**

○: Accessible, -: Inaccessible

Connected station	Relay station								
LCPU	Relay network 1	Relay CPU							
		RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FX5CPU
○	Ethernet	-	-	○	○	○	-	-	-	-
○	CC IE Field	-	-	○	○*1	○	-	-	-	-

*1 Only the universal model is applicable.

(b) **Multiple networks**

○: Accessible, -: Inaccessible

Connected station	Relay station									
LCPU	Relay network 1	Relay network 2	Relay CPU							
			RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU	ACPU	FX5CPU
○	Ethernet	Mnet/10(H)	-	-	-	○	○	-	-	-	-
		Ethernet	-	-	○	○	○	-	-	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○*1	-	-	-	-	-
○	CC IE Field*1	Mnet/10(H)	-	-	-	○	○	-	-	-	-
		Ethernet	-	-	○	○	○	-	-	-	-
		CC IE Cont	-	-	-	○	○	-	-	-	-
		CC IE Field	-	-	○	○*1	-	-	-	-	-

*1 Only the universal model is applicable.

(2) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) **When using an RS-232 cable manufactured by Mitsubishi Electric System & Service Co., Ltd.**

RS-232 cable*1
Personal computer side: 9-pin D-sub connector　　Controller side: MINI-DIN6-pin
GT01-C30R2-6P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

*1 The adapter L6ADP-R2 (manufactured by Mitsubishi Electric Corporation) is required for the direct CPU connection.

(b) **When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.**

• When using a Universal model QCPU

USB cable
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B
MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B
GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(c) **When using a USB cable manufactured by ELECOM CO., LTD.**

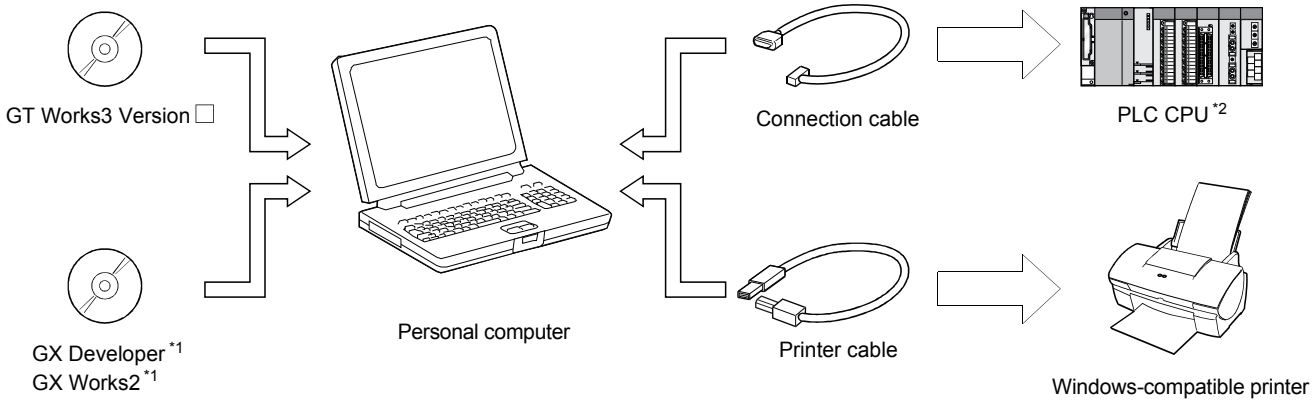
USB cable
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B
USB-M53 (3 m)

(d) **When using a LOAS USB cable**

USB cable	
Personal computer side: USB TYPE-A	Controller side: USB Mini-B
ZUM-430 (3 m)	

■5 Connecting with QnACPU, ACPU, Motion CPU (A series), or FXCPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Developer, GX Simulator, or GX Simulator2, refer to the following.

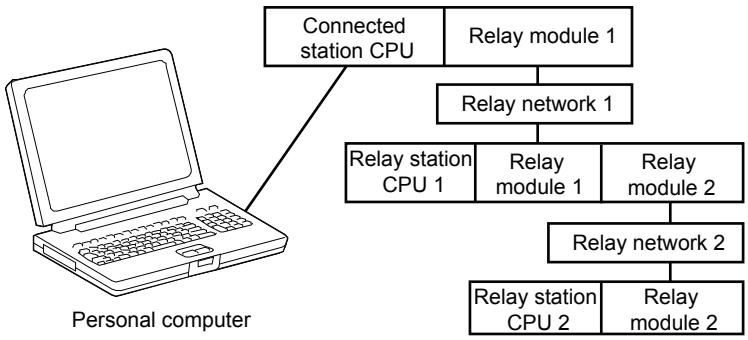
➟GX Developer Version□ Operating Manual (Startup)
GX Works2 Installation Procedure Manual

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 ■2 Mitsubishi Electric products

(1) Access range

The following shows the access range for the direct CPU connection (serial) in the following configuration.



(a) **Single network (connection with QnACPU)**

○: Accessible, -: Inaccessible

Connected station	Relay station								
QnACPU, MELDAS C6*	Relay network 1	Relay CPU							
		RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU, MELDAS C6*	ACPU	FX5CPU
○	Mnet/10(H)	-	-	-	-	-	-	○	-	-
	Mnet(II)*1*2	-	-	-	-	-	-	○*2	-	-
	Ethernet	-	-	-	-	-	-	○	-	-

*1 Only the link relay device or link register device assigned by the link parameter can be monitored. Depending on the type of the connected station, the access range is different.

• Master station: Local stations can be monitored.
• Local station: Only the master station can be monitored.
• Master station on the third hierarchy: The master station on the second hierarchy and local stations on the third hierarchy can be monitored.

2 MELDAS C6 is inaccessible.

(b) **Multiple networks (connection with QnACPU)**

○: Accessible, -: Inaccessible

Connected station	Relay station									
QnACPU, MELDAS C6*	Relay network 1	Relay network 2	Relay CPU							
			RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU, MELDAS C6*	ACPU	FX5CPU
○	Mnet/10(H)	Mnet/10(H)	-	-	-	-	-	-	○	-	-
		Ethernet	-	-	-	-	-	-	○	-	-
○	Ethernet	Mnet/10(H)	-	-	-	-	-	-	○	-	-
		Ethernet	-	-	-	-	-	-	○	-	-

*1 Only the link relay device or link register device assigned by the link parameter can be monitored.
Depending on the type of the connected station, the access range is different.
• Master station: Local stations can be monitored.
• Local station: Only the master station can be monitored.
• Master station on the third hierarchy: The master station on the second hierarchy and local stations on the third hierarchy can be monitored.

2 MELDAS C6 is inaccessible.

(c) **Single network (connection with ACPU or Motion CPU (A series))**

○: Accessible, -: Inaccessible, ▲: Accessible when the connected CPU is the control station, △: Accessible when the access destination CPU is the control station

Connected station	Relay station								
ACPU, QCPU (A mode)	Relay network 1	Relay CPU							
		RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU, MELDAS C6*	ACPU	FX5CPU
○	Mnet/ 10(H)*1	-	-	-	-	-	○	-	○	-
	Mnet(II)*2	-	-	-	-	-	○	○*3	○	-

*1 Depending on the CPU type, the access range is different.
Refer to the following table.

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
AnA(AnN)CPU	-	△	-	-
AnUCPU	▲	○	-	○

*2 Only the link relay device or link register device assigned by the link parameter can be monitored.
Depending on the type of the connected station, the access range is different.
• Master station: Local stations can be monitored.
• Local station: Only the master station can be monitored.
• Master station on the third hierarchy: The master station on the second hierarchy and local stations on the third hierarchy can be monitored.

3 MELDAS C6 is inaccessible.

(d) **Multiple networks (connection with ACPU or Motion CPU (A series))**

○: Accessible, -: Inaccessible, ▲: Accessible when the connected CPU is the control station, △: Accessible when the access destination CPU is the control station

Connected station	Relay station									
ACPU, QCPU (A mode)	Relay network 1	Relay network 2	Relay CPU							
			RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU, MELDAS C6*	ACPU	FX5CPU
○	Mnet/10(H)	Mnet/10(H)	-	-	-	-	-	○	-	○	-

*1 Depending on the CPU type, the access range is different.
Refer to the following table.

Connected station	Relay network 1		Relay network 2	
	AnA(AnN)CPU	AnUCPU	AnA(AnN)CPU	AnUCPU
AnA(AnN)CPU	-	△	-	-
AnUCPU	▲	○	-	○

*2 Only the link relay device or link register device assigned by the link parameter can be monitored.
Depending on the type of the connected station, the access range is different.
- Master station: Local stations can be monitored.
- Local station: Only the master station can be monitored.
- Master station on the third hierarchy: The master station on the second hierarchy and local stations on the third hierarchy can be monitored.

3 MELDAS C6 is inaccessible.

(e) **Single network (connection with FXCPU)**

For the direct CPU connection (serial), the CPUs on relay network 1 are inaccessible.

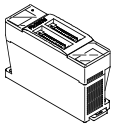
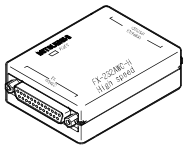
(f) **Multiple networks (connection with FXCPU)**

For the direct CPU connection (serial), the CPUs on relay network 1 and relay network 2 are inaccessible.

(2) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) When using an RS-232 cable or RS-422 cable manufactured by Mitsubishi Electric Corporation

For personal computer (RS-232 cable)	RS-232/RS-422 converter*3	For PLC CPU (RS-422 cable)
 F2-232CAB (Mitsubishi Electric Corporation) *1*2 (For the 25-pin D-sub connector of the personal computer)	 FX-232AW (Mitsubishi Electric Corporation)	 FX-422CAB (0.3 m) (Mitsubishi Electric Corporation) FX-422CAB-150 (1.5 m) (Mitsubishi Electric Corporation) (For connecting to QnACPU, ACPU, Motion CPU (A series), FX1CPU, FX2CPU, or FX2CCPU)
 F2-232CAB-1 (Mitsubishi Electric Corporation) *2 (For the 9-pin D-sub connector of the personal computer)	 FX-232AWC (Mitsubishi Electric Corporation)	 FX-422CAB0 (1.5 m) (Mitsubishi Electric Corporation) (for connection with FX0/FX0S/FX0N/FX1S/FX1N/FX2N/FX1NC/FX2NC/FX3G/FX3GC/FX3GE/FX3U/FX3UC/FX3SCPU/AC30N2A)
 AC30N2A (Mitsubishi Electric Corporation) *1 (For the 25-pin D-sub connector of the personal computer)	 FX-232AWC-H (Mitsubishi Electric Corporation) (FX series only)(Mitsubishi)	

*1 When using this cable for a DOS/V personal computer, a straight cable for conversion between 9-pin D-sub and 25-pin D-sub is required separately.

*2 To check whether the cable is compatible with QnACPU or ACPU or not, check the model name label on the cable. (The incompatible product cannot be used.)

Incompatible product	Compatible product (with the description of (F/FX/A))
F2-232CAB Y990C*****	F2-232CAB (F/FX/A) Y990C*****
F2-232CAB-1 Y990C*****	F2-232CAB-1 (F/FX/A) Y990C*****

*3 When FX3UC or FX3UCPU is connected to FX-232AWC-H, the transmission speeds of 9600, 19200, 38400, 57600, and 115200 bps are available.
When FX-232AWC or FX-232AW is connected, the transmission speeds of 9600 and 19200 bps are available.

(b) When using an RS-232 cable manufactured by Mitsubishi Electric Corporation

The following cables are usable to connect the function extension board or special adapter of FXCPU.

RS-232 cable*1*2
 GT01-C30R2-9S (Mitsubishi Electric Corporation)
 GT01-C30R2-25P (Mitsubishi Electric Corporation)

*1 The following shows connection types that can be used with GT01-C30R2-9S.

Model	Function extension board	Special adapter	Connector for personal computer
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	9-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-	FX3U-232ADP	9-pin D-sub
FX3S series	FX3G-232-BD	-	9-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP	
FX3G series	FX3G-232-BD	-	9-pin D-sub
	FX3G-CNV-BD	FX3U-232ADP	
FX3GC series	-	FX3U-232ADP	9-pin D-sub
FX3GE series	FX3G-232-BD	FX3U-232ADP	9-pin D-sub
FX2N series	FX2N-232-BD	-	9-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX2NC-232ADP	9-pin D-sub
FX1S, FX1N series	FX1N-232-BD	-	9-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

*2 The following shows connection types that can be used with GT01-C30R2-25P.

Model	Function extension board	Special adapter	Connector for the personal computer
FX3U series, FX3UC series (FX3UC-□□-LT)	FX3U-232-BD	-	25-pin D-sub
	FX3U-232-BD, FX3U-485-BD, FX3U-422-BD, FX3U-USB-BD, FX3U-CNV-BD	FX3U-232ADP	
FX3UC series (FX3UC-□□/D, FX3UC-□□/DSS)	-	FX3U-232ADP	25-pin D-sub
FX3S series	FX3G-232-BD	-	25-pin D-sub
	-	FX3S-CNV-ADP + FX3U-232ADP	
FX3G series	FX3G-232-BD	-	25-pin D-sub
	FX3G-CNV-BD	FX3U-232ADP	
FX3GC series	-	FX3U-232ADP	25-pin D-sub
FX3GE series	FX3G-232-BD	FX3U-232ADP	25-pin D-sub
FX2N series	FX2N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX2N-232-BD	-	25-pin D-sub
	FX2N-CNV-BD	FX2NC-232ADP	
FX1NC, FX2NC series	-	FX0N-232ADP	9-pin D-sub
	-	FX2NC-232ADP	25-pin D-sub
FX1S, FX1N series	FX1N-CNV-BD	FX0N-232ADP	9-pin D-sub
	FX1N-232-BD	-	25-pin D-sub
	FX1N-CNV-BD	FX2NC-232ADP	

(c) **When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.**

The following cables can be used when the built-in USB port of the FX3G or FX3GC or FX3GE or FX3S series is used for connection.

USB cable
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

For other USB cables that can be used with FXCPU, refer to the following.

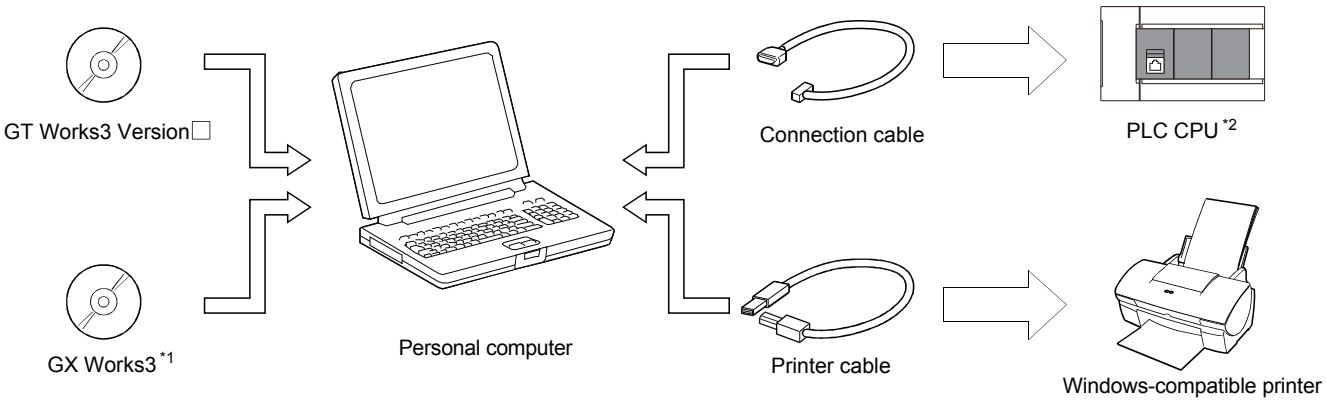
➟FX3U SERIES HARDWARE MANUAL

For the precautions on converters and cables, refer to the following.

➟3.3.3 ■2 When connecting GT Simulator3 with a PLC CPU

■6 Connecting with MELSEC iQ-F

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Works3, refer to the following.

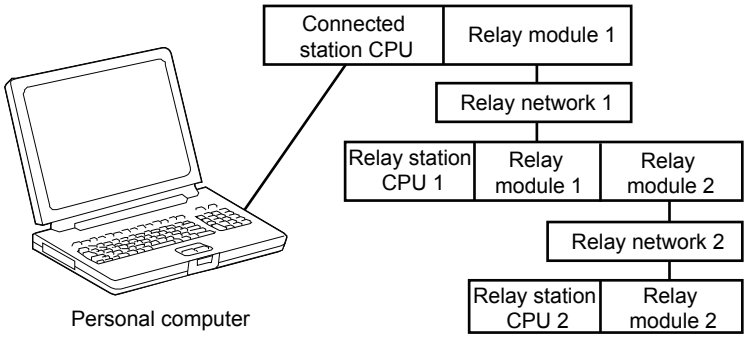
➟GX Works3 Installation Instructions

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 Monitoring-supported Controllers

(1) Access range

The following shows the access range for the direct CPU connection (serial) in the following configuration.



(2) Single network (connection with MELSEC iQ-F)

○: Accessible, -: Inaccessible

Connected station	Relay station								
FX5CPU	Relay network 1	Relay CPU							
		RCPU	LHCPU	LCPU	QnCPU	QSCPU	QCPU (A mode)	QnACPU, MELDAS C6*	ACPU	FX5CPU
○	CC IE Field	-	-	-	-	-	-	-	-	○*1

*1 Use an intelligent function module (FX5-CCLIEF) as an intelligent device station to connect to the CC-Link IE Field Network.

(3) Multiple networks (connection with MELSEC iQ-F)

For the direct CPU connection (serial), the CPUs on relay network 2 are inaccessible.

(4) Connection cable

The following shows the converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(5) When using an RS-232 cable manufactured by Mitsubishi Electric Corporation

The following cable is usable to connect the function extension board or special adapter of MELSEC iQ-F.

RS-232 cable*1
GT01-C30R2-9S (Mitsubishi Electric Corporation)

*1 The following shows connection types that can be used with GT01-C30R2-9S.

Model	Function extension board	Special adapter	Connector for personal computer
FX5U FX5UJ	FX5-232-BD	-	9-pin D-sub
FX5U FX5UC FX5UJ	-	FX5-232ADP	9-pin D-sub

For the precautions on converters and cables, refer to the following.

➟3.3.3 ■2 When connecting GT Simulator3 with a PLC CPU

(6) When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.

The following cables can be used when the built-in USB port of FX5UJ is used for connection.

USB cable
Personal computer side: USB TYPE-A Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(7) When using a USB cable manufactured by SANWA SUPPLY INC.

The following cables can be used when the built-in USB port of FX5UJ is used for connection.

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B   KU-AMB530 (3 m) or KU-AMB550 (5 m)

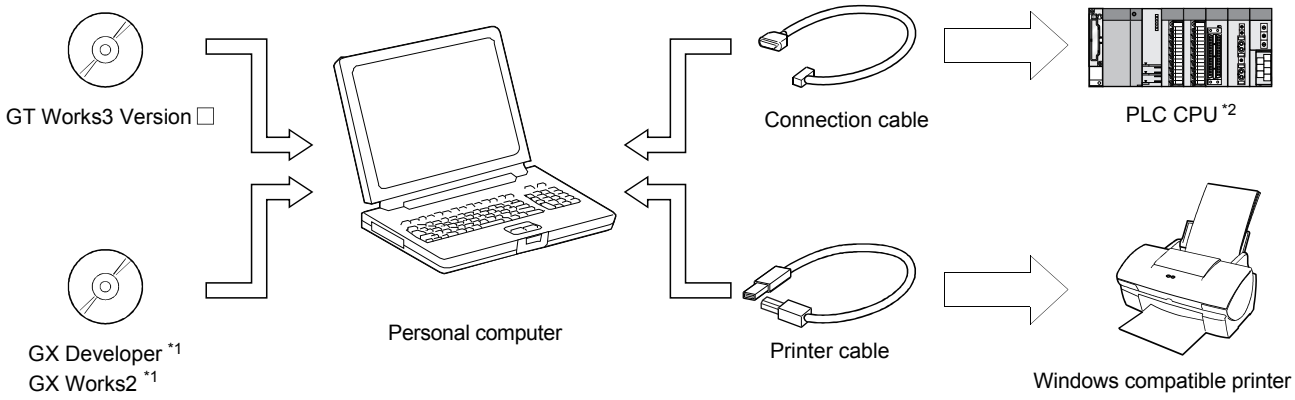
(8) When using a USB adapter manufactured by ELECOM CO., LTD.

The following cables can be used when the built-in USB port of FX5UJ is used for connection.

USB cable/USB conversion adapter
Personal computer side: USB TYPE-A　　Controller side: USB Mini-B   USB2-30 (3 m) + AD-USBBFTM5M

■7 Connecting with the MELSECNET/H remote I/O station

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



*1 For how to install GX Developer, GX Simulator, or GX Simulator2, refer to the following.

➟GX Developer Version□ Operating Manual (Startup)
GX Works2 Installation Procedure Manual

*2 For the PLCs that can be monitored by GT Simulator3, refer to the following.

➟3.1.2 ■2 Mitsubishi Electric products

(1) Connection cable

The following shows converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) When using an RS-232 cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.

RS-232 cable
Personal computer side: 9-pin D-sub connector　　Controller side: MINI-DIN6-pin   GT01-C30R2-6P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

■8 Connecting with CC-Link IE Field Network head unit

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Connection cable

The following shows converters and cables whose operations have been validated by Mitsubishi Electric Corporation.

(a) **When using a USB cable manufactured by Mitsubishi Electric Corporation or Mitsubishi Electric System & Service Co., Ltd.**

USB cable
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   MR-J3USBCBL3M (3 m) (Mitsubishi Electric Corporation)
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   GT09-C30USB-5P (3 m) (Mitsubishi Electric System & Service Co., Ltd.)

(b) **When using a USB cable manufactured by ELECOM CO., LTD.**

USB cable
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   USB-M53 (3 m)

(c) **When using a USB cable manufactured by LOAS CO., LTD.**

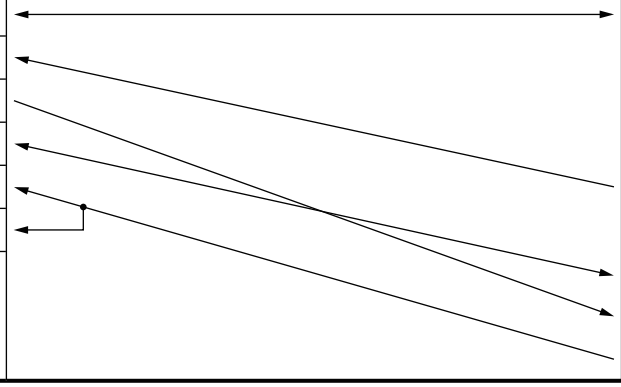
USB cable
Personal computer side: USB TYPE-A　Controller side: USB Mini-B   ZUM-430 (3 m)

■9 Connecting with MELDAS C6/C64

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The conversion cable to connect GT Simulator3 and MELDAS C6/C64 must be configured by the user.
The following shows the connection diagram and specifications of the connector.

(1) Connection diagram

Personal computer (GT Simulator3) side	Cable connection and signal direction	MELDAS C6/C64 (TERMINAL) side	
Signal name		Pin No.	Signal name
GND		1	GND
RD (RXD)		-	
SD (TXD)		-	
GND		-	
DR (DSR)		6	SD (TXD)
CS (CTS)		-	
		11	GND
		16	RD (RXD)
		18	ER (DTR)

(2) Specifications of the connector

(a) **Connector for the personal computer**
Use a connector applicable to the personal computer.

(b) **Connector for MELDAS C6/C64**
Use a connector applicable to MELDAS C6/C64.
For details, refer to the following manuals.

➟Manual of MELDAS C6/C64

(c) **Precautions for configuring a cable**
The length of the conversion cable must be 15 m or shorter.

3.2.3 Connecting with non-Mitsubishi Electric products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Connecting with OMRON PLCs

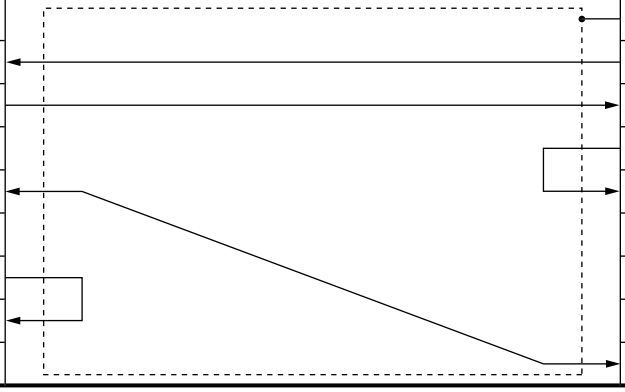
(1) When using an RS-232 cable manufactured by Mitsubishi Electric System & Service Co., Ltd.

RS-232 cable
GT09-C30R20101-9P (For the 9-pin D-sub connector for the personal computer)

(2) When configuring an RS-232 cable

The following shows the connection diagram and specifications of the connector.

(a) **Connection diagram**

Personal computer (GT Simulator3) side	Cable connection and signal direction	OMRON-PLC side	
Signal name		Pin No.	Signal name
CD		1	FG
RD (RXD)		2	SD
SD (TXD)		3	RD
ER (DTR)		4	RS
SG		5	CS
DR (DSR)		6	-
RS (RTS)		7	FR
CS (CTS)		8	ER
-		9	SG

(b) **Specifications of the connector**

- Connector for the personal computer

  Use a connector applicable to the personal computer.
- Connector for OMRON PLC

  Use a connector applicable to the OMRON PLC.

  For details, refer to the following manuals.

  ➟Manual of the OMRON PLC

(c) **Precautions for configuring a cable**

The length of the RS-232 cable must be 15 m or shorter.

3.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡3.3.1 Precautions for using GT Simulator3
3.3.2 Precautions for connecting with the controller simulators
3.3.3 Precautions for connecting with PLC CPU
3.3.4 Version of the project data to be simulated

3.3.1 Precautions for using GT Simulator3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Display of GT Simulator3 and the GOT

The display of GT Simulator3 may differ from the display of the GOT.
Check the actual display of the GOT.

■2 Numerical display

If an invalid numerical value is stored when [Real] is selected for [Display Format] of [Numerical Display], the invalid numerical value is displayed in GT Simulator3. ([non] is displayed on the GOT.)

■3 Clock display

The clock display at simulation by GT Simulator3 depends on the clock data of the personal computer. (The GOT reads the clock data of the PLC CPU to use it.)
The setting [Automatically adjust clock for daylight saving changes] in the personal computer is not applicable. Do not enable [Automatically adjust clock for daylight saving changes].

■4 Hard copy function

The following functions do not support simulation.

- [Invert]
- [Writing Notification Device]
- [Writing Error Notification Device]
- [Take a hard copy of a screen other than the displayed monitor screen]
- Output to a PDF file

The system information about the hard copy function cannot be simulated.

■5 Printer output

(1) Printer output

The data cannot be output directly by the report function or hard copy function.
Data will be output to a file (TXT, CSV, or BMP format) on the hard disk of the personal computer.
Output the file to a printer.

➡3.3.1 3.3.1 Precautions for using GT Simulator3

(2) When creating a table with the report function

Create a table as shown in example 1.
If a table is created as shown in example 2, the table will appear incorrectly in the output CSV file.

Example 1) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

➡

CSV file table

	A	B
X	1	2
Y	3	4

Example 2) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

➡

CSV file table

A	B	
X	1	2
Y	3	4

(3) When outputting the characters specified with a text print object by using the report function

Store characters in the specified devices according to the setting of [Display in order of High -> Low].
If the characters are not stored in the specified byte order, the characters are displayed incorrectly in the output CSV file.

➟8.32.5 [Text Print] dialog

(4) When using a project where the output trigger is set to turn on frequently

Make sure that your personal computer has enough free hard disk space, and delete the output files as necessary.
The output files will not be deleted automatically even upon exit from GT Simulator3.

(5) When opening an output file on the personal computer

If you open an output TXT file by using a text editor such as WordPad or Notepad, character spacing may be misaligned on display.
If the character spacing is misaligned, adjust the character font or font size.

(6) System alarm when the hard copy is executed

GT21 and GS21 do not support the system alarm function.
The system alarm is not displayed when the hard copy is executed.
For the troubleshooting for the hard copy, refer to the following.

➟3.8.2 Troubleshooting for saving files

■6 Sound output

(1) Inapplicable simulator

The GT21 and GS21 simulators do not support the sound output function.

(2) Personal computer conditions

The sound output function is executed with the sound function (sound card) or speaker of the personal computer.
If the personal computer to be used cannot output sound, the sound output function is unavailable.

(3) Unmuting of GT Simulator3 at its startup

If you mute GT Simulator3 in Windows sound settings, GT Simulator3 is automatically unmuted at its startup.
However, if you mute all sounds on Windows, GT Simulator3 remains mute.

■7 Connecting with FXCPU

When setting an odd value of [Counter (current value)(C)] (16 bits) for the start device in the recipe function, use C199 or earlier.

■8 When the project data has multi-channel

Only channel 1 can be simulated.
The other channels are ignored.
To monitor a device of other than channel 1, select [Search/Replace] → [Batch Edit] → [CHNo.] from the menu and set channel 1 for the debug target channel in GT Designer3.
Example) When channel 1 and 2 are used and channel 2 is to be simulated

Step 1 Change channel 1 to channel 3 in a batch.
Step 2 Change channel 2 to channel 1 in a batch.

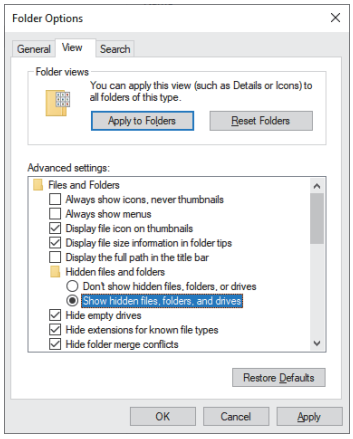
For the batch edit of the channels, refer to the following.

➟11.8.4 Changing the set values in a batch (Batch Edit)

■9 Showing hidden folders

The following folders are hidden folders.
Users\(user name)\AppData\Local

To display the hidden folders, configure the setting in Windows.



■10 Recipe information

Not available to GT21 and GS21.
Clicking a special function switch to which [Recipe Information] is set displays the recipe operation window, regardless of the setting of [Enable recipe file operation on the monitor] in the [Recipe Common Setting] dialog.
To display the recipe information, click the [Recipe Information] button in the simulation utility.

■11 Solutions when forgetting the administrator password for the operator authentication

Delete the operator management information file (AUTHINF.G2U) and register all operator management information again.
You can delete the operator management information file in the following procedure.

Step 1 Select [Delete operator information when starting] on the [Action setup] tab in the [Option] dialog.

Step 2 Start GT Simulator3.
The operator information file (AUTHINF.G2U) is deleted once, and a new file is created.

■12 Virtual drive V

To store image files in drive V and use them for parts displays, satisfy all the following conditions.

- Store the image files directly under drive V using the FTP server function that can run on Windows.
- Use IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg only for the file name and extension.
- Limit the total file size to less than 6 MB.
- Do not store any file other than IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg.

The files in drive V are deleted when a simulation is started, refreshed, or ended.
For details on parts displays, refer to the following.

➟8.8 Placing a Parts Display

■13 Screen save function

The screen is displayed in screen save mode even when GT Simulator3 is performing a simulation.
When Forced Screen Saver Enable signal (System signal 1-1.b1) is turned on, the GOT enters screen save mode and key input is disabled.
When Forced Screen Saver Enable signal (System signal 1-1.b1) is turned off, key input is enabled.
If you perform input operation with the mouse or keyboard or others in screen save mode, the first input will cancel the mode.
For the details of the system signal, refer to the following.

➟5.2.5 ■1 (1) System signal 1-1

The automatic screen saver function is not available.

3.3.2 Precautions for connecting with the controller simulators

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 When starting GX Simulator from GT Simulator3

While GT Simulator3 is monitoring GX Simulator, GX Simulator cannot be started from GX Developer.
After exiting GT Simulator3, start GX Simulator from GX Developer again.

■2 When starting the controller simulator from GX Developer or others

(1) Using the activated controller simulator

When a controller simulator has been started from GX Developer or others, GT Simulator3 connects to the activated controller simulator.

(2) Starting the controller simulator in advance

GX Simluator2 is not started automatically at the simulation of GT Simulator3.
Start GX Simluator2 from GX Works2 in advance.
GX Simulator and MT Simlator2 are started automatically at the simulation of GT Simulator3.
Starting them from GX Developer or MT Developer2 in advance is not required.

(3) Exiting GX Simulator

After exiting GT Simulator3, exit GX Simulator.
If you exit GX Simulator before GT Simulator3, a communication error occurs in GT Simulator3.

■3 When using MT Simulator2

GT Simulator3 monitors MT Simulator2 as one of the PLC CPUs of GX Simulator2.
To monitor MT Simulator2, also start GX Simulator2.

■4 When simulating the project data that has the setting of a non-Mitsubishi Electric PLC

(1) When simulating project data using [Default] in [GX Simulator setting]

When the CPU type in [Option] is set to [MELSEC-A] in GT Simulator3, the data can be simulated in the device range of A4UCPU.

➟3.6.1 Setting options

For the device range in which the data can be simulated, refer to the following.

➟3.1.3 Available devices for monitoring

(2) When simulating project data using [Specify a GX Developer project] in [GX Simulator setting]

Specify a GX Developer project whose PLC series is [ACPU].
When the CPU type in [Option] is set to [MELSEC-A] in GT Simulator3, the data can be simulated in the device range of ACPU (specified PLC type).

➟3.6.1 Setting options

For the device range in which the data can be simulated, refer to the following.

➟3.1.3 Available devices for monitoring

■5 When simulating project data whose PLC type is [LCPU] in GX Simulator

When the CPU type in [Option] is set to [MELSEC-Q] in GT Simulator3, the data can be simulated in the device range of Q26UDHCPU.

➟3.6.1 Setting options

For the device range in which the data can be simulated, refer to the following.

➟3.1.3 Available devices for monitoring

■6 When simulating project data whose PLC type is [FX3UC]

When [GX Simulator setting] is [Option] in GT Simulator3 is set to [Specify a GX Developer project], the GX Developer project whose PLC type is [FX3UC] cannot be simulated.
Set [GX Simulator setting] in [Option] in GT Simulator3 to [Default], and simulate the project in the device range of the FX2N series.

➟3.6.1 Setting options

■7 When simulating the buffer memory

The buffer memory can be simulated by setting [GX Simulator setting] in [Option] to [Specify a GX Developer project] in GT Simulator3 and specifying the GX Developer project to which I/O has been assigned.

➡3.6.1 Setting options

If [GX Simulator setting] in [Option] in GT Simulator3 is set to [Default], the buffer memory cannot be simulated because I/O has not been assigned.

■8 When simulating a project having the MELSEC redundant setting

GX Simulator does not support the simulation of the project having the MELSEC redundant setting.
To simulate such a project, establish a physical connection with a target CPU in the redundant system instead of GX Simulator.
Otherwise, system alarm occurs and the project is simulated incorrectly.

■9 When accessing a servo amplifier simultaneously with a GOT or software application

Do not monitor or write a device value to a servo amplifier simultaneously from a GOT, GT Simulator3, GT SoftGOT2000, and other MELSOFT applications (such as MR Configurator2).
Doing so may cause the incorrect display of parameters and others on the GOT and software applications, or a servo amplifier malfunction.

3.3.3 Precautions for connecting with PLC CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 When connecting GT Simulator3 with the function extension board of FXCPU

When connecting GT Simulator3 with the function extension board of FXCPU, configure the setting in GX Developer as follows.

Step 1 Disable [Operate communication setting] in the [PLC system(2)] tab of [PLC parameter].

Step 2 Set 0 in the special register (D8120) of FXCPU.

■2 When connecting GT Simulator3 with a PLC CPU

When connecting GT Simulator3 with a PLC CPU, note the following.

(1) Specifications and precautions for converters and cables

For the specifications and precautions for converters and cables, refer to the following.

➟Manual of each product

(2) When connecting or disconnecting the converter or cable that receives a 5 V DC power

Turn off the power on the PLC side, and then connect or disconnect the converter or cable that receives a 5 V DC power from the PLC side.

(3) When connecting or disconnecting the converter or cable that does not receive a 5 V DC power

Use the following procedure to connect or disconnect the converter or cable that receives an external power instead of the 5 V DC power from the PLC side.

Step 1 Touch an earth band or grounded metal to discharge static electricity of the cable and human body before operation.

Step 2 Turn off the personal computer.

Step 3 Turn off the converter.
Ground the FG terminal if provided.

Step 4 Connect or disconnect the converter or cable between the personal computer and the PLC.

Step 5 Turn on the converter.

Step 6 Turn on the personal computer.

Step 7 Start the software package.

3.3.4 Version of the project data to be simulated

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use GT Simulator3 of the same version as that of GT Designer3.
When using project data created in GT Designer3 of the version earlier than that of GT Simulator3, open the project data in GT Designer3 of the version same as that of GT Simulator3, and then save the data.

3.4 Simulation Procedure

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟3.4.1 Simulating the project being edited
3.4.2 Simulating a saved project

3.4.1 Simulating the project being edited

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Simulate the project data being edited in GT Designer3.

➟■1 Connecting the controller simulator with GT Simulator3
■2 Connecting a PLC CPU with GT Simulator3

Simulators for different series can be used simultaneously.
However, simulators for the following series combinations cannot be used simultaneously.

- GOT2000 series and GOT SIMPLE series
- GOT1000 series and GOT-A900 series

■1 Connecting the controller simulator with GT Simulator3

Step 1 Start the controller simulator by the following operations.

- When using GX Simulator
  GX Simulator is started automatically at the simulation of GT Simulator3.
  Starting GX Simulator in advance is not required.
  GT Simulator3 connects to GX Simulator which has been started from GX Developer.
  For the details of GX Simulator, refer to the following.
  ➟GX Developer Version□ Operating Manual (Startup)
- When using GX Simulator2
  Open project data on GX Works2, and start GX Simulator2.
  For the details of GX Simulator2, refer to the following.
  ➟GX Works2 Version□ Operating Manual (Common)
- When using GX Simulator3
  Open project data on GX Works3, and start GX Simulator3.
  For the details of GX Simulator3, refer to the following.
  ➟GX Works3 Operating Manual
- When using MT Simulator2
  Start GX Simulator2 in advance.
  Open project data on GX Works2, and start GX Simulator2.
  MT Simulator2 is started automatically at the simulation of GT Simulator3.
  Starting MT Simulator2 in advance is not required.
  For the details of MT Simulator2, refer to the following.
  ➟MT Developer2 Help
  3.3.2 Precautions for connecting with the controller simulators

Step 2 Select [Tools] → [Simulator] → [Set] from the menu in GT Designer3.
The [Option] dialog appears in GT Simulator3.
Configure the option settings in GT Simulator3.*1
Some items cannot be set by this operation.
➟3.6.1 Setting options

*1 To simulate the project data that was simulated last time, select [Simulate] → [Start] from the menu.
For details, refer to the following.
➟3.6.3 Starting or exiting simulation

Step 3 Select [Tools] → [Simulator] → [Activate] from the menu in GT Designer3.
The simulation in GT Simulator3 starts.
When GT Simulator3 is in operation, simulation cannot be started in GT Designer3.

Step 4 Debug the project in GT Simulator3.
➟3.6.5 Operations of the screen for simulation

Step 5 Update the project data in GT Designer3, and then check the update in GT Simulator3.

Check the update in GT Simulator3.

➟3.6.4 Updating the project to be simulated

Step 6 Select [Tools] → [Simulator] → [Exit] from the menu in GT Designer3.

GT Simulator3 exits.

➟3.6.6 Exiting GT Simulator3

■2 Connecting a PLC CPU with GT Simulator3

Step 1 Connect a PLC CPU with the personal computer.

➟3.1.2 Monitoring-supported Controllers

Step 2 Set the option of GT Simulator3*1.

Select [Tools] → [Simulator] → [Set] from the menu in GT Designer3.
The [Option] dialog appears in GT Simulator3.

Configure the option settings in GT Simulator3. *1
Some items cannot be set by this operation.

➟3.6.1 Setting options

*1 To simulate the project data that was simulated last time, select [Simulate] → [Start] from the menu.
For details, refer to the following.

➟3.6.3 Starting or exiting simulation

Step 3 Power on the PLC CPU.

Step 4 Select [Tools] → [Simulator] → [Activate] from the menu in GT Designer3.

The simulation in GT Simulator3 starts.
When GT Simulator3 is in operation, simulation cannot be started in GT Designer3.

Step 5 Debug the project in GT Simulator3.

➟3.6.5 Operations of the screen for simulation

Step 6 Update the project data in GT Designer3, and then check the update in GT Simulator3.

➟3.6.4 Updating the project to be simulated

Step 7 Select [Tools] → [Simulator] → [Exit] from the menu in GT Designer3.

GT Simulator3 exits.

➟3.6.6 Exiting GT Simulator3

Point

(1) **When [Connection] is set to [RS232] or [USB]**

The setting of [Connection] is not retained after GT Designer3 is exited.
When you newly start GT Designer3, set [Connection] according to the connection type.

(2) **When the controller setting is changed on GT Designer3**

The setting of [Connection] is automatically switched to the default one that corresponds to the new controller setting.
Change the setting of [Connection] according to the connection type as necessary.

3.4.2 Simulating a saved project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Simulate the saved project data.

➟■1 Connecting the controller simulator with GT Simulator3
■2 Connecting a PLC CPU with GT Simulator3

Simulators for different series can be used simultaneously.
However, simulators for the following series combinations cannot be used simultaneously.

- GOT2000 series and GOT SIMPLE series
- GOT1000 series and GOT-A900 seri

■1 Connecting the controller simulator with GT Simulator3

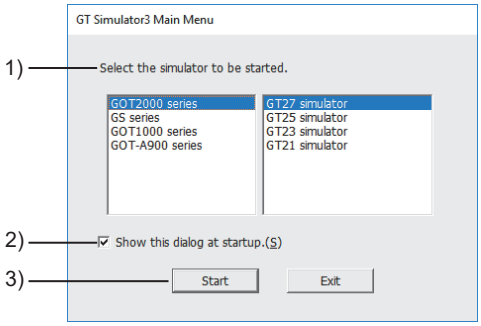
Step 1 Start the controller simulator by the following operations.

- When using GX Simulator
  GX Simulator is started automatically at the simulation of GT Simulator3.
  Starting GX Simulator in advance is not required.
  GT Simulator3 connects to GX Simulator which has been started from GX Developer.
  For the details of GX Simulator, refer to the following.
  ➟GX Developer Version□ Operating Manual (Startup)
- When using GX Simulator2
  Open project data on GX Works2, and start GX Simulator2.
  For the details of GX Simulator2, refer to the following.
  ➟GX Works2 Version□ Operating Manual (Common)
- When using GX Simulator3
  Open project data on GX Works3, and start GX Simulator3.
  For the details of GX Simulator3, refer to the following.
  ➟GX Works3 Operating Manual
- When using MT Simulator2
  Start GX Simulator2 in advance.
  Open project data on GX Works2, and start GX Simulator2.
  MT Simulator2 is started automatically at the simulation of GT Simulator3.
  Starting MT Simulator2 in advance is not required.
  For the details of MT Simulator2, refer to the following.
  ➟MT Developer2 Help
  3.3.2 Precautions for connecting with the controller simulators

Step 2 From the Windows start menu*1, select [MELSOFT]*2 → [GT Works3] → [GT Simulator3] to start GT Simulator3.

*1 Select [All Programs] on the [Start] screen, or select [Start] → [All Programs].
*2 [MELSOFT Application] appears for a version of GT Works3 earlier than 1.136S.

Step 3 The [GT Simulator3 Main Menu] dialog appears.
Configure the following settings, and click the [Activate] button.



1) **[Select the simulator to be started]**
Select the simulator to be started.
The following shows the items to be selected.

• When [GOT2000 series] is selected
[GT27 Simulator]
[GT25 Simulator]
[GT23 Simulator]
[GT21 Simulator]
• When [GS series] is selected
[GS25 Simulator]
[GS21 Simulator]
• When [GOT1000 series] is selected
[GT16 Simulator]
[GT15 Simulator]
[GT14 Simulator]
[GT12 Simulator]
[GT11 Simulator]
[GT10 Simulator]
• When [GOT-A900 series] is selected
[A900 Simulator]
When [GOT1000 series] or [GOT-A900 series] is selected for simulating the project data, refer to the following.

➟GT Simulator3 Version1 Operating Manual for GT Works3

2) **[Show this dialog at startup]**
Select whether to display [GT Simulator3 Main Menu] dialog at next startup.
This setting can be configured from the option as well.

➟3.6.1 ■3 [Environmental Setting] tab

3) **[Activate] button**
Activates GT Simulator3.

Step 4 Configure the option settings in GT Simulator3.*1

➟3.6.1 Setting options

*1 To simulate the project data that was simulated last time, select [Simulate] → [Start] from the menu.
For details, refer to the following.

➟3.6.3 Starting or exiting simulation

Step 5 Open the project data, and start a simulation.

➟3.6.2 Opening a project
3.6.3 Starting or exiting simulation

Step 6 Exit GT Simulator3 after the simulation.

➟3.6.6 Exiting GT Simulator3

■2 Connecting a PLC CPU with GT Simulator3

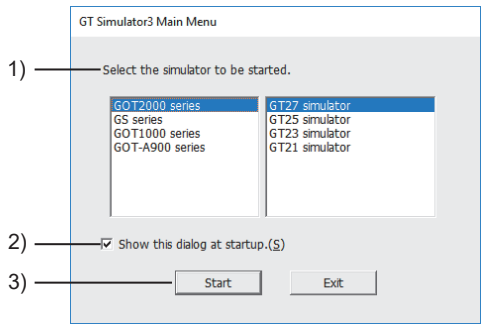
Step 1 Connect a PLC CPU with the personal computer.

➟3.1.2 Monitoring-supported Controllers

Step 2 From the Windows start menu*1, select [MELSOFT]*2 → [GT Works3] → [GT Simulator3] to start GT Simulator3.

*1 Select [All Programs] on the [Start] screen, or select [Start] → [All Programs].
*2 [MELSOFT Application] appears for a version of GT Works3 earlier than 1.136S.

Step 3 The [GT Simulator3 Main Menu] dialog appears.
Configure the following settings, and click the [Activate] button.



1) **[Select the simulator to be started]**

Select the simulator to be started.

The following shows the items to be selected.

- When [GOT2000 series] is selected

  [GT27 Simulator]
  [GT25 Simulator]
  [GT23 Simulator]
  [GT21 Simulator]

- When [GS series] is selected

  [GS25 Simulator]
  [GS21 Simulator]

- When [GOT1000 series] is selected

  [GT16 Simulator]
  [GT15 Simulator]
  [GT14 Simulator]
  [GT12 Simulator]
  [GT11 Simulator]
  [GT10 Simulator]

- When [GOT-A900 series] is selected

  [A900 Simulator]

When [GOT1000 series] or [GOT-A900 series] is selected for simulating the project data, refer to the following.

➟GT Simulator3 Version1 Operating Manual for GT Works3

2) **[Show this dialog at startup]**

Select whether to display [GT Simulator3 Main Menu] dialog at next startup.

This setting can be configured from the option as well.

➟3.6.1 ■3 [Environmental Setting] tab

3) **[Activate] button**

Activates GT Simulator3.

Step 4 Configure the option settings in GT Simulator3.*1

➟3.6.1 Setting options

*1 To simulate the project data that was simulated last time, select [Simulate] → [Start] from the menu. For details, refer to the following.

➟3.6.3 Starting or exiting simulation

Step 5 Power on the PLC CPU.

Step 6 Open the project data, and start a simulation.

➟3.6.2 Opening a project
3.6.3 Starting or exiting simulation

Step 7 Exit GT Simulator3 after the simulation.

➟3.6.6 Exiting GT Simulator3

Point

When [Connection] is set to [RS232] or [USB]

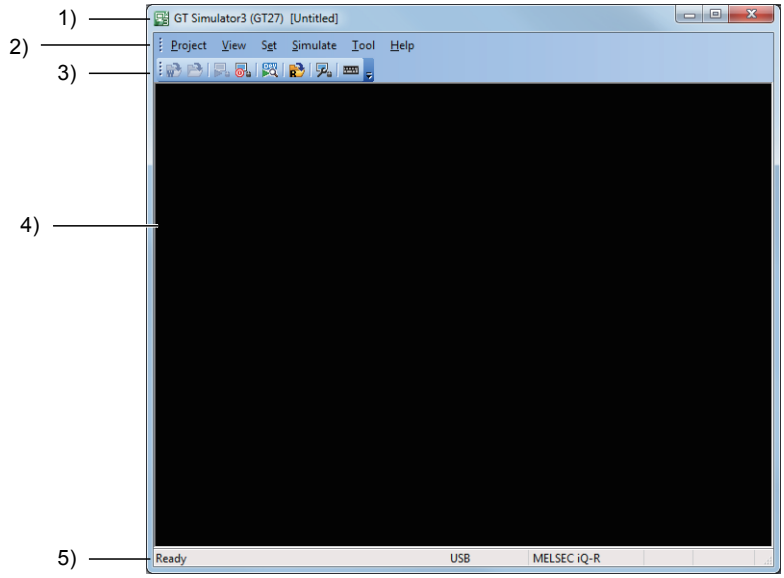
When you newly start GT Designer3, [Connection] is set to [GX Simulator2] automatically.

Change the setting of [Connection] according to the connection type as necessary.

3.5 Screen Layout of GT Simulator3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section describes the screen layout of GT Simulator3.



1) **Title bar**
Displays the software name and the project name.

2) **Menu bar**
GT Simulator3 can be operated from pull-down menus.
➟3.5.1 Menus

3) **Toolbar**
GT Simulator3 can be operated by buttons.
➟3.5.2 Toolbar

4) **Screen for simulation**
The simulation contents are displayed on this screen.

5) **Status bar**
The GT Simulator3 status is displayed.
➟3.5.4 Status bar

3.5.1 Menus

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the configurations of the menu bar.

➟■1 [Project]
■2 [Display]
■3 [Set]
■4 [Simulate]
■5 [Tools]
■6 [Help]

■1 [Project]

Menu		Description	Shortcut key
[Open]	[Project]	Reads workspace format projects. ➟3.4.2 Simulating a saved project	Ctrl + O
	[File]	Reads single file format projects. ➟3.4.2 Simulating a saved project	Ctrl + E
[Snap Shot]		Saves a screen as a file. (BMP format and JPEG format) ➟3.7.1 Taking snap shots	Ctrl + H
[Printer Settings]		Set a printer. ➟3.7.2 ■4 Configuring the printer setting	-
[Page Settings]		Adjusts the page layout for printing. ➟3.7.2 ■3 Page setting	-
[Print Preview]		Displays a print preview. ➟3.7.2 ■2 Previewing print image	-
[Print]		Outputs the contents of the settings of the project into a file. ➟3.7.2 ■1 Printing	Ctrl + P
[Property]		Displays the project information.	-
[End]		Exits GT Simulator3.	Alt + F4

■2 [Display]

Menu	Description	Shortcut key
[Scroll Bar]	Switches display or non-display of a scroll bar. ➟3.7.9 Displaying scroll bars	-
[Full Screen Mode]	Sets and cancels the full screen mode. ➟3.7.10 Displaying the simulation screen in full screen mode	Alt + F9

■3 [Set]

Menu	Description	Shortcut key
[Keyboard]	Enables or disables the keyboard input. ➟3.7.4 Operating the numerical input or text input with a keyboard	-

■4 [Simulate]

Menu	Description	Shortcut key
[Start]	Starts a simulation.	F3
[End]	Exits a simulation.	Alt + F3
[Option]	Displays the [Option] dialog. ➟3.6.1 Setting options	-

■5 [Tools]

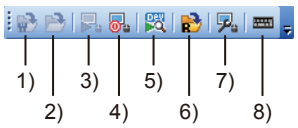
Menu	Description	Shortcut key
[Start of Device Monitor], [End of Device Monitor]	Starts or ends the device monitor. ➟3.7.5 Using the device monitor	-
[Resource Data]	Refer to resource data. ➟3.7.6 Referring to resource data	Ctrl + R
[Script Error]	Displays the script error information. ➟3.7.7 Displaying a script error	-
[Object Script Error]	Not available to GT21 and GS21. Displays the object script information. ➟3.7.8 Displaying an object script error	-

■6 [Help]

Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help. ➟0 How to Use Help	F1
[Manual List]	Lists the manuals.	-
[Connection to MITSUBISHI ELECTRIC FA Global Website]	Connects to the MITSUBISHI ELECTRIC FA Global Website.	-
[About GT Simulator3]	Check the version of GT Simulator3. ➟2.2.1 ■13 (1) [About GT Designer3] dialog	-

3.5.2 Toolbar

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

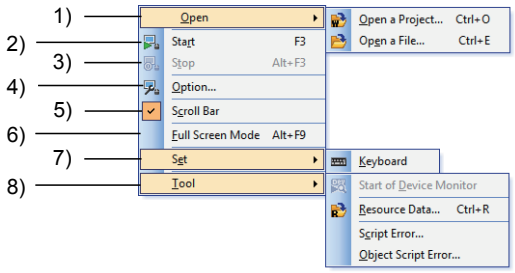


1) **[Opening a project] button**
Reads workspace format projects.
2) **[Opening a file] button**
Reads single file format projects.
3) **[Starting simulation] button**
Starts a simulation.
4) **[Exit simulation] button**
Exits a simulation.
5) **[Device Monitor] button**
Starts or ends the device monitor.
6) **[Resource Data] button**
Refer to resource data.
7) **[Option setting] button**
Displays the [Option] dialog.
8) **[Keyboard] button**
Enables or disables the keyboard input.

3.5.3 Screen for simulation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Right-click the simulate screen to display the following popup menu.



1) **[Open]**
   - [Project]
     Reads workspace format projects.
   - [File]
     Reads single file format projects.

2) **[Start]**
   Starts a simulation.

3) **[End]**
   Exits a simulation.

4) **[Option]**
   Displays the [Option] dialog.

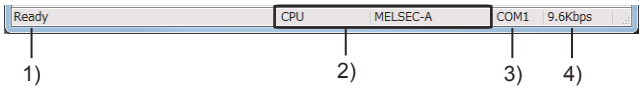
5) **[Scroll Bar]**
   Switches display or non-display of a scroll bar.

6) **[Full Screen Mode]**
   Not available to GT21 and GS21.
   Sets and cancels the full screen mode.

7) **[Set]**
   - [Keyboard]
     Enables or disables the keyboard input.

8) **[Tools]**
   - [Start of Device Monitor], [End of Device Monitor]
     Starts or ends the device monitor.
   - [Resource Data]
     Refer to resource data.
   - [Script Error]
     Displays the script error information.
   - [Object Script Error]
     Not available to GT21 and GS21.
     Displays the object script information.

3.5.4 Status bar



1) **Operation explanations**
Displays the operation explanation.

2) **How to connect the communication setting**
Displays how to connect the communication setting.

3) **Communication port of the communication setting**
Displays the communication port or the communication setting.
This item is displayed only for the direct CPU connection.

4) **Baud rate of the communication setting**
Displays the baud rate or the communication setting.
This item is displayed only for the direct CPU connection.

3.6 Basic Operations of GT Simulator3

➥3.6.1 Setting options
3.6.2 Opening a project
3.6.3 Starting or exiting simulation
3.6.4 Updating the project to be simulated
3.6.5 Operations of the screen for simulation
3.6.6 Exiting GT Simulator3

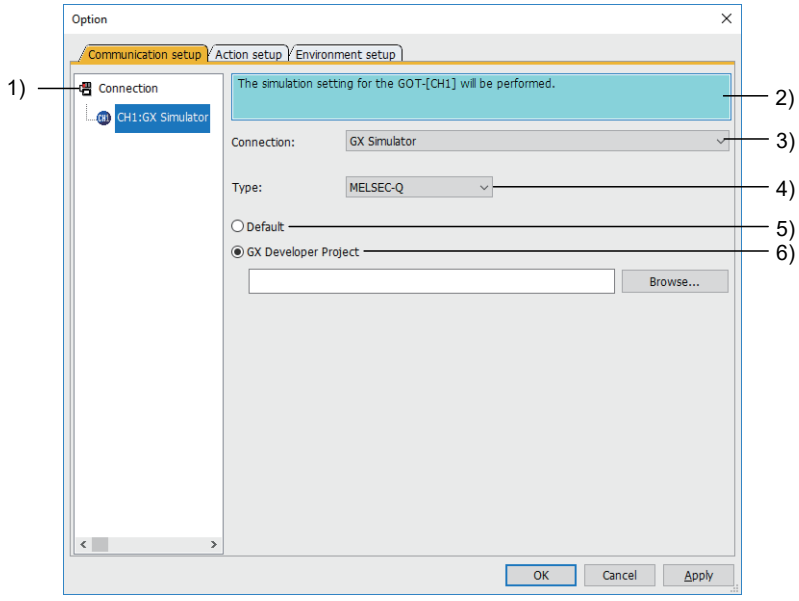
3.6.1 Setting options

➥■1 [Communication settings] tab
■2 [Action Setup] tab
■3 [Environmental Setting] tab

■1 [Communication settings] tab

➥(1) When [GX Simulator] is selected for [Connection]
(2) When [GX Simulator2] is selected for [Connection]
(3) When [GX Simulator2/MT Simulator2] is selected for [Connection]
(4) When [GX Simulator3] is selected for [Connection]
(5) When [MELSOFT Mirror] is selected for [Connection]
(6) When [RS232] is selected for [Connection]
(7) When [USB] is selected for [Connection]

(1) When [GX Simulator] is selected for [Connection]



1) **Connection configuration tree**
Displays connection methods and connection settings for each channel of the GOT.

2) **Description**
Displays a controller name to be connected to each channel of the GOT.

3) **[Connection]**
Select a connection method for each channel of the GOT.

4) **[Type]**
Select a controller type to be connected.

The following shows the items to be selected.

- [MELSEC-A]
- [MELSEC-QnA]
- [MELSEC-Q]
- [MELSEC-Q(A-Mode)]
- [MELSEC-FX]

5) **[Default]**

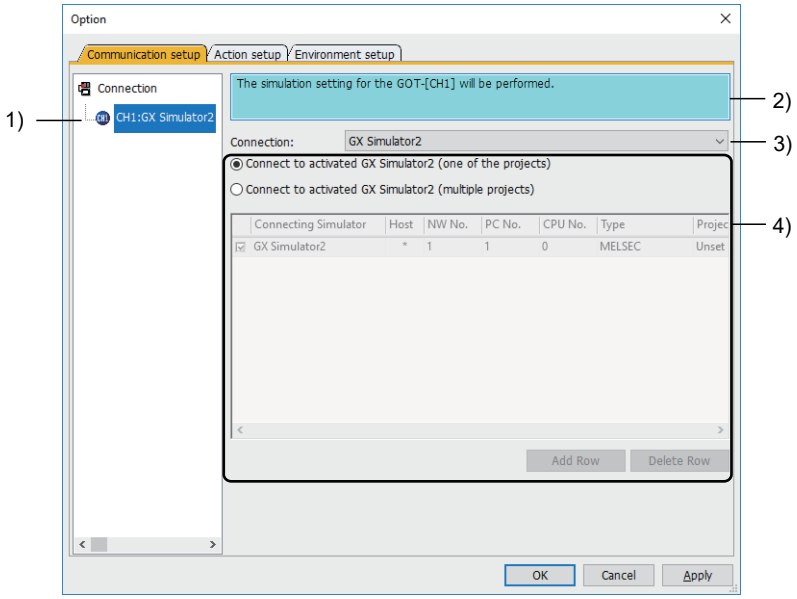
Executes a simulation with a sequence program with the END instruction only.

6) **[Specify a GX Developer project]**

Select this item to execute a simulation with any sequence program.

To specify a sequence program, click the [Browse] button to select a GX Developer project.

(2) When [GX Simulator2] is selected for [Connection]



1) **Connection configuration tree**

Displays connection methods and connection settings for each channel of the GOT.

2) **Description**

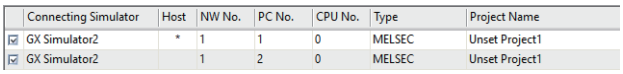
Displays a controller name to be connected to each channel of the GOT.

3) **[Connection]**

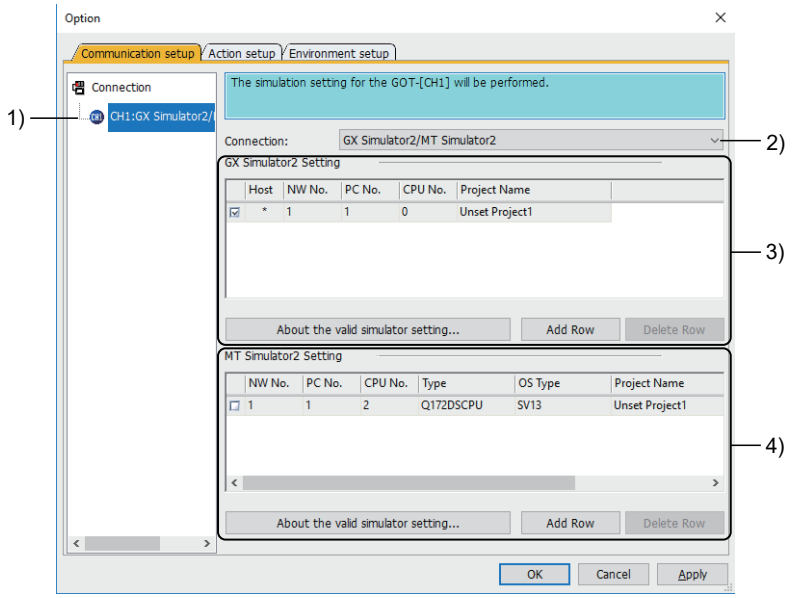
Select a connection method for each channel of the GOT.

4) **Connection setting**

Item	Description
[Connect to activated GX Simulator2 (one of the projects)]	Enables connecting to one module of GX Simulator2.
[Connect to activated GX Simulator2 (multiple projects)]	Enables connecting to multiple modules of GX Simulator2.

Item	Description
Detail setting table	When you select [Connect to activated GX Simulator2 (multiple projects)], set the controller simulator to be monitored.  Match the settings with those of [Network] of the device set in the project. When the GOT monitors the device of the host station, the device set in the project does not have the network number and station number settings. [0-FF] is set internally for the device. Set a value corresponding to the value of the host station (0-FF) to [NW No] and [PC No.] according to the system configuration of the monitoring target. When using a connection type that does not route a network such as serial connection, set [0] to [NW No.] and [255] to [PC No.]. If both of the following conditions are satisfied, no applicable station for monitoring exists. The GOT monitors the host station. • A device of other stations is set in the project. • No controller simulator on other stations is set in GT Simulator3. The following shows the setting items. • Checkbox Select corresponding checkbox to enable the setting. • [Connecting simulator] Select a simulator to be connected. • [Host] Select a simulator to be set as a host. • [NW No.] Set the network number. The setting range is [0] to [239]. • [PC No.] Set the station number. The setting range is [0] to [255]. • [CPU No.] Set a CPU No. The setting range is [0] to [4]. • [Type] Displays the controller type. • [Project Name] Set the project name for GX Simulator2. The following shows the available project formats. • Workspace format project (*.gd2) • Single file format project (*.GXW)
[Add Row] button	Adds a detail setting row in the detail setting table. Up to seven rows can be added.
[Delete Row] button	Deletes the detail setting row that is selected in the detail setting table.

(3) When [GX Simulator2/MT Simulator2] is selected for [Connection]

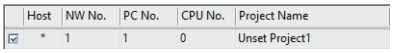


1) **Connection configuration tree**
Displays connection methods and connection settings for each channel of the GOT.

2) **[Connection]**
Select a connection method for each channel of the GOT.

3) **[GX Simulator2 Setting]**
Set the connection method for GX Simulator2.

Item	Description

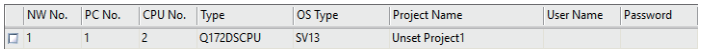
Detail setting table	
	Set the controller simulator to be monitored.
	Match the settings with those of [Network] of the device set in the project.
	When the GOT monitors the device of the host station, the device set in the project does not have the network number and station number settings. [0-FF] is set internally for the device.
	Set a value corresponding to the value of the host station (0-FF) to [NW No] and [PC No.] according to the system configuration of the monitoring target.
	When using a connection type that does not route a network such as serial connection, set [0] to [NW No.] and [255] to [PC No.].
	If both of the following conditions are satisfied, no applicable station for monitoring exists. The GOT monitors the host station.
	• A device of other stations is set in the project.
	• No controller simulator on other stations is set in GT Simulator3.
	
	The following shows the setting items.
	• Checkbox Select corresponding checkbox to enable the setting.
	• [NW No.] Set the network number. The setting range is [0] to [239].
	• [PC No.] Set the station number. The setting range is [0] to [255].
	• [CPU No.] Set a CPU No. The setting range is [0] to [4].
	• [Project Name] Set the project name for GX Simulator2. The following shows the available project formats.
	  • Workspace format project (*.gd2)
	  • Single file format project (*.GXW)

[About the valid simulator setting] button	Displays the description dialog of the valid simulator setting.
[Add Row] button	Adds a detail setting row in the detail setting table. Up to four rows can be added.
[Delete Row] button	Deletes the detail setting row that is selected in the detail setting table.

4) **[MT Simulator2 Setting]**

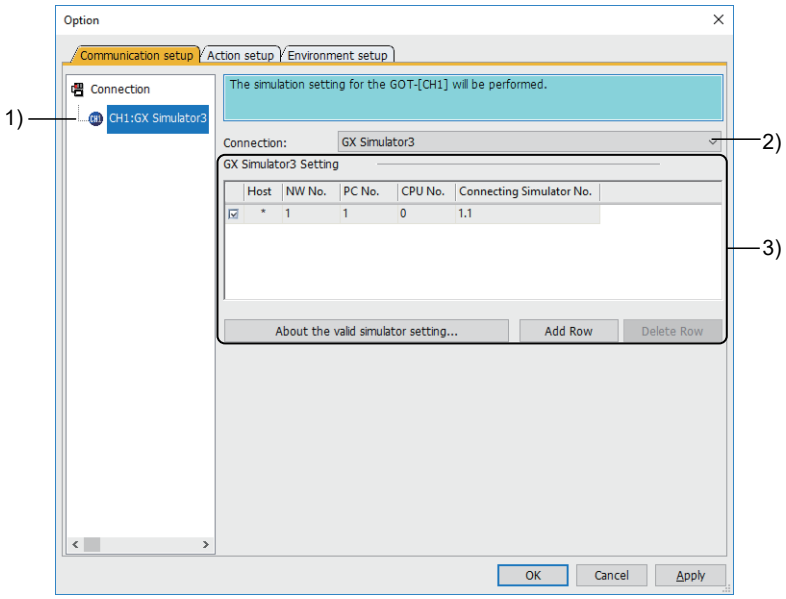
Set the connection method for MT Simulator2.

Item	Description

Detail setting table	
	Set the controller simulator to be monitored.
	Match the settings with those of [Network] of the device set in the project.
	When the GOT monitors the device of the host station, the device set in the project does not have the network number and station number settings. [0-FF] is set internally for the device.
	Set a value corresponding to the value of the host station (0-FF) to [NW No] and [PC No.] according to the system configuration of the monitoring target.
	When using a connection type that does not route a network such as serial connection, set [0] to [NW No.] and [255] to [PC No.].
	If both of the following conditions are satisfied, no applicable station for monitoring exists. The GOT monitors the host station.
	• A device of other stations is set in the project.
	• No controller simulator on other stations is set in GT Simulator3.
	
	The following shows the setting items.
	• Checkbox Select corresponding checkbox to enable the setting.
	• [NW No.] Set the network number. The setting range is [0] to [239].
	• [PC No.] Set the station number. The setting range is [0] to [255].
	• [CPU No.] Set a CPU No. The setting range is [2] to [4].
	• [Type] Select the model of the controller.
	• [OS Type] Select the type of the OS.
	• [Project Name] Set the project name for MT Simulator2. The following shows the available project formats.
	  • Workspace format project (*.mt2)
	  • Single file format project (*.MTW)
	• [User Name] Set the user name for the project.
	• [Password] Set the password for the project.

[About the valid simulator setting] button	Displays the description dialog of the valid simulator setting.
[Add Row] button	Adds a detail setting row in the detail setting table. Up to three rows can be added.
[Delete Row] button	Deletes the detail setting row that is selected in the detail setting table.

(4) When [GX Simulator3] is selected for [Connection]



1) **Connection configuration tree**

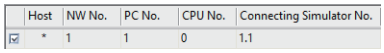
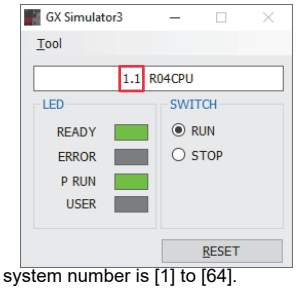
Displays connection methods and connection settings for each channel of the GOT.

2) **[Connection]**

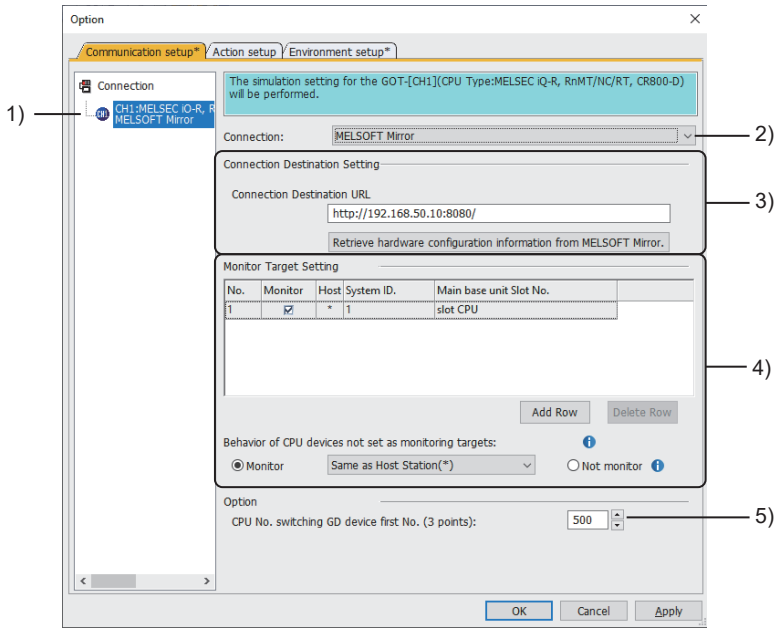
Select a connection method for each channel of the GOT.

3) **[GX Simulator3 Setting]**

Set the connection details for GX Simulator3.

Item	Description
Detail setting table	 Set the controller simulator to be monitored. Match the settings with those of [Network] of the device set in the project. When the GOT monitors the device of the host station, the device set in the project does not have the network number and station number settings. [0-FF] is set internally for the device. Set a value corresponding to the value of the host station (0-FF) to [NW No] and [PC No.] according to the system configuration of the monitoring target. When using a connection type that does not route a network such as serial connection, set [0] to [NW No.] and [255] to [PC No.]. If both of the following conditions are satisfied, no applicable station for monitoring exists. The GOT monitors the host station. • A device of other stations is set in the project. • No controller simulator on other stations is set in GT Simulator3. The following shows the setting items. • Checkbox Enables a setting. • [Host] Set a simulator as the host station. • [NW No.] Set a network number. The setting range is [0] to [239]. • [PC No.] Set a station number. The setting range is [0] to [255]. • [CPU No.] Set a CPU number. The setting range is [0] to [4]. • [Connecting Simulator No.] Set the system number and CPU number appearing on the screen of GX Simulator3. Enter the system number, the period (.), and the CPU number in the order shown on the GX Simulator3 screen. Example) On the following screen, [1.1] is applicable.  The setting range of the system number is [1] to [64]. The setting range of the CPU number is [1] to [4].
[About the valid simulator setting] button	Displays the description dialog of the valid simulator setting.
[Add Row] button	Adds a detail setting row in the detail setting table. Up to 32 rows can be added.
[Delete Row] button	Deletes a detail setting row selected in the detail setting table.

(5) When [MELSOFT Mirror] is selected for [Connection]



1) **Connection configuration tree**
Displays connection methods and connection settings for each channel of the GOT.

2) **[Connection]**
Select a connection method for each channel of the GOT.

3) **[Connection Destination Setting]**
Configure the settings for connection with MELSOFT Mirror.

Item	Description
[Connection Destination URL]	Specify the URL for connection with the MELSOFT Mirror server. Specify the URL with one-byte alphanumerics and symbols within 2083 characters.
[Retrieve hardware configuration information from MELSOFT Mirror.] button	Acquires the hardware configuration being simulated in MELSOFT Mirror. When this button is pressed, the hardware configuration information of MELSOFT Mirror is reflected in the detail setting table for [Monitor Target Setting].

4) **[Monitor Target Setting]**
Set the information on the station to be simulated.

Item	Description
Detail setting table	 • [No.] Displays the item number. • [Monitor] Select the checkbox when monitoring the network information. • [Host] An asterisk (*) is displayed for the station set as the host station (0-FF). The clicked station is set as the host station. Only one station can be set as the host station. • [System ID.] Set the system number of the system to be simulated. The setting range is [1] to [59]. • [Main base unit Slot No.] Set the slot number of the CPU module which is set to the main base unit of the system to be simulated with MELSOFT Mirror. The setting range is [slot I/O 0] to [slot I/O 6].
[Add Row] button	Adds a row to the bottom in the detail setting table. Up to 64 rows can be added.
[Delete Row] button	Deletes the row selected with the cursor in the detail setting table.

Item	Description
[Behavior of CPU devices not set as monitoring targets]	Set the behavior of CPU devices not targeted for monitoring. • [Monitor] All the CPU devices not targeted for monitoring are monitored. To monitor devices that are not targeted for monitoring, set either of the following behaviors. • [Same as Host Station] The CPU devices will be displayed in the same way as the devices of the host station(*) that are the monitoring targets. • [Display 0] Displays all CPU devices as 0. • [Not monitor] The CPU devices not targeted for monitoring are not monitored.

5) **[CPU No. switching GD device first No. (3 points)]**

Set this item when selecting [MELSEC-Q] for [Type].

Set the start device number of the GOT data registers (GD) to specify a CPU number.

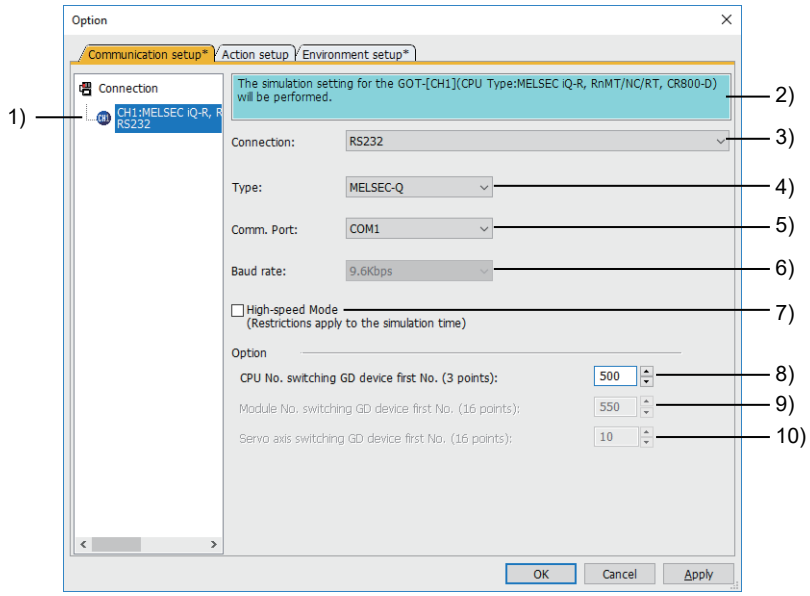
The following shows the items to be selected.

- GT27, GT25, GT23, and GS25: [0] to [65520]
- GT21 and GS21: [0] to [2032]

Specify the value of [CPU No. switching GD device first No. (3 points)] set in the [Controller Setting] window in GT Designer3.

If you set a different number on GT Simulator3, the simulation is not performed properly.

(6) When [RS232] is selected for [Connection]



1) **Connection configuration tree**

Displays connection methods and connection settings for each channel of the GOT.

2) **Description**

Displays a controller name to be connected to each channel of the GOT.

3) **[Connection]**

Select a connection method for each channel of the GOT.

4) **[Type]**

Select a PLC type to be connected.

The following shows the items to be selected.

- [MELSEC iQ-F]
- [MELSEC-A]
- [MELSEC-QnA]
- [MELSEC-Q]
- [MELSEC-Q(A-Mode)]
- [MELSEC-L]
- [MELSEC-FX]
- [MELDAS C6*]

• [OMRON SYSMAC]

5) **[Communication port]**

Select a communication port.

The setting range is [COM1] to [COM63].

6) **[Baud rate]**

Select a communication baud rate.

The following shows the items to be selected.

PLC type	Baud rate	
	In the normal mode	In the high-speed mode
[MELSEC iQ-F]	[9.6Kbps]	[9.6Kbps] [19.2Kbps] [38.4Kbps] [57.6Kbps] [115.2Kbps]
[MELSEC-Q]		
[MELSEC-Q(A-Mode)]		
[MELSEC-L]		
[MELSEC-FX]		
[MELSEC-A]	[9.6Kbps]	[9.6Kbps]
[MELSEC-QnA]	[9.6Kbps]	[9.6Kbps] [19.2Kbps] [38.4Kbps]
[MELDAS C6*]	[19.2Kbps]	[19.2Kbps]
[OMRON SYSMAC]	[9.6Kbps]	[9.6Kbps] [19.2Kbps] [38.4Kbps] [57.6Kbps] [115.2Kbps]

7) **[High-speed mode]**

Select this item to use the high-speed mode.

In the high-speed mode, the continuous simulation time is two hours.

When you select [MELSEC-A] or [MELDAS C6*] in the [Controller Type], this item is not be displayed.

8) **[CPU No. switching GD device first No. (3 points)]**

Set this item when selecting [MELSEC-Q] for [Type].

Set the start device number of the GOT data registers (GD) to specify a CPU number.

The following shows the items to be selected.

• GT27, GT25, GT23, and GS25: [0] to [65520]

• GT21 and GS21: [0] to [2032]

Specify the value of [CPU No. switching GD device first No. (3 points)] set in the [Controller Setting] window in GT Designer3.

If you set a different number on GT Simulator3, the simulation is not performed properly.

9) **[Module No. switching GD device first No. (16 points)]**

Set this item when selecting [MELSEC iQ-F] for [Type].

Set the start device number of the GOT data registers (GD) to specify module numbers.

The following shows the items to be selected.

• GT27, GT25, GT23, and GS25: [0] to [65520]

• GT21 and GS21: [0] to [2032]

Specify the value of [Module No. switching GD device first No. (16 points)] set in the [Controller Setting] window in GT Designer3.

If you set a different number on GT Simulator3, the simulation is not performed properly.

10) **[Servo axis switching GD device first No. (16 points)]**

Set this item when selecting [MELSEC iQ-F] for [Type].

Set the start device number of the GOT data registers (GD) to specify an axis number.

The following shows the items to be selected.

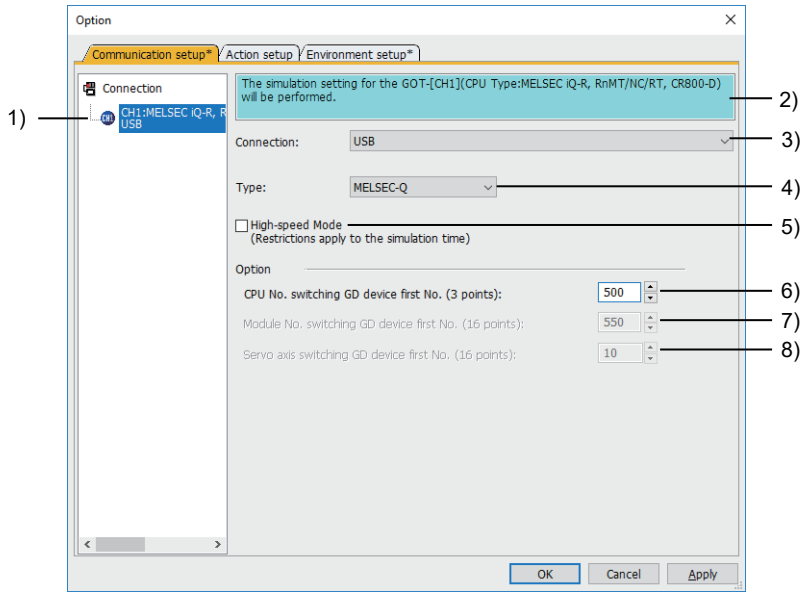
• GT27, GT25, GT23, and GS25: [0] to [65520]

• GT21 and GS21: [0] to [2032]

Specify the value of [Servo axis switching GD device first No. (16 points)] set in the [Controller Setting] window in GT Designer3.

If you set a different number on GT Simulator3, the simulation is not performed properly.

(7) When [USB] is selected for [Connection]



1) **Connection configuration tree**
Displays connection methods and connection settings for each channel of the GOT.

2) **Description**
Displays a controller name to be connected to each channel of the GOT.

3) **[Connection]**
Select a connection method for each channel of the GOT.

4) **[Type]**
Select a PLC type to be connected.
The following shows the items to be selected.
- [MELSEC iQ-R]
- [MELSEC iQ-L]
- [MELSEC iQ-F]
- [MELSEC-Q]
- [MELSEC-L]
- [MELSEC-FX]

5) **[High-speed mode]**
Select this item to use the high-speed mode.
In the high-speed mode, the continuous simulation time is two hours.
When you select [MELSEC-A] or [MELDAS C6*] in the [Controller Type], this item is not be displayed.

6) **[CPU No. switching GD device first No. (3 points)]**
Set this item when selecting [MELSEC iQ-R] or [MELSEC-Q] for [Type].
Set the start device number of the GOT data registers (GD) to specify a CPU number.
The following shows the items to be selected.
- GT27, GT25, GT23, and GS25: [0] to [65520]
- GT21 and GS21: [0] to [2032]

Specify the value of [CPU No. switching GD device first No. (3 points)] set in the [Controller Setting] window in GT Designer3.
If you set a different number on GT Simulator3, the simulation is not performed properly.

7) **[Module No. switching GD device first No. (16 points)]**
Set this item when selecting [MELSEC iQ-R] or [MELSEC iQ-F] for [Type].
Set the start device number of the GOT data registers (GD) to specify module numbers.
The following shows the items to be selected.
- GT27, GT25, GT23, and GS25: [0] to [65520]
- GT21 and GS21: [0] to [2032]

Specify the value of [Module No. switching GD device first No. (16 points)] set in the [Controller Setting] window in GT Designer3.
If you set a different number on GT Simulator3, the simulation is not performed properly.

8) **[Servo axis switching GD device first No. (16 points)]**

Set this item when selecting [MELSEC iQ-R] or [MELSEC iQ-F] for [Type].

Set the start device number of the GOT data registers (GD) to specify an axis number.

The following shows the items to be selected.

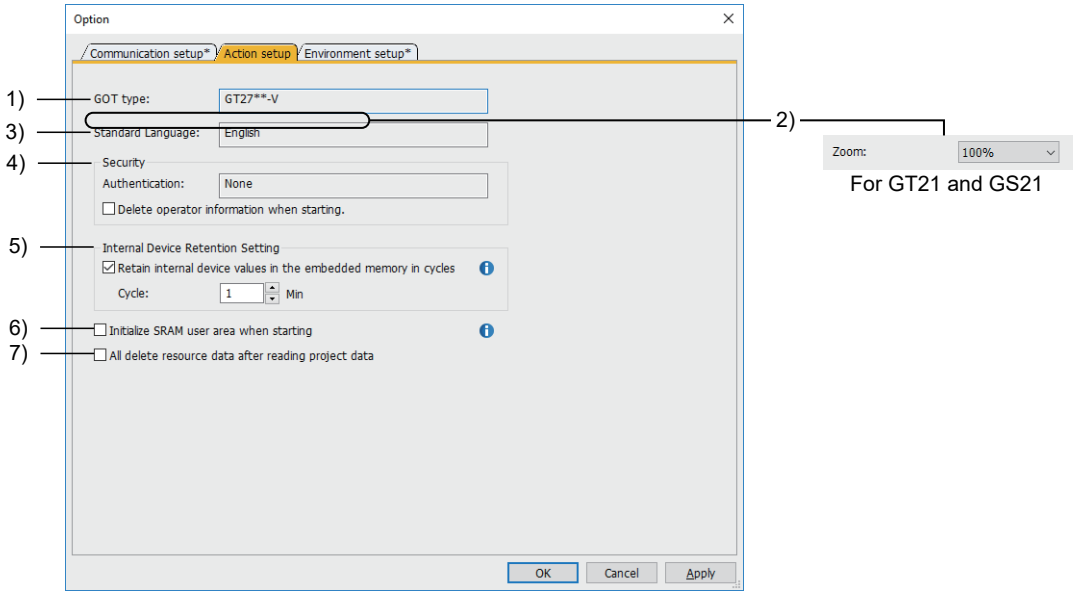
- GT27, GT25, GT23, and GS25: [0] to [65520]
- GT21 and GS21: [0] to [2032]

Specify the value of [Servo axis switching GD device first No. (16 points)] set in the [Controller Setting] window in GT Designer3.

If you set a different number on GT Simulator3, the simulation is not performed properly.

■2 [Action Setup] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[GOT Type]**

Displays the GOT model to be simulated.

2) **[Zoom]**

Available to GT21 and GS21.

Select the display magnification of the simulation screen.

3) **[Standard Language]**

Displays the standard language.

4) **[Security]**

Item	Description
[Authentication Method]	Displays the authentication method.
[Delete operator information when starting]	Deletes the operator information when starting a simulation.

5) **[Internal Device Retention Setting]**

Item	Description
[Retain internal device values in the embedded memory in cycles]	Saves the values of GOT internal devices to the SRAM user area at the specified intervals. If this item is deselected, the values will be saved when GT Simulator3 exits.
[Cycle]	Set a time interval to save the values of GOT internal devices to the SRAM user area. The setting range is [1] minute to [60] minutes.

6) **[Initialize SRAM user area when starting]**

Not available to GT21 and GS21.

Initializes the SRAM user area when starting a simulation.

The following functions save data to the SRAM user area.

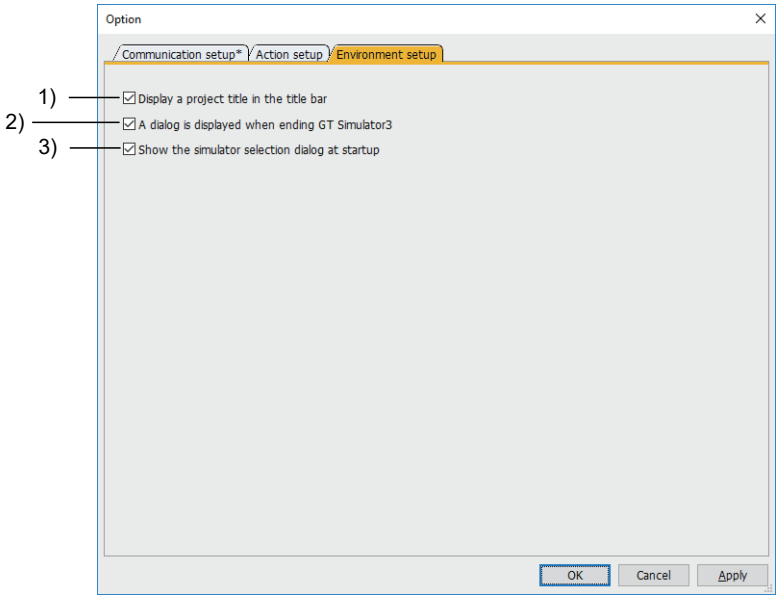
- User alarm observation
- System alarm observation
- Logging function

• Recipe function
• Internal device retention

7) **[Delete all resource data after reading project data]**
Deletes all user data in the following folders when starting a simulation.
Folder A, B, E, F, G or lower hierarchies in the working folders
For the working folder, refer to the following.
➟3.1.5 ■3 Working folder

■3 [Environmental Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Display a project title in the title bar]**
Displays the project name in the title bar.

2) **[A dialog is displayed when ending GT Simulator3]**
Displays a dialog when GT Simulator3 exits.

3) **[Show the simulator selection dialog at startup]**
Displays the [GT Simulator3 Main Menu] dialog at GT Simulator3 startup.

3.6.2 Opening a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Opening a workspace format project
■2 Opening a single file format project

■1 Opening a workspace format project

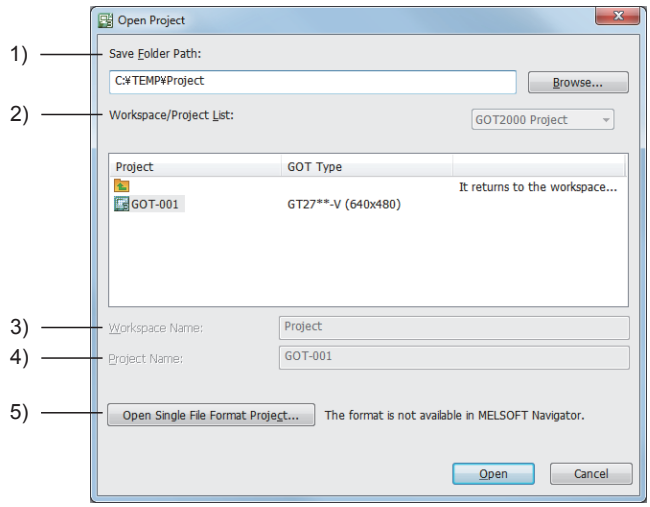
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations.

- Click the [Open Project] button on the toolbar.
- Select [Project] → [Open] → [Project] from the menu.
- Right-click the mouse and select [Open] → [Project] from the menu.

Step 2 The [Open Project] dialog (workspace format) appears.

Configure the following settings and click the [Open] button.



1) **[Save Folder Path]**
Select a location where the project data has been saved.

2) **[Workspace/Project List]**
Workspaces or projects which are saved are displayed.
If a workspace is double-clicked, the projects in the workspace are displayed.
Select a project to be opened.

3) **[Workspace Name]**
The selected workspace name is displayed.

4) **[Project Name]**
The selected project name is displayed.

5) **[Open a Single File Format Project]**
Click this button to switch the screen to the one for selecting a single file format project.

Step 3 The confirmation dialog is displayed.

Confirm the display and click the [Yes] button or the [OK] button,

Step 4 The simulation starts.

■2 Opening a single file format project

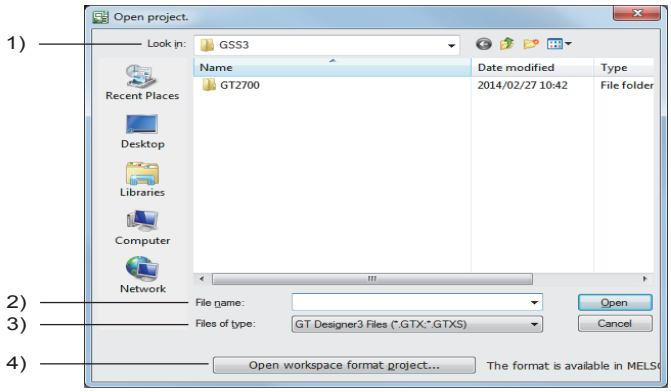
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations.

- Click the [Open a File] button on the toolbar.
- Select [Project] → [Open] → [File] from the menu.
- Right-click the mouse and select [Open] → [File] from the menu.

Step 2 The [Open Project] dialog (single file format) appears.

Configure the following settings and click the [Open] button.



1) **[Look in]**
Select a location where the project data has been saved.

2) **[File name]**
Set a name for the project data to be simulated.

3) **[Files of type]**
Select a file format of the project data. GTX formant or GTXS format)

4) **[Open workspace format project]**
Switches the dialog to the one for selecting a workspace format project.

Step 3 The confirmation dialog is displayed.

Confirm the display and click the [Yes] button or the [OK] button,

Step 4 The simulation starts.

3.6.3 Starting or exiting simulation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

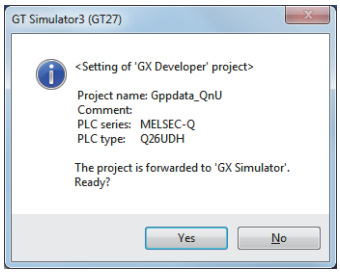
■1 Starting simulation

Step 1 Perform one of the following operations.

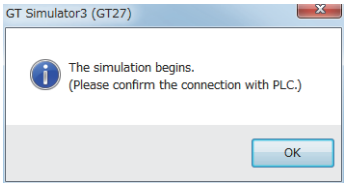
- Click the [Start] button on the toolbar.
- Select the [Simulate] → [Start] from the menu.
- Right-click the mouse and select [Start] from the menu.

Step 2 The confirmation dialog is displayed.

Confirm the display and click the [Yes] button or the [OK] button,



When GX Simulator is connected



Direct CPU connection (serial)

Step 3 The simulation starts.

■2 Exiting simulation

Step 1 Perform one of the following operations.

- Click the [END] button on the toolbar.
- Select [Project] → [END] from the menu.
- Select the [Simulate] → [END] from the menu.
- Right-click the mouse and select [END] from the menu.
- Click the [Close] button on the title bar.

Step 2 Simulation exits.

■3 Switching the display language of GT Simulator3

The display language of GT Simulator3 is switched according to that of GT Designer3.
The following shows how to switch the display language.

Step 1 Exit GT Simulator3.

Step 2 Switch the display language of GT Designer3.

For how to switch the display language of GT Designer3 and precautions, refer to the following.

➟2.1.3 Switching the display language of GT Designer3

Step 3 Start GT Simulator3 again to switch the display language.

In the following cases, the display language of GT Simulator3 is not switched.

- GT Simulator3 is not exited before the display language of GT Designer3 is switched.
- After the display language of GT Designer3 is switched, GT Simulator3 is started before GT Designer3 is exited.

3.6.4 Updating the project to be simulated

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When you start GT Simulator3 from GT Designer3, you can confirm the contents edited with GT Designer3 with GT Simulator3 without starting GT Designer3 again.

Step 1 Select [Tools] → [Simulator] → [Activate] from the menu in GT Designer3.

Step 2 Edit a project data with GT Designer3.

Step 3 Select [Tools] → [Simulator] → [Update] from the menu in GT Designer3.

Step 4 The project data of GT Simulator3 is updated.

Point

Starting GT Simulator3 associating with GT Designer3

Updating the program to be updated can be available only when GT Simulator3 is started from GT Designer3. When you start GT Simulator3 alone, updating the project is unavailable.

3.6.5 Operations of the screen for simulation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In GT Simulator3, use the mouse instead of touching the screen.
The input range is narrower than that of the GOT. Check the input by buzzer.

3.6.6 Exiting GT Simulator3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations.

- Click the [END] button on the toolbar.
- Select [Project] → [END] from the menu.
- Select the [Simulate] → [END] from the menu.
- Right-click the mouse and select [END] from the menu.
- Click the [Close] button on the title bar.

Step 2 GT Simulator3 exits.

3.7 Useful Functions of GT Simulator3

➡3.7.1 Taking snap shots
3.7.2 Printing the screen being simulated
3.7.3 Displaying the information of the project being simulated
3.7.4 Operating the numerical input or text input with a keyboard
3.7.5 Using the device monitor
3.7.6 Referring to resource data
3.7.7 Displaying a script error
3.7.8 Displaying an object script error
3.7.9 Displaying scroll bars
3.7.10 Displaying the simulation screen in full screen mode

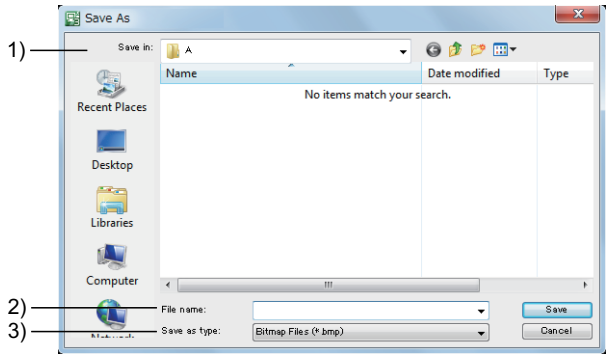
3.7.1 Taking snap shots

Save a screen image of the simulation as a BMP format file or a JPEG format file.

Step 1 Select [Project] → [Snap Shot] from the menu.

Step 2 The [Save As] dialog appears.

Configure the following settings and click the [Save] button.



1) **[Save in]**
Select a location for saving a file.

2) **[File name]**
Set a file name of the screen image to be saved.

3) **[Save as type]**
Select the BMP format or the JPEG format.

3.7.2 Printing the screen being simulated

Output a screen image of the simulation to a printer.

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Printing
■2 Previewing print image
■3 Page setting
■4 Configuring the printer setting

■1 Printing

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Print] from the menu.

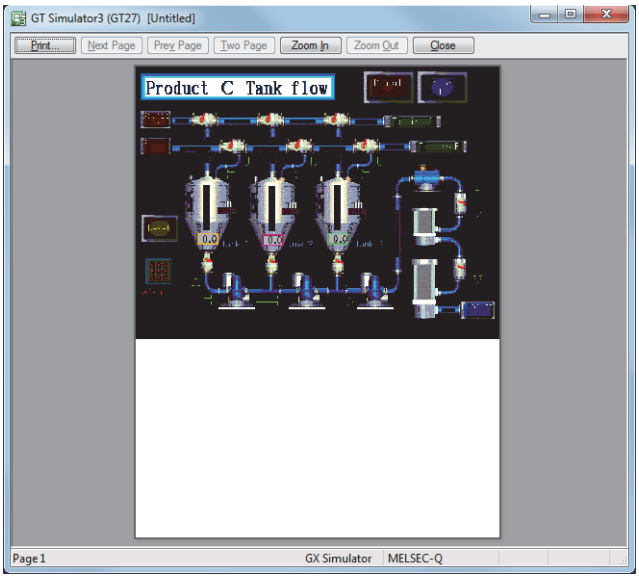
Step 2 The [Print] dialog of Windows is displayed.
Click the [OK] button to start printing.

■2 Previewing print image

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Print Preview] from the menu.

Step 2 The print preview is displayed.



Point

Precautions for using the print preview

The print preview of the simulator screen may look smaller than the actual simulator screen depending on the paper type or size, and the screen resolution.
Therefore, what is printed may not match the print preview.
Check what has been printed.

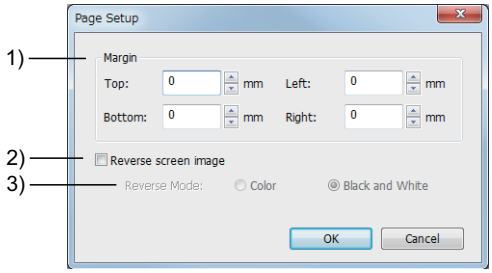
■3 Page setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Page Setup] from the menu.

Step 2 The [Page Setup] dialog is displayed.

Configure the following settings and click the [OK] button.



1) **[Margin]**
Set margins for the page to be printed.

2) **[Reverse screen image]**
Select this item to reverse colors of the screen image at printing.

3) **[Reverse Mode]**
Set a reverse method for the screen image.
The following shows the items to be selected.
- [Color]: Reverses whole colors of the screen image to be printed.
- [Black and White]: Reverses white to black of the screen image to be printed.

■4 Configuring the printer setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Print Setup] from the menu.

Step 2 The print dialog of Windows is displayed.
Configure the settings for the printer (selecting a printer, paper size, direction of printing).

Point

(1) **Precautions for the printer used**
GT Simulator3 retains the print settings by GOT model.
However, when you perform one of the following operations, the printer selected for [Set as default printer] in Windows is specified.
- Deleting the selected printer
- Selecting a printer whose name contains 31 characters or more

(2) **Precautions for the print settings**
Depending on the printer used, some print settings are not retained.

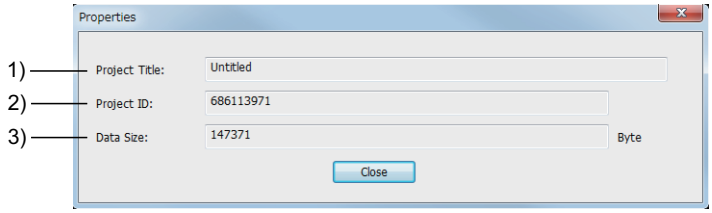
3.7.3 Displaying the information of the project being simulated

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The project title, project ID, and the data size of the project data that is being simulated are displayed.

Step 1 Select [Project] → [Properties] from the menu.

Step 2 The [Properties] dialog appears.



1) **[Project Title]**
Displays the title for the project.

2) **[Project ID]**
Displays the project ID.

3) **[Data Size]**
Displays the data size of the project data.

Point

When the [Properties] dialog is displayed before executing the simulation

When the [Properties] dialog is displayed before executing the simulation, the project title, the project ID, and the data size of the previous simulation are displayed.

When the project data is not read, the project title, the project ID, and the data size are not displayed.

3.7.4 Operating the numerical input or text input with a keyboard

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operate the numerical input or text input with the keyboard of a personal computer.

Perform one of the following operations to enable or disable the keyboard input.

- Select [Set] → [Keyboard] from the menu.
- Click the [Keyboard] button on the toolbar.
- Select [Set] → [Keyboard] from the right-click context menu.

The following shows how to operate the numerical input or text input with a keyboard.

Keyboard operation	GOT key code	Operation on the numerical input	Operation on the text input
[Back space]	0008h	Delete the character on the cursor.	
[Enter]*1	000Dh	Write the entry to a specified device, display the cursor on the target object, move the cursor to a different object, or close the key window.	
[Esc]	001Bh	Cancel the entry.	
[-] (Hyphen)	002Dh	Reverse the sign of the value.	-
[.] (Period)	002Eh	Enter a decimal point.	-
[0] to [9]	0030h to 0039h	Enter a numeric character.	Enter a character. (ASCII or Unicode 2.1-compatible)
[A] to [Z], [a] to [z]	0041h to 005Ah, 0061h to 007Ah	Enter a numeric character in hexadecimal ([A] to [F], [a] to [f]).	
Symbol keys	Character codes (ASCII)	-	
Enter text (such as hiragana or kanji characters).	Character codes (Unicode)	-	Enter text. (Unicode 2.1-compatible)
[→], [←], [↑], [↓]	0080h, 0081h, 0082h, 0083h	Move the cursor to a different object.	
[Home]	0084h	-	Convert the entry to kanji or Simplified Chinese characters.
[Page Up]	0085h	-	Select the previous candidate.
[Page Down]	0086h	-	Select the next candidate.
[End]	0087h	-	Confirm the entry, or select the next group of hiragana characters to be converted to kanji characters.
[Delete]	0088h	Delete all the entered characters.	
[Ctrl] + [→], [Ctrl] + [←]	0090h, 0091h	Move the cursor on the target object.	
[Ctrl] + [↑], [Ctrl] + [↓]	FFFAh, FFFBh	Increment or decrement the value.	-

*1 The operation on the target object varies depending on the setting in the [Environmental Setting] window ([Key Windows]).
For the details, refer to the following.

➟5.2.4 ■4 [Key Window]

3.7.5 Using the device monitor

The device monitor function monitors the devices of a controller connected to GT Simulator3.
You can change the current values of devices, checking the project operations efficiently.

■1 Specifications of the device monitor

(1) Starting the device monitor

When connection is established between GT Simulator3 and a controller simulator or Mitsubishi Electric equipment, you can start the device monitor during simulation only.
If connection is established between GT Simulator3 and non-Mitsubishi Electric equipment by using the direct CPU connection, you cannot start the device monitor.

(2) Devices that can be monitored

The device monitor function monitors GOT internal devices and controller devices.
For the devices that can be monitored by GT Simulator3, refer to the following.

➟3.1.3 Available devices for monitoring

(3) Specifications of the free registration list

A created free registration list is retained after GT Simulator3 exits.
Up to 32 free registration lists can be created.
Up to 32 characters are available for a free registration list name.
The following characters cannot be used in a free registration list name.
\ / : ; * ? " < > | .
Up to 6 free registration windows can be open simultaneously.
Up to 256 devices are registrable in one free registration list.

■2 How to use the device monitor

➟(1) Starting or ending the device monitor
(2) Creating or editing a free registration list
(5) Deleting a free registration list

(1) Starting or ending the device monitor

(a) **Starting the device monitor**

While GT Simulator3 is performing a simulation, perform one of the following operations to start the device monitor.

- Select [Tool] → [Start of Device Monitor] from the menu.
- Click the [Device Monitor] button on the toolbar.
- Select [Tool] → [Start of Device Monitor] from the right-click context menu.

(b) **Ending the device monitor**

Perform one of the following operations to end the device monitor.

- Select [Tool] → [End of Device Monitor] from the menu of GT Simulator3.
- Select [File] → [Exit] from the menu of the device monitor.
- Click the [Close] button on the title bar of the device monitor.
- On the GT Simulator3 screen, select [Tool] → [End of Device Monitor] from the right-click context menu.
- Exit GT Simulator3.

(2) Creating or editing a free registration list

Register a device in a free registration list to test the device for correct operation.
After changing the device value, you can check the project operations.

(a) **Creating or editing a free registration list**

The following shows the procedure for creating or editing a free registration list.

Step 1 Perform one of the following operations to display a free registration window.

- Select [Window] → [New Free Registration List] from the menu.
- Double-click [New] under [Free Reg] in the [Project] window.
- Double-click a target free registration list under [Free Reg] in the [Project] window.

For information on how to import a free registration list and add it as a new list, refer to the following.

➟3.7.5 ■2 (3) Importing a free registration list

Step 2 Register, edit or delete a device in the free registration window.

➟3.7.5 ■4 (3) Free registration window

(b) **Changing the name of a free registration list**

Select a free registration list, and click it again or press the [F2] key on the keyboard to edit its name.

(c) **Deleting a device**

Select a device and press the [Delete] key on the keyboard to delete the device.

(3) Importing a free registration list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Import a free registration list file in the CSV or Unicode text format.
The following shows the procedure for importing a free registration list.

Step 1 Perform one of the following operations in the [Project] window according to the import method.

- To import a free registration list and add it as a new list, select [New].
- To overwrite an existing free registration list with an imported list, select the target existing free registration list.
- To import multiple free registration lists, select [Free Reg] at the top of the tree.

Step 2 Perform one of the following operations to display the [Open] dialog.

- Select [File] → [Import Free Registration List] from the menu.
- In the [Project] window, click the [Im] button.
- Right-click the item selected in step 1, and select [Import] from the menu.

Step 3 Select a free registration list file and click the [Open] button to import the file.

When importing multiple files, you can import CSV files and Unicode text files together.
For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(4) Exporting a free registration list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Export a free registration list to a CSV or Unicode text file.
You can export one free registration list, or export all free registration lists collectively.
The following shows the procedure for exporting one free registration list.

Step 1 In the [Project] window, select a free registration list to be exported.

Step 2 Perform one of the following operations to display the [Save As] dialog.

- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click the free registration list to be exported, and select [Export] from the menu.

Step 3 Set [File name] and [Save as type], and click the [Save] button to export the free registration list.

The following shows the procedure for exporting all free registration lists collectively.

Step 1 In the [Project] window, select [Free Reg] at the top of the tree.

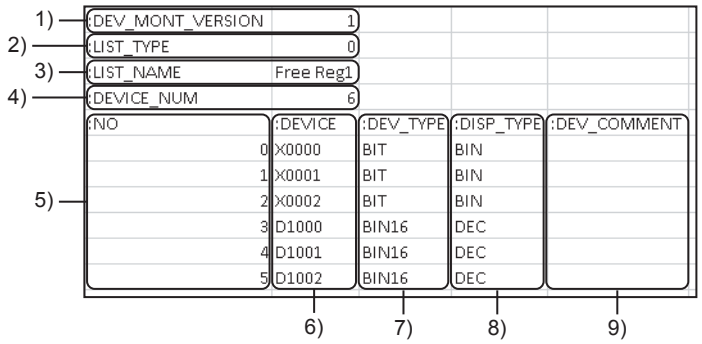
Step 2 Perform one of the following operations to display a dialog where you can select a file format.

- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click [Free Reg] at the top of the tree, and select [Export] from the menu.

Step 3 Select a file format and click the [OK] button to display the [Browse For Folder] dialog.

Step 4 Select an export destination and click the [OK] button to export the free registration lists.

The exported free registration lists are editable with spreadsheet software or others.
The following shows the layout of an exported free registration list.



1) Version
Version of the free registration list.

2) List type
Type of a list.
- 0: Free registration list

3) List name
Name of the free registration list.
For the name specifications, refer to the following.
➟3.7.5 ■1 (3) Specifications of the free registration list

4) Number of devices
Number of the registered devices.
Up to 256 devices are registrable in one free registration list.

5) No.
Registered device number.

6) Device
Registered device.

7) Data type
Data type of a device
- BIT: [Bit]
- BIN8: [Byte [Signed]]
- BIN8_Unsigned: [Byte [Unsigned]/Bit String [8-bit]]
- BIN16: [Word [Signed]]
- BIN16_Unsigned: [Word [Unsigned]/Bit String [16-bit]]
- BIN32: [Double Word [Signed]]
- BIN32_Unsigned: [Double Word [Unsigned]/Bit String [32-bit]]
- BIN64: [Quad Word [Signed]]
- BIN64_Unsigned: [Quad Word [Unsigned]/Bit String [64-bit]]

8) Display format
Display format of a device.
- BIN: [Binary]
- OCT: [Octal]
- DEC: [Decimal]
- HEX: [Hexadecimal]

9) Comment
Comment set for a device.
Up to 255 characters can be set for one comment.

(5) Deleting a free registration list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for deleting a free registration list.

Step 1 In the [Project] window, select a free registration list to be deleted.

Step 2 Perform one of the following operations to display a confirmation dialog.

- Press the [Delete] key on the keyboard.
- Right-click the free registration list to be deleted, and select [Delete] from the menu.

Step 3 Click the [Yes] button to delete the list.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Monitoring performance of GT Simulator3

An increase in the number of monitored devices causes monitoring performance degradation in GT Simulator3.

(2) Precautions for exporting a free registration list

When a free registration list contains characters that cannot be represented in ASCII or Shift JIS code, export the list to a Unicode text file.

If you export the list to a CSV file, such characters are not output properly.

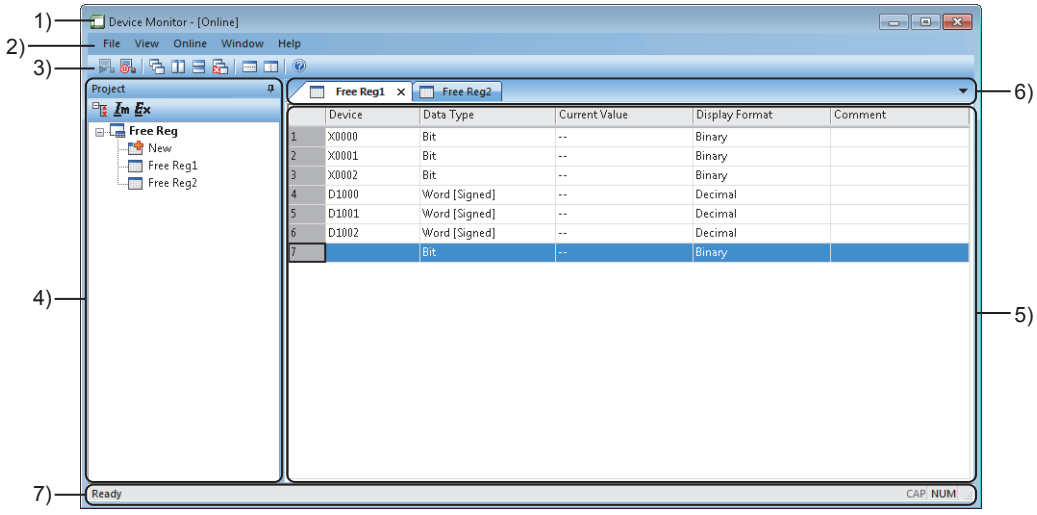
(3) Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

■4 [Device Monitor] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **Title bar**
Displays the device monitor operation status.

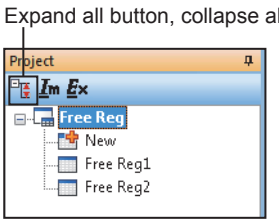
2) **Menu bar**
Displays the operation menus of the device monitor.

➟(1) Menus

3) **Toolbar**
Displays the operation buttons of the device monitor.

➟(2) Toolbar

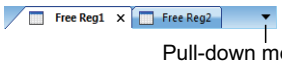
4) **[Project] window**



- Expand all button, collapse all button
  Expands or collapses all items in the tree.
- [Im] button
  Import a free registration list file in the CSV or Unicode text format.
  For the procedure for importing a free registration list, refer to the following.
  ➟3.7.5 ■2 (3) Importing a free registration list
- [Ex] button
  Export a free registration list to a CSV or Unicode text file.
  For the procedure for exporting a free registration list, refer to the following.
  ➟3.7.5 ■2 (4) Exporting a free registration list
- [Free Reg]
  Displays created free registration list names.
- [New]
  Creates a free registration list.

5) **Work window**
An area in which free registration windows appear
➟(3) Free registration window

6) **Editor tab**
Displays the tabs corresponding to the windows opened in the work window.
To bring an open window to the foreground in the work window, select its tab.



- **Pull-down menu button**
  Lists the open windows in the work window.
  To bring an open window to the foreground in the work window, select it from the pull-down menu.

7) **Status bar**
Displays the description of a selected menu.

(1) Menus

(a) [File]

Menu	Description	Shortcut key
[Import Free Registration List]	Import a free registration list file in the CSV or Unicode text format. For the procedure for importing a free registration list, refer to the following. ➟3.7.5 ■2 (3) Importing a free registration list	Alt + I
[Export Free Registration List]	Export a free registration list to a CSV or Unicode text file. For the procedure for exporting a free registration list, refer to the following. ➟3.7.5 ■2 (4) Exporting a free registration list	Alt + E
[Exit]	Ends the device monitor.	-

(b) [View]

Menu	Description	Shortcut key
[Toolbar]	Displays or hides the toolbar.	-
[Status Bar]	Displays or hides the status bar.	-

(c) [Online]

Menu	Description	Shortcut key
[Start]	Starts the device monitor.	F3
[Stop]	Stops the device monitor.	Alt+F3

(d) [Window]

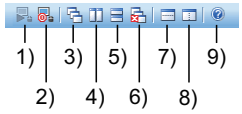
Menu	Description	Shortcut key
[New Free Registration List]	Create a free registration list.	-
[Cascade]	Displays open windows in a stack in the work window.	-
[Arrange Sideways]	Tiles open windows side by side in the work window.	-

Menu	Description	Shortcut key
[Arrange Lengthways]	Tiles open windows horizontally in the work window.	-
[Close Inactive Windows]	Closes all open windows except the selected one in the work window.	-
[New Horizontal Tab Group]	Splits the work window into panes horizontally. Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane. Tabs are movable between the editor tabs of panes.	-
[New Vertical Tab Group]	Splits the work window into panes vertically. Puts the free registration window corresponding to a selected tab in the immediately right pane. Tabs are movable between the editor tabs of panes.	-

(e) **[Help]**

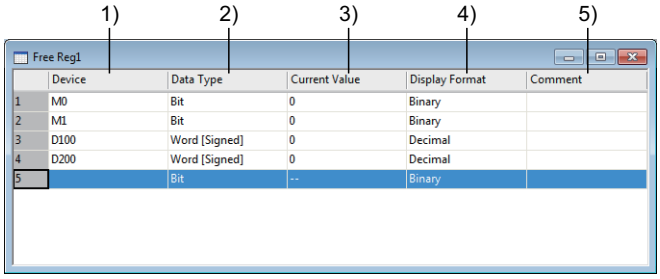
Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help.	F1

(2) Toolbar



1) **[Start the communication] button**
   Starts the device monitor.
2) **[Stop the communication] button**
   Stops the device monitor.
3) **[Display all open windows in a stack (cascade)] button**
   Displays open windows in a stack in the work window.
4) **[Display all open windows in a horizontal direction] button**
   Tiles open windows side by side in the work window.
5) **[Display all open windows in a vertical direction] button**
   Tiles open windows horizontally in the work window.
6) **[Close all the inactive windows] button**
   Closes all open windows except the selected one in the work window.
7) **[Create a new horizontal tab group] button**
   Splits the work window into panes horizontally.
   Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane.
   Tabs are movable between the editor tabs of panes.
8) **[Create a new vertical tab group] button**
   Splits the work window into panes vertically.
   Puts the free registration window corresponding to a selected tab in the immediately right pane.
   Tabs are movable between the editor tabs of panes.
9) **[Display GT Designer3 Help] button**
   Displays GT Designer3 Help.

(3) Free registration window



1) **[Device]**
Set a device to be monitored.
➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of a device.
The following shows the items to be selected.
- [Bit]
- [Byte [Unsigned]/Bit String [8-bit]]
- [Word [Unsigned]/Bit String [16-bit]]
- [Double Word [Unsigned]/Bit String [32-bit]]
- [Quad Word [Unsigned]/Bit String[64-bit]]
- [Byte [Signed]]
- [Word [Signed]]
- [Double Word [Signed]]
- [Quad Word [Signed]]

3) **[Current Value]**
Displays the current value of a device.
The set value is changeable.
If a communication error occurs, [--] is displayed.
The setting range of [Current Value] depends on the device.

4) **[Display Format]**
Select the display format of a device.
The following shows the items to be selected.
- [Binary]
- [Octal]
- [Decimal]
- [Hexadecimal]

5) **[Comment]**
Set a comment for a device.
Up to 255 characters can be set for one comment.

3.7.6 Referring to resource data

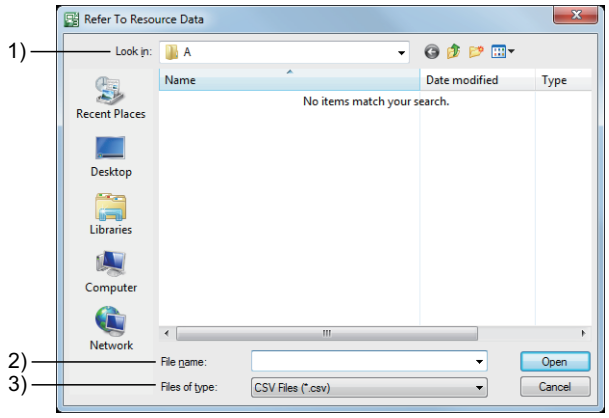
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Refer to alarm log files, recipe files, data log files, operation log files, and image files (such as hard copies) saved in a personal computer.

Step 1 Perform one of the following operations to display the [Refer To Resource Data] dialog.

- Select [Tool] → [Resource Data] from the menu.
- Click the [Resource Data] button on the toolbar.
- Select [Tool] → [Resource Data] from the right-click context menu.

Step 2 Configure the following settings and click the [Open] button to display the resource data.



1) **[Look in]**
Select the storage location of resource data.

2) **[File name]**
Select resource data to be referred to.

3) **[Files of type]**
Select the file type of resource data.

- CSV Files (*.csv): CSV format
- Unicode Text Files (*.txt): Unicode text format
- Bitmap Files (*.bmp): BMP format
- JPEG Files (*.jpg): JPEG format

3.7.7 Displaying a script error

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

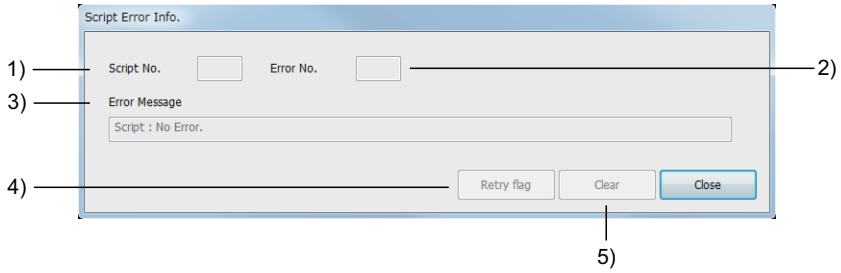
Displays the script error information.
For the script function, refer to the following.

➟9.9.14 ■3 (5) List of script execution error codes

Step 1 Perform one of the following operations.

- Select [Tool] → [Script Error] from the menu.
- Select [Tool] → [Script Error] from the right-click context menu.

Step 2 The [Script Error Info.] dialog is displayed.



1) **[Script No.]**
The script No. of the script in which an error occurs is displayed.

2) **[Error No.]**
The error code of the error is displayed.

3) **[Error message]**
Displays the error contents.

4) **[Retry flag] button**
Retries the script.
If a screen in which no script runs is displayed on the simulator screen, the retry is not performed.

5) **[Clear] button**
Clears the displayed error message by performing the following.
If a screen in which no script runs is displayed on the simulator screen, the error message is not cleared.

- GS14.b0, b7, b8, and b12 store 0
- GS15 stores -1
- GS16 to GS47 store 0

For the details of the GOT internal devices, refer to the following.

➟12.1.3 GOT special register (GS)

When the error has not been cleared, the error message is displayed again.

3.7.8 Displaying an object script error

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

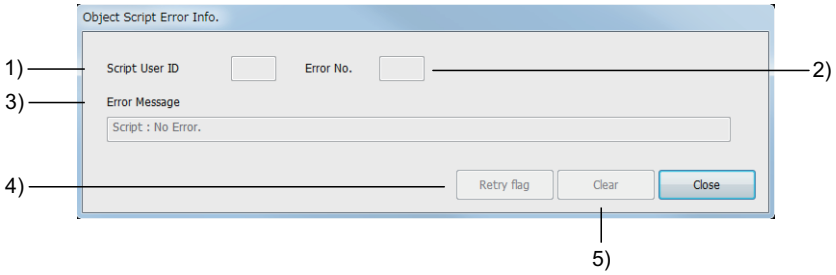
Displays the object script information.
For the object script function, refer to the following.

➟9.10.9 ■3 (5) List of object script execution error codes

Step 1 Perform one of the following operations.

- Select [Tool] → [Object Script Error] from the menu.
- Select [Tool] → [Object Script Error] from the right-click context menu.

Step 2 The [Object Script Error Info.] dialog is displayed.



1) **[Script User ID]**
The user ID of the script in which an error occurs is displayed.

2) **[Error No.]**
The error code of the error is displayed.

3) **[Error message]**
Displays the error contents.

4) **[Retry Flag] button**
Retries the object script.
If a screen in which no script runs is displayed on the simulator screen, the retry is not performed.

5) **[Clear] button**
Clears the displayed error message by performing the following.
If a screen in which no script runs is displayed on the simulator screen, the error message is not cleared.

- GS80.b0, b7, b8, and b12 store 0
- GS81 stores -1
- GS82 to GS113 store 0

For the details of the GOT internal devices, refer to the following.

➟12.1.3 GOT special register (GS)

When the error has not been cleared, the error message is displayed again.

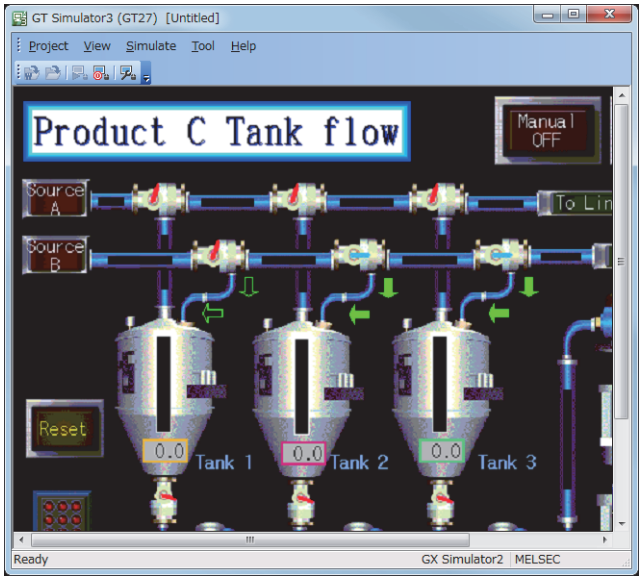
3.7.9 Displaying scroll bars

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations.

- Select [Display] → [Scroll bar] from the menu.
- Right-click the mouse and select [Scroll bar] from the menu.

Step 2 A scroll bar appears.



Point

(1) **Displaying the scroll bar**

When resolutions of the GOT model to be simulated are lower than the window size, the scroll bar is not displayed.

(2) **Scrolling the screen**

When GT Simulator3 is activated, the screen can be scrolled by a wheel of a mouse.
The vertical scroll is prioritized.
Scrolling with the [PageUp] key and the [PageDown] key is unavailable.

3.7.10 Displaying the simulation screen in full screen mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The simulation screen can be displayed on the personal computer in a full screen.

➡■1 Executing the full screen display
■2 Canceling the full screen display

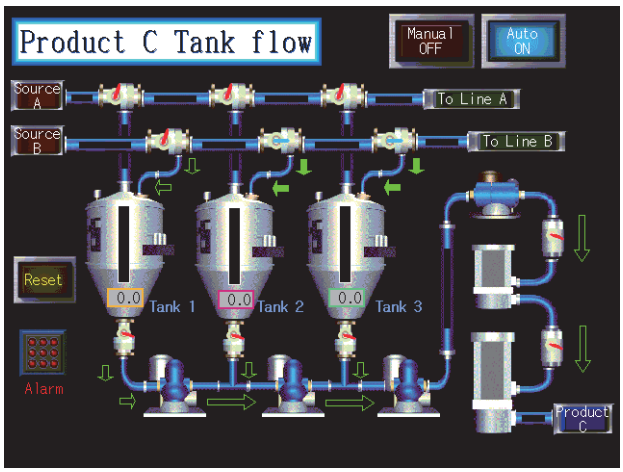
■1 Executing the full screen display

Step 1 Perform one of the following operations.

- Press the [Alt] key and the [F9] key.
- Select the [View] → [Full Screen Mode] from the menu.
- Right-click the mouse and select [Full Screen Mode] from the menu.

Step 2 The confirmation dialog for switching the full screen display appears.

Click the [OK] button, and then GT Simulator3 is displayed in a full screen.

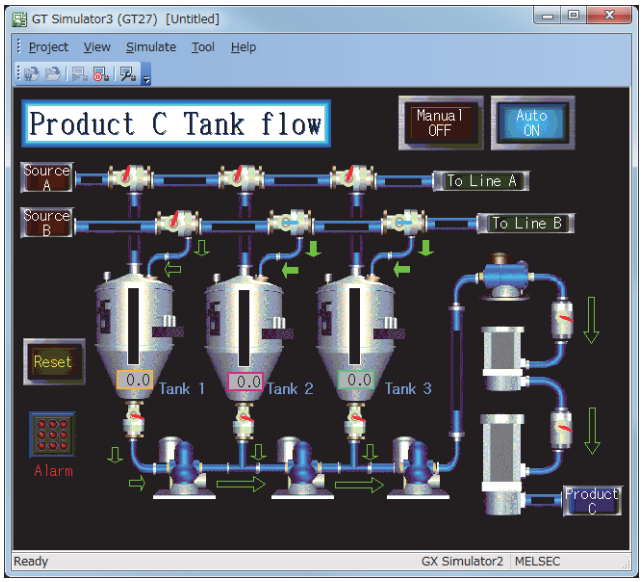


■2 Canceling the full screen display

Step 1 Perform one of the following operations.

- Press the [Alt] key and the [F9] key.
- Right-click the mouse and select [Full-screen display] from the menu.

Step 2 The confirmation dialog for switching the full screen display appears.
Click the [OK] button, and a full screen display is canceled.



Point

Operation during the full screen display

- During the full screen display, operations for [Open], [Start], [END], and [Option] are available.
  To execute an operation other than above, cancel the full screen display.
- If a screen is switched to a full screen when resolutions of a personal computer are different from that of the project data, the display of GT Simulator3 is fixed to the upper left of the display of the personal computer. The screen cannot be moved.

3.8 Troubleshooting

➡3.8.1 Error messages (GOT2000 Series simulator)
3.8.2 Troubleshooting for saving files

3.8.1 Error messages (GOT2000 Series simulator)

The following shows error messages displayed when using GOT2000 Series simulator, details of error, error causes and corrective actions.

Error message	Details of error and cause	Corrective action
The Adobe Reader is not installed properly. Install the Adobe Reader.	• The Adobe Reader is not installed. • The Adobe Reader is not installed properly.	Uninstall the Adobe Reader and install again.
The manual file does not exist. Install the manual.	• The GT Manual is not installed. • The GT Manual is not installed properly.	Uninstall the GT Manual and install again.
GT Simulator3 is not installed properly.	The product registry for GT Simulator3 does not exist.	Uninstall GT Simulator3 and install again.
The project file cannot be accessed.	The specified project data cannot be accessed.	Check the access privileges of the project data.
The project file does not exist.	The project data does not exist in the location with specified path.	Specify the path for a location where project data exists.
The PLC type of the project differs from the GT Simulator3 setting.	The PLC type of the read project differs from the GT Simulator3 setting.	Set the same PLC type for the project data created with GT Designer3 and GT Simulator3.
The GOT type of the project differs from the GT Simulator3 setting.	The GOT type of the read project differs from the GT Simulator3 setting.	Set the same GOT type for the project data created with GT Designer3 and GT Simulator3.
Reading has failed. Check the followings and retry. • Data size of screen and number of data points • Available space of the disk • Access privilege for the project file • The project file is incorrect or damaged<CODE: %d-%d>	The size of the screen data is too large.	Check the data size of the screen. ➡3.1.1 Simulation-supported GOTs
	Hard disk space is insufficient.	Prepare 200MB or more for the hard disk space.
	The project data cannot be accessed.	Check the access privileges of the project data.
	The project settings are incorrect.	Check the settings with GT Designer3.
	• The project data is not the one for GOT. • The project data is damaged.	Use the correct project data or the project data that is not damaged.
Reading preparation has failed. Check the followings and retry. • Dialog display • Waiting for offline mode	A message such as [This function is unavailable.] is displayed on the screen and reading is unavailable.	Select the [OK] button on the dialog to delete the message, then retry reading.
	Internal processing other than the above is waited to be completed.	Retry reading after a while.
Configuring the operating environment has failed. Check the followings and retry. • Available space of the disk • Access privilege for a file	Hard disk space is insufficient.	Prepare 200MB or more for the hard disk space.
	Files required for the GT Simulator3 operations cannot be accessed.	Check that GT Simulator3 already has been activated.
	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
Failed to delete the user data. • Close the opened user data. • Check the access privilege for a file.	Deleting the user data after reading the screen data has failed.	• When the user data is opened by other software, close the file. • Check the access privilege for a file.
Specified project is incorrect or is not a readable format. Specify the project again.	• The GT Designer2 project is not in the workspace. • The project is not saved in GT Designer2 (the project is not registered in the [*.GTE] format).	• Specify the GT Designer2 project in the workspace. • Specify the project saved in GT Designer2 (the project that is registered in the [*.GTE] format).
The simulation cannot be closed. Close the simulate screen and retry.	A message such as [This function is unavailable.] is displayed on the screen and GT Simulator3 cannot be closed normally.	Select the [OK] button on the dialog to delete the message, then close GT Simulator3 again.
	Problems occur internally and GT Simulator3 cannot be closed.	Select the [OK] button on the dialog and close GT Simulator3 after a while.
GT Simulator3 cannot be closed. Close all dialogs and print previews that are being displayed.	• Dialogs or pint previews are displayed. • Waiting for completion of internal process.	Close all dialogs and print previews that are being displayed.

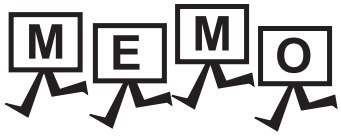
Error message	Details of error and cause	Corrective action
Log off or shut down Windows after closing GT Simulator3.	Log-off or shut-off processing was executed before closing GT Simulator3.	Log off or shut-off processing after closing GT Simulator3.
This function is unavailable.	A function that is unusable in GT Simulator3 has been selected.	Click the [OK] button.
Taking snap shots has failed.	• GT Simulator3 was closed in an incorrect status previously. • Incorrect processing is activated.	• Restart GT Simulator3. • Restart the personal computer and restart GT Simulator3.
The GX Developer project file is not correct.	The project specified in [GX Developer Project] of the [Option] dialog does not exist.	Check that the specified GX Developer project exists.
The path name is too long.	The GX Developer project saved in a folder of deep hierarchy is set.	Set the GX Developer project again in the [Option] dialog.
A communication error has occurred. • Retry: Retries the communication. • Cancel: All the future communications are not executed. To execute the simulation, restart GT Simulator3 (GT**). <ES:xxxxxxxx>	• A cable is disconnected. • A cable is broken.	Check the causes on the left and select the corresponding button in the dialog. [Retry] Retries the communication. [Cancel] All the future communications are not executed. To execute the simulation, restart GT Simulator3.
	The transmission speed (baud rate) is incorrect.	
	The PLC type of the destination PLC CPU differs from that of the project.	
This version of Easysocket is incorrect!	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
Easysocket is not installed!	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
GX Simulator is not installed!	• GX Simulator is not installed. • GX Simulator is not installed properly.	Install GX Simulator.
This version of GX Simulator cannot operate!	The version of installed GX Simulator is old.	Install GX Simulator Version 5.40E or later.
GT Simulator3 cannot work, since language version for GT Simulator3 is different from one for GX Simulator!	GT Simulator3 cannot work, since language version for GT Simulator3 is different from one for GX Simulator.	Install GX Simulator with the same language version as GT Simulator3.
Project path of GX Developer cannot be acquired. Cause • GT Simulator3 is not installed properly. • Unsupported CPU type is specified. • Registry is corrupted.	• Registry information related to the project path of GX Developer is corrupted. • Unsupported CPU type is specified.	Set the GX Developer project again in the [Option] dialog.
	GT Simulator3 is not installed properly.	Uninstall GT Simulator3 and install again.
The CPU type specified in GT Simulator3 differs from the one specified in GX Developer. Change the CPU type in the Option setting or check the settings in the GX Developer project.	The CPU type settings are incorrect.	Change the CPU type of the GX Developer project.
Failed to start Shared memory server (Vlinks.exe). <ES:****> **********	Easysocket may not be installed properly.	Reinstall the latest version of MELSOFT application.
	• MELSOFT application was closed incorrectly. • Incorrect processing is activated.	• Restart the personal computer and restart GT Simulator3. • Reinstall the latest version of GT Simulator3, GX Simulator, and GX Developer.
Failed to initialize GX Simulator. <ES:****> ********** error	Easysocket may not be installed properly.	Reinstall the latest version of MELSOFT application.
	GX Simulator may not be installed properly.	Uninstall GX Simulator and install again.
	• MELSOFT application was closed incorrectly. • Incorrect processing is activated.	• Restart the personal computer and restart GT Simulator3. • Reinstall the latest version of GT Simulator3, GX Simulator, and GX Developer.
Failed to start GX Simulator. <ES:****> **********	Easysocket may not be installed properly.	Reinstall the latest version of MELSOFT application.
	GX Simulator may not be installed properly.	Uninstall GX Simulator and install again.
Install path of GT Simulator3 cannot be acquired.	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
Parameter file does not exist.	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
	An incorrect GX Developer project may be set.	Create a new GX Developer project.
Program file does not exist.	GT Simulator3 may not be installed properly.	Uninstall GT Simulator3 and install again.
	An incorrect GX Developer project may be set.	Create a new GX Developer project.
The memory for starting GX Simulator is insufficient.	Dynamic memory is insufficient.	Reserve the enough memory capacity. • Close unnecessary applications. • Check the hard disk space.

Error message	Details of error and cause	Corrective action
The project (GX Developer) is incorrect. Project cannot be transferred to GX Simulator.	Incorrect program exists in the GX Developer project folder.	Create a new GX Developer project.
Unsupported CPU type is selected.	Unsupported CPU type is set for the CPU type of GT Simulator3.	Change the CPU type and restart monitoring.
No response from GX Simulator for termination request. GX Simulator is closed forcibly. Exit GT Simulator3 immediately and shutdown the personal computer.	• MELSOFT application was closed incorrectly. • Incorrect processing is activated.	Restart the personal computer and restart GT Simulator3.
An SFC program cannot be written to GX Simulator. Specify a program other than the SFC program.	An SFC type GX Developer project is specified.	Set the GX Developer project again in the [Option] dialog.
Project information of GX Developer cannot be acquired. Gppw.gps or Gppw.gpj cannot be found.	An incorrect GX Developer project may be set.	Set the GX Developer project again in the [Option] dialog.
An incorrect CPU type.	Unsupported CPU type is specified in the GX Developer project.	Change the CPU type of the GX Developer project.
GX Works2 is not installed properly. Install GX Works2.	• GX Works2 (GX Simulator2) is not installed. • GX Works2 (GX Simulator2) may not be installed properly.	Reinstall GX Works2 (GX Simulator2).
'GX Works3' is not properly installed. Install 'GX Works3'.	• GX Works3 (GX Simulator3) is not installed. • GX Works3 (GX Simulator3) may not be installed properly.	Reinstall GX Works3 (GX Simulator3).
MT Developer2 is not installed properly. Install MT Developer2.	• MT Developer2 (MT Simulator2) is not installed. • MT Developer2 (MT Simulator2) may not be installed properly.	Reinstall MT Developer2 (MT Simulator2).
This version of GX Works2 is not supported. Install GX Works2 with supported version.	The version of installed GX Works2 (GX Simulator2) is old.	Install version 1.03D or later of GX Works2 (GX Simulator2).
"GX Works3' of this version does not support the simulator function. Please use 'GX Works3' of the version 1.007H or later.	The version of the installed GX Works3 (GX Simulator3) is old.	Install version 1.007H or later of GX Works3 (GX Simulator3).
This version of MT Developer2 is not supported. Install MT Developer2 with supported version.	The version of the installed MT Developer2(MT Simulator2) is old.	Install version 1.70Y or later of MT Developer2 (MT Simulator2).
Failed to connect since GX Simulator2 is not started. Start GX Simulator2 and retry.	The simulation function of GX Works2 (GX Simulator2) is not started.	Start the simulation function of GX Works2 (GX Simulator2) and retry the operation.
Failed to connect to GX Simulator2. <ES:0x******> **********	• An application was closed incorrectly. • Incorrect processing is activated.	• Restart GT Simulator3 and GX Works2. • Restart the personal computer and start GT Simulator3.
Failed to connect to GX Simulator2. Workspace name: ********** Project name: ********** Check the project name of started GX Simulator2 and the one set in GT Simulator3.	GX Simulator2 that is operating in the GX Works2 project set with GT Simulator3 does not exist.	Check the GX Works2 project specification of GT Simulator3 and started GX Simulator2 project, then change the settings.
No response from GX Simulator2 for termination request. GX Simulator2 is closed forcibly. Exit GT Simulator3 immediately and shutdown the personal computer.	• An application was closed incorrectly. • Incorrect processing is activated.	Exit GT Simulator3 and shutdown the personal computer.
Unable to connect to 'GT Simulator3' since 'GX Simulator3' is not running. Activate 'GX Simulator3' and retry.	The simulation function of GX Works3 (GX Simulator3) is not started.	Start the simulation function of GX Works3 (GX Simulator3) and retry the operation.
Failed to connect with 'GX Simulator3'. <ES:0x******> **********	• An application was closed incorrectly. • Incorrect processing is activated.	• Restart GT Simulator3 and GX Works3. • Restart the personal computer and start GT Simulator3.
This project data cannot be opened with the security key registered in the PC.	• The personal computer does not have the security key that matches the one assigned to the project. • The security key in the personal computer expires.	Import the valid security key using GT Designer3, and then start a simulation again.

3.8.2 Troubleshooting for saving files

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Symptom	Details of error and cause	Corrective action
No files are output when the hard copy command is executed from the monitor screen of GT Simulator3.	The file cannot be saved due to problems with the output destination disk.	• Check that the folder specified as the virtual drive exists. • Check the access privilege for the folder specified as the virtual drive. • Check the disk space of the folder specified as the virtual drive.
	The file cannot be saved since the file No. external control device value is not set within 1 to 9999.	Check that the file No. external control device value is set within 1 to 9999.


MEMO

4. COMMUNICATING WITH GOT

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4.1 Data Transfer

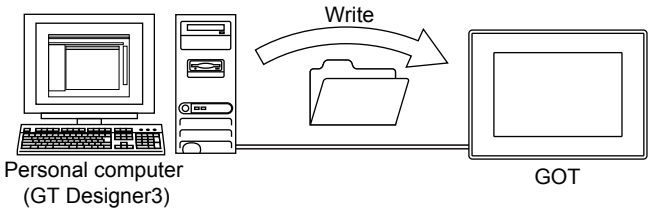
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡4.1.1 Route for the data transfer
4.1.2 Types of the data to be transferred to the GOT

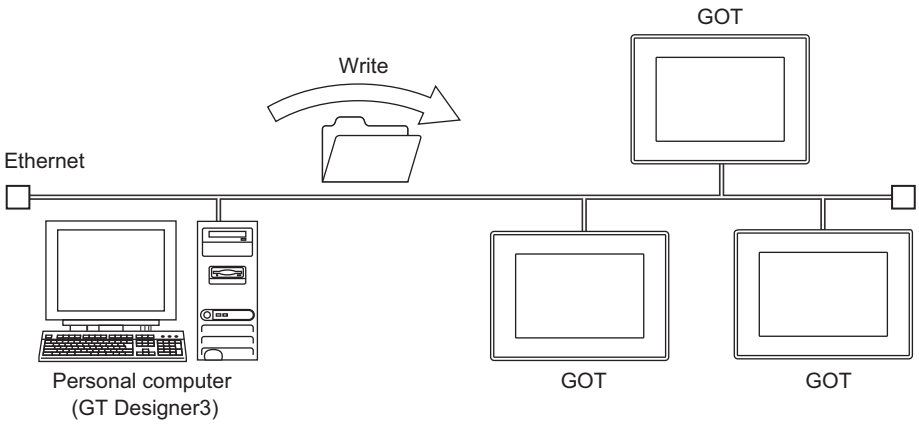
The data transfer function writes, reads, or verifies various data, such as package data, special data, and resource data, between the GOT and the personal computer (GT Designer3).

• Write

Package data or resource data is written or BootOS is installed to the GOT from the personal computer.

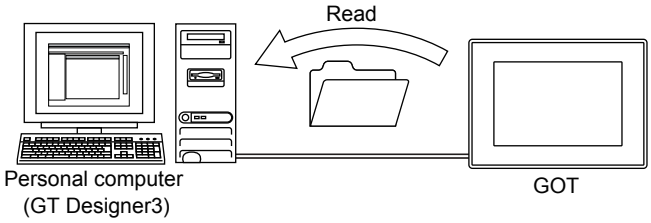


You can write package data from a personal computer to multiple GOTs on the same Ethernet network in one go.
This enables you to update the project in each GOT efficiently.
Since data is written to multiple GOTs simultaneously, the processing time becomes shorter.



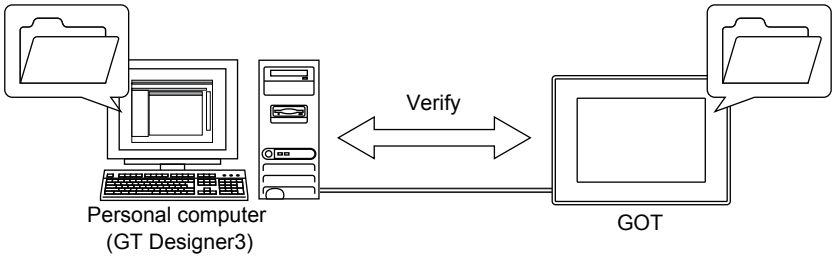
• Read

Project data, package data, resource data, or drive information is read to the personal computer from the GOT.



• Verification

The running project data in GT Designer3 and the project data in the GOT are verified.
The data is verified based on the data or the modified date.



Point

Deleting unnecessary screen data or settings in the GOT

To delete unnecessary screen data or settings in the GOT, read the project data from the GOT, take either of the following actions, and write the project data to the GOT.

- Delete unnecessary screen data and settings in the project data.
- Select [Select] for [Write Mode] in the [Write Option] dialog and deselect unnecessary screen data or settings.

➟4.8.3 ■3 [Write Option] dialog

4.1.1 Route for the data transfer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

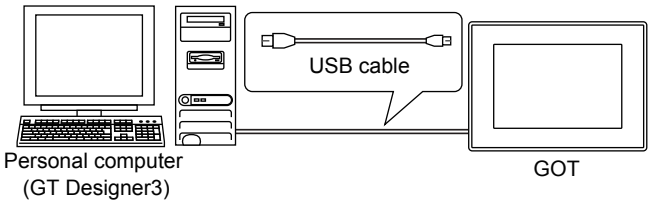
■1 Direct communication with the GOT and the personal computer (GT Designer3)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Data is transferred by the direct communication of the GOT and the personal computer.
The communication has the following routes.

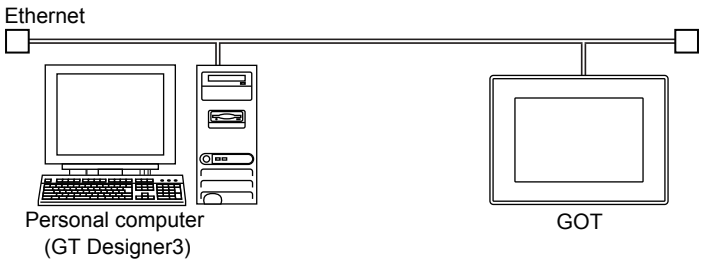
(1) Communication using USB cable

The GOT and the personal computer are connected with a USB cable to communicate directly.

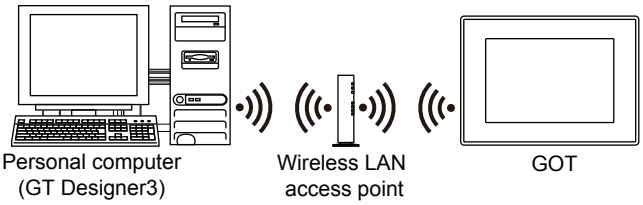


(2) Communication by Ethernet

The personal computer communicates directly with the GOT on the Ethernet network.



Using the wireless LAN communication unit allows wireless communication through a wireless LAN access point.



The following values are set for the Ethernet settings including the IP address and subnet mask of the GOT as default settings at shipment.

- Ethernet standard port 1: 192.168.3.18
- Subnet mask: 255.255.255.0

If a personal computer can access the network group set in the GOT by default, reading/writing data from/to the GOT with the factory settings is available by connecting the personal computer to the GOT.
Not available to GT21 and GS21.
If there are multiple GOTs whose factory settings remain unchanged, a connection to the GOTs is not available due to IP address duplication.
Set different IP addresses.

■2 Communication via a PLC

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

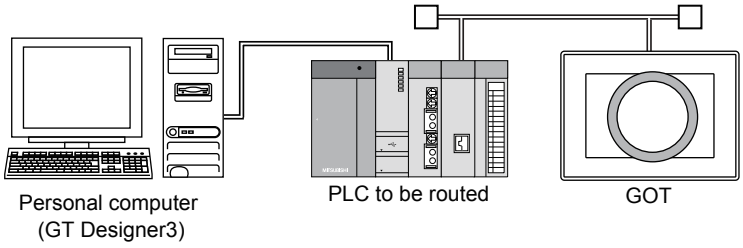
The personal computer communicates with the GOT via a PLC that is connected to the same Ethernet network, CC-Link IE TSN, or CC-Link IE Field Network as the GOT.
GT25-W, GT2505-V, GT25HS-V, and GS25 do not support the CC-Link IE Field Network connection.
GT23 does not support the CC-Link IE TSN and CC-Link IE Field Network connections.
The personal computer can communicate with the GOT over multiple networks through multiple PLCs as well.
Up to eight networks can be routed.
To communicate with the GOT over multiple networks, the routing parameters must be set for the routed PLCs.
For the details of PLCs and networks to be routed, refer to the following.

➟4.4 Transferring the Data between the Personal Computer and the GOT via PLC CPU

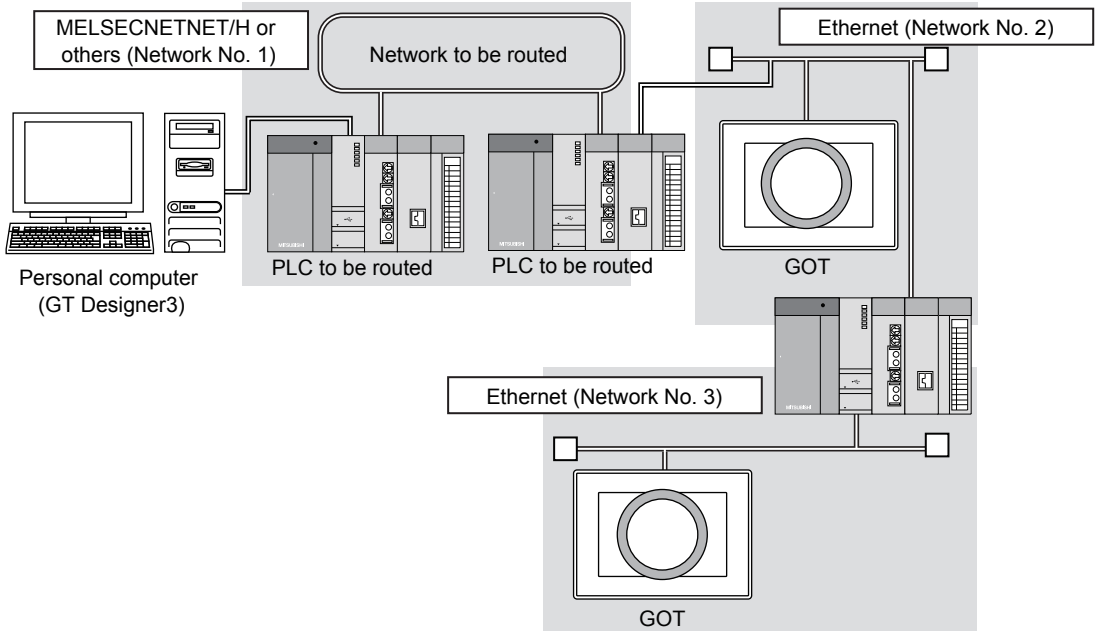
For the connecting method of the GOT and a PLC, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

• Example of communication via a PLC



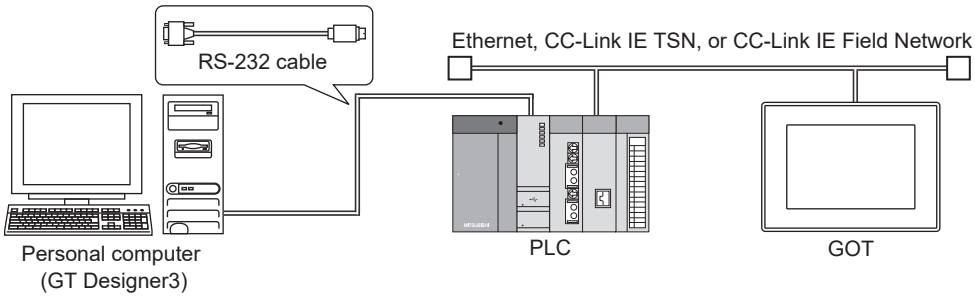
• Example of communication via the network



The following shows the communication route via a PLC.

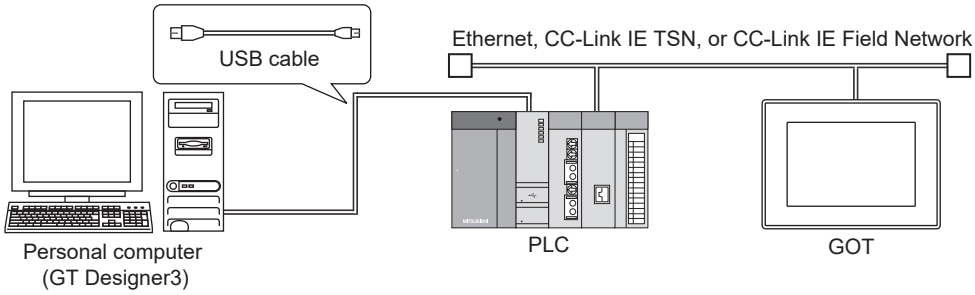
(1) Connection using RS-232 cable

Connect the personal computer and a PLC with an RS-232 cable to communicate with the GOT via the PLC.



(2) Connection using USB cable

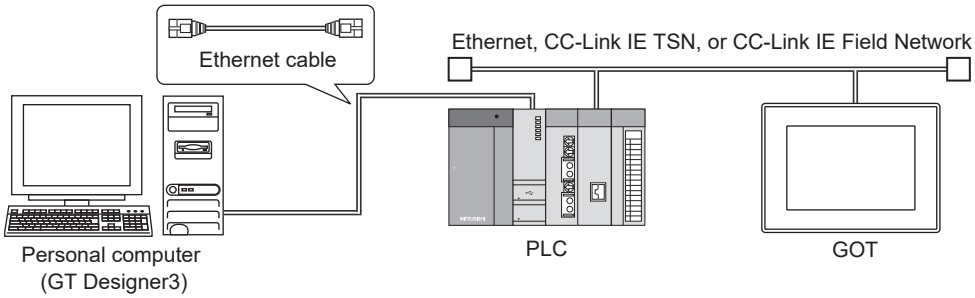
Connect the personal computer and a PLC with a USB cable to communicate with the GOT via the PLC.



(3) Connection using Ethernet cable

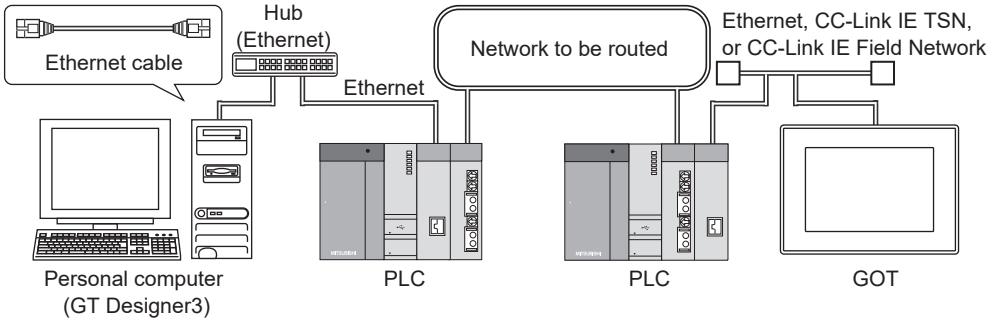
(a) Connecting directly to the Ethernet port

Connect the personal computer and a PLC with an Ethernet cable to communicate with the GOT via the PLC.



(b) Connecting by a hub

Connect the personal computer and a PLC with an Ethernet cable through a hub to communicate with the GOT via the PLC.

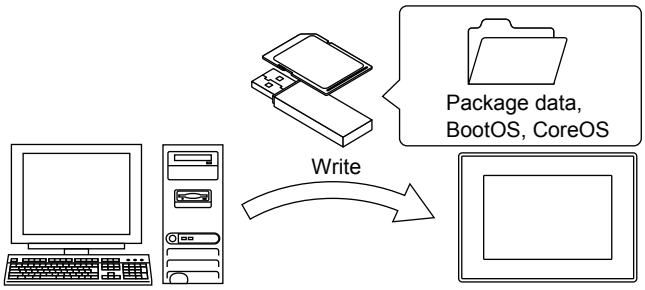


To connect a PLC and a hub, use an Ethernet interface module (RJ71EN71, QJ71E71 series, or LJ71E71 series).

■3 Using the data storage

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The package data, BootOS, or CoreOS is transferred by using the data storage such as a USB memory and SD card.



4.1.2 Types of the data to be transferred to the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the types of data to be transferred between GT Designer3 and the GOT.

■1 Data to be written to the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows data to be written to the GOT.

Data	Description	Communication route
BootOS	For the BootOS, refer to the following. ➟1.2.1 BootOS, CoreOS and package data	• Direct connection using a USB cable ➟4.1.1 ■1 (1) Communication using USB cable • Writing using the data storage ➟4.1.1 ■3 Using the data storage
CoreOS	For the CoreOS, refer to the following. ➟1.2.1 BootOS, CoreOS and package data	• Writing using the data storage ➟4.1.1 ■3 Using the data storage
Package data	For the package data, refer to the following. ➟1.2.1 BootOS, CoreOS and package data	The data is writable to the GOT through any communication route. ➟4.1.1 Route for the data transfer
Resource data	Data to be used for GOT functions, including data collected by the recipe function and image files stored by the hard copy function For the target resource data, refer to the following. ➟4.1.2 ■3 Transferable resource data Files of 0 MB or more than 256 MB cannot be written to the GOT.	The data is writable to the GOT through any communication route. ➟4.1.1 Route for the data transfer

For the size of each data and the storage destination in the GOT, refer to the following.

➟12.10 Data Transferred to the GOT and Storage Destination

■2 Data to be read from the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows data to be read from the GOT.

Data	Description	Communication route
Project data	For the project data, refer to the following. ➟1.2.2 Project	The data is readable from the GOT through any communication route. ➟4.1.1 Route for the data transfer
Package data	For the package data, refer to the following. ➟1.2.1 BootOS, CoreOS and package data	The data is readable from the GOT through any communication route. ➟4.1.1 Route for the data transfer
Resource data	Data to be used for GOT functions, including data collected by the recipe function and image files stored by the hard copy function For the target resource data, refer to the following. ➟4.1.2 ■3 Transferable resource data	The data is readable from the GOT through any communication route. ➟4.1.1 Route for the data transfer
Drive information	Use status of each drive in the GOT	The data is readable from the GOT through any communication route. ➟4.1.1 Route for the data transfer

For the size of each data and the storage destination in the GOT, refer to the following.

➟12.10 Data Transferred to the GOT and Storage Destination

■3 Transferable resource data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the resource data that can be transferred between GT Designer3 and the GOT.
○: Available, ×: Not available

File name[*1]	Write	Read	Description	Supported models
AAMxxxxx.csv	○	○	Alarm log file. The file is used for the user alarm observation or the system alarm observation.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
AAMxxxxx.txt	○	○		
AAMxxxxx.G2A	×	○		
ARPxxxxx.csv	○	○	Recipe file. The file is used for the recipe function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
ARPxxxxx.txt	○	○		
ARPxxxxx.G2P	○	○		
LOGxxx.csv	○	○	Logging file. The file is used for the logging function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
LOGxxx.txt	○	○		
LOGxxx.G2L	×	○		
OPELOGYYYYMMDD_xxxx.csv	○	○	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Operation log file. The file is used for the operation log.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
OPELOGYYYYMMDD_xxxx.txt	○	○		
OPELOGYYYYMMDD_xxxx.G2O	×	○		
SYSBK_YYMMDDHHMMSS.G2S	○	○	Backup file of the data in the SRAM user area. The file is used for the SRAM management.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.G2R	○	○	Report file. This file is used for the file print function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

File name[*1]	Write	Read	Description	Supported models
#####.gpf2	○	○	Graphical waveform data file. The file is used for the drive recorder.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.amo2	○	○	File of the data at the occurrence of an alarm. The file is used for the drive recorder.	
SNAPxxxx.bmp	○	○	Image file. The file is used for the parts display or the parts movement.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
SNAPxxxx.jpg	○	○	Image file. The file is used for the parts display, the parts movement, or the document display.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.jpeg	○	○		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.png	○	○	Image file. The file is used for the parts display or the parts movement.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.gif	○	○	Image file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.3gp	○	○	Video file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.mp4	○	○		
#####.mov	○	○		
#####.rm	○	○		
#####.divx	○	○		
#####.flv	○	○		
#####.f4v	○	○		
#####.pdf	○	○	PDF file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.wav	○	○	Sound file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.wma	○	○		
#####.mp3	○	○		
#####.m4a	○	○		
#####.wmv	○	○		
#####.f4a	○	○		
#####.swf	○	○	Flash file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.ttf	○	○	Font file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.ttc	○	○		

File name*1	Write	Read	Description	Supported models
#####.htm	○	○	HTML file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.html	○	○		
#####.xml	○	○	XML file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.xsl	○	○	XSL file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.chm	○	○	Help file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.js	○	○	JavaScript file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.css	○	○	Cascading Style Sheet.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.doc	○	○	Microsoft Word file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.docx	○	○		
#####.docm	○	○		
#####.xls	○	○	Microsoft Excel file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.xlsx	○	○		
#####.xlsm	○	○		
#####.ppt	○	○	Microsoft PowerPoint file.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
#####.pptx	○	○		
#####.pptm	○	○		
#####.json	○	○	JavaScript Object Notation.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

*1 The file name is set by default.
The name can be changed by the user.
"xxxxx" indicates the serial number of a file.

4.2 Setting a System Application to be Written to the GOT

➡4.2.1 Specifications of the application setting
4.2.2 How to use the application setting

At the data transfer, GT Designer3 selects the required system application, communication driver, and special data automatically from the project setting and adds them to the package data.
However, the system application of the function which is not set in the project is not added to the package data.
Also, the user is required to add the writing data according to the function to use or the method of creating a project.
In the following cases, add the writing data using the application setting.

- When using the intelligent module monitor, the motion monitor, or the servo amplifier monitor
  The special data (intelligent module monitor data, the motion monitor data, or the servo amplifier monitor data) are required to be added by the user.
- When using system applications (extended functions) for the sequence program monitors and others
  You can configure and start the monitor functions, such as the sequence program monitors, in the utility without setting a special function switch or the GOT setup in the project.
  However, unless you configure the functions in the project, necessary system applications are not incorporated into the package data.
  Add necessary system applications to the package data in the application selection setting.
  For the size of the system applications (extended functions) and the special data, refer to the following.

➡12.10.2 Transferred data size list

4.2.1 Specifications of the application setting

■1 Writing data the user can select

In the application setting, the following transfer data can be selected.

- System applications (extended functions)
- Communication driver
- Special data

For the details of each data, refer to the following.

➡12.10 Data Transferred to the GOT and Storage Destination

■2 Method to hold the data when the project is saved

The transfer data which the user has selected manually are held in the project when the project is saved.
The method to hold the transfer data depends on the saving format.

Saving format of project data	Method to hold transfer data	
	User selected item	System application, special data
A single file format project (GTXS, G2)	The selected item is held.	The data is saved to the package data with the project data.
A single file format project (GTX) Workspace format project	The selected item is held.	The data is not saved to the package data.

4.2.2 How to use the application setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting in the [Application Selection] dialog

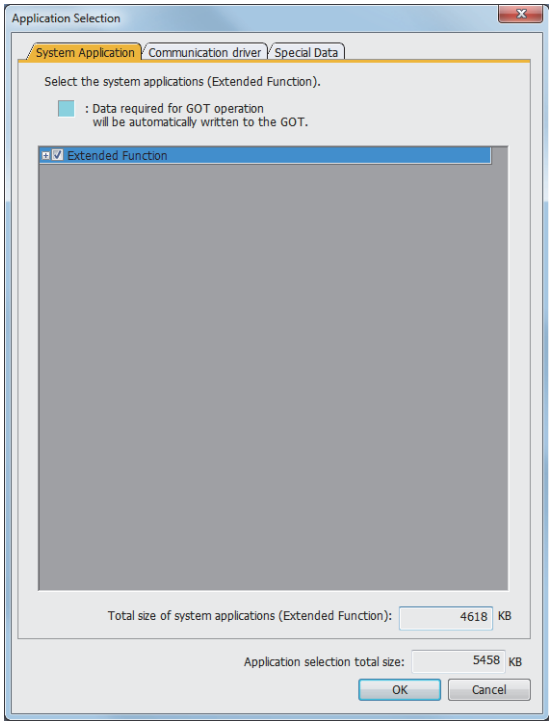
The following shows an example of writing package data to GT27.

Step 1 Select [Common] → [Application Selection] from the menu.

Step 2 The [Application Selection] dialog appears.

Set the data to transfer to the GOT.

➟4.8.4 [Application Selection] dialog



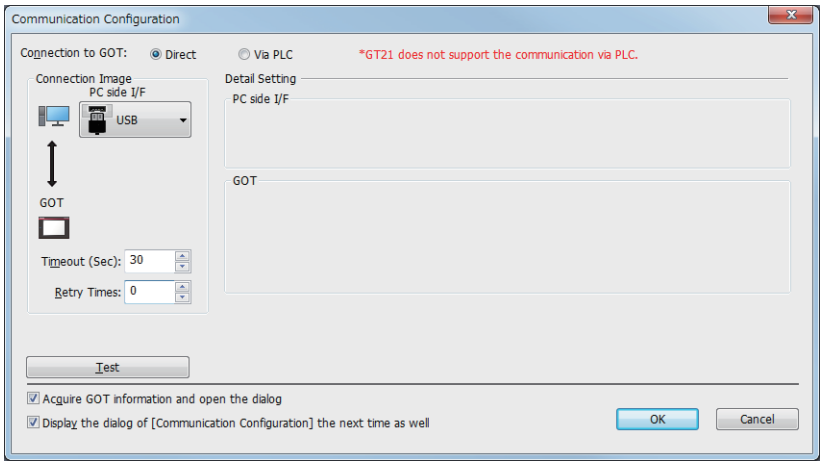
■2 Setting when the data is written to the GOT

Step 1 Select [Communication] → [Write to GOT] from the menu.

Step 2 The [Communication Configuration] dialog appears.

Set the communication method with the GOT and click the [OK] button.

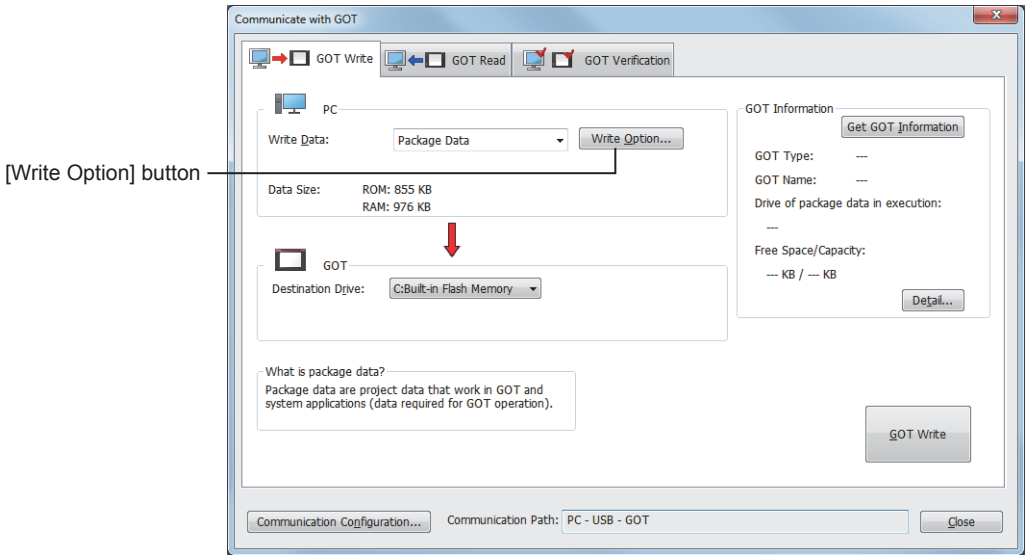
➟4.8.8 [Communication Configuration] dialog



Step 3 The [GOT Write] tab of the [Communicate with GOT] dialog appears.

Click the [Write Option] button.

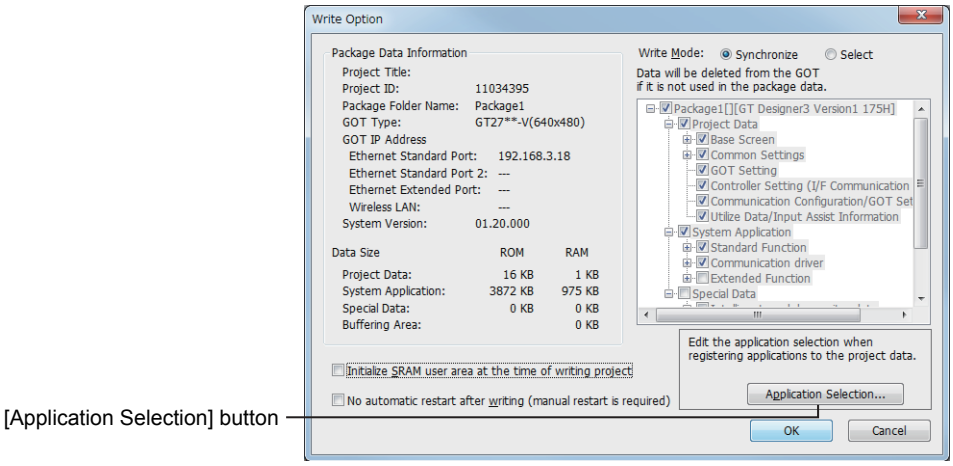
➟4.8.2 ■1 [GOT Write] tab



Step 4 The [Write Option] dialog appears.

Click the [Application Selection] button.

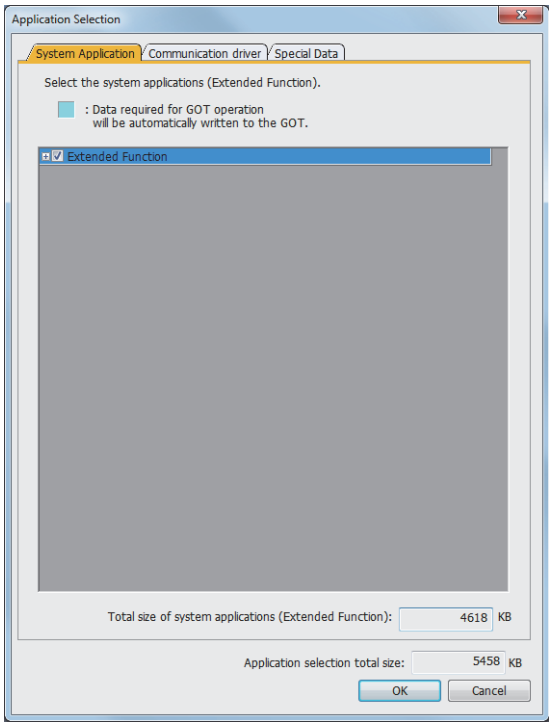
➟4.8.3 [Write Option] dialog (for writing data to one GOT)



Step 5 The [Application Selection] dialog appears.

Set the data to transfer to the GOT.

➟4.8.4 [Application Selection] dialog



4.3 Transferring the Data between the Personal Computer and the GOT

➡4.3.1 Connecting the personal computer to the GOT
4.3.2 Transferring data

Directly connect the personal computer and the GOT with a cable for the communication.
For the details of the data which can be transferred, refer to the following.

➡4.1.2 Types of the data to be transferred to the GOT

4.3.1 Connecting the personal computer to the GOT

➡■1 Connection using USB cable
■2 Connection using Ethernet cable
■3 Connection using Wireless LAN

A personal computer and GOT are connectable via USB, Ethernet, or wireless LAN.
To write package data to multiple GOTs in one go, connect a personal computer and the GOTs via Ethernet or wireless LAN.

➡■2 Connection using Ethernet cable
■3 Connection using Wireless LAN

The following shows each connection method.

■1 Connection using USB cable

(1) Connecting a personal computer to the GOT

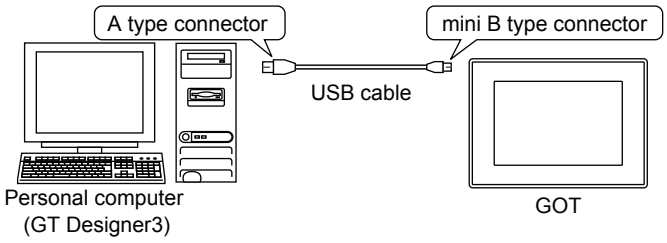
Use the following cable to connect a personal computer to the GOT.

Cable type	Connector
USB cable	A-mini B type

Step 1 Connect the A-type connector of a USB cable to the USB port of the personal computer, and the mini B type connector of the cable to the USB interface (Device) of the GOT.

For the location of the USB interface (Device) on the GOT, refer to the following.

➡GOT2000 Series User's Manual (Hardware)



Step 2 Power on the GOT.

Step 3 Only at the first connection, the USB driver is installed to the personal computer automatically.

(2) Configuring the communication settings

Perform one of the following operations according to your purpose.

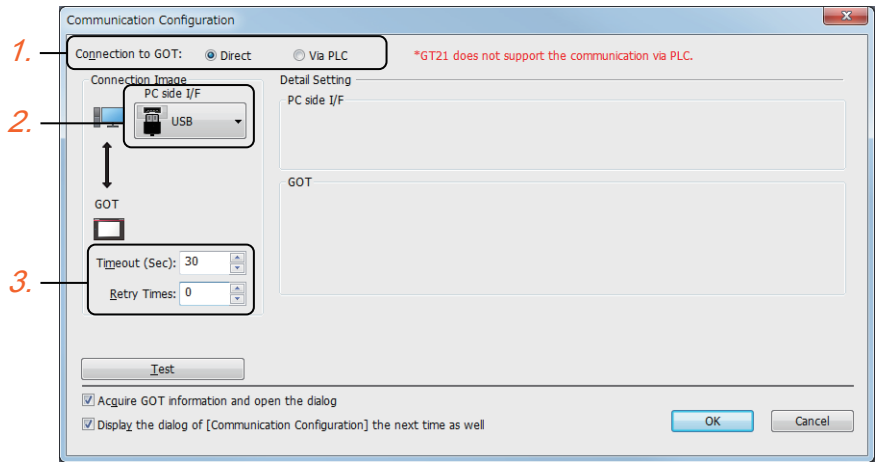
- To write data, select [Communication] → [Write to GOT] from the menu.
- To read data, select [Communication] → [Read from GOT] from the menu.
- To verify data, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

This dialog is displayable by selecting [Communication] → [Communication Configuration] from the menu as well.

➟4.8.8 ■1 Writing the data into the GOT directly

Configure the settings as shown below, and click the [OK] button.



Step 1 Select [Direct] for [Connection to GOT].

Step 2 Select [USB] for [PC side I/F].

Step 3 Set [Timeout (Sec)] and [Retry Times].

Step 4 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

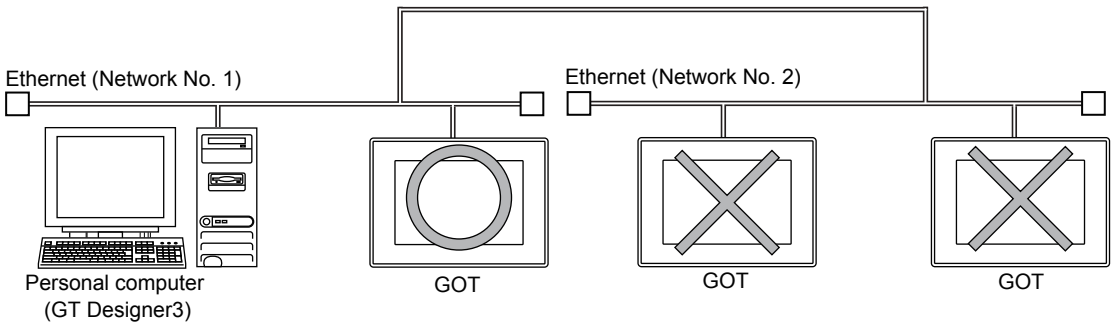
■2 Connection using Ethernet cable

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

(1) Connecting a personal computer to the GOT

To connect by Ethernet, connect the personal computer and the GOT to the same network.



Use the following Ethernet cables.

Cable type	Description
Ethernet cable	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e

Step 1 Connect the Ethernet port of the personal computer and the Ethernet interface of the GOT using an Ethernet

cable.

For the position of the Ethernet interface of the GOT, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

Step 2 Power on the GOT.

To transfer data to one GOT, set the communication method in the [Communication Configuration] dialog.

➟(2) Configuring the communication settings

To write package data to multiple GOTs in one go, perform the operation in the [Batch Write to multiple GOTs] dialog.

➟4.3.2 ■2 Writing package data to multiple GOTs in one go

Point

Precautions for connecting with personal computer

To connect a personal computer to the GOT via Ethernet, a communication driver for Ethernet connection must be installed on the GOT.

To install the communication driver, set [CH. No.] to a value other than [0] for [Ethernet Connection Setting] in the [I/F Communication Setting] dialog.

If [0] is set, [Driver] will be set to [None] and the communication driver will not be installed.

For the [I/F Communication Setting] dialog, refer to the following.

➟5.7.3 [I/F Communication Setting] dialog

(2) Configuring the communication settings

Perform one of the following operations according to your purpose.

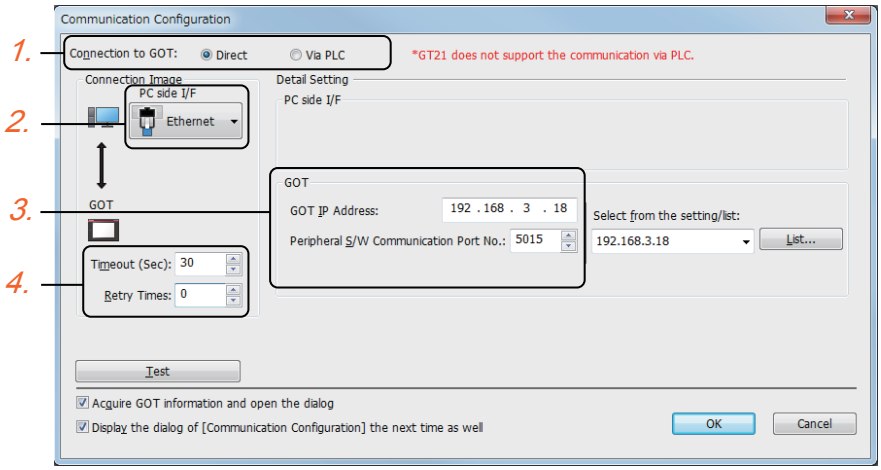
- To write data, select [Communication] → [Write to GOT] from the menu.
- To read data, select [Communication] → [Read from GOT] from the menu.
- To verify data, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

This dialog is displayable by selecting [Communication] → [Communication Configuration] from the menu as well.

➟■1 Writing the data into the GOT directly

Configure the settings as shown below, and click the [OK] button.



Step 1 Select [Direct] for [Connection to GOT].

Step 2 Select [Ethernet] for [PC side I/F].

Step 3 Set [GOT IP Address] and [Peripheral S/W Communication Port No.].

Step 4 Set [Timeout (Sec)] and [Retry Times].

Step 5 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

■3 Connection using Wireless LAN

Wireless LAN connection is available for use only in Japan.

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

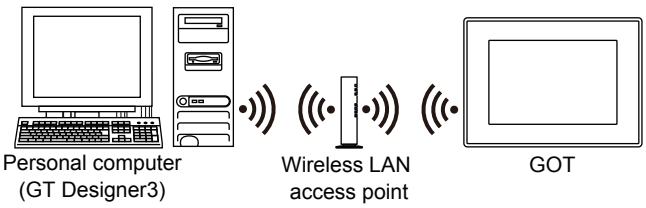
(1) Connection using the GOT as a station

Set the GOT as a station to communicate with a personal computer via a wireless LAN access point.
To establish connection with the GOT, a wireless LAN access point (commercial product) is required.
For usable wireless LAN access points, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

Before establishing connection, check the SSID, security authentication method, and WEP key or passphrase of the wireless LAN access point to be used.
For the check method, refer to the following.

➟Manual of the wireless LAN access point used



Step 1 Connect the personal computer and a wireless LAN access point on an Ethernet network.
For information on how to connect the wireless LAN access point, refer to the following.

➟Manual of the wireless LAN access point used

Step 2 Power on the GOT.

Step 3 Configure the following settings, and write the package data to the GOT.

- Wireless LAN setting ([GOT Setup])

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

- IP address setting for the wireless LAN interface

➟5.4.1 ■3 (3) [Wireless LAN] tab

To transfer data to one GOT, set the communication method in the [Communication Configuration] dialog.

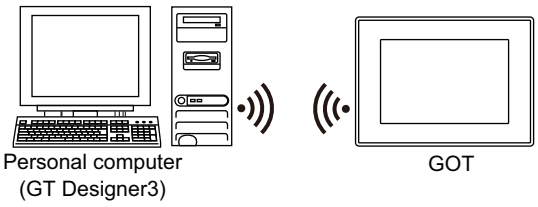
➟4.3.1 ■2 (2) Configuring the communication settings

To write package data to multiple GOTs in one go, perform the operation in the [Batch Write to multiple GOTs] dialog.

➟4.3.2 ■2 Writing package data to multiple GOTs in one go

(2) Connection using the GOT as a wireless LAN access point

Set the GOT as a wireless LAN access point to communicate with a personal computer.



Step 1 Power on the GOT.

Step 2 Configure the following settings, and write the package data to the GOT.

- Wireless LAN setting ([GOT Setup])

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

- IP address setting for the wireless LAN interface

➟5.4.1 ■3 (3) [Wireless LAN] tab

To transfer data to one GOT, set the communication method in the [Communication Configuration] dialog.

➟4.3.1 ■2 (2) Configuring the communication settings

To write package data to multiple GOTs in one go, perform the operation in the [Batch Write to multiple GOTs] dialog.

➟4.3.2 ■2 Writing package data to multiple GOTs in one go

4.3.2 Transferring data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Writing data to one GOT
■2 Writing package data to multiple GOTs in one go
■3 Reading the data from the GOT
■4 Verifying projects between the GOT and GT Designer3

■1 Writing data to one GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For writing package data to multiple GOTs in one go, refer to the following.

➟■2 Writing package data to multiple GOTs in one go

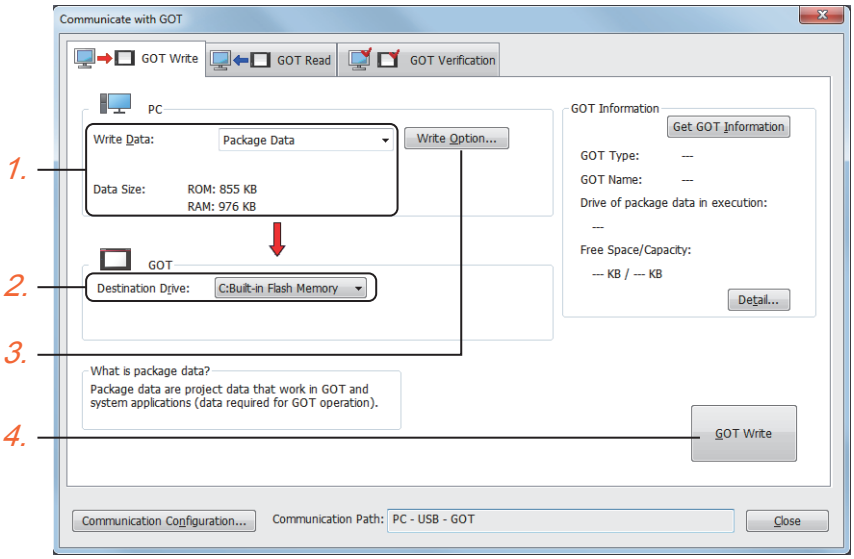
The transfer data is written in the [Communicate with GOT] dialog.
For the procedure of displaying this dialog, refer to the following.

➟4.3.1 ■1 (2) Configuring the communication settings
4.3.1 ■2 (2) Configuring the communication settings

For the details of the settings, refer to the following.

➟4.8.2 ■1 [GOT Write] tab

(1) Writing the package data



Step 1 Select [Package Data] for [Write Data].

The capacity of the transfer data is displayed in [Data Size]. Check that the destination drive has the sufficient available space.
For the capacity and the storage destination of the data, refer to the following.

➟12.10 Data Transferred to the GOT and Storage Destination

Step 2 Select [Destination Drive].

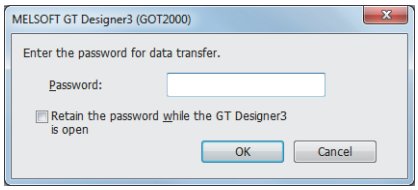
Step 3 When the system application or the special data is required to be added to the package data or deleted, click the [Write Option] button and configure the setting in the [Write Option] dialog.

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

Step 4 Click the [GOT Write] button.

Step 5 If data transfer security has been set for the target GOT, the dialog for entering the data transfer password is displayed.

Input the data transfer password.



Step 6 The package data is written to the GOT.

Point

(1) **Execution of parameter verification (iQ Works only)**

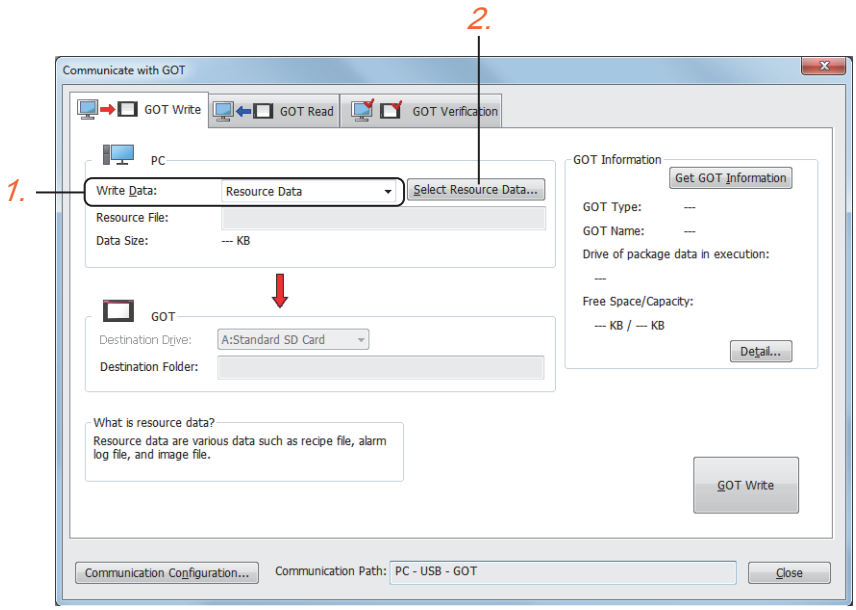
Before writing a project data to the GOT, execute [Verification of System Configuration Information and Parameters] by MELSOFT Navigator to check whether the system configuration diagram and the GT Designer3 controller setting are matched.
When the system configuration diagram does not match the GT Designer3 controller setting, the GOT may not monitor a controller correctly.
For MELSOFT Navigator operation, refer to the following.

➟Help for MELSOFT Navigator

(2) **Precautions when selecting write data (iQ Works only)**

When system labels are written and [System Label] is cleared for target data, system labels are deleted from a target project, and the labels are changed to devices.
The system labels changed to devices cannot be restored.
To hold the system label settings, do not clear [System Label] for the write target data.
When clearing [System Label] for the write target data, check the device setting.

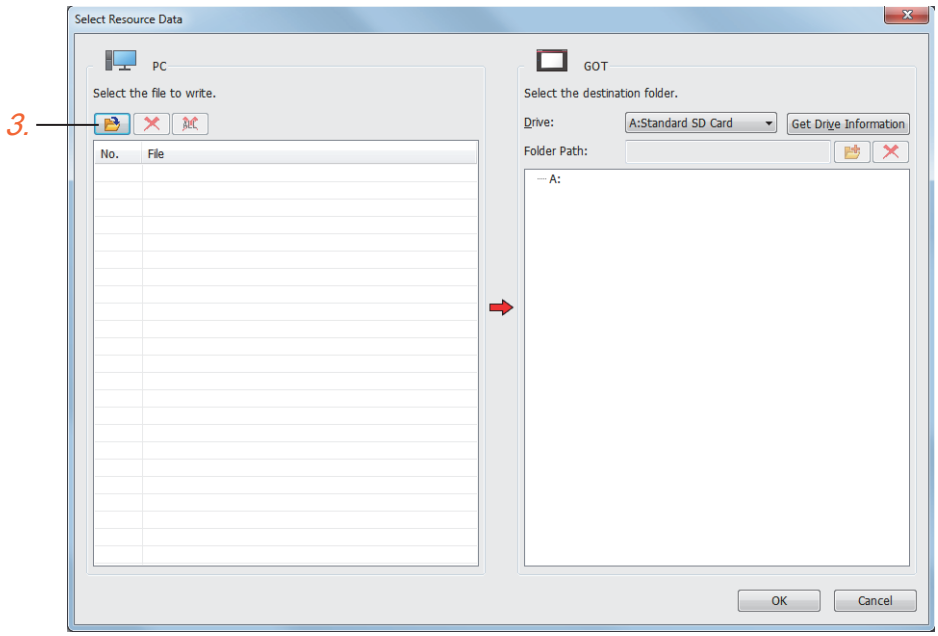
(2) Writing the resource data



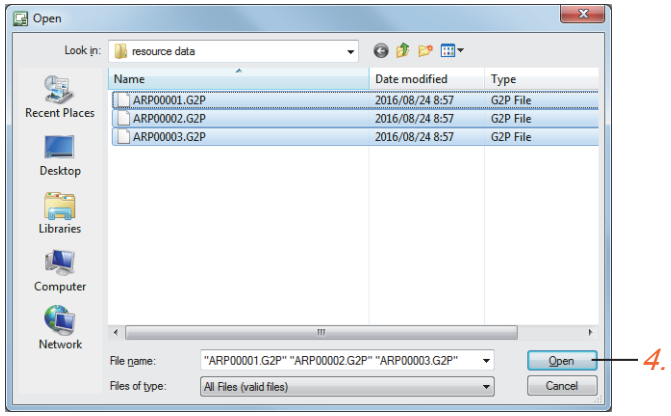
Step 1 Select [Resource Data] for [Write Data].

Step 2 Click the [Select Resource Data] button to display the [Select Resource Data] dialog.

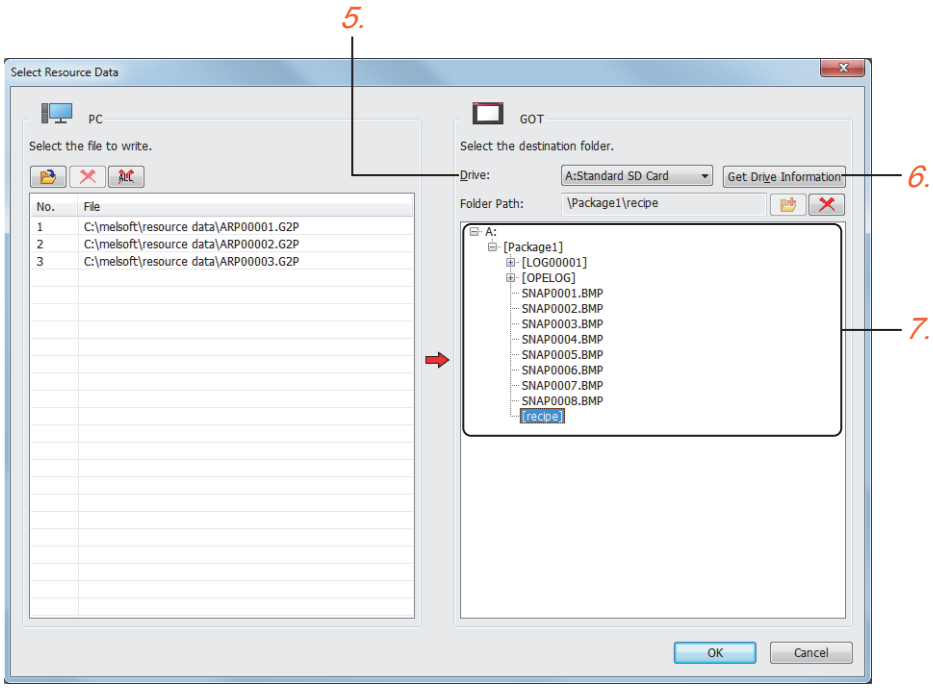
➟4.8.5 [Select Resource Data] dialog



Step 3 Click the [Add File] button in [PC] to display the [Open] dialog.



Step 4 Select a target file and click the [Open] button to display the file in the [Select Resource Data] dialog.

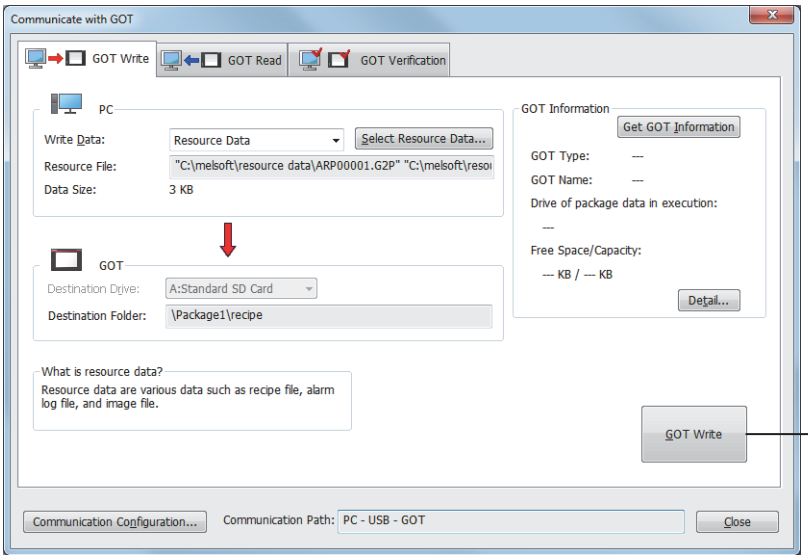


Step 5 Select the write destination drive of the GOT for [Drive] in [GOT].

Step 6 Click the [Get Drive Information] button to list the contents of the selected drive in the tree.

Step 7 In the tree, select a write destination folder and click the [OK] button to reflect the settings to the display of the [Communicate with GOT] dialog ([GOT Write] tab).

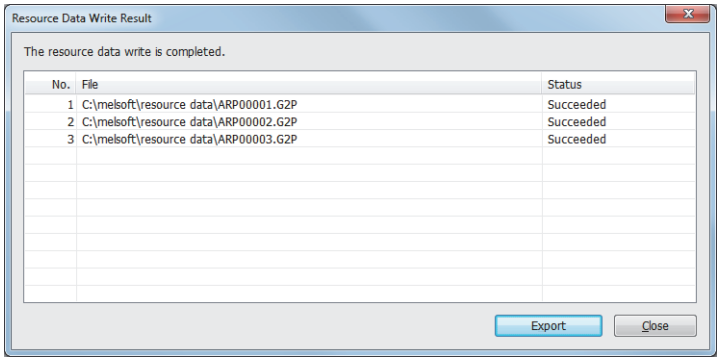
Check that the write destination drive has enough free space to store the target file according to the file size displayed in [Data Size].



Step 8 Click the [GOT Write] button in the [GOT Write] tab.

Upon completion of writing, the [Resource Data Write Result] dialog appears. Check the write result.

➟4.8.6 [Resource Data Write Result] dialog

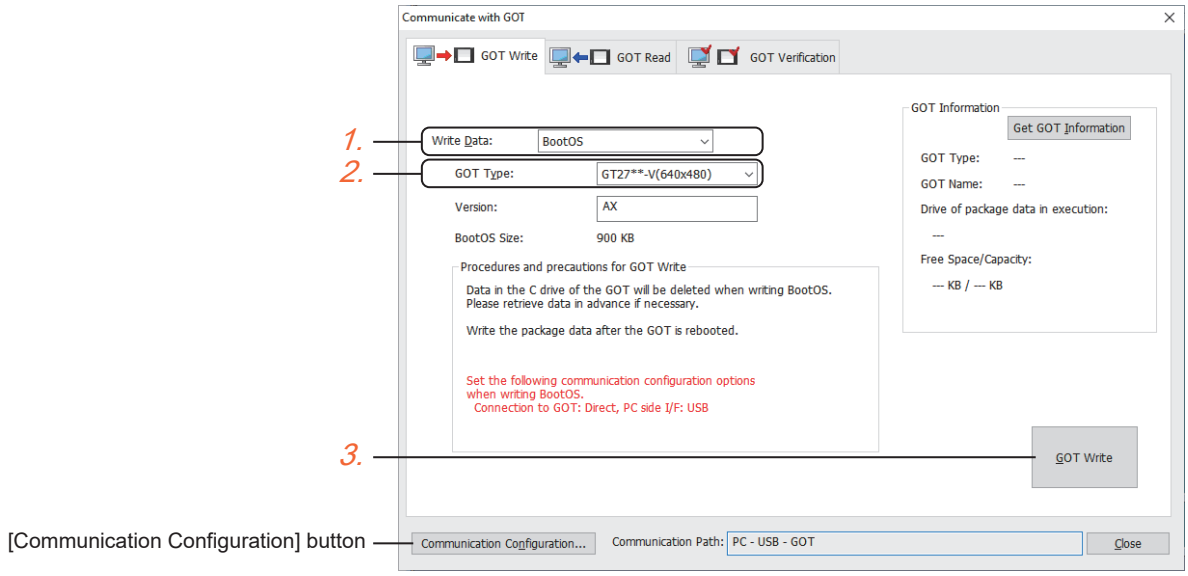


(3) Installing the BootOS

When the BootOS is installed, all the data in the GOT are deleted.
When the data in the GOT is required, read the data in advance.
Also, the BootOS can be installed only by the following method.

- Direct connection using a USB cable
- Data transfer using the data storage

When the personal computer and the GOT are connected by the method other than the direct connection using a USB cable, click the [Communication Configuration] button and change the setting, so that the direct connection using a USB cable is available.



Step 1 Select [BootOS] for [Write Data].

Step 2 Select [GOT Type] of the destination GOT for writing.

Step 3 Click the [GOT Write] button to install the BootOS to the GOT.

■2 Writing package data to multiple GOTs in one go

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
In the [Batch Write to multiple GOTs] dialog, write package data to multiple GOTs in one go.
Select [Communication] → [Batch Write to multiple GOTs] from the menu to display the [Batch Write to multiple GOTs] dialog.
For the setting details, refer to the following.

➟4.8.9 [Batch Write to multiple GOTs] dialog

Connect a personal computer and multiple GOTs by Ethernet.
The package data cannot be written to the GOT whose type is different from the one set in the project of the package data.
The following settings cannot be written to multiple GOTs in one go.

- [GOT ID No.] in the [GOT Setup] window

➟5.3.2 ■4 [GOT ID No.]

- [I/F Communication Setting] dialog

➟5.7.3 [I/F Communication Setting] dialog

- [I/F] and [Driver] set for each channel in the [Controller Setting] window

➟5.5.1 ■4 [Controller Setting]

- [GOT Ethernet Setting] window

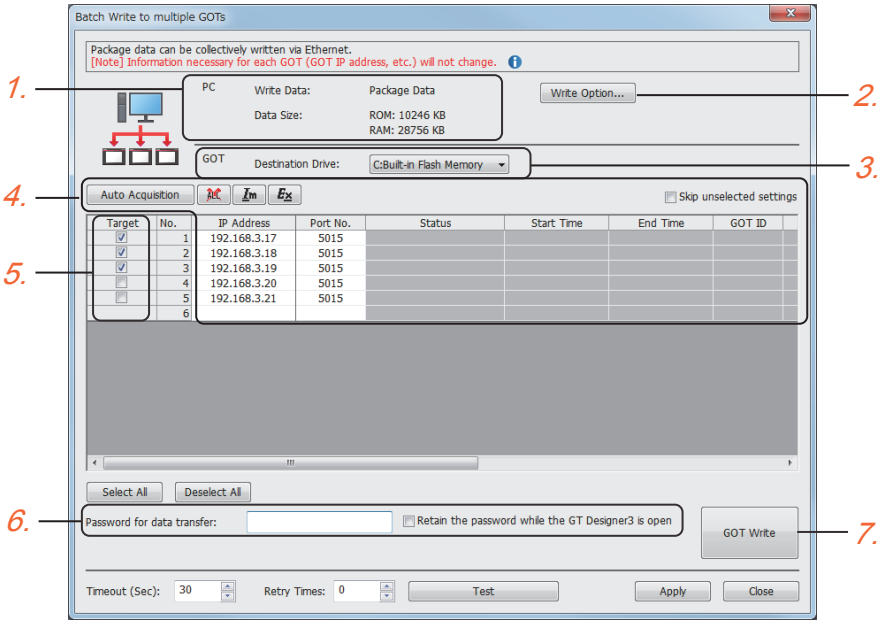
➟5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

After writing package data to multiple GOTs in one go, if you verify the current project against the project stored in each GOT, inconsistencies in the above settings may be detected.
In the [Write Option] dialog, set whether to write the following settings to the target GOTs.

➟4.8.10 [Write Option] dialog (for writing data to multiple GOTs in one go)

- [Screen Switching/Windows] in the [Environmental Setting] window

• [System Information] in the [Environmental Setting] window
• [Station No. Switching] in the [Controller Setting] window
• [Connected Ethernet Controller Setting] in the [Controller Setting] window



Step 1 Check the package data size with [Data Size], and make sure that the destination drive has enough free space for storing the data.

➟12.10 Data Transferred to the GOT and Storage Destination

Step 2 To add or delete a system application or special data to/from the package data, click the [Write Option] button to display the [Write Option] dialog and configure the setting.

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

Step 3 Set [Destination Drive].

Step 4 Set [IP Address] and [Port No.] of target GOTs by one of the following methods.

- Automatic acquisition
  Not available to GT21 and GS21.
  Click the [Auto Acquisition] button to acquire the information of the GOTs on the same network.
  The information existing in the list is deleted.
- Data entry
  Enter [IP Address] and [Port No.].
  You can copy data from a spreadsheet file or others as well.
- File import
  Click the Import button to import the information of the GOTs.
  A CSV file or Unicode text file can be imported.

Step 5 Select a checkbox in the [Target] column for the GOT to which the package data is written.

Step 6 If the data transfer security has been set for the project in the target GOT, enter the data transfer password.

➟4.7 Precautions
5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])

Step 7 Click the [GOT Write] button.

The [Communication Status] dialog appears, starting the writing of the package data.

➟4.8.11 [Communication Status] dialog

After the writing is complete, check the result in the [Communication Status] dialog.

■3 Reading the data from the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

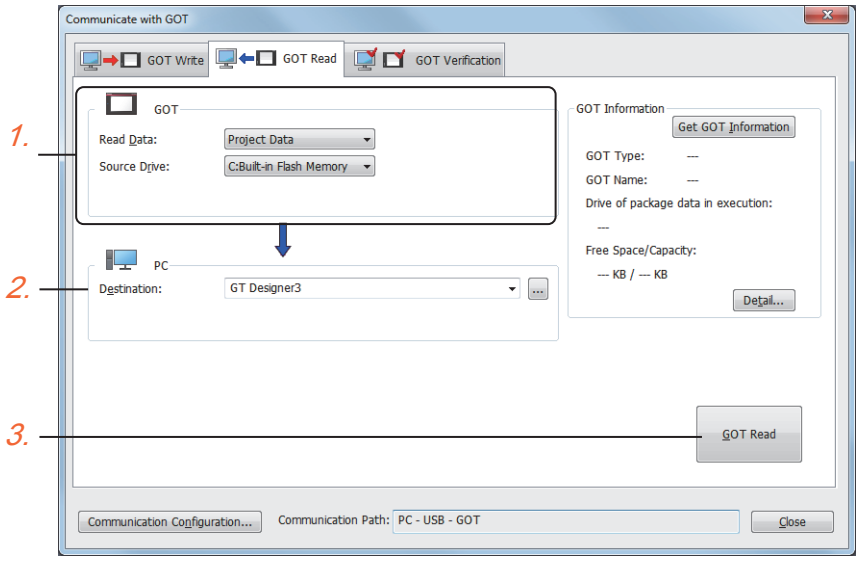
The transfer data is read in the [Communicate with GOT] dialog.
For the procedure of displaying this dialog, refer to the following.

➟4.3.1 ■1 (2) Configuring the communication settings
4.3.1 ■2 (2) Configuring the communication settings

For the details of the setting procedure, refer to the following.

➟4.8.2 ■2 [GOT Read] tab

(1) Reading the project data or the package data



Step 1 Set [GOT Side] as follows.

- Select [Project Data] or [Package Data] for [Read Data].
- Select the drive where the project data or the package data is stored for [Source Drive].

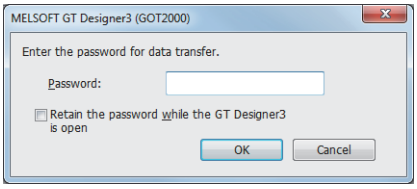
Step 2 Set [PC Side].

Set the reading destination of the project for [Destination].
To read the project data to GT Designer3, select [GT Designer3].
(When [Read Data] is [Package Data], the project data cannot be read to GT Designer3.)
To read the project data as a file, click the [...] button to set the saving format and the saving destination of the file.

Step 3 Click the [GOT Read] button.

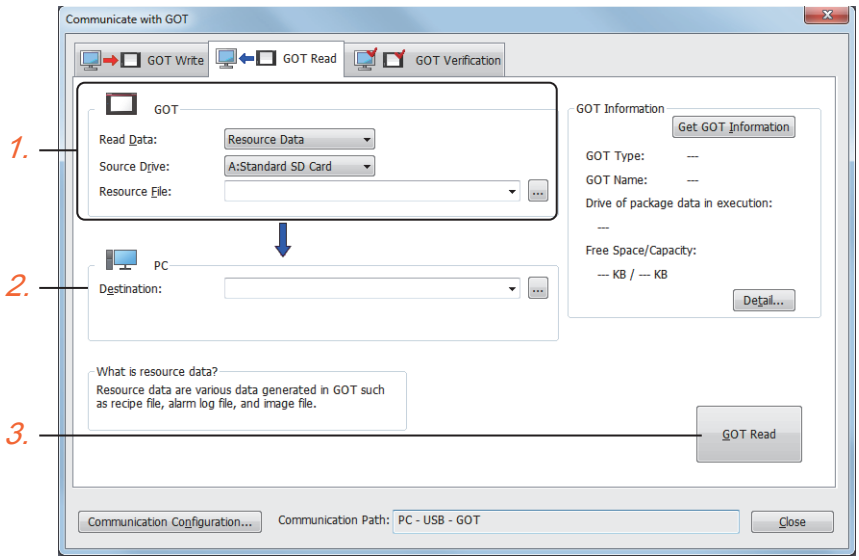
Step 4 If data transfer security has been set for the target GOT, the dialog for entering the data transfer password is displayed.

Input the data transfer password.



Step 5 The project is read.

(2) Reading the resource data



Step 1 Set [GOT Side] as follows.

- Select [Resource Data] for [Read Data].
- Select the drive where the resource data is stored for [Source Drive].
- Set a resource file to be read for [Resource File].
  Click the [...] button to set a resource file to be read in the [Path Specification] dialog.

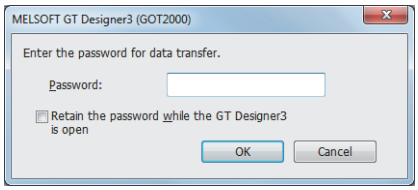
Step 2 Set [PC Side].

Set the reading destination of the resource data for [Destination].
Click the [...] button to set the saving destination of the file to be read in the [Browse For Folder] dialog.

Step 3 Click the [GOT Read] button.

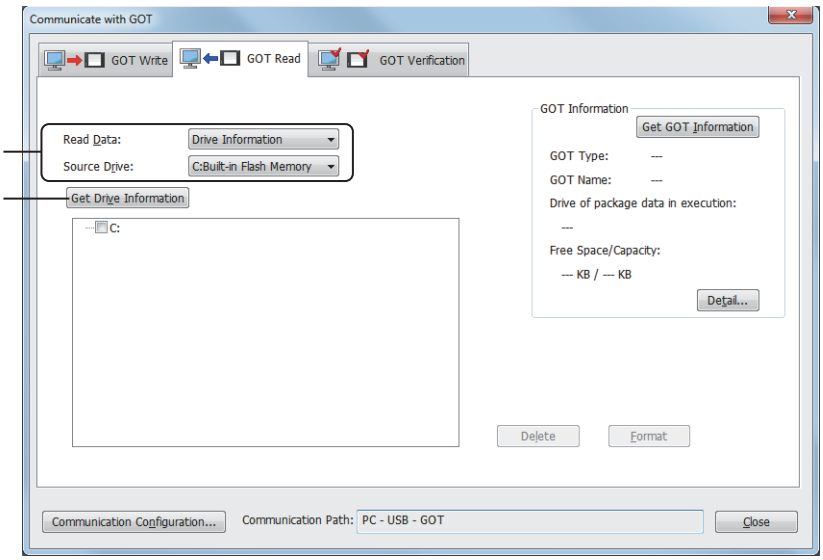
Step 4 If data transfer security has been set for the target GOT, the dialog for entering the data transfer password is displayed.

Input the data transfer password.



Step 5 The resource data is read.

(3) Reading the drive information



Step 1 Set [GOT Side] as follows.

- Select [Drive Information] for [Read Data].
- Select the read target drive for [Source Drive].

Step 2 Click the [Importing Drive Information] button.

Step 3 The folders in the specified drive appear in the tree.

■4 Verifying projects between the GOT and GT Designer3

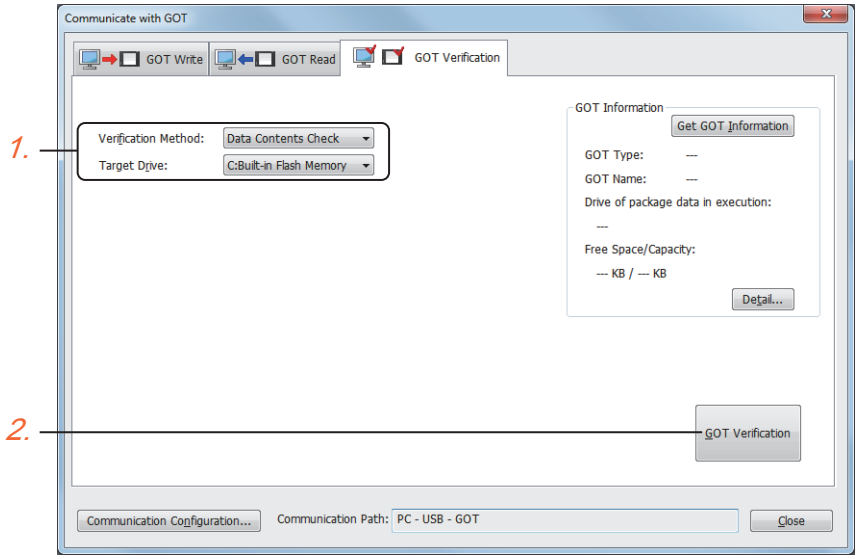
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The project is verified in the [Communicate with GOT] dialog.
For the procedure of displaying this dialog, refer to the following.

➟4.3.1 ■2 (2) Configuring the communication settings
4.3.1 ■2 (2) Configuring the communication settings

For the details of the setting procedure, refer to the following.

➟4.8.2 ■3 [GOT Verification] tab



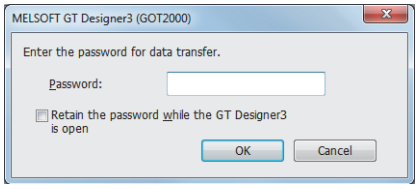
Step 1 Configure the setting as follows.

- Select the verification method in [Verification Method].
  [Data Contents Check]: The descriptions of the data such as setting item are compared.
  [Time Stamp Check]: The time stamps of the files are compared.
- Select the drive where the project data is stored in [Target Drive].

Step 2 Click the [GOT Verification] button.

Step 3 If data transfer security has been set for the target GOT, the dialog for entering the data transfer password is displayed.

Input the data transfer password.



Step 4 The [Verify Result] dialog displays the verification results.

➟11.5.6 [Verify Result] dialog

4.4 Transferring the Data between the Personal Computer and the GOT via PLC CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟4.4.1 Connecting the personal computer and PLC CPU
4.4.2 Transferring data

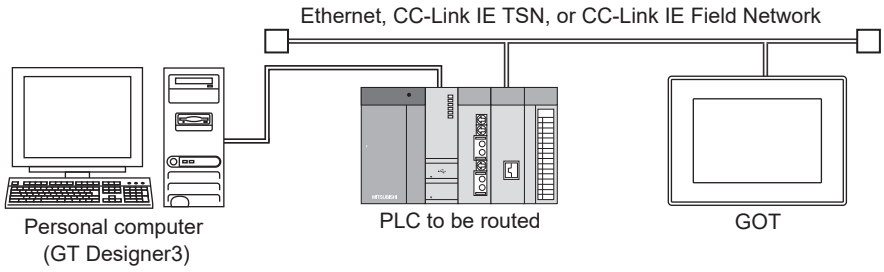
The personal computer communicates with the GOT via a PLC that is connected to the same Ethernet network, CC-Link IE TSN, or CC-Link IE Field Network as the GOT.
GT25-W, GT2505-V, GT25HS-V, and GS25 do not support the CC-Link IE Field Network connection.
GT23 does not support the CC-Link IE TSN and CC-Link IE Field Network connections.
The personal computer can communicate with the GOT over multiple networks through multiple PLCs as well.
For the details of the data which can be transferred, refer to the following.

➟4.1.2 Types of the data to be transferred to the GOT

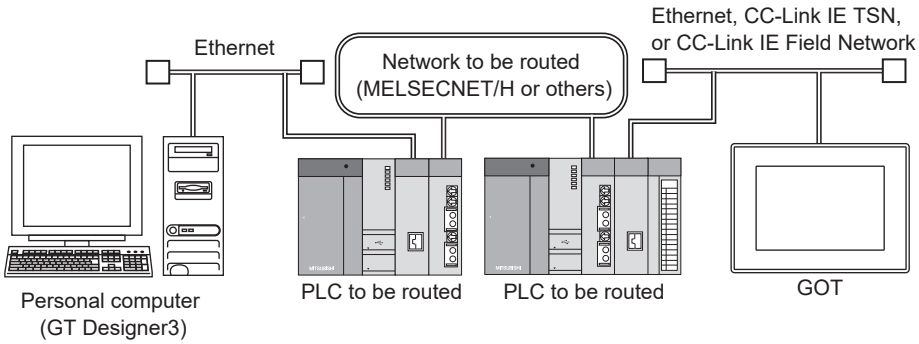
For the connecting method of the GOT and a PLC, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

• Example of communication via a PLC



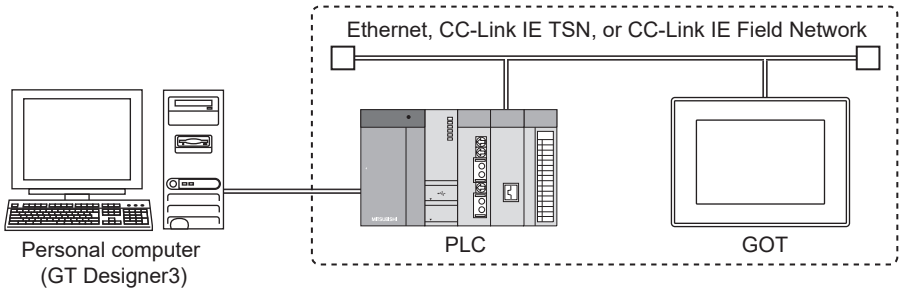
• Example of communication via the network



■1 PLCs and networks to be routed

(1) Connection type between the GOT and a PLC

The following shows the applicable PLCs and the connection type between the GOT and the PLC.



○: Available, ×: Not available

Applicable PLC		Connection type between the GOT and a PLC			
		Ethernet connection		CC-Link IE TSN connection	CC-Link IE Field Network connection
		PLC side: Ethernet module	PLC side: Built-in Ethernet port		
RCPU	R00CPU, R01CPU, R02CPU	○	○ *6	○	○
	R04CPU, R08CPU, R16CPU, R32CPU, R120CPU	○	○ *7	○	○
	R08PCPU, R16PCPU, R32PCPU, R120PCPU	○	×	×	○
	R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU	○	×	×	○
	R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU	○	○ *1*7	○	○
	R12CCPU-V	○ *2	×	×	○
Motion CPU (MELSEC iQ-R series)	R16MTCPU, R32MTCPU	○	×	×	○

Applicable PLC		Connection type between the GOT and a PLC			
		Ethernet connection		CC-Link IE TSN connection	CC-Link IE Field Network connection
		PLC side: Ethernet module	PLC side: Built-in Ethernet port		
QCPU	Q00JCPU, Q00CPU, Q01CPU, Q02CPU	○	×	×	×
	Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU	○	×	×	×
	Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU	○	×	×	×
	Q12PRHCPU (Main base unit), Q25PRHCPU (Main base unit), Q12PRHCPU (Remote extension base unit), Q25PRHCPU (Remote extension base unit), Q12PRHCPU (Extension base unit), Q25PRHCPU (Extension base unit)	×	×	×	×
	Q00UJCPU, Q00UJCPU-S8, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU	○	×	×	○
	Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU	○	×	×	○
	Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU, Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU	○	○*3	×	○
	Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q24DHCCPU-VG, Q26DHCCPU-LS	○	×	×	○*4
LCPU	L02CPU, L06CPU, L26CPU-BT, L02CPU-P, L06CPU-P, L26CPU-P, L26CPU-PBT	○	×	×	○*5
	L02SCPU-P	○	×	×	○*5
CC-Link IE Field Network remote head module	RJ72GF15-T2	×	×	×	○
	LJ72GF15-T2	×	×	×	○
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	×	×	○

*1 Use port P1 of the network part. (The port must be enabled for Ethernet connection.)

*2 Use the Ethernet module in the multiple CPU system.

*3 For the conditions and settings to establish connection through the Ethernet port built in the QnUD(P)VCPU, refer to the following.

➟4.4.1 ■3 (3) Settings required for connection through the built-in Ethernet port of the QnUD(P)VCPU

*4 For Q12DCCPU-V (Basic mode), the serial number must start with 12042 or later.
For Q12DCCPU-V (Extended mode), the serial number must start with 15102 or later.

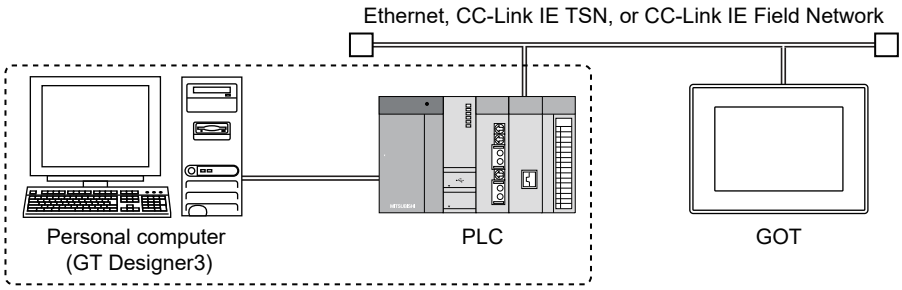
*5 Use a PLC CPU having a serial number stating with 13012 or later in the first 5 digits.
Use GT Works2 with version 1.50C or later.

*6 Use a PLC CPU with firmware version 08 or later.

*7 Use a PLC CPU with firmware version 40 or later.

(2) Connection type between the personal computer and a PLC

The following shows the applicable PLCs and the connection type between the personal computer and the PLC.



○: Available, ×: Not available

Available PLC		Connection type between the personal computer and a PLC		
		Connection using an Ethernet cable	Connection using a USB cable	Connection using an RS-232 cable
RCPU	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU	○	○	×
	R08PCPU, R16PCPU, R32PCPU, R120PCPU	○	○	×
	R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU	○	○	×
	R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU	○	○	×
	R12CCPU-V	○	×	×
Motion CPU (MELSEC iQ-R series)	R16MTCPU, R32MTCPU	○	○	×
QCPU	Q00JCPU, Q00CPU, Q01CPU, Q02CPU	○*1	×	○
	Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU	○*1	○	○
	Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU	○*1	○	○
	Q12PRHCPU (Main base unit), Q25PRHCPU (Main base unit), Q12PRHCPU (Remote extension base unit), Q25PRHCPU (Remote extension base unit), Q12PRHCPU (Extension base unit), Q25PRHCPU (Extension base unit)	○*1	○	○
	Q00UJCPU, Q00UJCPU-S8, Q00UCPU, Q01UCPU, Q02UCPU, Q03UDCPU, Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU	○*1	○	○
	Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU	○	○	○*2
	Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU, Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU	○	○	○*2
	Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q24DHCCPU-VG, Q26DHCCPU-LS	○	○	○*2
LCPU	L02CPU, L06CPU, L26CPU-BT, L02CPU-P, L06CPU-P, L26CPU-P, L26CPU-PBT	○	○	○*3
	L02SCPU-P	○*1	○	○
CC-Link IE Field Network head module	RJ72GF15-T2	×	○	×
	LJ72GF15-T2	×	○	×

*1 Since the CPU has no Ethernet port, it cannot be connected with an Ethernet cable.

Use an Ethernet module and a hub to connect the CPU.
*2 Connect the CPU via a QCPU in the multiple CPU system.
*3 An adapter (L6ADP-R2 or L6ADP-R4) is required.

(3) Network through which data can pass

The data can be transferred via the following network.

- MELSECNET/10
- MELSECNET/H
- CC-Link IE TSN
- CC-Link IE Controller Network
- CC-Link IE Field Network
- Ethernet

4.4.1 Connecting the personal computer and PLC CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Connection using RS-232 cable
■2 Connection using USB cable
■3 Connection to the Ethernet port built in the PLC using an Ethernet cable
■4 Connection to the Ethernet port built in the PLC via a hub
■5 Connection to the Ethernet interface module via a hub

■1 Connection using RS-232 cable

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Connecting the personal computer and a PLC

Use the following cable to connect with a PLC.

PLC to be routed	Cable type	Cable model
QCPU	RS-232 cable	GT01-C30R2-6P (3m)
LCPU		

For the PLCs connectable to the personal computer, refer to the following.

➥4.3.2 ■1 (2) Connection type between the personal computer and a PLC

Step 1 Check the connection type between the PLC to be routed and the GOT.

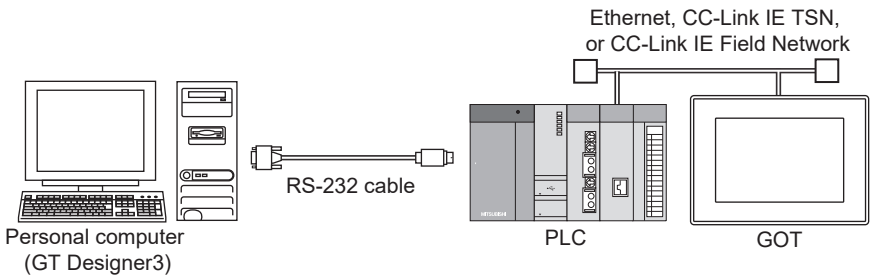
For the PLCs connectable to the GOT, refer to the following.

➥4.3.2 ■1 (1) Connection type between the GOT and a PLC

Step 2 Connect the RS232 ports of the personal computer and the PLC using an RS-232 cable.

For the position of the RS232 port of the PLC, refer to the following.

➥User's Manual of the PLC used



Step 3 Power on the PLC and the GOT.

(2) Configuring the communication settings

Perform one of the following operations according to your purpose.

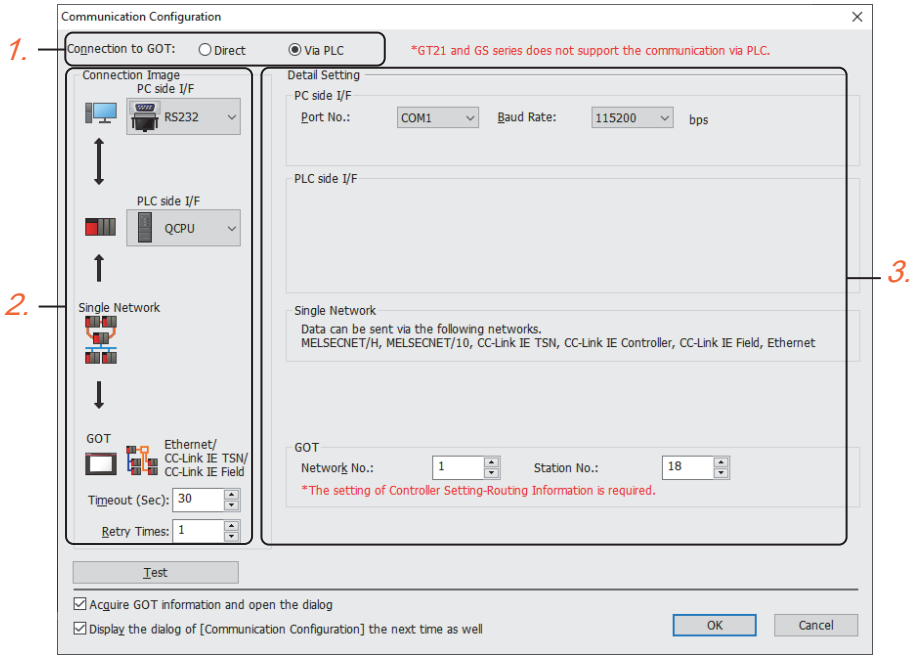
- To write data, select [Communication] → [Write to GOT] from the menu.
- To read data, select [Communication] → [Read from GOT] from the menu.
- To verify data, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

This dialog is displayable by selecting [Communication] → [Communication Configuration] from the menu as well.

➟4.8.8 ■2 ■2 Writing the data via PLC CPU

Configure the settings as shown below, and click the [OK] button.



Step 1 Select [Via PLC] for [Connection to GOT].

Step 2 Set [Connection Image].

Select [RS232] for [PC side I/F].
Select the type of the PLC to be routed for [PLC side I/F].
Set [Timeout (Sec)] and [Retry Times].

Step 3 Set [Detail Setting].

Set the RS232 port and the transmission speed of the personal computer in [PC side I/F].
Set the network No. and the station number of the destination GOT in [GOT].

Step 4 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

■2 Connection using USB cable

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Connecting the personal computer and a PLC

Use the following cable to connect with a PLC.

PLC to be routed		Cable type	Connector
RCPU		USB cable	A-mini B type
QCPU	High Performance model QCPU	USB cable	A-B type
	Universal model QCPU	USB cable	A-mini B type
LCPU		USB cable	A-mini B type

For the PLCs connectable to the personal computer, refer to the following.

➟4.3.2 ■1 (2) Connection type between the personal computer and a PLC

Step 1 Check the connection type between the PLC to be routed and the GOT.

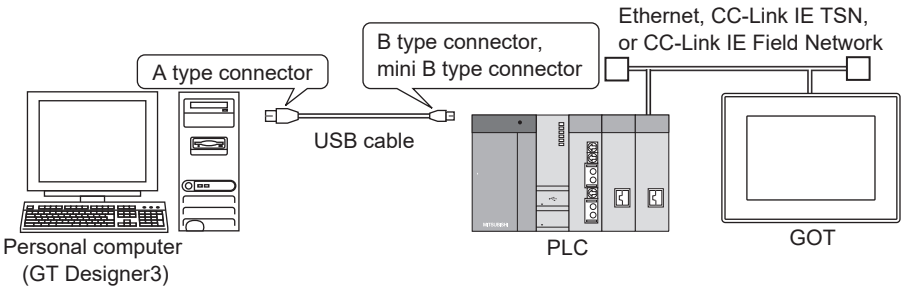
For the PLCs connectable to the GOT, refer to the following.

➟4.3.2 ■1 (1) Connection type between the GOT and a PLC

Step 2 Connect the A type connector of a USB cable to the USB port of the personal computer and the B type connector or the mini B type connector to the USB port of the PLC.

For the position of the USB port of the PLC, refer to the following.

➟User's Manual of the PLC used



Step 3 Power on the PLC and the GOT.

(2) Configuring the communication settings

Perform one of the following operations according to your purpose.

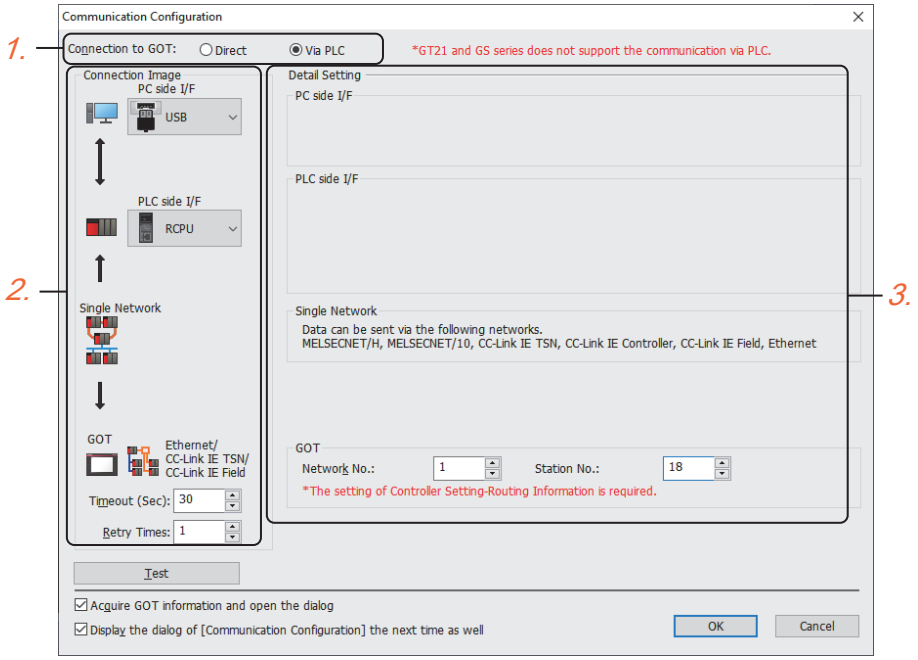
- To write data, select [Communication] → [Write to GOT] from the menu.
- To read data, select [Communication] → [Read from GOT] from the menu.
- To verify data, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

This dialog is displayable by selecting [Communication] → [Communication Configuration] from the menu as well.

➟4.8.8 ■2 ■2 Writing the data via PLC CPU

Configure the settings as shown below, and click the [OK] button.



Step 1 Select [Via PLC] for [Connection to GOT].

Step 2 Set [Connection Image].

Select [USB] for [PC side I/F].

Select the type of the PLC to be routed for [PLC side I/F].

Set [Timeout (Sec)] and [Retry Times].

Step 3 Set [Detail Setting].

Set the network No. and the station number of the destination GOT in [GOT].

Step 4 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

■3 Connection to the Ethernet port built in the PLC using an Ethernet cable

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the following cable to connect the personal computer and the PLC.

Cable type	Description
Ethernet cable	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e

For the PLCs connectable to the personal computer, refer to the following.

➟4.3.2 ■1 (2) Connection type between the personal computer and a PLC

To establish connection through the Ethernet port built in the QnUD(P)VCPU, configure the MELSOFT connection extended setting.

➟(3) Settings required for connection through the built-in Ethernet port of the QnUD(P)VCPU

To establish connection through the Ethernet port built in the RCPU, enable communication based on the network number and station number.

➟(4) Settings required for connection through the built-in Ethernet port of the RCPU

(1) Connecting the personal computer and a PLC

Step 1 Check the connection type between the PLC to be routed and the GOT.

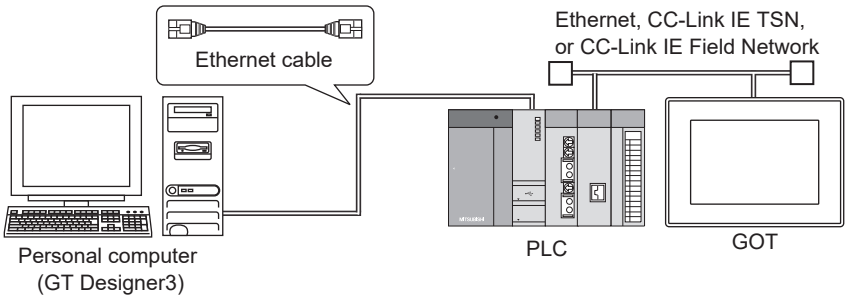
For the PLCs connectable to the GOT, refer to the following.

➟4.3.2 ■1 (1) Connection type between the GOT and a PLC

Step 2 Connect the Ethernet port of the personal computer and the Ethernet port of the PLC to be routed using an Ethernet cable.

For the position of the Ethernet port of the PLC, refer to the following.

➟User's Manual of the PLC to be used



Step 3 Power on the PLC and the GOT.

(2) Configuring the communication settings

Perform one of the following operations according to your purpose.

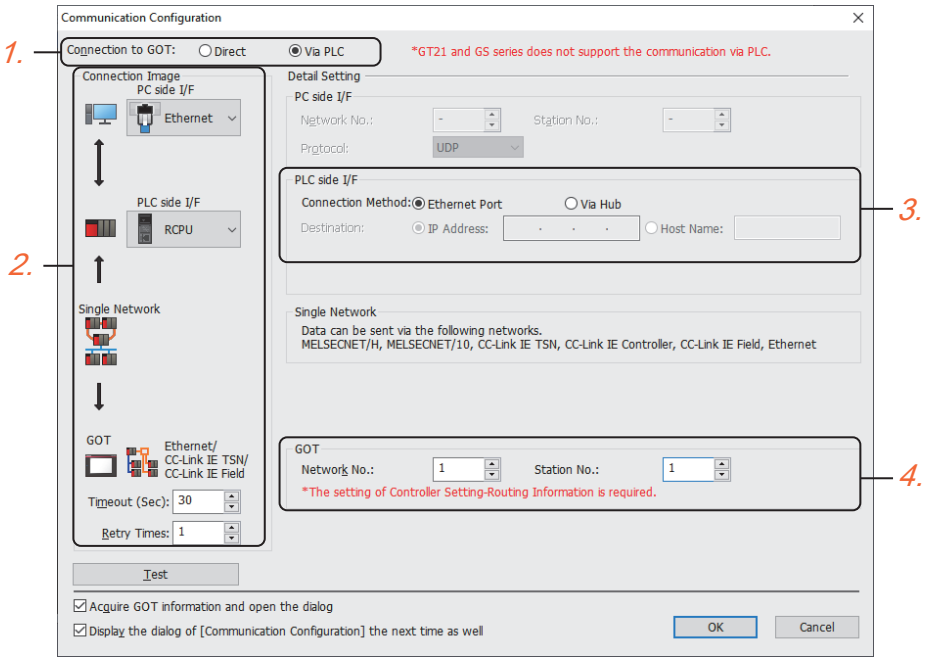
- To write data, select [Communication] → [Write to GOT] from the menu.
- To read data, select [Communication] → [Read from GOT] from the menu.
- To verify data, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

This dialog is displayable by selecting [Communication] → [Communication Configuration] from the menu as well.

➟4.8.8 ■2 ■2 Writing the data via PLC CPU

Configure the settings as shown below, and click the [OK] button.



Step 1 Select [Via PLC] for [Connection to GOT].

Step 2 Set [Connection Image].

Select [Ethernet] for [PC side I/F].

Select the type of the routed PLC ([RCPU], [QCPU], or [LCPU]) for [PLC side I/F].

Set [Timeout (Sec)] and [Retry Times].

Step 3 Set [PLC side I/F] in [Detail Setting].

Select [Connecting directly to the Ethernet port] for [Connection].

Step 4 Set [GOT] in [Detail Setting].

Set the network No. and the station number of the destination GOT.

Step 5 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

(3) Settings required for connection through the built-in Ethernet port of the QnUD(P)VCPU

Configure the settings on the PLC and GOT sides as shown below.

Required setting	Setting contents	Requirements
PLC side setting	On GX Works2, configure the MELSOFT connection extended setting and write the parameter to the PLC. For the MELSOFT connection extended setting, refer to the following. ➟QnUCPU User's Manual (Communication via Built-in Ethernet Port)	Use the QnUD(P)VCPU and GX Works2 that satisfy the following requirements. • QnUD(P)VCPU: The serial number contains 17052 or later in the first 5 digits. • GX Works2: Version 1.535H or later
GOT side setting	In GT Designer3, register the QnUD(P)VCPU in [Connected Ethernet Controller Setting] and write the package data to the GOT. Set [Network No.], [Station No.], and [Port No.] as shown below. • [Network No.]: [Network No.] set in the MELSOFT connection extended setting on GX Works2 • [Station No.]: [Station No.] set in the MELSOFT connection extended setting on GX Works2 • [Port No.]: 5001 For [Connected Ethernet Controller Setting], refer to the following. ➟5.5.1 ■4 [Controller Setting]	-

(4) Settings required for connection through the built-in Ethernet port of the RCPU

Configure the settings on the PLC and GOT sides as shown below.

Required setting	Setting contents	Requirements
PLC side setting	In GX Works3, set [Communications by Network No./Station No.] to [Enable], set the network number and station number, and then write the parameter to the PLC. For [Communications by Network No./Station No.], refer to the following. ➟MELSEC iQ-R Ethernet User's Manual (Application)	For the firmware version of the applicable RCPU, refer to the following. ➟4.4■1 PLCs and networks to be routed
GOT side setting	In GT Designer3, register the RCPU in [Connected Ethernet Controller Setting] and write the package data to the GOT. Set [Network No.], [Station No.], and [Port No.] as shown below. • [Net No.]: [Network No.] set on GX Works3 • [Station No.]: [Station No.] set on GX Works3 • [Port No.]: 5001 For [Connected Ethernet Controller Setting], refer to the following. ➟5.5.1 ■4 [Controller Setting]	-

■4 Connection to the Ethernet port built in the PLC via a hub

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the following cable to connect the personal computer and the PLC.

Cable type	Description
Ethernet cable	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e

For the PLCs connectable to the GOT, refer to the following.

➟4.3.2 ■1 (2) Connection type between the personal computer and a PLC

To establish connection through the Ethernet port built in the QnUD(P)VCPU, configure the MELSOFT connection extended setting.

➟4.4.1 ■3 (3) Settings required for connection through the built-in Ethernet port of the QnUD(P)VCPU

To establish connection through the Ethernet port built in the RCPU, enable communication based on the network number and station number.

➟4.4.1 ■3 (4) Settings required for connection through the built-in Ethernet port of the RCPU

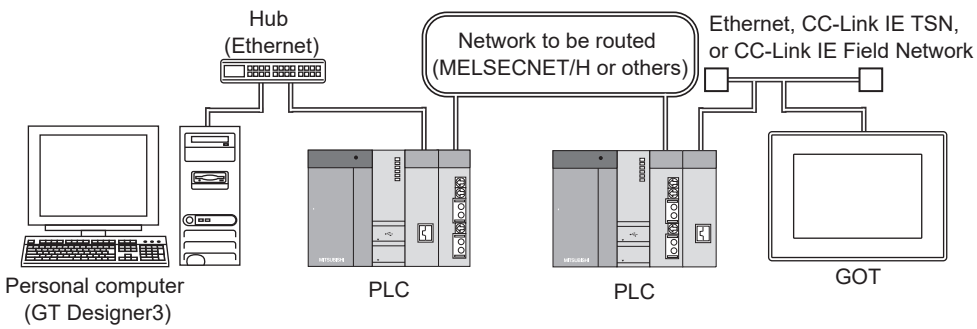
(1) Connecting the personal computer and a PLC

Step 1 Use a hub to connect the personal computer and the PLC on the same Ethernet network.

Connect the hub and the Ethernet port of the PLC with an Ethernet cable.

For the position of the Ethernet port of the PLC, refer to the following.

➟User's Manual of the PLC or the Ethernet interface module to be used



Step 2 Power on the PLC and the GOT.

(2) Configuring the communication method

According to the purpose, perform either of the following operations.

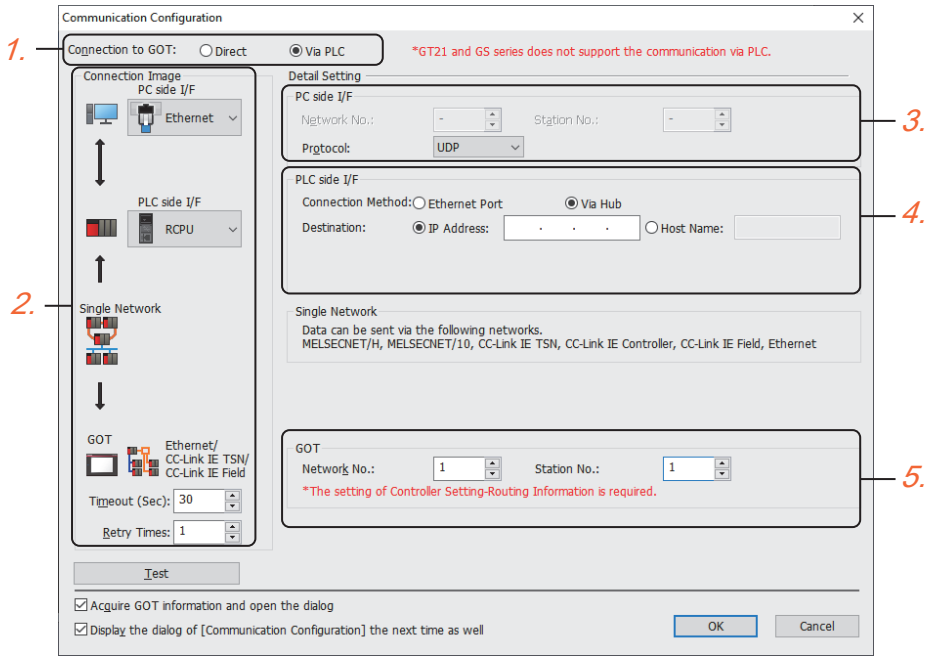
- For writing, select [Communication] → [Write to GOT] from the menu.
- For reading, select [Communication] → [Read from GOT] from the menu.
- For verifying, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.

Select [Communication] → [Communication Configuration] from the menu to display this dialog.

➟4.8.8 ■2 (1) Connection using RS-232 cable and USB cable

Set the communication method as follows and click the [OK] button.



Step 1 Select [Via PLC] for [Connection to GOT].

Step 2 Set [Connection Image].

Select [Ethernet] for [PC side I/F].
Select the type of the routed PLC ([RCPU], [QCPU], or [LCPU]) for [PLC side I/F].
Set [Timeout (Sec)] and [Retry Times].

Step 3 Set [PC side I/F] in [Detail Setting].

Select the communication protocol to be used ([UDP] or [TCP]) in [Protocol].

Step 4 Set [PLC side I/F] in [Detail Setting].

Set [Connecting by the hub] for [Connection].
After selecting, set [IP Address] or [Host Name] of the PLC to be routed in [Destination].

Step 5 Set [GOT] in [Detail Setting].

Set the network No. and the station number of the destination GOT.

Step 6 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

■5 Connection to the Ethernet interface module via a hub

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the following cable to connect the personal computer and the PLC.

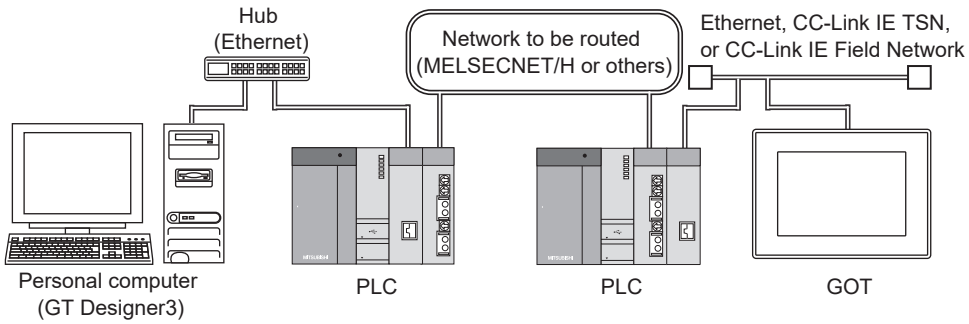
Cable type	Description
Ethernet cable	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e

For the PLCs connectable to the GOT, refer to the following.

➟4.3.2 ■1 (2) Connection type between the personal computer and a PLC

(1) Connecting the personal computer and a PLC

Step 1 Use a hub to connect the personal computer and the PLC on the same Ethernet network.
Connect the hub and the Ethernet interface module with an Ethernet cable.



Step 2 Power on the PLC and the GOT.

(2) Configuring the communication method

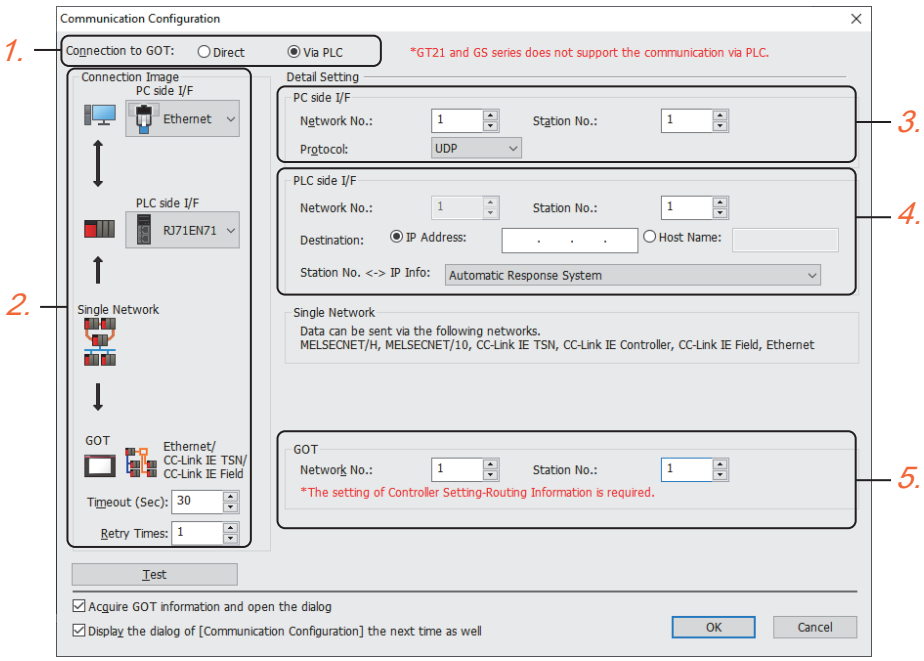
According to the purpose, perform either of the following operations.

- For writing, select [Communication] → [Write to GOT] from the menu.
- For reading, select [Communication] → [Read from GOT] from the menu.
- For verifying, select [Communication] → [Verify GOT] from the menu.

The [Communication Configuration] dialog appears.
Select [Communication] → [Communication Configuration] from the menu to display this dialog.

➟4.8.8 ■2 (1) Connection using RS-232 cable and USB cable

Set the communication method as follows and click the [OK] button.



Step 1 Select [Via PLC] for [Connection to GOT].

Step 2 Set [Connection Image].

Select [Ethernet] for [PC side I/F].

Select the type of the Ethernet interface module to be routed ([RJ71EN71], [QJ71E71] or [LJ71E71]) for [PLC side I/F].

Set [Timeout (Sec)] and [Retry Times].

Step 3 Set [PC side I/F] in [Detail Setting].

Set [Network No.] and [Station No.].

Select the communication protocol to be used ([UDP] or [TCP]) in [Protocol].

Step 4 Set [PLC side I/F] in [Detail Setting].

Set [Station No.] of the PLC to be routed.

Set [IP Address] or [Host Name] of the PLC to be routed in [Destination].

Select the response method of the PLC in [Station No.<->IP information].

Step 5 Set [GOT] in [Detail Setting].

Set the network No. and the station number of the destination GOT.

Step 6 Click the [OK] button to display the [Communicate with GOT] dialog.

For the operations of the [Communicate with GOT] dialog, refer to the following.

➟4.3.2 Transferring data

4.4.2 Transferring data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To transfer data to the GOT via a PLC, use the same method as when the personal computer and the GOT are connected directly.
You cannot write package data to multiple GOTs in one go via a PLC.
For the transfer method, refer to the following.

➟4.3.2 Transferring data

However, the data transfer via a PLC differs in the following points.

- Transfer of the BootOS or the CoreOS

  The BootOS and the CoreOS cannot be transferred by the data transfer via a PLC.
  To install the BootOS to the GOT, connect the personal computer and the GOT using a USB cable or use the data storage.

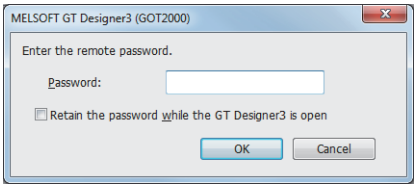
  ➟4.3.1 ■1 Connection using USB cable
  4.5.3 Installing the BootOS or the CoreOS to the GOT

  To install the CoreOS to the GOT, use the data storage.

  ➟4.5.3 Installing the BootOS or the CoreOS to the GOT

- Remote password of the PLC to be routed

  When the remote password is set for the PLC to be routed, the setting must be canceled at the communication with the GOT.
  When the following dialog appears, input the remote password of the PLC to be routed.



4.5 Transferring the Data with Data Storage

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

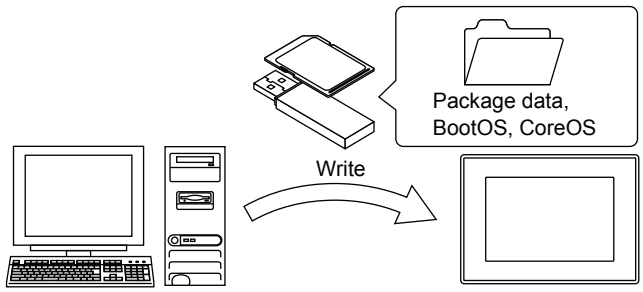
➟4.5.1 Writing a package data into the GOT
4.5.2 Starting up the package data from data storage
4.5.3 Installing the BootOS or the CoreOS to the GOT

Use the data storage such as SD card to transfer the data.
For the details of the data which can be transferred by this method, refer to the following.

➟4.1.2 Types of the data to be transferred to the GOT

For the available data storage, refer to the following Technical Bulletin.

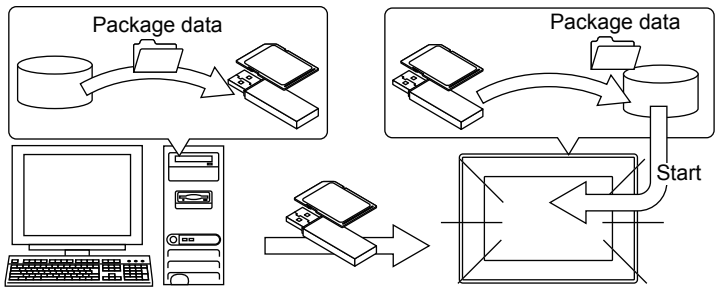
➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)(GOT-A-0160)
Operation Check Results of Non-Mitsubishi SD Cards on GOT2000 Series Units (GOT-A-0065)



4.5.1 Writing a package data into the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the data storage to write the package data to the GOT.



Point

Capacity check of the package data and the destination drive

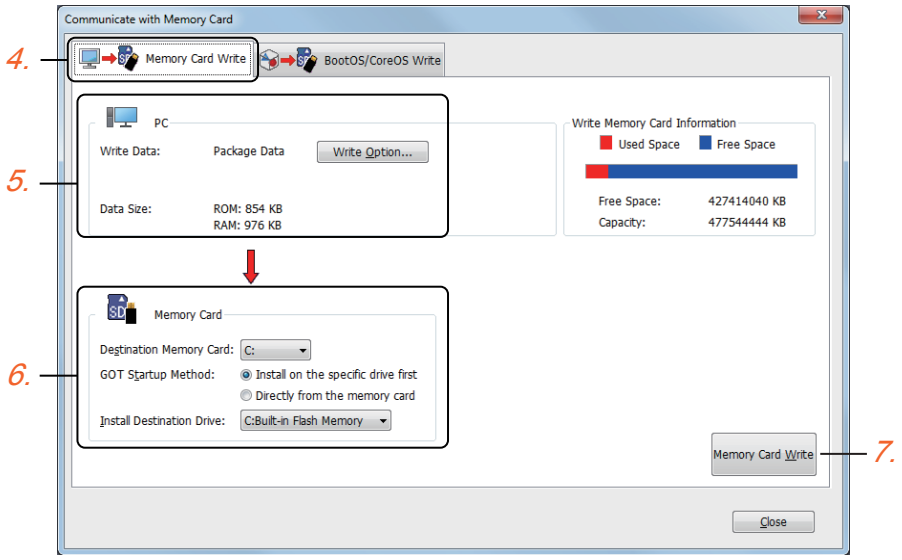
Before writing the package data, check the data size of the package data to be transferred and the available space of the destination drive.
For how to check the available space of the destination drive, refer to the following.

➟GOT2000 Series User's Manual (Utility)

The following shows the procedure to write the package data.

Step 1 Connect the data storage to the personal computer.
Step 2 Open the project to be written in GT Designer3.
Step 3 Select [Communication] → [Write to Memory card] from the menu.
The [Transfer to Memory Card] dialog appears.

➟4.8.12 [Communicate with Memory Card] dialog



Step 4 Select the [Memory Card Write] tab.

Step 5 Set [PC Side].

The capacity of the transfer data is displayed in [Data Size]. Check that the destination drive has the sufficient available space.
When the system application or the special data is required to be added to the package data or deleted, click the [Write Option] button and configure the setting in the [Write Option] dialog.

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

Step 6 Set [Memory Card].

Set the drive name of the data storage for [Destination Memory Card].
Select [Startup after installing data to specified drive] for [Startup Operation].
Select the write destination drive of the GOT for [Destination Drive].

Step 7 Click the [Memory Card Write] button.

Step 8 After the writing to the data storage is completed, remove the data storage from the personal computer.

Step 9 Install the data storage that has been removed from the personal computer to the GOT.

For how to install each data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

Step 10 Write the package data according to the GOT model.

- For GT27, GT25 (excluding GT2505-V), GT23, and GS25

  While pressing the S.MODE switch, power on the GOT.
  When the GOT is powered on, the package data is written to the GOT.
- For GT2505-V, GT21, and GS21

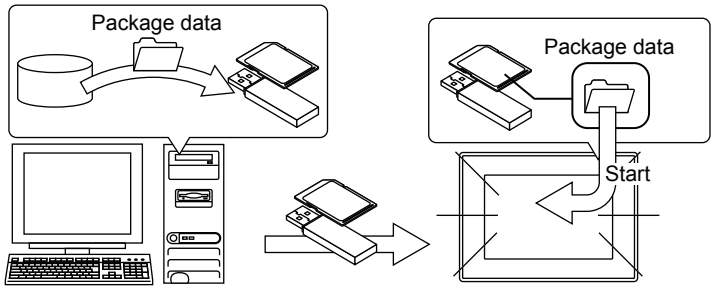
  While touching the GOT screen lower-right corner, power on the GOT.
  When the GOT is powered on, the package data is written to the GOT.

Step 11 After the writing of the package data is completed, touch the screen to restart the GOT.

4.5.2 Starting up the package data from data storage

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Start the GOT using the package data stored in the data storage.



Point

Capacity check of the package data and the destination drive

Before writing the package data, check the data size of the package data to be transferred and the available space of the data storage.

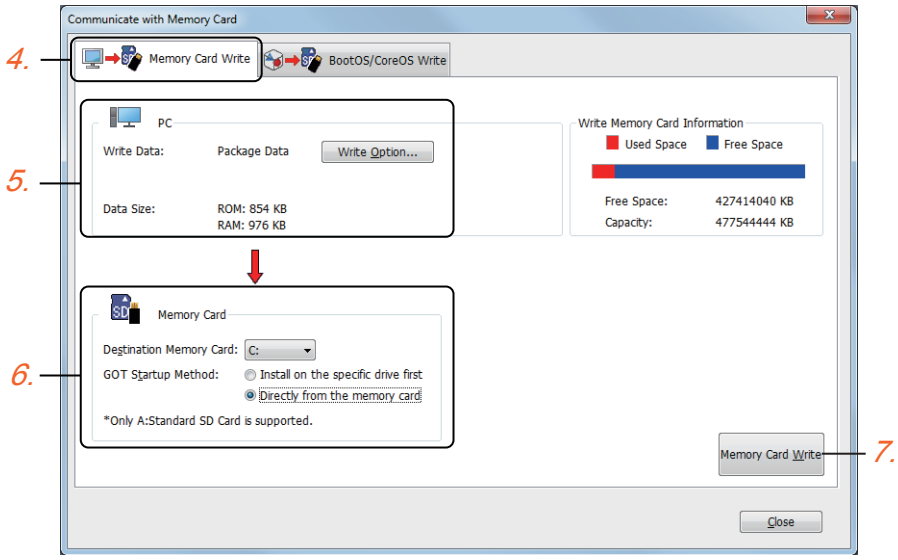
Step 1 Connect the data storage to the personal computer.

Step 2 Open the project to be written in GT Designer3.

Step 3 Select [Communication] → [Write to Memory card] from the menu.

The [Transfer to Memory Card] dialog appears.

➟4.8.12 [Communicate with Memory Card] dialog



Step 4 Select the [Memory Card Write] tab.

Step 5 Set [PC Side].

The capacity of the transfer data is displayed in [Data Size]. Check that the data storage has the sufficient available space.

When the system application or the special data is required to be added to the package data or deleted, click the [Write Option] button and configure the setting in the [Write Option] dialog.

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

Step 6 Set [Memory Card].

Set the drive name of the data storage for [Destination Memory Card].

Select [Direct startup from memory card] for [Startup Operation].

Step 7 Click the [Memory Card Write] button.

Step 8 After the writing to the data storage is completed, remove the data storage from the personal computer.

Step 9 Install the data storage that has been removed from the personal computer to the GOT.

For how to install each data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

Step 10 Power on the GOT.

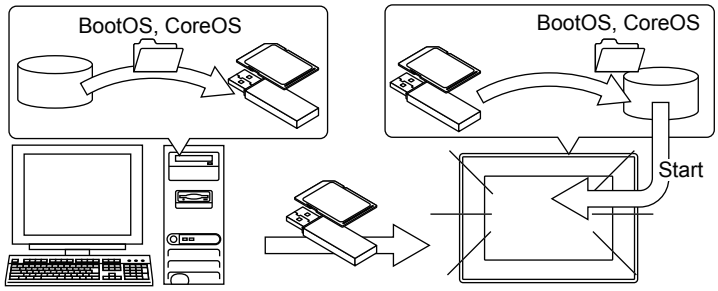
4.5.3 Installing the BootOS or the CoreOS to the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the data storage to install the BootOS or the CoreOS to the GOT.

For the version of the BootOS or the CoreOS supported by each version of GT Designer3, refer to the following.

➟12.17 Upgraded Additional Function List



Point

(1) **Capacity check for the BootOS/CoreOS and the destination drive**

Before installing the BootOS or the CoreOS, check the data size of the Boot OS or the CoreOS and the available space of the data storage.

(2) **Data in the GOT**

When the BootOS or the CoreOS is installed, all the data in the GOT are deleted.
When the data in the GOT is required, read the data in advance.

(3) **Installing the CoreOS and the BootOS simultaneously**

The BootOS is installed simultaneously at the installation of the CoreOS.
Reinstalling the BootOS is not required.

(4) **Data storage for installing the CoreOS**

The CoreOS is installed in drive A (standard SD card) only.

■1 Writing the BootOS or the CoreOS to the data storage

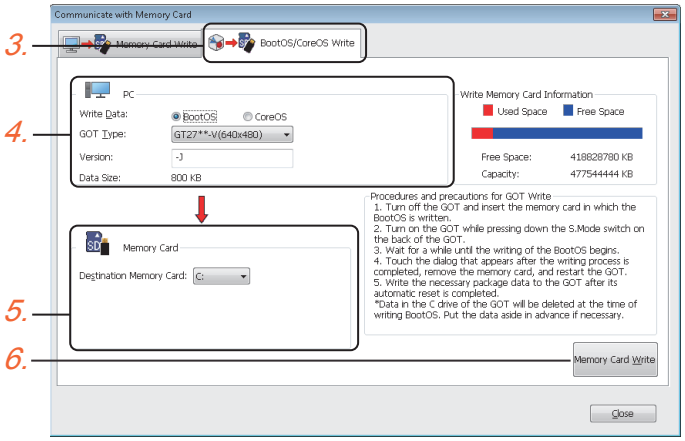
Step 1 To install the BootOS, connect a data storage to the personal computer, and start GT Designer3.

To install the CoreOS, connect an SD card to the personal computer, and start GT Designer3.

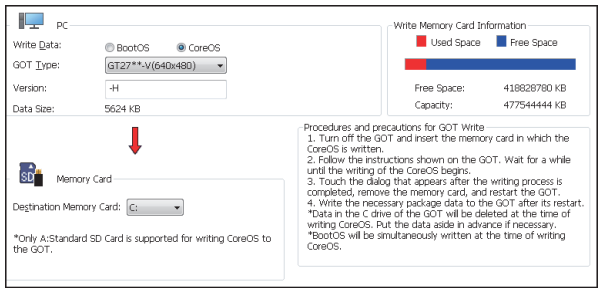
Step 2 Select [Communication] → [Write to Memory card] from the menu.

The [Transfer to Memory Card] dialog appears.

➟4.8.12 [Communicate with Memory Card] dialog



When [BootOS] is selected for [Write Data]



When [CoreOS] is selected for [Write Data]

Step 3 Select the [BootOS/CoreOS Write] tab.

Step 4 Set [PC Side].

Select the type of the destination GOT for [GOT Type].

The capacity of the transfer data is displayed in [Data Size]. Check that the data storage has the sufficient available space.

Step 5 Set [Memory Card].

Set the drive name of the data storage for [Destination Memory Card].

Step 6 Click the [Memory Card Write] button.

Step 7 After the writing to the data storage is completed, remove the data storage from the personal computer.

Step 8 Refer to the following to install the BootOS or the CoreOS to the GOT.

- Installing the BootOS

  ➟4.5.3 ■2 (1) Installing the BootOS

- Installing the CoreOS

  ➟4.5.3 ■2 (2) Installing the CoreOS

■2 Installing the BootOS or the CoreOS to the GOT from the data storage

(1) Installing the BootOS

Step 1 Install the data storage that has been removed from the personal computer to the GOT.

For how to install each data storage, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

Step 2 The procedure for installing the BootOS to the GOT depends on the GOT models.

- For GT27, GT25 (excluding GT2505-V), GT23, and GS25

  While pressing the S.MODE switch, power on the GOT.
  When the GOT is powered on, the BootOS is installed to the GOT.

- For GT2505-V, GT21, and GS21

  While touching the GOT screen lower-right corner, power on the GOT.
  When the GOT is powered on, the BootOS is installed to the GOT.

Step 3 After the installation of the BootOS is completed, power off the GOT.

Step 4 Remove the data storage from the GOT.

Step 5 Power on the GOT again.

Step 6 After powering on the GOT, write the required package data to the GOT.

(2) Installing the CoreOS

Step 1 Insert the SD card removed from the personal computer to the GOT.

For how to insert an SD card, refer to the following.

➡GOT2000 Series User's Manual (Hardware)

Step 2 Power on the GOT.

Step 3 The confirmation message for installing the CoreOS appears.

To install the CoreOS, touch the screen for two seconds or longer.
To abort the installation of the CoreOS, power off the GOT.

Step 4 When the installation of the CoreOS is completed, the completion message appears.

Touch the screen to restart the GOT.

Step 5 Write the required package data to the restarted GOT.

4.6 Transferring Data between the Personal Computer and GT01-RS4-M

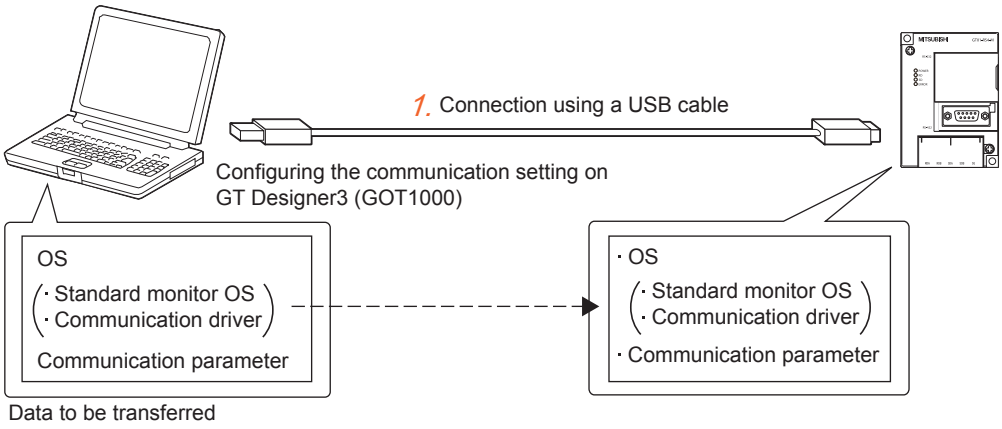
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Directly connect the personal computer with GT01-RS4-M using a USB cable for communication.

■1 Transferring data between the personal computer and GT01-RS4-M

The following shows the data transfer procedure.
To transfer data, GT Designer3 (GOT1000) must be installed on the personal computer in advance.
For the details of the connection method and settings on GT Designer3 (GOT1000), refer to the following.

➟GT Designer3 Version1 Screen Design Manual (Fundamentals)



Step 1 Connect the personal computer with GT01-RS4-M using a USB cable.

Step 2 On GT Designer3 (GOT2000), select [Communication] → [Communicate with GT01-RS4-M] from the menu to start GT Designer3 (GOT1000) and display the [Communicate with GT01-RS4-M] dialog.

Perform the rest of the procedure on GT Designer3 (GOT1000).

➟GT Designer3 Version1 Screen Design Manual (Fundamentals)

4.7 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for writing to the GOT

(1) Canceling writing the package data

When writing the package data is canceled during the process, the data in the GOT may be corrupt.
When writing the package data has been canceled during the process, write the package data again.

(2) Data in the GOT before the BootOS or the CoreOS is installed

When the BootOS or the CoreOS is installed, all the data in the GOT are deleted.
When the data in the GOT is required, read the data in advance.

(3) Precautions for the utilize data and the input assist information

When [Utilize data/Input assist information] is excluded from the package data at writing, the project read from the GOT operates as follows.

- The accumulated input assist information return to the initial status.
- The project data is not searched for when a new project is to be created using another project.

(4) Precautions for writing a project in the single file format (*.GTXS)

When the existing package data in the GOT contains the following setting, you cannot write even a later version of package data from GT designer3 whose version is earlier than 1.122C.
[Restrict write from GT Designer3 of the older versions] is selected in [GOT ID No.] in the GOT setup.
Install the latest version of GT Designer3, and then rewrite the package data.
For the settings of the GOT setup ([GOT ID No.]), refer to the following.

➥5.3.2 ■4 [GOT ID No.]

(5) Message at startup of the GOT that uses an earlier version of the BootOS

If the following message appears on the GOT that uses version S or earlier of the BootOS, update the BootOS to version T or later.
[The number of system applications installed exceeds the limitation. Please reduce the number of system applications to install.]

(6) Password for writing data to multiple GOTs in one go

In the [Batch Write to multiple GOTs] dialog, you can enter one data transfer password only.
If the entered password differs from the one set on a destination GOT, data cannot be written to the GOT.
In this case, enter the password which is set on the destination GOT and perform the writing again.

■2 Precautions for reading from the GOT

(1) Precautions for the utilize data

When the project data is saved to the personal computer directly at the reading from the GOT, the project data is not the target to search for the utilize data.
When the utilize data is used, open the project in GT Designer3 and save the project again after reading.

■3 Common precautions for reading and writing

(1) When the data storage stores a large number of folders or files

A large number of folders or files in the data storage may decrease file access performance, resulting in a much longer communication time than usual or a communication timeout.
Reduce the number of folders or files in the data storage as necessary.

(2) Precautions for the data transfer by Ethernet

(a) Advance preparation for the data transfer

For the data transfer by Ethernet, configure the following settings to the GOT in advance to enable the communication by Ethernet.

- Writing of the system application (basic function and communication driver)
- Communication settings

For how to check the setting, refer to the following.

➥GOT2000 Series User's Manual (Utility)

(b) **Advance notification for the writing of the package data**

When the package data is written by Ethernet, set a rule in advance, such as notifying the operator of the change of the package data.

When the package data is changed without a notice, the operation of the GOT may be affected.

(c) **Securing a recovering method**

Changing the communication settings when the project data is written may disable the communication with GT Designer3.

Save the data for recovering to the data storage or perform other methods, so that the GOT can recover.

(3) Power saving function of the personal computer

To transfer the data by connecting with the GOT, disable the power saving function of the personal computer and Windows.

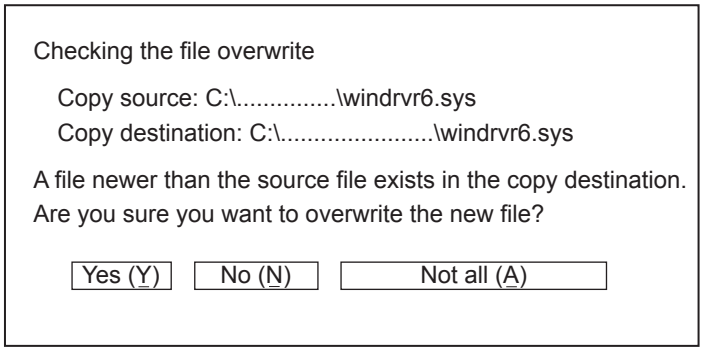
For the details of the power saving function setting, refer to the manual of the personal computer or Windows Help.

(4) USB driver of other products

When the USB driver of other products is installed, the confirmation message for overwriting the USB driver file (windrvr6.sys) may appear.

If a new file already exists, click the [No] button and do not overwrite the file.

When the file is overwritten, the USB communication of GT Designer3 and the GOT may not be properly executed.



(5) Precautions for using a USB cable

To transfer the data by connecting the personal computer and the GOT using a USB cable, do not set the resume function, the suspending function, the power saving function, or the standby mode of the personal computer.

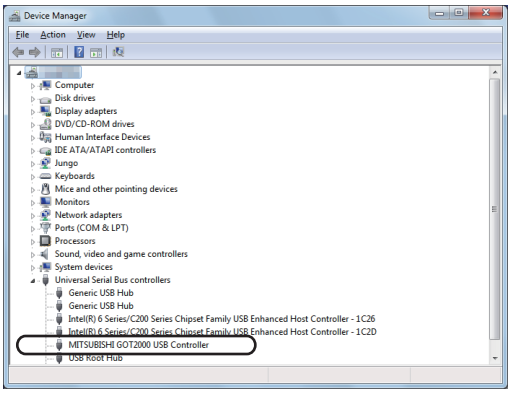
For the details of the resume function, the suspending function, the power saving function, or the standby mode, refer to the manual of the personal computer or the Help of Windows.

If the USB cable is removed or the GOT is reset or powered off/on, the communication may not be recovered from an error.

In this case, perform either of the following operations.

- Checking if the personal computer recognizes a USB

  Check that [MITSUBISHI GOT2000 USB Controller] is displayed in [USB(Universal Serial Bus) Controller] in the device manager.



- Restart the GOT.

  Remove the USB cable from the GOT and power off the GOT.

  After the GOT is powered off, restart the GOT and connect a cable to communicate again.

(6) Communication error when the PLC is not connected

If the GOT is not connected to a PLC with the connection setting to the PLC, the GOT fails to communicate with the PLC and retries the communication.

When the following operations are performed in GT Designer3 with this status, a communication error (error No. 8011000a) may occur.

- Writing the package data
- Deleting the system application, the advanced application, the project data, and the resource data
- Drive format

For the corrective actions, refer to the following.

➡4.9 Troubleshooting

(7) Communication error by the firewall

The setting of the communication port of the personal computer may cause a communication error, such as timeout error.

When the port for the Ethernet communication is blocked by the firewall, a communication error occurs.

Disable the firewall or set the port to be opened.

For the details of the checking and the setting of the communication port, refer to the Help of Windows.

(8) Precautions for transferring data to the GOT via a PLC

For transferring data to the GOT via an RCPU and RJ71EN71, the GOT is connectable to Ethernet ports (P1 and P2) of the RJ71EN71.

If you set the same network number for both Ethernet ports (P1 and P2) of the RJ71EN71, connect the GOT to Ethernet port P1.

An error occurs if all the following conditions are satisfied.

- Both Ethernet ports (P1 and P2) of the RJ71EN71 are in use.
- The same network number is set for both Ethernet ports (P1 and P2).
- The GOT (data transfer destination) is connected to Ethernet port P2 of the RJ71EN71.

(9) Transferring data while firmware update is in progress

While firmware update of the communication unit mounted on the GOT is in progress, transferring data is not available.

To transfer data, make sure that firmware update is not executed.

(10)Transferring data while the FA transparent function is used

While the controller programming software communicates with a controller by using the FA transparent function, transferring data may not be available.

To transfer data, make sure that the FA transparent function is not in use.

4.8 Data Transfer Setting

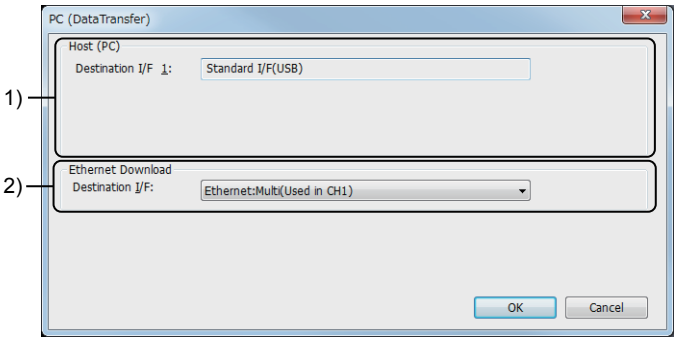
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟4.8.1 [PC (Data Transfer)] dialog
4.8.2 [Communicate with GOT] dialog
4.8.3 [Write Option] dialog (for writing data to one GOT)
4.8.4 [Application Selection] dialog
4.8.5 [Select Resource Data] dialog
4.8.6 [Resource Data Write Result] dialog
4.8.7 [GOT Information - Detail] dialog
4.8.8 [Communication Configuration] dialog
4.8.9 [Batch Write to multiple GOTs] dialog
4.8.10 [Write Option] dialog (for writing data to multiple GOTs in one go)
4.8.11 [Communication Status] dialog
4.8.12 [Communicate with Memory Card] dialog

4.8.1 [PC (Data Transfer)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [PC (Data Transfer)] dialog, set the communication interface to be used for the data transfer between the personal computer and the GOT.
Select [Common] → [Peripheral Setting] → [PC (Data Transfer)] from the menu to display this dialog.



1) **[Host (PC)]**
Set the destination interface for the direct connection using a USB cable.

2) **[Ethernet Download]**
Set the destination interface for the connection by Ethernet.

Item	Description
[Destination I/F]	Set the destination interface to be used for Ethernet download. The following shows the setting range. • [Ethernet:Multi] Connects to an Ethernet interface of the GOT. • [Not connected] Does not use an Ethernet interface of the GOT.

4.8.2 [Communicate with GOT] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Communicate with GOT] dialog, the data is transferred and verified between the personal computer and the GOT. This dialog can be displayed in the following method.

Step 1 According to the purpose, perform either of the following operations.

- For writing, select [Communication] → [Write to GOT] from the menu.
- For reading, select [Communication] → [Read from GOT] from the menu.
- For verifying, select [Communication] → [Verify GOT] from the menu.

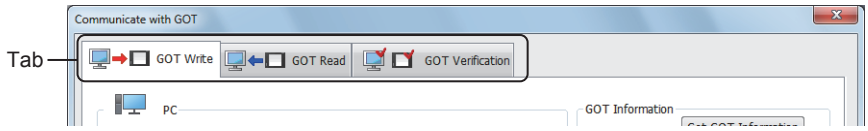
Step 2 The [Communication Configuration] dialog appears.

Configure the communication setting between the personal computer and the GOT.

➟4.8.8 [Communication Configuration] dialog

Step 3 The [Communicate with GOT] dialog appears.

Click each tab to switch the display as required.



For the settings in each tab, refer to the following.

➟4.8.2 ■1 [GOT Write] tab
4.8.2 ■2 [GOT Read] tab
4.8.2 ■3 [GOT Verification] tab

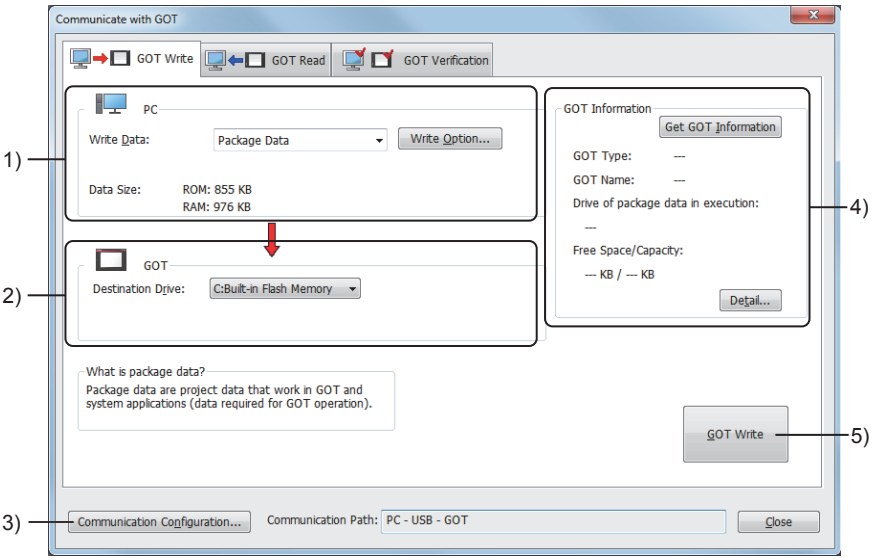
■1 [GOT Write] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Writing the package data
(2) Writing the resource data
(3) Installing the BootOS

(1) Writing the package data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[PC]**
Set the data to be written to the GOT.

Item	Description
[Write Data]	Select [Package Data].
[Write Option] button	Set the details of the package data to be written to the GOT. ➟4.8.3 [Write Option] dialog (for writing data to one GOT)
[Data Size]	Data size of the package data to be written to the GOT.

2) **[GOT]**
Set the destination to transfer the package data.

Item	Description
[Destination Drive]	Select the destination drive to which the data is written. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer

3) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.
➟4.8.8 [Communication Configuration] dialog

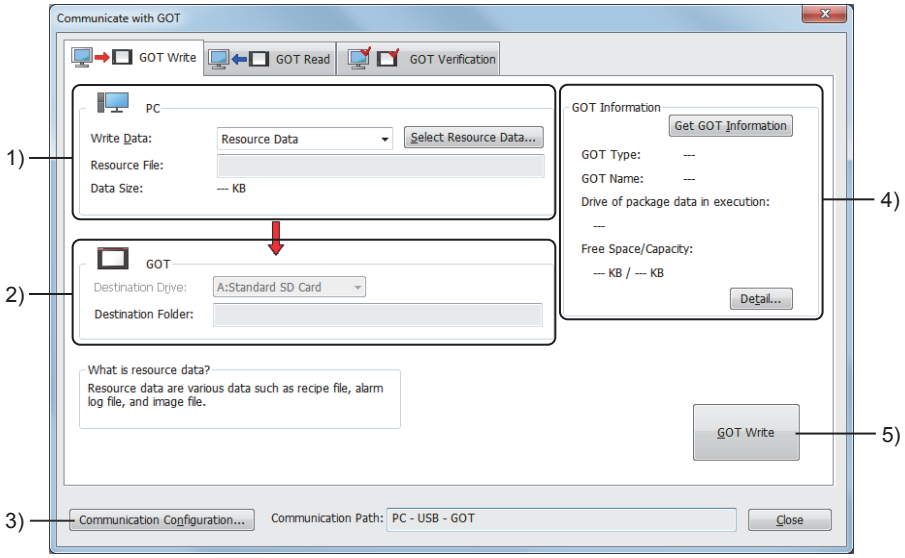
4) **[GOT Information]**
The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	Type of the target GOT
[GOT Name]	Name of the target GOT
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Destination Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

5) **[GOT Write] button**
Starts the data writing to the GOT.

(2) Writing the resource data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[PC]**
Set the data to be written to the GOT.

Item	Description
[Write Data]	Select [Resource Data].
[Select Resource Data] button	Select the resource data to be written to the GOT. ➟4.8.5 [Select Resource Data] dialog
[Resource File]	Resource data file to be written to the GOT
[Data Size]	Size of the resource data file to be written to the GOT

2) **[GOT]**
Transfer destination for the resource data.
Configure the setting in the [Select Resource Data] dialog.
➟4.8.5 [Select Resource Data] dialog

Item	Description
[Destination Drive]	Write destination drive for the resource data
[Destination Folder]	Write destination folder for the resource data

3) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.
➟4.8.8 [Communication Configuration] dialog

4) **[GOT Information]**
The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	Type of the target GOT
[GOT Name]	Name of the target GOT
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Destination Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

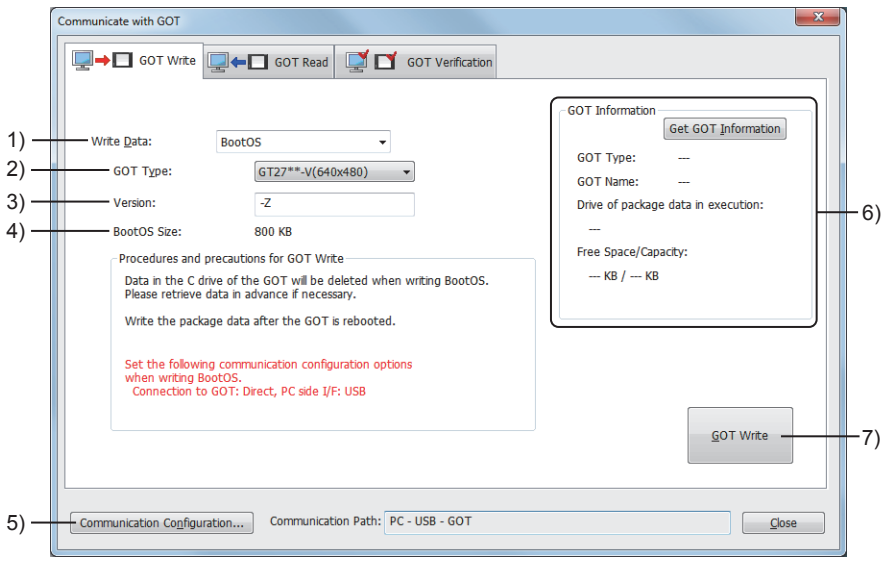
5) **[GOT Write] button**
Starts the data writing to the GOT.

Upon completion of writing, the [Resource Data Write Result] dialog appears.

➟4.8.6 [Resource Data Write Result] dialog

(3) Installing the BootOS

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Write Data]**
Select [BootOS].

2) **[GOT Type]**
Type of the target GOT

3) **[Version]**
Version of the BootOS to be installed to the GOT.

4) **[BootOS Size]**
Data size of the BootOS to be installed to the GOT.

5) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

6) **[GOT Information]**
The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

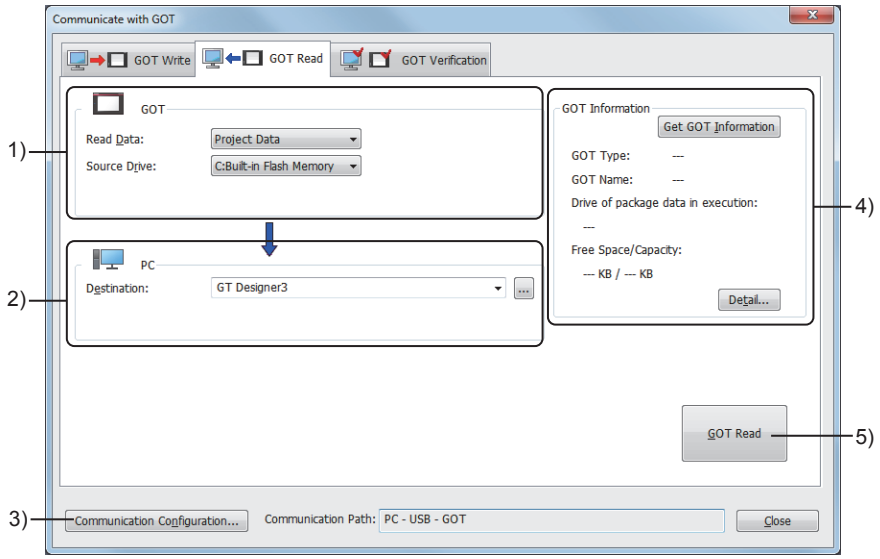
Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	Type of the target GOT
[GOT Name]	Name of the target GOT
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Destination Drive]

7) **[GOT Write] button**
Starts the data writing to the GOT.

■2 [GOT Read] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Reading the project data or the package data



1) **[GOT]**
Set the type of the data to be read from the GOT, and select the source drive.

Item	Description
[Read Data]	Select [Project Data] or [Package Data]. When GT Designer3 is started from MELSOFT Navigator, [Package Data] cannot be selected.
[Source Drive]	Select the source drive from which the data is read. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer

2) **[PC]**
Set the destination of the project read from the GOT.

Item	Description
[Destination]	Set the destination of the read project or package data. When GT Designer3 is started from MELSOFT Navigator, the reading destination is fixed to [GT Designer3] if [Package Data] is selected for [Read Data]. • When [GT Designer3] is selected The read project is opened in GT Designer3. The project cannot be selected when the package data is read. • When the path of the save destination folder is input The project or the package data are read as a file in the specified folder. Click the [...] button to display the [Save As Project] dialog. The save destination folder and the saving format of the read project can be set in the displayed dialog.

3) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.
➟4.8.8 [Communication Configuration] dialog

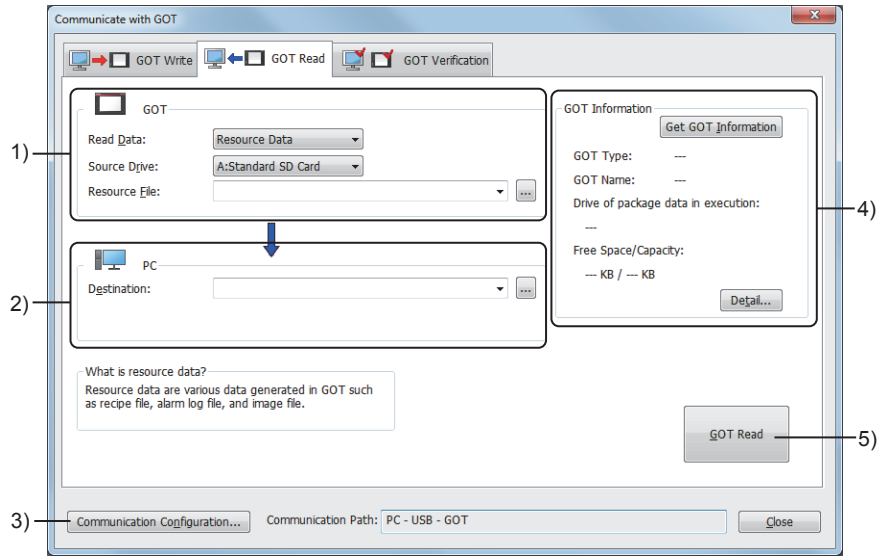
4) **[GOT Information]**

The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	GOT type of the reading source GOT.
[GOT Name]	Name of the reading source GOT.
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Source Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

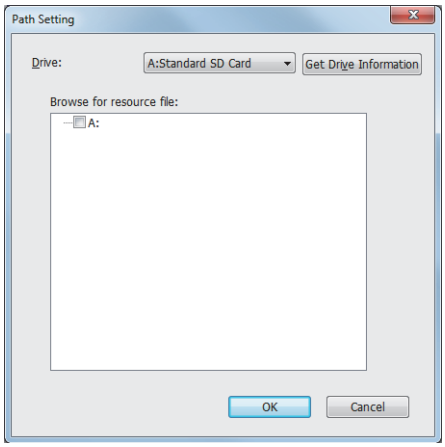
5) **[GOT Read] button**
Starts the data reading from the GOT.

(2) Reading the resource data



1) **[GOT]**
Set the type of the data to be read from the GOT, the read source drive, and the resource file name.

Item	Description
[Read Data]	Select [Resource Data].
[Source Drive]	Select the source drive from which the data is read. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [D:Built-in SRAM] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer

Item	Description
[Resource File]	Set the saving path and the file name of the resource data. Click the [...] button to display the [Path Setting] dialog. The read source drive and the resource file can be set by selecting the one in the displayed dialog.  • [Drive] Select the read source drive. • [Get Drive Information] button Acquires the drive information of the read source drive. • [Browse for resource file] The file configuration of the read source drive is displayed in the tree. The resource file to be read can be selected from the tree.

2) **[PC]**

Set the destination of the resource data read from the GOT.

Item	Description
[Destination]	Set the path for the destination of the resource data read from the GOT. Click the [...] button to display the [Browse For Folder] dialog. You can specify the destination folder to save the read resource data in the displayed dialog as well.

3) **[Communication Configuration] button**

Displays the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

4) **[GOT Information]**

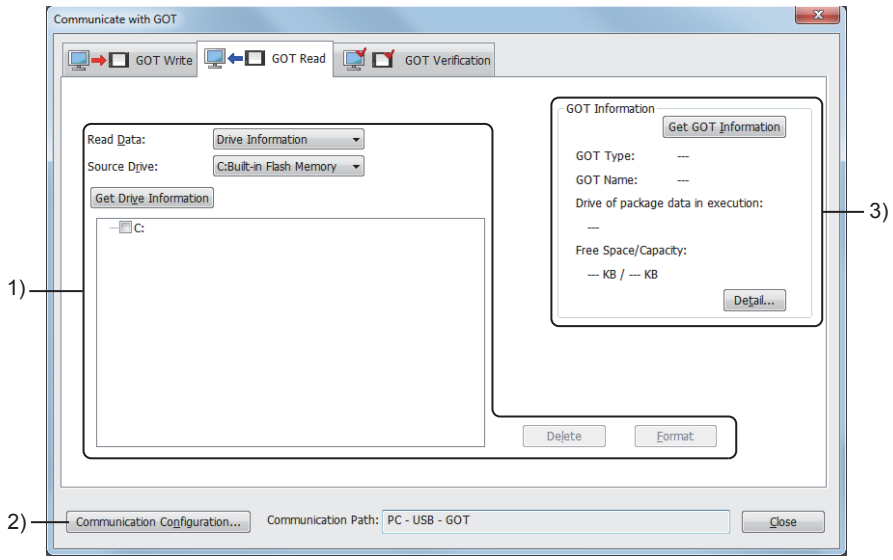
The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	GOT type of the reading source GOT.
[GOT Name]	Name of the reading source GOT.
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Source Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

5) **[GOT Read] button**

Starts the data reading from the GOT.

(3) Reading the drive information



1) **GOT-side setting**

Set the type of the data to be read from the GOT, and select the source drive.

Item	Description
[Read Data]	Select [Drive Information].
[Source Drive]	Select the source drive from which the data is read. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [D:Built-in SRAM] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Get Drive Information] button	Acquires the drive information of the drive selected in [Source Drive].
Drive information tree	The file configuration of the read source drive is displayed in the tree. • [Delete] button Collectively deletes folders and files selected in the tree. Individually deleting the folder or file is not available. • [Format] button Formats the drive selected in [Source Drive].

2) **[Communication Configuration] button**

Displays the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

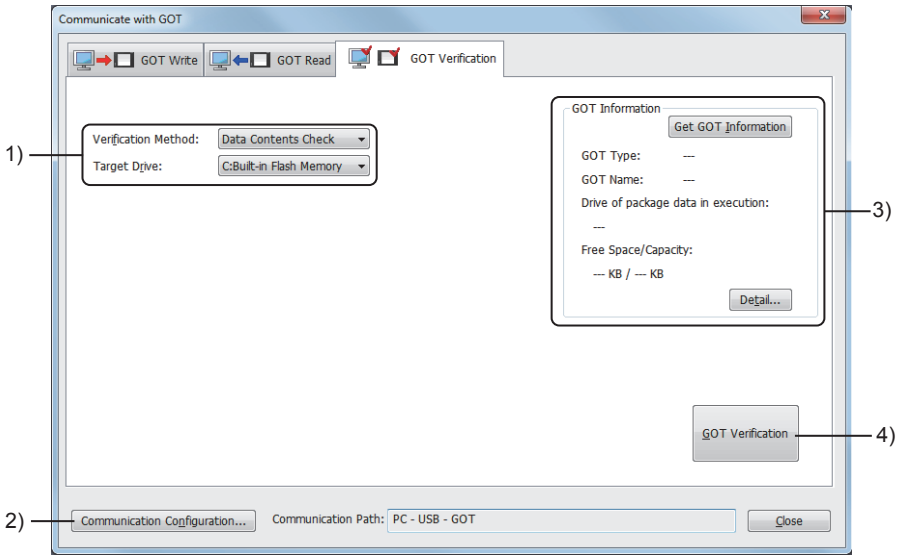
3) **[GOT Information]**

The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	GOT type of the reading source GOT.
[GOT Name]	Name of the reading source GOT.
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Source Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

■3 [GOT Verification] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) GOT-side setting

Specify the verification method and the GOT drive in which the project to be verified is stored.

Item	Description
[Verification Method]	Select the method to verify the project. • [Data Contents Check] The verification is performed according to the description of the project. • [Time Stamp Check] The verification is performed according to the time stamp of the project data.
[Target Drive]	Select the drive which stores the project data to be verified. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer

2) [Communication Configuration] button

Displays the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

3) [GOT Information]

The information on the target GOT, including the GOT type and the capacity of the specified drive, is displayed.

Item	Description
[Get GOT information] button	Acquires the information from the target GOT, including the GOT type and the free space of the specified drive.
[GOT Type]	Type of the target GOT
[GOT Name]	Name of the target GOT
[Drive of package data in execution]	Drive that stores the package data being used in the target GOT
[Free Space/Capacity]	Free space and capacity of the drive selected for [Target Drive]
[Detail] button	Displays the [GOT Information - Detail] dialog. ➟4.8.7 [GOT Information - Detail] dialog

4) [GOT Verification] button

Starts the verification with the GOT.

4.8.3 [Write Option] dialog (for writing data to one GOT)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Write Option] dialog, set the details of the package data to be written to one GOT.
The method for displaying the dialog differs depending on the writing destination.

■1 Displaying the dialog when writing data into the GOT

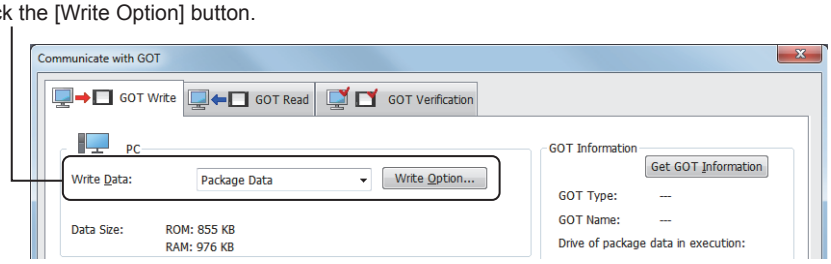
Display the dialog in the following method when writing data into the GOT.

Step 1 Select [Communication] → [Write to GOT] from the menu.

Step 2 The [Communication Configuration] dialog appears.
Configure the communication setting between the personal computer and the GOT.
➟4.8.8 [Communication Configuration] dialog

Step 3 The [Communicate with GOT] dialog appears.
Select [Package Data] for [Write Data] and click the [Write Option] button.
➟4.8.2 ■1 [GOT Write] tab

Select [Package Data] and
click the [Write Option] button.



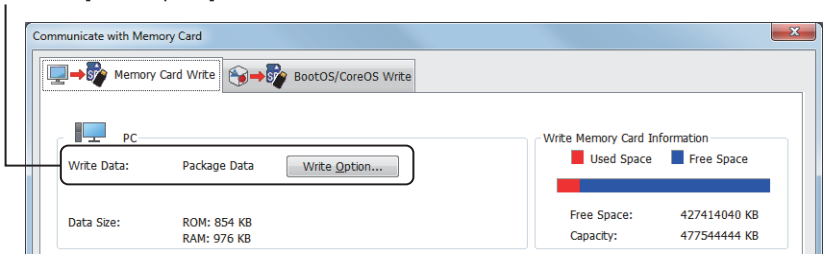
■2 Displaying the dialog when writing data into data storage

Display the dialog in the following method when writing data into data storage.

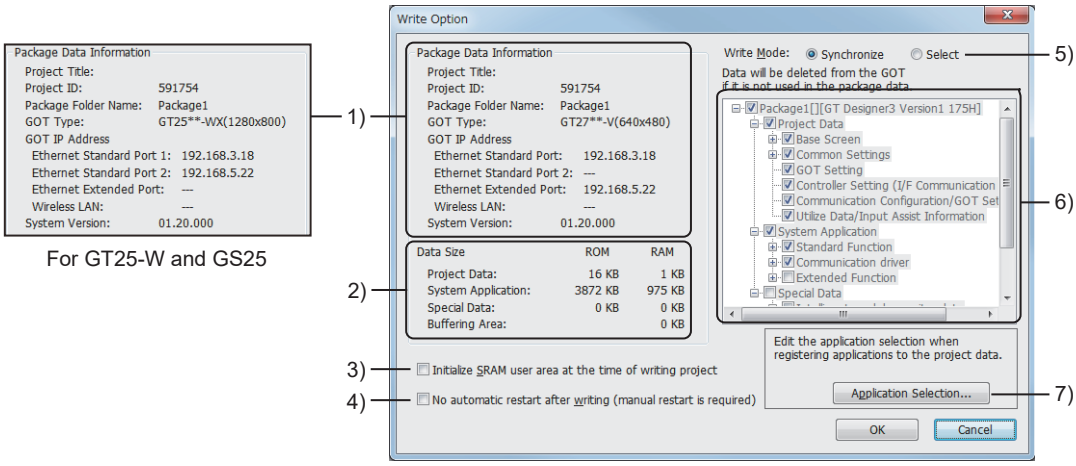
Step 1 Select [Communication] → [Write to Memory card] from the menu.

Step 2 The [Communicate with Memory Card] dialog appears.
Click the [Write Option] button.
➟4.8.12 ■1 [Memory Card Write] tab

Click the [Write Option] button.



■3 [Write Option] dialog



For GT25-W and GS25

For the models other than GT25-W and GS25

1) [Package Data Information]

Item		Description
[Project Title]		Title of the project
[Project ID]		ID number of the project
[Package Folder Name]		Name of the folder that stores the package data
[GOT Type]		GOT type of the project
[GOT IP Address]	[Ethernet Standard Port]	This item is not displayed for GT25-W and GS25. GOT IP address set for the Ethernet standard port.
	[Ethernet Standard Port1]	This item is displayed only for GT25-W and GS25. GOT IP address set for Ethernet standard port 1.
	[Ethernet Standard Port2]	GOT IP address set for Ethernet standard port 2.
	[Ethernet Extended Port]	GOT IP address set for the Ethernet extended port.
	[Wireless LAN]	GOT IP address set for the wireless LAN interface.
[System Version]		System application version in the package data

2) [Data Size]

Item	Description
[Project Data]	Project data size (ROM and RAM)
[System Application]	Size of the system applications included in the package data (ROM and RAM)
[Special Data]	Size of the special data included in the package data (ROM and RAM)
[Buffering Area]	Size of the buffering area in the operation memory (RAM)

3) [Initialize SRAM user area when writing project data/OS]

Not available to GT21 and GS21.

Initialize the SRAM user area when the package data is written to the GOT.

4) [Not restart automatically after writing (required to restart manually)]

The GOT does not restart automatically after the package data is written to the GOT.

When this item is selected, the GOT is required to be restarted manually after writing.

5) [Write Mode]

Select the write mode of the package data.

- [Synchronize]

  Only the required data is written according to the difference with the package data which has already been written to the GOT.

  The data which is not related to the package in the GOT is deleted.

- [Selection]

  Only the data selected in the package data tree is written.

The write mode is fixed to [Synchronize] in the following cases.

- The [Write Option] dialog is displayed from the [Communicate with Memory Card] dialog.

- Package data is written to the GOT without opening a single file format project (*.GTXS).
- System labels Ver.2, global labels, OMRON NJ/NX tags, or AB native tags are set in the common settings or object settings.
- The project contains a label group.
- The project is protected with a security key.
- The project contains a mobile screen.
- [Use GOT Mobile function] is selected in [Basic Setting] in the [GOT Mobile Setting] window.

6) **Package data tree**

The data included in the package data is displayed in the tree.
When [Selection] is selected for [Write Mode], the data can be added or deleted.

7) **[Application Selection] button**

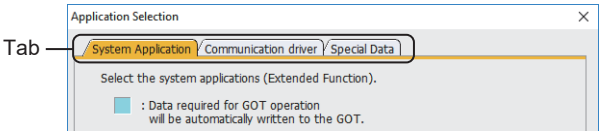
This button is displayed only when [Synchronize] is selected for [Write Mode].
Clicking this button displays the [Application Selection] dialog.

➟4.8.4 [Application Selection] dialog

4.8.4 [Application Selection] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

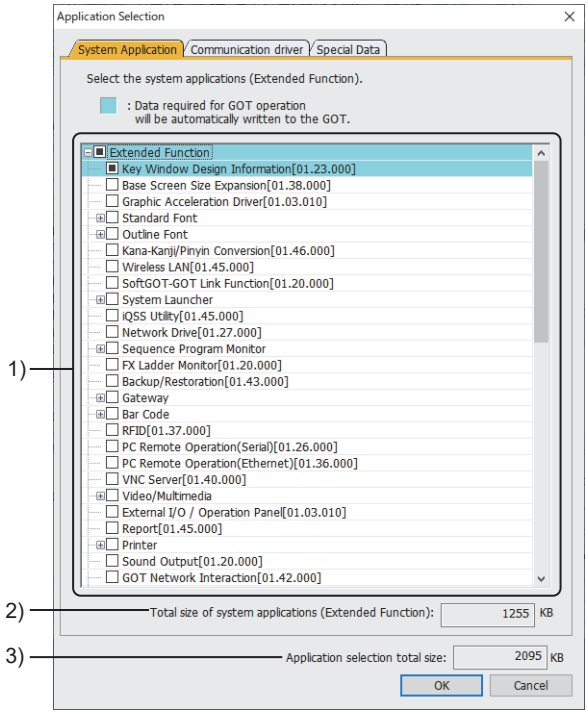
In the [Application Selection] dialog, system applications (extended functions), communication drivers, and special data are selectable, and the selected items are held in the project data.
Select [Common] → [Application Selection] from the menu to display this dialog.
Configure the settings by switching the tabs according to the target data.



➟■1 [System Application] tab
■2 [Communication Driver] tab
■3 [Special Data] tab

■1 [System Application] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Extended Function] tree**
Lists the system applications (Extended Function) which can be installed to the GOT in a tree view.
The application selected in the tree is written to the GOT regardless of whether to use or not use the function.
The application required for the GOT operation is displayed in light-blue.
The selection of the application displayed in light-blue cannot be canceled.

2) **[Total size of system applications (Extended Function)]**
Displays the total size of the system applications (Extended Function) selected in the tree.

3) **[Total size of selected applications]**
Displays the total size of all the items selected in the [System Application] tab, the [Communication driver] tab, and the [Special Data] tab.

■2 [Communication Driver] tab

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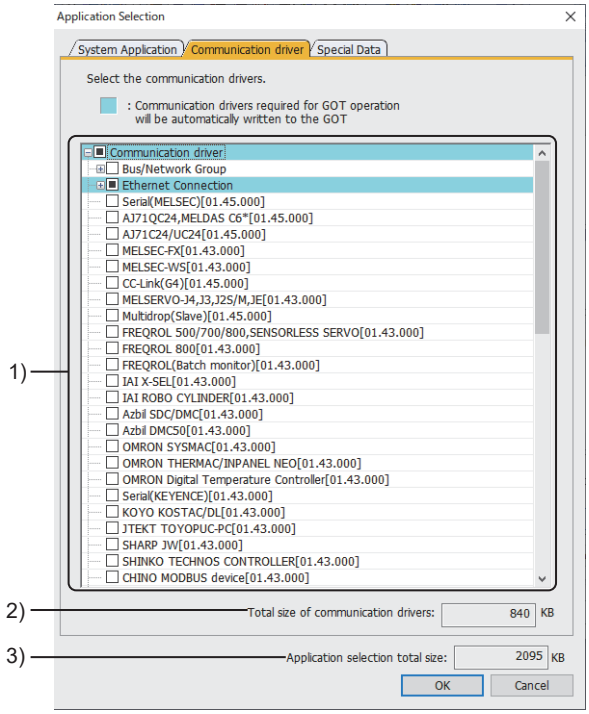

1) **[Communication driver] tree**
Lists the system applications (Extended Function) which can be installed to the GOT in a tree view.
The communication driver selected in the tree is installed to the GOT regardless of whether to use or not use the function.
The communication driver required for the GOT operation is displayed in light-blue.
The selection of the communication driver displayed in light-blue cannot be canceled.

2) **[Total size of system applications (Extended Function)]**
Displays the total size of the system applications (Extended Function) selected in the tree.

3) **[Total size of selected applications]**
Displays the total size of all the items selected in the [System Application] tab, the [Communication driver] tab, and the [Special Data] tab.

■3 [Special Data] tab

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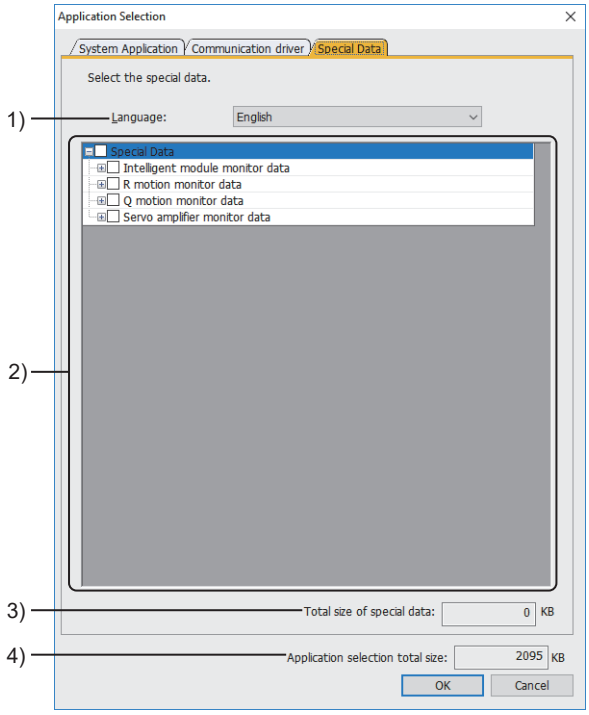


1) **[Language]**
Select the language of the special data.
- [Japanese]
- [English]

2) **[Special Data] tree**
The list of the special data which can be written to the GOT is displayed in the tree.
The special data selected in the tree is written to the GOT regardless of whether to use or not use the function.

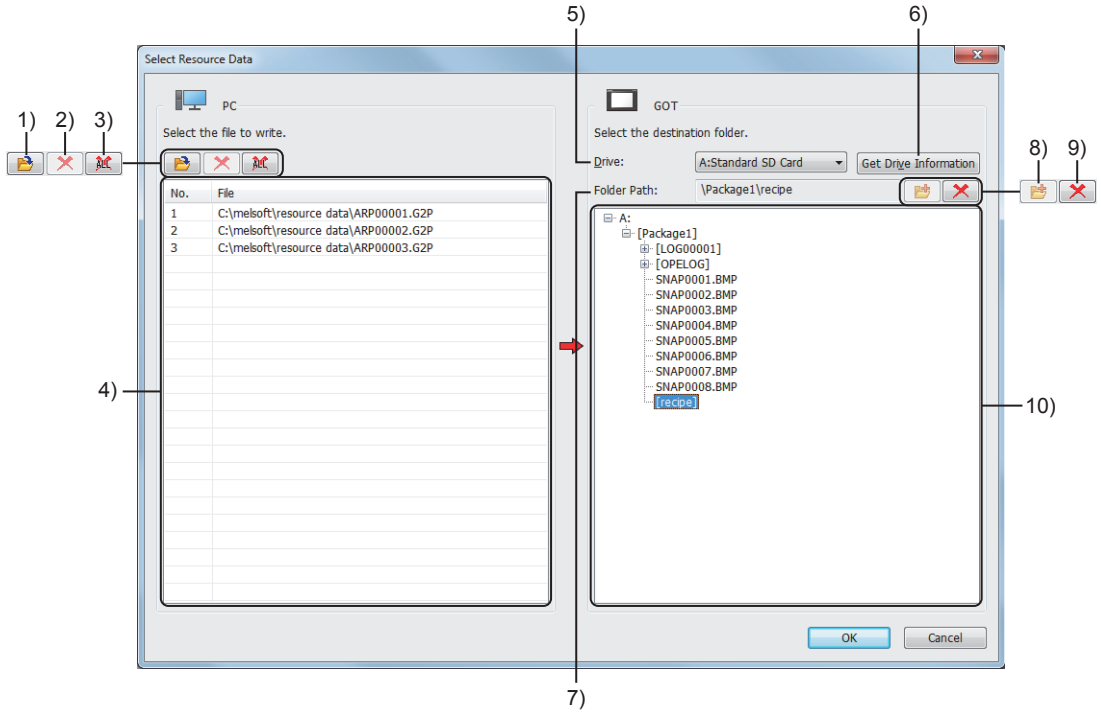
3) **[Total size of special data]**
The total size of the special data selected in the tree is displayed.

4) **[Total size of selected applications]**
Displays the total size of all the items selected in the [System Application] tab, the [Communication driver] tab, and the [Special Data] tab.

4.8.5 [Select Resource Data] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Select Resource Data] dialog, set the resource data to be written to the GOT, and set the write destination.
To display this dialog, click the [Select Resource Data] button on the [GOT Write] tab in the [Communicate with GOT] dialog.



1) **[Add File] button**
Displays the [Open] dialog.
Select a resource data file to be written to the GOT.

2) **[Delete] button**
Deletes a selected resource data file from the write target list.

3) **[Delete All] button**
Deletes all resource data files from the write target list.

4) **Write target list**
Lists the resource data files to be written to the GOT.

5) **[Drive]**
Select the destination drive to which the resource data is written.
The following shows the items to be selected.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

6) **[Get Drive Information] button**
Reads the contents of a specified drive from the GOT.
The read data is displayed in the drive information tree.

7) **[Folder Path]**
Path to the write destination folder for the resource data
The path to the folder selected in the drive information tree is displayed.

8) **[New Folder] button**
Adds a new folder under the drive or folder selected in the drive information tree.
The new folder name is displayed in red.

The new folder is created upon completion of resource data writing.

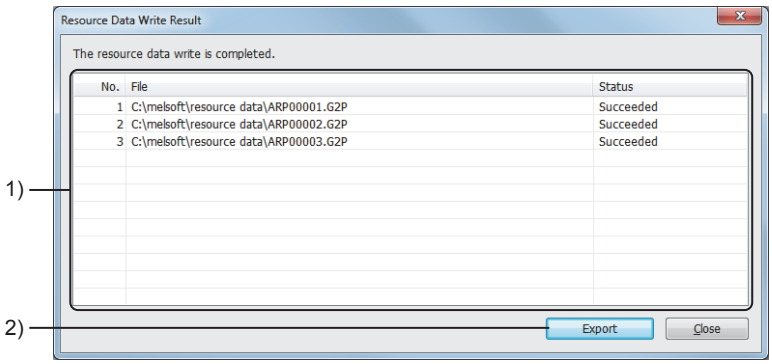
9) **[Delete] button**
Deletes a newly-added folder that is selected in the drive information tree.

10) **Drive information tree**
Displays the folders and files in the drive that is selected for [Drive] in the tree view.
The folder selected in the tree is set as the write destination folder.

4.8.6 [Resource Data Write Result] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Resource Data Write Result] dialog displays the result of resource data writing.
This dialog appears only after resource data writing is performed on the [GOT Write] tab in the [Communicate with GOT] dialog.



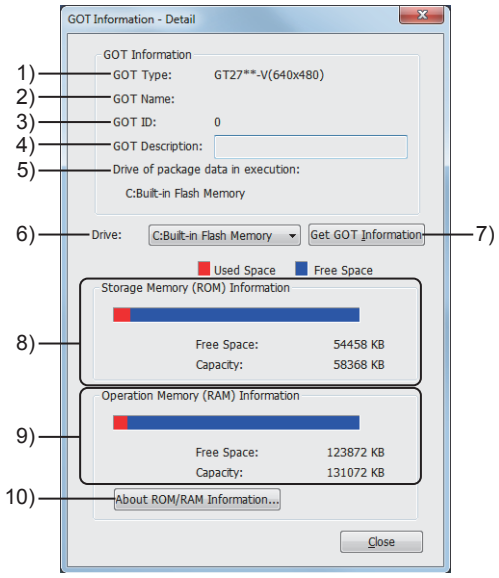
1) **Write result list**
Result of resource data writing

Item	Description
[No.]	File number
[File]	Resource data file
[Status]	Write result • [Succeeded] • [Failed]

2) **[Export] button**
Displays the [Save As] dialog.
Save the write result to a file.

4.8.7 [GOT Information - Detail] dialog

In the [GOT Information - Detail] dialog, data is written or read and the detailed information on the verification target GOT is displayed.



1) **[GOT Type]**
   GOT type.
2) **[GOT Name]**
   Name to identify the GOT.
3) **[GOT ID]**
   ID number to identify the GOT
4) **[GOT Description]**
   Detailed description for the GOT.
5) **[Drive of package data in execution]**
   Drive that stores the package data being used in the GOT
6) **[Drive]**
   Select the GOT drive whose detailed information is to be displayed.
7) **[Get GOT information] button**
   Acquires the information from the GOT, including the GOT type and the free space of the specified drive.
8) **[Storage Memory (ROM) Information]**
   Free space and capacity of the GOT storage memory (ROM)
9) **[Operation Memory (RAM) Information]**
   Free space and capacity of the GOT operation memory (RAM)
10) **[About ROM/RAM Information] button**
    Displays explanations of ROM and RAM in the GOT.

Point

ROM and RAM in the GOT

The system applications and project data in the storage memory (ROM) are expanded to the operation memory (RAM) to run the GOT.
If the expanded data size exceeds the capacity of the operation memory (RAM), reduce the data size by deleting unnecessary project data or system applications, or other methods.

4.8.8 [Communication Configuration] dialog

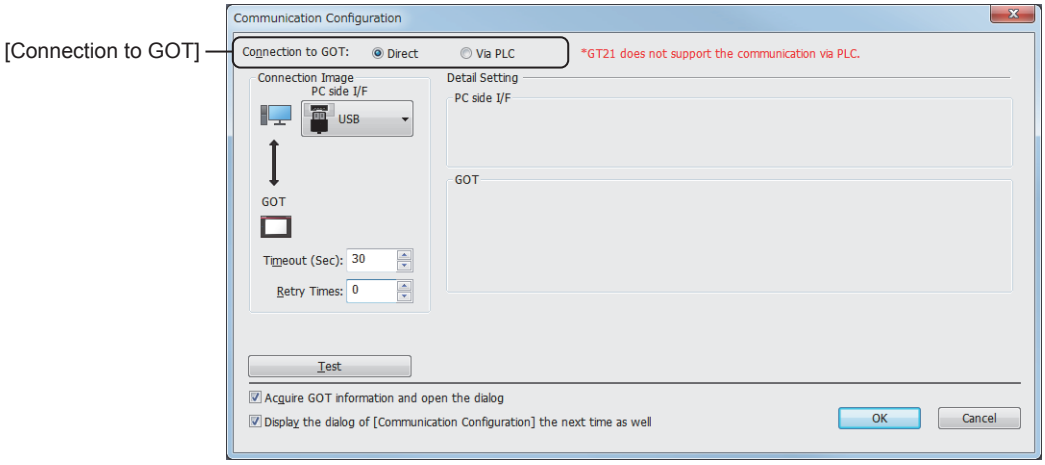
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Communication Configuration] dialog, the communication with the GOT is set.
Select [Communication] → [Communication Configuration] from the menu to display this dialog.
The settings differ according to the connection method of the personal computer and the GOT.
When the personal computer and the GOT are connected directly, select [Direct] for the [Connection to GOT].

➟■1 Writing the data into the GOT directly

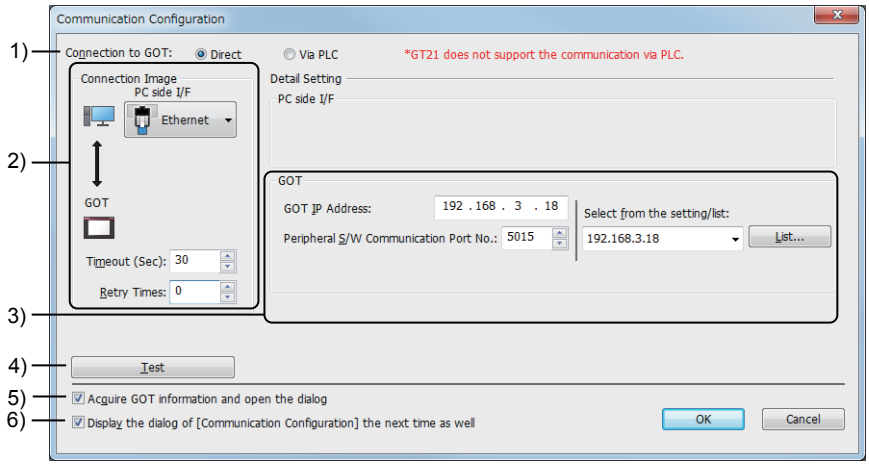
When the personal computer and the GOT are connected via a PLC, select [Via PLC] for the [Connection to GOT].

➟■2 Writing the data via PLC CPU



■1 Writing the data into the GOT directly

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Connection to the GOT]**
Select the connection method of the personal computer and the GOT.
- [GOT directly]
  Connect the personal computer and the GOT directly using a cable.
- [Via PLC]
  Connect the personal computer and the GOT via a PLC.

2) **[Connection Image]**
Set the interface to be used or the device to be routed for the connection of the personal computer and the GOT.

Item	Description
[PC side I/F]	Select the type of the interface of the personal computer. • [USB] • [Ethernet]

Item	Description
[Timeout (Sec)]	Set the time period for the communication between the personal computer and the GOT to time out. The setting range is [1] to [9999] seconds. If you set a time less than 30 seconds, a communication error may occur. Set 30 seconds or more.
[Retry Times]	Set the number of retries to be performed when a communication error occurs. The setting range is [0] time to [5] times.

3) **[GOT]**

Set the details of the interface of the GOT.

The details are set only when the GOT is connected by Ethernet.

Item	Description
[GOT IP Address]	Set the IP address of the GOT. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
[Peripheral S/W Communication Port No.]	Set the port No. used for the communication with GT Designer3. The setting range is [1024] to [65534].
[Select from setting/list]	Select the interface setting of the GOT from the GOT identification information registered in the project.
[List] button	Displays the [GOT Setting List] dialog. The interface setting of the GOT can be selected from the list. ➟5.3.2 ■5 [GOT Setting List] dialog

4) **[Communication Test] button**

Performs the communication test of the personal computer and the GOT.

5) **[Acquire GOT information and open the dialog]**

Acquires the GOT identification information from a target GOT, and then displays the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

For the details of the GOT identification information, refer to the following.

➟5.3.2 ■1 Specifications

6) **[Display the dialog of [Communication Configuration] the next time as well]**

Displays the [Communication Configuration] dialog before displaying the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

If this item is deselected, the [Communication Configuration] dialog and this item do not appear from the next time. To display the [Communication Configuration] dialog again, select [Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT/GOT Diagnostics] in the [Operation] tab in the [Options] dialog.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

Point

Settings of [Timeout (Sec)] and [Retry Times]

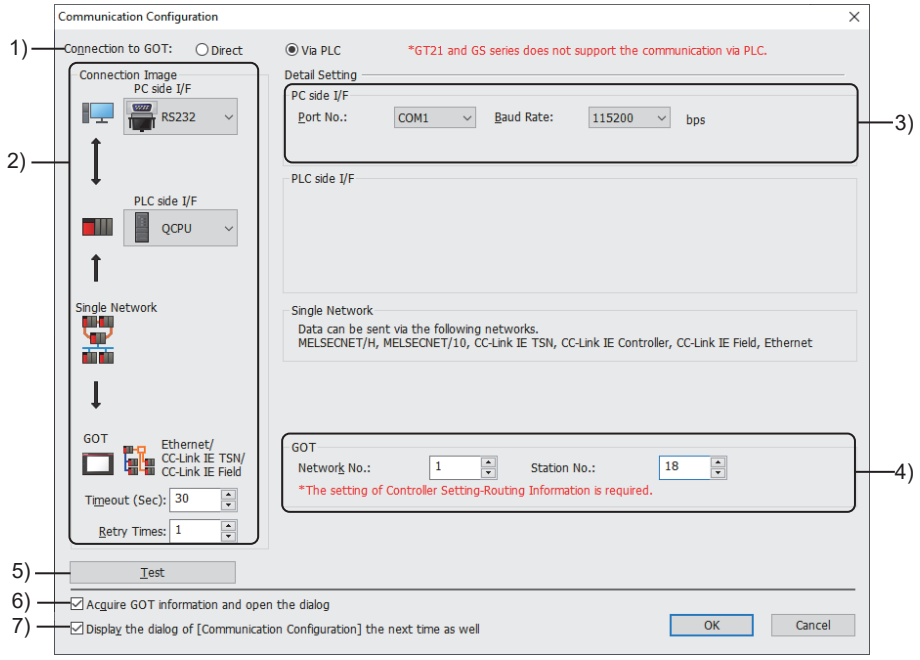
After setting [Timeout (Sec)] and [Retry Times] in a project on GT Designer3 version 1.122C or later, if you open the project on GT Designer3 whose version is earlier than 1.122C, the setting items do not appear.

Upon the writing of the project, the GOT operates using the values of [Timeout (Sec)] and [Retry Times] set on GT Designer3 version 1.122C or later.

■2 Writing the data via PLC CPU

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Connection using RS-232 cable and USB cable



1) **[Connection to GOT]**

Select the connection method of the personal computer and the GOT.

- [Direct]

  Connect the personal computer and the GOT directly using a cable.
- [Via PLC]

  Connect the personal computer and the GOT via a PLC.

2) **[Connection Image]**

Set the interface to be used or the device to be routed for the connection of the personal computer and the GOT.

Item	Description
[PC side I/F]	Select the type of the interface of the personal computer. • [RS232] • [USB] • [Ethernet]
[PLC side I/F]	Select a PLC type to be routed. • [RCPU] (This item is not selectable when [RS232] is selected for [PC side I/F].) • [QCPU] • [LCPU]
[Ethernet/CC-Link IE TSN/CC-Link IE Field]	Network to be routed which the GOT is connected.
[Timeout (Sec)]	Set the time period for the communication between the personal computer and the GOT to time out. The setting range is [1] to [9999] seconds. If you set a time less than 30 seconds, a communication error may occur. Set 30 seconds or more.
[Retry Times]	Set the number of retries to be performed when a communication error occurs. The setting range is [0] time to [5] times.

3) **[PC side I/F]**

Set the details of the interface of the personal computer.

The details are set only when the GOT is connected using RS-232 cable.

Item	Description
[Communication port]	Select the RS232 communication port of the personal computer. The setting range depends on the personal computer to be used.
[Baud Rate]	Select the transmission speed of the communication between the personal computer and the PLC. • [115200] bps • [57600] bps • [38400] bps • [19200] bps • [9600] bps

4) **[GOT]**

Set the details of the interface of the GOT.

Item	Description
[Network No.]	Set the network No. of the network to which the GOT is connected. The setting range is [1] to [239].
[Station No.]	Set the GOT's station number. The setting range is [1] to [64].

5) **[Test] button**

Performs the communication test of the personal computer and the GOT.

6) **[Acquire GOT information and open the dialog]**

Acquires the GOT identification information from a target GOT, and then displays the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

For the details of the GOT identification information, refer to the following.

➟5.3.2 ■1 Specifications

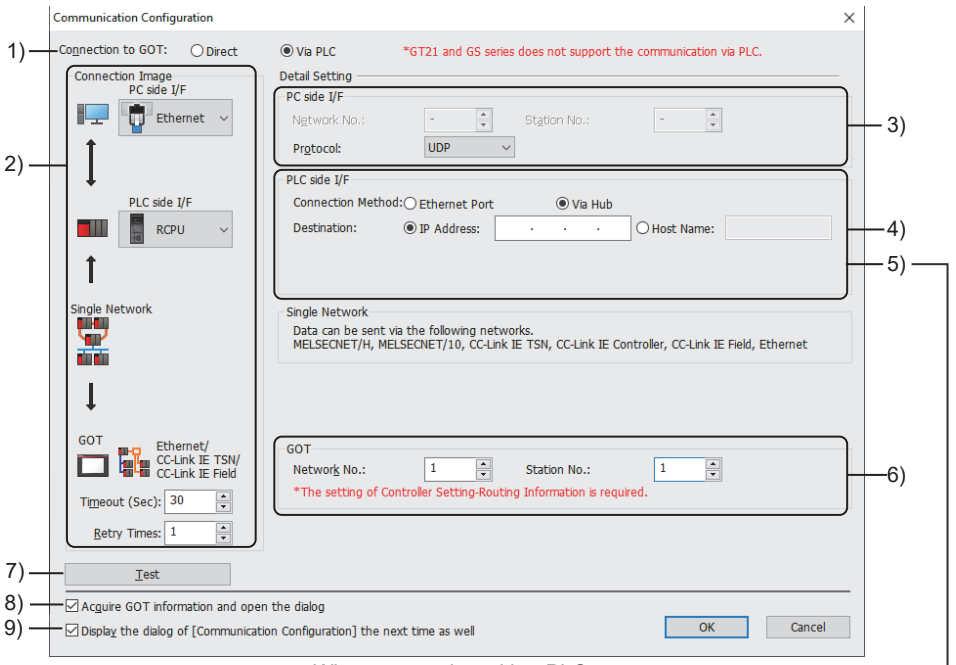
7) **[Display the dialog of [Communication Configuration] the next time as well]**

Displays the [Communication Configuration] dialog before displaying the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

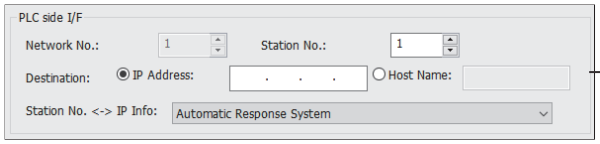
If this item is deselected, the [Communication Configuration] dialog and this item do not appear from the next time. To display the [Communication Configuration] dialog again, select [Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT/GOT Diagnostics] in the [Operation] tab in the [Options] dialog.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

(2) Connecting by Ethernet



When connecting with a PLC



When connecting with the Ethernet interface module

1) **[Connection to the GOT]**
Select the connection method of the personal computer and the GOT.
- [GOT directly]
  Connect the personal computer and the GOT directly using a cable.
- [Via PLC]
  Connect the personal computer and the GOT via a PLC.

2) **[Connection Image]**
Set the interface to be used or the device to be routed for the connection of the personal computer and the GOT.

Item	Description
[PC side I/F]	Select the type of the interface of the personal computer. • [RS232] • [USB] • [Ethernet]
[PLC side I/F]	Select the type of the PLC or the Ethernet interface module to be routed. • [RCPU] • [RJ71EN71] • [QCPU] • [QJ71E71] • [LCPU] • [LJ71E71] To use port CPU P1 of the RnENCPU, select [RCPU]. To use port P1 of the RnENCPU, select [RJ71EN71]. (Port P2 does not support the Ethernet connection.)
[Ethernet/CC-Link IE TSN/CC-Link IE Field]	Network to be routed which the GOT is connected.
[Timeout (Sec)]	Set the time period for the communication between the personal computer and the GOT to time out. The setting range is [1] to [9999] seconds. If you set a time less than 30 seconds, a communication error may occur. Set 30 seconds or more.
[Retry Times]	Set the number of retries to be performed when a communication error occurs. The setting range is [0] time to [5] times.

3) **[PC side I/F]**

Set the details of the interface of the personal computer.

Item	Description
[Network No.]	Set the network No. of the Ethernet network to which the personal computer is connected. The setting range is [1] to [239]. The network No. is set only when the Ethernet interface module is connected.
[Station No.]	Set the station number of the personal computer. To connect the personal computer with the Ethernet interface module, set the station number which does not overlap with other station numbers in the same network. The following shows the setting range. • When [PLC side I/F] is set to [QJ71E71] or [LJ71E71]: [1] to [64] • When [PLC side I/F] is set to [RJ71EN71]: [1] to [120]
[Protocol]	Select the communication protocol to be used for the communication between the personal computer and the PLC. • [TCP] • [UDP]

4) **[PLC side I/F] (when the destination is the PLC)**

Configure the interface setting on the PLC side when the PLC (RCPU, QCPU, or LCPU) is connected.

Item	Description
[Connection]	Select the connecting method of the personal computer and the PLC. • [Connecting directly to the Ethernet port] • [Connecting by the hub]
[Destination]	When [Connecting by the hub] is selected in [Connection], set the IP address or the host name of the destination PLC. • [IP Address] Specify the destination PLC by the IP address. After selecting, set the IP address of the destination PLC. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255]. • [Host Name] Specify the host name by the destination PLC. Up to 64 characters can be set for the host name. A one-byte character is counted as one character, and a two-byte character is counted as two characters.

5) **[PLC side I/F] (when the destination is the Ethernet interface module)**

Configure the interface setting on the PLC side when the Ethernet interface module (RJ71EN71, QJ71E71, or LJ71E71) is connected.

Item	Description
[Network No.]	Network No. of the Ethernet network to which the PLC is connected. The setting range is [1] to [239].
[Station No.]	Set the station number of the PLC. The following shows the setting range. • When [PLC side I/F] is set to [QJ71E71] or [LJ71E71]: [1] to [64] • When [PLC side I/F] is set to [RJ71EN71]: [1] to [120]
[Destination]	When [Connecting by the hub] is selected in [Connection], set the IP address or the host name of the destination PLC. • [IP Address] Specify the destination PLC by the IP address. After selecting, set the IP address of the destination PLC. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255]. • [Host Name] Specify the host name by the destination PLC. Up to 64 characters can be set for the host name. A one-byte character is counted as one character, and a two-byte character is counted as two characters.
[Station No.<->IP information]	When the PLC connected to the GOT communicates with a PLC of another station, select the method to acquire the network No., the station number, and the IP address of the PLC of another station. Select the item according to the network parameter of the destination PLC. • [Automatic Response Method] • [IP Address Calculation Method/Table Convert Method/Combination Method]

6) **[GOT]**

Set the details of the interface of the GOT.

Item	Description
[Network No.]	Set the network No. of the network to which the GOT is connected. The setting range is [1] to [239].
[Station No.]	Set the GOT's station number. The setting range is [1] to [64].

7) **[Communication Test] button**

Performs the communication test of the personal computer and the GOT.

8) **[Acquire GOT information and open the dialog]**

Acquires the GOT identification information from a target GOT, and then displays the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

For the details of the GOT identification information, refer to the following.

➟5.3.2 ■1 Specifications

9) **[Display the dialog of [Communication Configuration] the next time as well]**

Displays the [Communication Configuration] dialog before displaying the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

If this item is deselected, the [Communication Configuration] dialog and this item do not appear from the next time. To display the [Communication Configuration] dialog again, select [Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT/GOT Diagnostics] in the [Operation] tab in the [Options] dialog.

➟11.10.3 ■1 [Option] dialog ([Operation] tab)

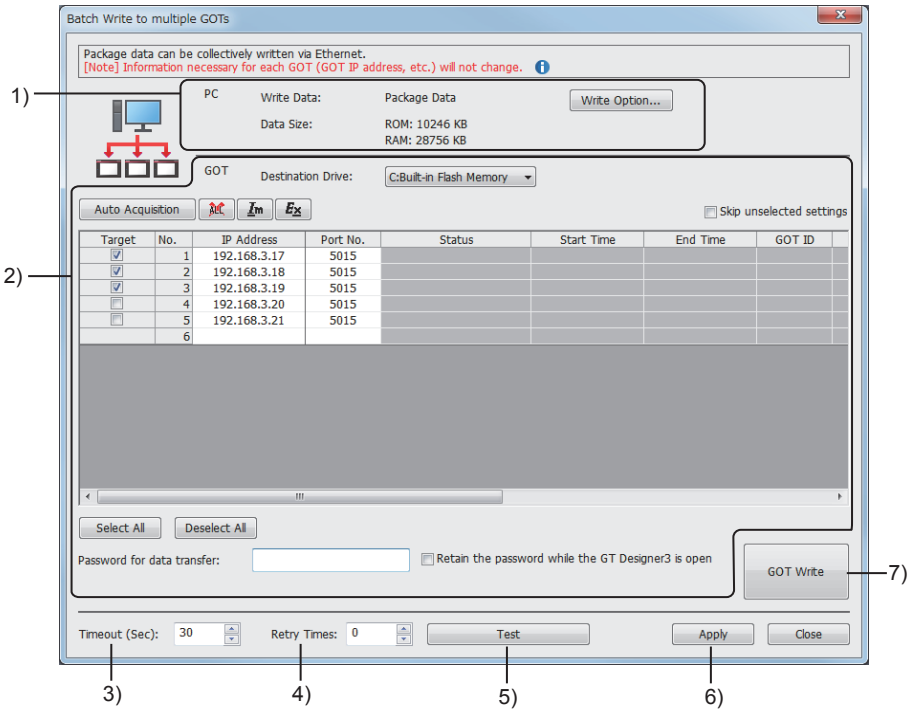
4.8.9 [Batch Write to multiple GOTs] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

In the [Batch Write to multiple GOTs] dialog, set the details of the data to be written, the write destination, and others.

To display this dialog, select [Communication] → [Batch Write to multiple GOTs] from the menu.



1) **[PC]**

View or set the details of the package data to be written to target GOTs.

Item	Description
[Write Data]	Type of the data to be written. ([Package Data])
[Data Size]	Data size of the package data.
[Write Option] button	Displays the dialog to set the details of the package data. ➟4.8.3 [Write Option] dialog (for writing data to one GOT)

2) **[GOT]**

View or set the details of the destination to which the package data is written.

Item	Description
[Destination Drive]	Set the drive to which the data is written. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Auto Acquisition] button	Automatically acquires the GOT identification information, including the GOT IP address.
Delete All button	Deletes all rows.
Import button	Imports the communication target setting, IP address, port number, and other GOT settings. The following shows the available file formats. • CSV format • Unicode text format

Item	Description
Export button	Exports the communication target setting, GOT settings, and communication result to a file. The following shows the available file formats. • CSV format • Unicode text format
[Skip unselected settings]	Only displays the rows marked with a checkmark in the [Target] column.
[Select All] button	Selects all GOTs in the list as the communication target.
[Deselect All] button	Deselects all the GOTs selected as the communication target.
[Target]	Select a target GOT. This item is not settable for the GOT whose type is different from the one set in the project of the package data to be written.
[No.]	Number for each GOT in the list. The number ranges from [1] to [256].
[IP Address]	Set the IP address of each GOT. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
[Port No.]	Set the port number of each GOT. The setting range is [1024] to [65534].
[Status]	Displays the communication result.
[Start Time]	Displays the start time of a communication test or data write.
[End Time]	Displays the end time of a communication test or data write.
[GOT ID]	Displays the ID number to identify each GOT.
[GOT Name]	Displays the name to identify each GOT.
[GOT Type]	Displays the type of each GOT.
[I/F]	Displays the interface type for each GOT IP address.
[Password for data transfer]	If the data transfer security has been set for the project in the target GOT, enter the data transfer password. ➟4.7 Precautions

3) **[Timeout (Sec)]**

Set the timeout period for communication between the personal computer and each GOT.
The setting range is [1] second to [9999] seconds.
If you set a time less than 30 seconds, a communication error may occur.
Set 30 seconds or more.

4) **[Retry Times]**

Set the number of retries to be performed when a timeout occurs.
The setting range is [0] to [5].

5) **[Test] button**

Executes a communication test between the personal computer and each GOT.

6) **[Apply] button**

Confirms the new settings, and saves them in the current project.
This item is displayed only when this dialog has been brought up from the [Communication] menu.
The following shows the settings to be saved.

- [Destination Drive]
- [Skip unselected settings]
- [Target]
- [No.]
- [IP Address]
- [Port No.]
- [GOT ID]
- [GOT Name]
- [GOT Type]
- [I/F]
- [Timeout (Sec)]
- [Retry Times]

7) **[GOT Write] button**

Writes the data to the target GOT.

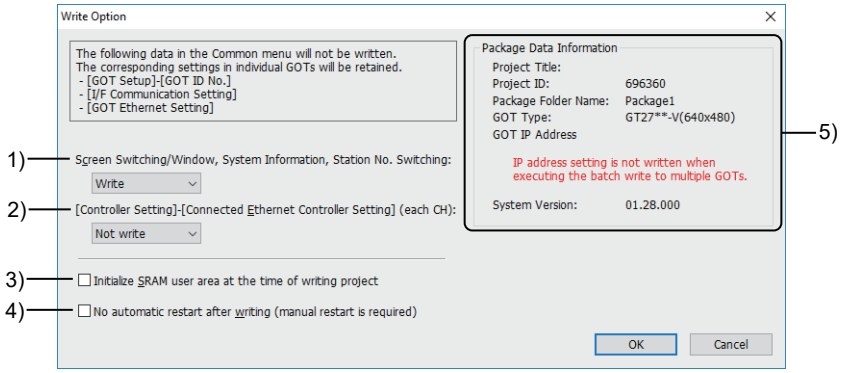
4.8.10 [Write Option] dialog (for writing data to multiple GOTs in one go)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

In the [Write Option] dialog, set the details of the package data to be written to multiple GOTs in one go.

To display this dialog, click the [Write Option] button in the [Batch Write to multiple GOTs] dialog.



1) **[Screen Switching/Window, System Information, Station No. Switching]**

Set whether to write the following settings to the target GOTs.

- [Screen Switching/Windows] in the [Environmental Setting] window
- [System Information] in the [Environmental Setting] window
- [Station No. Switching] in the [Controller Setting] window

The following shows selectable items.

- [Write]
- [Not write]

If [Not write] is selected, the above settings in each target GOT will remain unchanged.

2) **[[Controller Setting]-[Connected Ethernet Controller Setting] (each CH)]**

Set whether to write the settings of [Connected Ethernet Controller Setting] in the [Controller Setting] window to the target GOTs.

The following shows selectable items.

- [Write]
- [Not write]

If [Not write] is selected, the above settings in each target GOT will remain unchanged.

3) **[Initialize SRAM user area when writing project data/OS]**

Not available to GT21 and GS21.

Initialize the SRAM user area when the package data is written to the GOT.

4) **[Not restart automatically after writing (required to restart manually)]**

The GOT does not restart automatically after the package data is written to the GOT.

When this item is selected, the GOT is required to be restarted manually after writing.

5) **[Package Data Information]**

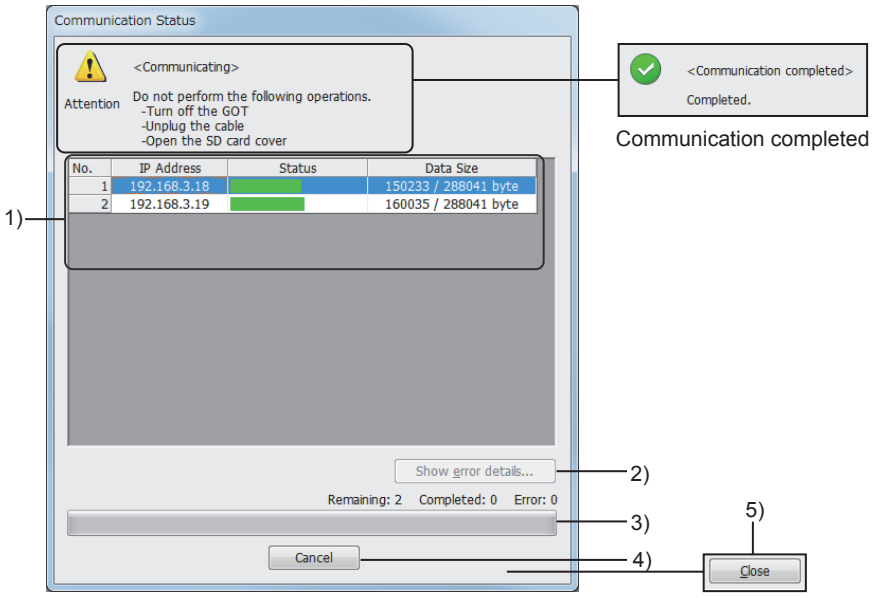
Item	Description
[Project Title]	Title of the project
[Project ID]	ID number of the project
[Package Folder Name]	Name of the folder that stores the package data
[GOT Type]	GOT type of the project
[System Version]	System application version in the package data

4.8.11 [Communication Status] dialog

Not available to GT2105-Q.

The [Communication Status] dialog displays the communication status or result of a simultaneous write or a communication test.

To display this dialog, click the [Test] button or the [GOT Write] button in the [Batch Write to multiple GOTs] dialog.



Communication in progress

1) **Communication status list**

Lists the IP addresses and communication status of target GOTs.

Item	Description
[No.]	Displays the number for each GOT.
[IP Address]	Displays the IP address of each GOT.
[Status]	Displays the communication status or result.
[Data Size]	Displays the transferred data size and/or the total data size. The data size is displayed according to [Status] shown below. • Writing in progress: Transferred data size and total data size • [Completed]: Total data size • [Waiting]: - • [Error]: - For communication tests, the data size is not displayed.

2) **[Show error details] button**

Displays the details of an error in the GOT selected in the communication status list.

3) **Progress bar**

Shows the overall communication progress.

4) **[Cancel] button**

Cancels communication with the GOTs being in the waiting status.

The communication in progress cannot be canceled.

The data in the GOTs in the completion status cannot be reset to the state before the data write.

5) **[Close] button**

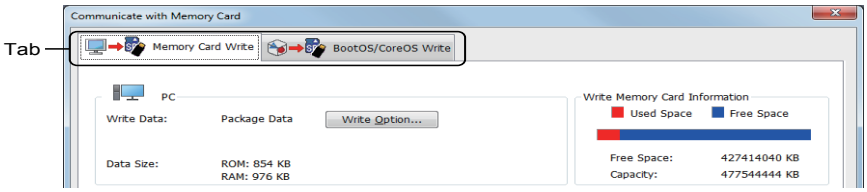
This item is displayed upon completion of communication.

Closes the [Communication Status] dialog, and updates [Start Time], [End Time], and [Status] in the [Batch Write to multiple GOTs] dialog.

4.8.12 [Communicate with Memory Card] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

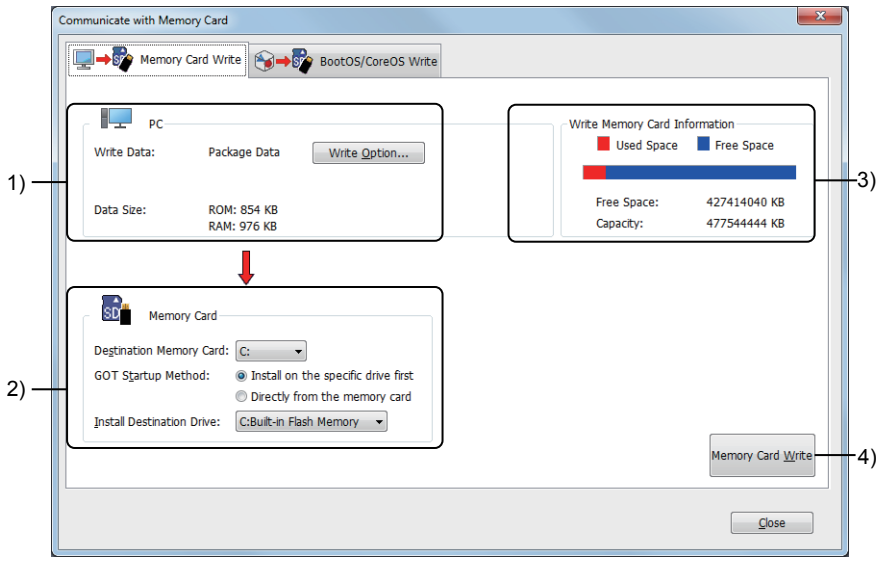
In the [Communicate with Memory Card] dialog, the information to be written to the data storage or the destination to write the data is set.
Select [Communication] → [Write to Memory Card] from the menu to display this dialog.
Configure the settings by switching the tabs according to the target data.



➟4.8.12 ■1 [Memory Card Write] tab
4.8.12 ■2 [BootOS/CoreOS Write] tab

■1 [Memory Card Write] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[PC Side]**
The information related to the package data which is written to the data storage is displayed and set.

Item	Description
[Write Data]	Type of the writing data. ([Package Data])
[Data Size]	Data size of the package data.
[Writing Option] button	Set the details of the package data. ➟4.8.3 [Write Option] dialog (for writing data to one GOT)

2) **[Memory Card Side]**
Set the information related to the destination data storage of the package data.

Item	Description
[Destination Memory Card]	Select the drive of the destination data storage. The drive which is displayed in [Hard Disk Drive] or [Device with Removable Storage] of Windows can be used in [My Computer]. (The available drive depends on the personal computer.)

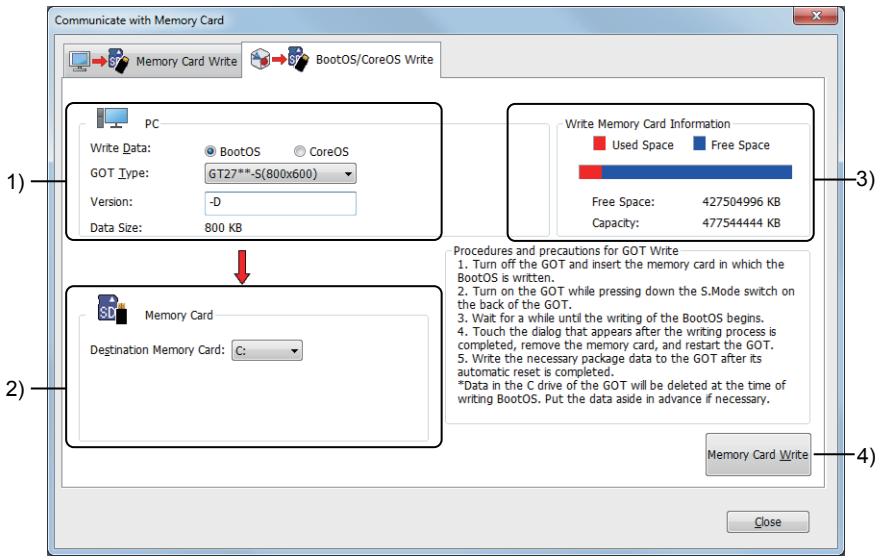
Item	Description
[Startup Operation]	Set the startup operation of the GOT of when the package data in the data storage is written to the GOT. • [Startup after installing data to specified drive] • [Direct startup from memory card]
[Destination Drive]	Set the destination drive of when the package data is written to the GOT. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer

3) **[Write Memory Card Information]**
Information of destination data storage capacity.

4) **[Memory Card Write] button**
Writes the package data to the data storage.

■2 [BootOS/CoreOS Write] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[PC Side]**
Set the information related to the BootOS or CoreOS to be stored in a data storage.

Item	Description
[Write Data]	Select the type of the writing data. • [BootOS] • [CoreOS]

Item	Description
[GOT Type]	Select the GOT type for the BootOS or the CoreOS. When [CoreOS] is selected for [Write Data], GT21 and GS21 models are not selectable. • [GT27**-X(1024x768)] • [GT27**-S(800x600)] • [GT27**-V(640x480)] • [GT2705-V(640x480)] • [GT25**-WX(1280x800)] • [GT25**-W(800x480)] • [GT25**-S(800x600)] • [GT25**-V(640x480)] • [GT2505-V(640x480)] • [GT23**-V(640x480)] • [GT2107-W(800x480)] • [GT2105-Q(320x240)] • [GT2104-R(480x272)] • [GT2104-P(384x128)] • [GT2103-P(320x128)] • [GS25**-WX(1280x800)] • [GS21**-W-N(800x480)] • [GS21**-W(800x480)] For the correspondence between the GOT types and GOT models, refer to the following. ➟1.1.2 Supported models
[Version]	Version of the BootOS or the CoreOS
[Data Size]	Data size of the Boot OS or the CoreOS

2) **[Memory Card Side]**
Set the information related to the data storage in which the BootOS or CoreOS is stored.

Item	Description
[Destination Memory Card]	Select the drive of the destination data storage. The drive which is displayed in [Hard Disk Drive] or [Device with Removable Storage] of Windows can be used in [My Computer]. (The available drive depends on the personal computer.)

3) **[Write Memory Card Information]**
Information of destination data storage capacity.

4) **[Memory Card Write] button**
Writes the BootOS or the CoreOS to the data storage.

4.9 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When an error occurs during the data transfer, check the following items.
If an error occurs after the following actions are taken or an error which is not described in the following list occurs, consult a service representative.

Error code	Error message	Description	Corrective action
80100005	An error occurred. The file in the p.c. cannot be written.	Failed to write to the file in the personal computer.	Check that the drive to which the file is written can be written or has enough available space in the disk capacity.
80110003	An error occurred. Please check Port No..	The set port No. is out of the range.	Check the port No.
80110004	An error occurred. Time out error	Communication time error	Check the communication cable and the power of the device.
80110006	An error occurred. The GOT is being accessed by another application.	The GOT is being accessed by another application.	Wait until another application ends.
80110007	An error occurred. Quality of communication signal error. Please check communication settings.	Error by the quality of the communication line	Decrease the baud rate and perform the communication.
80110008	An error occurred. Please check Baud rate.	The controller does not support the set baud rate.	Check the baud rate which the controller supports.
801fa303	An error occurred. GOT restricts the communication with Ethernet. Unable to communicate with GOT via Ethernet.	Communication via an Ethernet network is not allowed.	Disable the Ethernet Access Control (GS454) and the Processing Security Control via Wireless LAN (GS1840).
80112401	An error occurred. Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) Basic system application is not written in the GOT (2) The GOT is not turned on (3) Communication Settings are not properly set (4) GOT IP address is not properly set (5) Incorrect wiring	The GOT does not exist on the network.	Check the followings. • The basic system application is written to the GOT. • The GOT is powered on. • The communication settings are set correctly. • [GOT IP Address] is set correctly in the [Communication Configuration] dialog. • The wiring is correct.
80112402	An error occurred. Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) The GOT is communicating with another computer (2) GOT IP address is not properly set (3) GOT Port No. is not properly set	Socket line open error (Failed to generate a socket.)	Check the followings. • The GOT is not communicating with another computer. • The communication target is not the network device excluding the GOT. • [Peripheral S/W Communication Port No.] in the [Communication Configuration] dialog matches with the port No. set to the GOT.
80112405	An error occurred. Please check if both GOT and PC are properly connected together via Ethernet cabling.	Network error	Check the GOT is connected to the network correctly.
80112406	An error occurred. Unable to communicate with GOT via Ethernet. The possible causes are shown below. (1) The GOT is communicating via USB/ RS232 (2) The GOT is not turned on	The connecting socket is disconnected forcibly.	Check the followings. • The GOT is not communicating using the USB or RS232. • The GOT is powered on.
801fa000	An error occurred. Routing parameter is insufficient in the GOT of the relay station. Please set routing parameter for the GOT.	The routing parameter set for the relay station (GOT) is incorrect.	Check the routing parameter setting of the relay station.

Error code	Error message	Description	Corrective action
801fa080	An error occurred. Information is insufficient in the GOT of the relay station Ethernet setting. Please set the Ethernet setting of the GOT.	The Ethernet setting configured for the relay station (GOT) is incorrect.	Check the routing parameter and the IP address.
801fa200	An error occurred. Communication driver is not booted in the GOT of the relay station. Please check the GOT setting.	One of the following is the cause. • No communication driver is installed on the GOT. • The package data is corrupt. • The communication driver does not support the relay function.	Install the package data on the GOT again.
801fa304	An error occurred. The basic system application to be written is not valid for the H/W version of the GOT. Please prepare the new drawing software.	The hardware versions of the BootOS and the GOT do not match.	Install the BootOS from the appropriate version of GT Designer3.
801fa305	An error occurred. SD card cannot be accessed. The possible causes are shown below. • SD card cover of the GOT is open. • SD card access switch of the GOT is turned off.	The possible causes are as follows. • The SD card cover is open. • The SD card access switch is turned off.	Close the SD card cover of the GOT. Turn on the SD card access switch of the GOT.
801fa306	An error occurred. Project data, system application, and resource data cannot be written/deleted since the write-protect switch is activated. Please deactivate the write-protect switch.	The write protection switch of the data storage is on.	Cancel the write protection switch of the data storage.
801fa309	An error occurred. The package data/resource data cannot be written due to the shortage of free space on the drive.	The available space of the drive is not sufficient.	Acquire the free space by deleting unnecessary files or others. Or, reduce the size of the package data or resource data to be written.
801fa30c 801fa30d	An error occurred. The following drive is not mounted. X: XXXXXXXXX Check the drive.	The data storage is not connected to the specified drive.	Check the data storage is connected correctly to the specified drive.
801fa311	An error occurred. The specified file cannot be found. Update the information. (Click on the "Get Drive Information" button.)	The specified file does not exist.	Check if the specified file name is correct.
801fa315	An error occurred. The specified drive cannot be formatted.	The drive is used for the GOT direct startup and therefore cannot be formatted.	Select a drive that is not used for the GOT direct startup.
801fa317 801fa318	An error occurred. The cable is disconnected/unconnected or the GOT is in communication with another application. The possible causes are shown below. • GOT write is in process • GOT read is in process • GOT verification is in process • GOT information acquisition is in process • GOT diagnostics is in process	The possible causes are as follows. • The communication cable is broken or disconnected. • The GOT is in communication with another application.	• Check that the communication cable is connected correctly. • Check that the GOT is not in communication with another application.
801fa31f	An error occurred. The password is wrong.	The input password is incorrect.	Input the correct password.
801fa326	An error occurred. The package data cannot be written due to the shortage of free space on the buffering area.	The free space in the buffering area is insufficient.	Reduce the size of the package data by decreasing the number of incorporated functions and others.
801fa327	An error occurred. The package data cannot be written due to the shortage of free space on the project data area.	The free space in the project data area is insufficient.	Reduce the size of the package data by decreasing the number of incorporated functions and others.
801fa328	An error occurred. The security key of the GOT is deleted. Update the information. (Click on the "Get GOT Information" button.)	The GOT is requested to delete a security key that has already been deleted.	Click the [Get GOT Information] button on the [GOT] tab in the [Security Key Setting] dialog to update the GOT information.

Error code	Error message	Description	Corrective action
801fa32a	An error occurred. This function cannot be executed since the GOT does not support security key function. The possible causes are shown below. • Version of the BootOS in the GOT does not support security key function.	The following operations are performed to the GOT whose BootOS does not support the security key function. • Writing a security key to the GOT • Deleting a security key from the GOT • Acquiring the GOT information	Install the latest version of GT Designer3 on the personal computer, and then install the latest BootOS on the GOT.
801fa32b	An error occurred. The security key is set for the GOT. Please delete the security key and then write again.	Writing of the security key is performed to the GOT that already has a security key.	Delete the current security key from the GOT, and then write a new one to the GOT.
801fa32f	An Error occurred This function cannot be executed since the GOT does not support data write of the selected resource data. The possible causes are shown below. • The resource data that the destination GOT does not support is selected. • Version of the basic system application in the GOT does not support data write of the selected resource data.	The write destination GOT does not support the file format of the selected resource data. Or, the target GOT has an older version of the standard system application, and therefore the resource data file cannot be written.	Delete the unsupported resource data file from the write target list. Or, install the latest version of GT Designer3, and then write the package data to the GOT.
801fa330	An Error occurred Failed to access the file. Perform the following operations. • Reduce the number of files in the destination. • Check if the selected file in the GOT exists. • Check if the selected file in the GOT can be overwritten.	The number of files and folders has exceeded the storage limit for the root directory of the FAT16 formatted data storage on the write destination drive.	Reduce the number of the files and folders in the data storage on the write destination drive.
		The selected file is nonexistent or write-protected in the GOT.	Check the following. • The selected file exists. • The selected file is not write-protected.
801fa332	An Error occurred Communication with the GOT is disconnected during monitoring. Check the state of the GOT and retry.	Communication with the GOT has been lost due to a setting change in the utility or other causes.	Wait for some time, and then execute the GOT diagnostics again.
801fc202	An error occurred. Please confirm whether a remote password is set in the relay station. It is not possible to establish communication when a remote password is set in the relay station.	When the GOT accesses another station, the remote password authentication fails.	Do not set a remote password in the relay station and other stations, or exclude the GOT from the remote password authentication.
801fc205			
80110009	An error occurred. Communication error The possible causes are shown below. • The communication port settings are incorrect. • The cable is disconnected or broken. • The GOT is turned off. • The communication setting of each controller or routing parameter setting is incorrect. • Dialog window is displayed in the GOT. • Remote password is set for unsupported PLC/unit. • It is not connected with GOT2000. • The time set for "Timeout (Sec)" is short.	Packet send error	Check the line is connected.
8011000a		Communication time error	Check the GOT operates normally and perform the communication again.
80112208		USB line error (Cable is disconnected halfway.)	Check the USB cable connected to the GOT.
80112403		Socket line close error	Perform the communication again.
80112501		Easysocket generate error	Check the followings. • Easysocket is installed. • The GOT is in communication using another communication method. • The GOT is connected correctly.
801fa302		The GOT is processing data and no interrupt is available.	After the GOT completes the current process, perform the operation again.
801fa307		The specified file is read-only.	Check the destination data storage.
801fa30f		The specified path does not exist.	Check the specified path is correct.
801fa310		The specified path is incorrect.	Check the input path. • The reserved word is not used. • A dot is not used at the top. • A dot is not used at the end. • The path and the file name are not too long.
801fa32c		Writing data from GT Designer3 whose version is earlier than version 1.122C is restricted in the GOT.	Install the latest version of GT Designer3, and then perform the operation again.
801fa331		The GOT diagnostics cannot be executed due to IP address duplication, security key authentication failure, or other causes.	Check that the relevant settings are configured properly, and then execute the GOT diagnostics again.

Error code	Error message	Description	Corrective action
a	An error occurred. The software installation file is damaged or incomplete. Please reinstall.	Failed to generate the object of EZSocket.	Reinstall GT Designer3.
c9	Memory Card error Failed to create the folder. Check if the destination memory card exists.	Folder creating error	Check the destination data storage.
ca	Memory Card error Failed to delete the folder.	Folder deleting error	Check either of the following operations. • The specified folder exists. • The specified folder is not read-only.
cc	Memory Card error Failed to copy the file. The capacity of the destination memory card is full. Reduce the capacity. *The specified drive may be write protected.	File copy error	Check the followings. • Capacity of the data storage • Access privilege of the destination drive When the user account control is valid, set a destination drive other than drive C.
dc	Memory Card error Failed to delete the file.	File deleting error	Check either of the following. • The specified file exists. • The specified file is not read-only.
132	An error occurred. The BootOS cannot be written if its version is older than the one of the BootOS written in the GOT. Version of the BootOS in the GOT: BB Version of the BootOS to be written: AA	A later version of the BootOS is already installed on the GOT.	Install the BootOS version that is newer than the one installed to the GOT to the GOT.
133	An error occurred. The GOT type is different or unsupported.	The GOT type acquired from the GOT and the one of the package data do not match. Or, the type of the GOT to communicate with is not supported.	Check the GOT type of the project and the destination GOT.
134	An error occurred. Package data is not written. Write the package data.	The BootOS was started when the following processing is performed. • Installing the BootOS • Writing the package data • Writing or acquiring the GOT identification information • Performing the processing other than writing or acquiring of the security	Write the package data again.
13a	An error occurred. Functions to be written and already written functions conflict with each other. Selected function: %s Written function: %s *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	Since the function which is written and the one which is already written are competing, the system application cannot be written.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
13d (GT27, GT25, GT23, and GS25)	An error occurred. There are more than 4 communication drivers that are already written in the GOT and those to be written. (Up to 4 communication drivers can be written in GOT.) Delete the already written communication drivers and write the items again. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	Four communication drivers have already been installed on the GOT. Therefore, the communication driver cannot be installed.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]

Error code	Error message	Description	Corrective action
13d (GT21 and GS21)	An error occurred. There are more than 2 communication drivers that are already written in the GOT and those to be written. (Up to 2 communication drivers can be written in GOT.) Delete the already written communication drivers and write the items again. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	Two communication drivers have already been installed on the GOT. Therefore, the communication driver cannot be installed.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
190	An error occurred. The package data in the memory card is directly started. The following operations cannot be performed. • Deleting directly-started package data • Formatting the drive of package data in execution • Writing another package data to the drive of package data in execution • Writing package data to the destination other than the drive of package data in execution *Take out the memory card from the GOT to perform these operations.	When the package data is started from the data storage directly, the following operations cannot be performed. • Deleting the package data during the direct startup • Formatting the startup drive • Writing another package data to the startup drive • Writing package data to a drive other than the startup drive	Do not perform the following operations. • Deleting the package data during the direct startup • Formatting the startup drive • Writing another package data to the startup drive • Writing package data to a drive other than the startup drive
191	An error occurred. Failed to create the file.	Failed to create a file when the resource data is read.	Check the destination folder is not read only.
192	An error occurred. Failed to create the folder.	Failed to create a folder when the resource data is read.	Check the destination folder is not read only.
193	An error occurred. The processing is not properly completed since the data may be broken.	The data is broken.	The processing may recover if the processing is redone after GT Designer3 is installed again. However, the processing cannot recover when the data in the saving file is broken.
194	An error occurred. The processing is not properly completed since the file may be broken.		
195	An error occurred. The package data to be written is insufficient. Change the write mode to "Synchronize" and retry.	The basic system application is not included in the package data.	Add the basic system application and the project data in the package data.
196	An error occurred. The system major version of the package data in the GOT is different from the one of the package data to be written. The project data and special data will be deleted since they do not work properly if the major versions are different. Package data without project data and basic system application cannot be written.	This error occurs when the package data is written without selecting the project data in the [Write Option] dialog, the same package data exists in the GOT, and the system application of the different major version is written.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
197	An error occurred. Multiple package data are written in the drive. In the current software, data cannot be written to the drive where multiple package data exist. Please update the software version.	Multiple package data exist in the destination drive of the package data.	Write the package data from GT Designer3 of the latest version or write the package data to other drives.
198	An error occurred. There is no package data in the specified drive.	The package data does not exist in the specified drive.	Specify the drive in which the package data is stored.
199	An error occurred. The package data cannot be written with the write mode "Select" since project security is set for the project. Change the write mode to "Synchronize" and retry.	The package data with the project security is written to the GOT. Therefore, the data cannot be written by setting [Write Mode] to [Selection] in the [Write Option] dialog.	Write the data by setting [Write Mode] to [Synchronize] in the [Write Option] dialog.

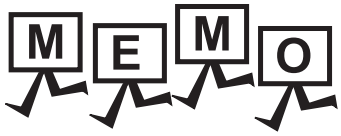
Error code	Error message	Description	Corrective action
19a	An error occurred. Unsupported GOT security is set. Please update the software version.	The GOT does not support the security setting to be written.	Install the latest version of GT Designer3, and then write the package data to the GOT.
19b	An error occurred. Soft security key is set for the project in the GOT. This function cannot be executed since the current GT Designer3 does not support the soft security key function. Update the application and retry.	The project in the GOT is protected with a security key. Therefore, the following operations are not available. • Verify GOT • Read from GOT (when destination for reading is set to [GT Designer3])	Install the latest version of GT Designer3, and then perform the operation again.
19d	An error occurred. It is necessary to update the BootOS written in the GOT to make the current package data work in the GOT. Update the BootOS and write the package data again. *Please check "Procedures and precautions for GOT Write" before updating the BootOS.	The package data containing the following items cannot be written to the GOT because the BootOS on the GOT does not support the items. • [Wireless LAN] • [MES Interface] • [Printer(ESC/P-R)] • [Network Drive]	Install the latest version of GT Designer3 on the personal computer, install the latest BootOS on the GOT, and then rewrite the package data to the GOT.
19e	An error occurred. The write processing cannot be executed since the setting to restrict write from GT Designer3 of the older versions is in effect. Check the version of GT Designer3 in which the editing is executed.	The setting, which restricts writing data from earlier versions of GT Designer3, is enabled on the GOT. The GT Designer3 version is old.	Install the latest version of GT Designer3, and then perform the operation again.
1a0	An error occurred. The package data cannot be written with the write mode "Select" since security key is set for the project. Change the write mode to "Synchronize" and retry.	The package data to be written to the GOT contains a project protected with a security key. Therefore, the data cannot be written when [Write Mode] is set to [Select] in the [Write Option] dialog.	Select [Synchronize] for [Write Mode] in the [Write Option] dialog.
1a1	An error occurred. This function cannot be executed since the GOT does not support security key function. The possible causes are shown below. • Version of the basic system application in the GOT does not support security key function. • Version of the BootOS in the GOT does not support security key function.	The following operations are performed to the GOT that does not support the security key function. • Writing a security key to the GOT • Deleting a security key from the GOT • Acquiring the GOT information	Install the latest version of GT Designer3 on the personal computer, install the latest BootOS on the GOT, and then rewrite the package data to the GOT.
1a2	An error occurred. This function cannot be executed since the GOT does not support GOT diagnostics function. The possible cause is shown below. • Version of the basic system application in the GOT does not support GOT diagnostics function.	The GOT diagnostics function that monitors occurring errors is not supported.	Install the latest version of GT Designer3, and then write the package data to the GOT.
1a5	An error occurred. Functions to be written and already written functions conflict with each other. Either GB2312 or GBK of Chinese (simplified) outline font can be written. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1a6	An error occurred. FA transparent function is used in other MELSOFT applications for the GOT. Terminate the function and retry.	Another MELSOFT application is using the FA transparent function, and therefore the following processes cannot be executed. • Writing package data • Installing the BootOS • Deleting package data • Formatting a drive • Starting the GOT internal device monitor of the GOT diagnostics function	Wait 30 seconds after the application ends the FA transparent function, and then execute the process again.

Error code	Error message	Description	Corrective action
1a7	An error occurred. Functions to be written and already written functions conflict with each other. Either high-quality version (with antialiasing) or normal version (without antialiasing) of outline font can be written. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1a8	An Error occurred This function cannot be executed since the GOT does not support resource file write. The possible cause is shown below. • Version of the basic system application in the GOT does not support resource file write.	The target GOT has an older version of the standard system application, and therefore the resource data file cannot be written.	Install the latest version of GT Designer3, and then write the package data to the GOT.
1a9	An Error occurred The resource file that does not exist is specified. Check the file to be written.	The selected resource data file is nonexistent.	Check that the file exists.
1b0	An Error occurred The resource file that cannot be read is specified. Check the file to be written.	Another software application is using the selected resource data file, and therefore the file cannot be opened.	Check that the file is not being used by the other software applications.
1b1	An Error occurred Memory capacity in the PC is insufficient. Check the size of the resource file to be written.	The personal computer does not have enough memory, and therefore the selected resource data file cannot be opened.	Perform the following operations on the personal computer to free up the hard disk space and memory, and then write the resource data file. • Exit unnecessary applications. • Delete unnecessary files.
1b2	An error occurred. There are more than 2 kanji regions of the outline font that is already written in the GOT and the outline font to be written. (Up to 2 kanji regions can be written in GOT.)Delete the kanji regions of the already written outline font and write the font again. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The GOT has the outline font and two KANJI regions of data. Therefore, different KANJI region data cannot be written additionally.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1b3	An error occurred. The style of the outline font that is already written in the GOT is different from the one of the outline font to be written. (Only 1 style can be written in GOT.) Delete the style of the already written outline font and write the font again. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The typeface data of the outline font to be written differs from the one in the GOT. Therefore, the typeface data cannot be written.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1b4	An Error occurred The following function to be written conflicts with the function that is already written in the GOT. • Key Window Design Information *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	Since the function which is written and the one which is already written are competing, the system application cannot be written.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]

Error code	Error message	Description	Corrective action
1b5	An error occurred. The package data cannot be written since the communication via Ethernet will be disabled if it is written in the following cases. Write the package data from [Communication] -> [Write to GOT]. • Package data does not exist in the destination • The package folder is different from the one of the package data in the destination drive • The project ID is different from the one of the package data in the destination drive • The major version of the package data in the destination drive is different from the one of the system application • Security key is set for the write target package data • Security key is set for the package data in the destination • Free space of the destination drive is insufficient	As the individual identification information and the communication interface setting data are not written to multiple GOTs in one go, the following result will occur under the conditions shown left. Ethernet communications become unavailable and the package data cannot be written accordingly.	Write the package data to each GOT individually by selecting [Communication] → [Write to GOT] or [Write to Memory Card] from the menu.
1b6	An error occurred. The package data cannot be written since the data in the GOT contains the following settings. • System Label Ver.2 • Global Label • Label (GT Designer3) • OMRON NJ/NX Tag • AB Native Tag *Change the setting of "Screen Switching/ Windows, System Information, Station No. Switching" to "Write" in the dialog of Write Option, and then write the package data.	When [Not write] is selected for [Screen Switching/Window, System Information, Station No. Switching] in the [Write Option] dialog, you cannot write package data to multiple GOTs in one go if any of the GOTs has the setting of labels or tags.	Perform one of the following operations. • Select [Write] for [Screen Switching/ Window, System Information, Station No. Switching] in the [Write Option] dialog, and then rewrite the package data. • Select [Communication] → [Write to GOT] or [Write to Memory Card] from the menu to write the package data to the target GOTs separately.
1b8	An error occurred. Functions to be written and already written functions conflict with each other. Either GOT Graphic Ver.1 or GOT Graphic Ver.2 of PC Remote Operation (Ethernet) can be written. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1b9	An error occurred. The data cannot be written with the write mode "Select" since the package data that contains expanded base screens is written. Change the write mode to "Synchronize" and retry.	The package data to be written to the GOT contains the project in which the base screen size expansion is enabled. Therefore, the data cannot be written when [Write Mode] is set to [Select] in the [Write Option] dialog.	Select [Synchronize] for [Write Mode] in the [Write Option] dialog, and then write the package data.

Error code	Error message	Description	Corrective action
1bb	An error occurred. The data cannot be written since the operation memory (RAM) size of the write data exceeds 128 MB, the capacity of the GOT. Write data to the following GOT whose operation memory (RAM) capacity is 256 MB. • Function version on the rating plate on the GOT rear face: "C" or later • Version of the basic system application: "01.39.000" or later Check the following data sizes and write the package data again when writing the data to the GOT other than the above. • Package data to be written • CSP+ for iQSS data in the GOT	The RAM capacity required for the package data to be written to and the size of the iQSS data (CSP+) used in the GOT exceed the capacity of the GOT operation memory (RAM). Therefore, the data cannot be written to the GOT.	Write the package data after performing either of the following operations. • Reduce the RAM capacity required for the package data. • Write the data to a GOT with function version C or later and standard system application version 01.39.000 or later. • Reduce the number of devices set for the iQSS data (CSP+) in the GOT and rewrite the data.
1bc		The RAM capacity required for the package data to be written to and the size of the iQSS data (CSP+) used in the GOT exceed the capacity of the GOT operation memory (RAM). Therefore, the data cannot be written to the GOT. (The function version is earlier than C, or the standard system application version is earlier than 01.39.000.)	Write the package data after performing either of the following operations. • Reduce the RAM capacity required for the package data. • Write the data to a GOT with function version C or later and standard system application version 01.39.000 or later. • Reduce the number of devices set for the iQSS data (CSP+) in the GOT and rewrite the data. When the data is written to a GOT with function version C or later, update the standard system application according to one of the following procedures. • Select [Select] for [Write Mode] and write the standard system application. • Obtain the drive information on the [GOT Read] screen, delete the package data in the GOT, and rewrite the package data. • While pressing the S.MODE switch on the GOT rear face, turn on the GOT and write the package data.
1bd	An error occurred. Functions to be written and already written functions conflict with each other. Either Kana-kanji Conversion or Pinyin Conversion can be written depending on the conversion method. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1be	An error occurred. Functions to be written and already written functions conflict with each other. For Chinese (simplified) outline fonts, only one type of characters can be written: GB2312, GBK, or GB18030-2022. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]
1bf	An error occurred. Functions to be written and already written functions conflict with each other. Either GB18030-2022 valid version or GB18030-2022 invalid version of Chinese (simplified) standard font of Standard Function can be written. *Select "Synchronize" for Write Mode in the dialog of Write Option or delete the package data from the drive information in the [GOT Read] tab, and then write the package data.	The system application cannot be written because the application conflicts with the existing one in the GOT.	Write the package data after performing either of the following operations. • Selecting [Synchronize] in [Write Mode] of [Write Option] • Deleting the package data in [Drive Information] of [GOT Read]

Error code	Error message	Description	Corrective action
1c1	An error occurred. The data cannot be written since the operation memory (RAM) size of the write data exceeds 15 MB, the capacity of the GOT. Write data to the following GOT whose operation memory (RAM) capacity is 64 MB. • Version of the basic system application: "01.55.000" or later Check the following data sizes and write the package data again when writing the data to the GOT other than the above. • Package data to be written	The RAM usage of the package data to be written exceeds the operating memory capacity (RAM) of the GOT, therefore, the data cannot be written. (The standard system application of the GOT is earlier than version 01.55.000.)	Write the package data after performing either of the following operations. • Reduce the RAM usage of the package data. • Write the package data to a GOT with standard system application version 01.55.000 or later. If you use the current package data, update the standard system application according to the following procedure and write the package data. • In the [Write Option] dialog, select [Select] for [Write Mode] and write the standard system application.


MEMO

5. COMMON SETTING

5.1 Changing the GOT Type of the Project ([GOT Type Setting]) . . . . . .5 - 2
5.2 Setting the GOT Basic Operations ([GOT Environmental Setting]) . . . . . .5 - 32
5.3 Setting the Utility Function ([GOT Setup]) . . . . . .5 - 204
5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting]) . . . .5 - 269
5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting]) . . . . . .5 - 279
5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction]) . . . . . .5 - 304
5.7 Checking the Interface Settings of the GOT ([I/F Communication Setting]) . . . . . .5 - 314
5.8 Comment Setting ([Comment]) . . . . . .5 - 318
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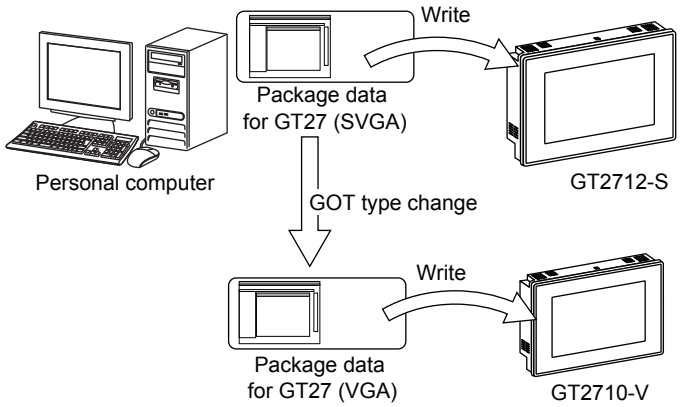
5.1 Changing the GOT Type of the Project ([GOT Type Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡5.1.1 Specifications of the GOT type change
5.1.2 Graphics mode ([Graphics Setting])
5.1.3 Base screen size expansion ([Expand base screen sizes])
5.1.4 Precautions
5.1.5 [Type Setting] dialog
5.1.6 [Output] window

The available functions depend on the GOT model.
Thus, set the GOT type of the project according to the GOT model.



5.1.1 Specifications of the GOT type change

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If you change the GOT type in the [Type Setting] dialog, some settings may be deleted or changed, or the shape and shape frame settings may be changed.

■1 Setting to be held when the GOT type is changed

The setting of the changed GOT that is available in the newly set GOT is held after the GOT type change.

(1) Screen size

When the GOT type is changed to one with the same screen resolution, the screens are not resized.
The figures and objects on the screens are also not resized.

(2) Channel No. setting

When the GOT type after the change has the same channel No. and interface as those of the GOT type before the change, the channel No. is assigned to the same interface before the change.

(3) Library

The user-created library is not changed.
The parts and templates in the library can be used in the newly set GOT.
However, the library data containing figures or objects incompatible with the new GOT is not displayed on the library image list.

■2 Setting to be deleted when the GOT type is changed

Functions, settings, or screens that the newly set GOT does not have are deleted.

■3 Setting to be changed when the GOT type is changed

If the originally-selected GOT does not support some settings of the newly-selected GOT, the default values are applied according to the other related settings of the newly-selected GOT.
For some of the unsupported settings, the default values may not be applied depending on the combination of the originally-selected GOT and the newly-selected GOT.

(1) Screen size

Screen type	Description
Original-size base screen	When the GOT type is changed to one with a different screen resolution, the base screens are resized to the screen size of the newly-selected GOT. Select whether to reposition and resize the figures and objects on the screens. For information on how the screen data is converted, refer to the following. ➟5.1.1 ■4 Resizing the screens, figures, and objects
Expanded base screen	Select whether to resize the screens. For information on how the screen data is converted, refer to the following. ➟5.1.1 ■4 Resizing the screens, figures, and objects
Window screen	

(2) Channel No. setting

When the newly set GOT does not have the channel No. that the changed GOT has, the default value is set in the channel No.
When a channel No. with the default value is already used in another interface, the channel No. is set to 0.
When the newly set GOT does not have the communication driver set for the channels of the changed GOT, the default communication driver is set.

(3) Device settings

The incompatible device range with the newly set GOT is shown as [??] in GT Designer3.
In this case, set the device again.
The devices with device types (BCD, real number) that the newly set GOT does not support are deleted.

(4) Project security

When the project security is set, the following user cannot change the GOT type.

- Users who are restricted to edit the project by the project security
- Users who are restricted to display or edit a screen

➟2.13 Protecting a Project by Registering Users

(5) Channel No. setting of the special function switch

When the GOT type is changed, if the channel No. set for the special function switch does not exist, the channel No. is automatically changed.
When either of the following functions is set for the special function switch, check the channel No. of the special function switch.

- [System Launcher]
- [Device Monitor]
- [Backup/Restoration]

(6) Image data (BMP)

(a) Changing 16-tone monochrome to 256 or 65536 colors

When the GOT type is changed, the number of bits per pixel of 16-tone monochrome image data cannot be held.
The image data is converted to the image data with either 8 bits or 16 bits.
Thus, the data size of the image data is increased.

(b) Restriction due to the arrangement method

When using image data of BMP files (256 colors), use the same method to display all the image data.
The color of the image data of BMP files (256 colors) may be changed depending on the arrangement method at the GOT type change.

- Importing the BMP file by selecting [Figure] → [Import Image Data] from the menu
  The image data is displayed in 8-bit color.
- Copying the BMP file to the clipboard and pasting it on the screen
  The image data is displayed in 16-bit color.

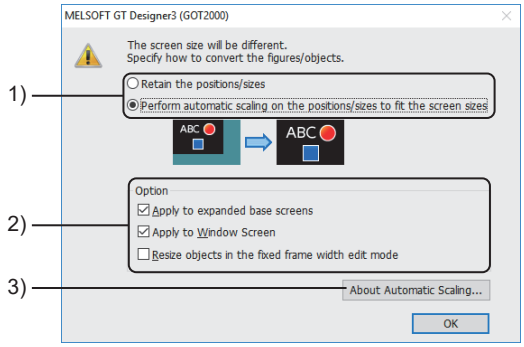
(7) Startup logo setting

When the screen size of the newly set GOT does not correspond to that of the changed GOT, the size of the startup logo may be changed.
When the screen size has been changed, set the startup logo again.

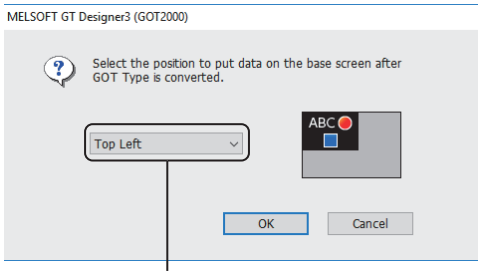
■4 Resizing the screens, figures, and objects

In the [Type Setting] dialog, change the GOT type to one with a different screen resolution and click the [OK] button to display the dialog prompting you to specify the method of changing the figures and objects on the screens.
How the screen data is converted depends on the types of the base screens before the GOT type change and the method of changing the figures and objects on the screens.
For more details, refer to the following.

➟(1) How the original-size base screen data is converted
(2) How the expanded base screen data is converted (when enabling the base screen size expansion for the newly-selected GOT)
(3) How the expanded base screen data is converted (when disabling the base screen size expansion for the newly-selected GOT)
(4) How the window screen data is converted



1) Method of changing the figures and objects
Select whether to reposition and resize the figures and objects according to the screen size of the newly-selected GOT.
The following shows selectable items.

Item	Description
[Retain the positions/sizes]	Resizes the screens, and does not reposition and resize the figures and objects on the screens. If the screen size of the newly-selected GOT is smaller than the screen size of the originally-selected GOT, some of the figures and objects may enter the temporary area. In this case, move such figures and objects to the screen display area. If the screen size of the newly-selected GOT is larger than the screen size of the originally-selected GOT, click the [OK] button to display the following dialog.  Position of the figures and objects • Position of the figures and objects Select where to place the figures and objects on the base screens after the GOT type change. The following items are selectable: [Top Left], [Top Right], [Center], [Bottom Left], [Bottom Right], [Top], [Bottom], [Left], and [Right].
[Perform automatic scaling on the positions/sizes to fit the screen sizes]	Repositions and resizes the figures and objects according to the new screen size. How they are repositioned and resized depends on them. ➟(5) How the figures and objects are changed The setting of [Resize objects in the fixed frame width edit mode] determines whether to fix the object shape frame widths after the GOT type change.

2) [Option]
This item appears when [Perform automatic scaling on the positions/sizes to fit the screen sizes] is selected as the

method of changing the figures and objects.

Item	Description
[Apply to expanded base screens]	Available to GT27, GT25, and GS25. This item is displayed when the base screen size expansion is available for both the originally-selected GOT and newly-selected GOT. Resizes the figures and objects on the expanded base screens. Resizes the expanded base screens. For information on how the expanded base screen data is converted, refer to the following. ➟(2) How the expanded base screen data is converted (when enabling the base screen size expansion for the newly-selected GOT) (3) How the expanded base screen data is converted (when disabling the base screen size expansion for the newly-selected GOT)
[Apply to Window Screen]	Resizes the figures and objects on the window screens. Resizes the window screens. For information on how the window screen data is converted, refer to the following. ➟(4) How the window screen data is converted
[Resize objects in the fixed frame width edit mode]	Resizes the applicable objects with their shape frame widths fixed. The objects must satisfy the frame width fixing conditions. For the frame width fixing conditions, refer to the following. ➟6.6.13 [Edit Objects with Fixed Frame Width] The shape frame widths are fixed after the GOT type change.

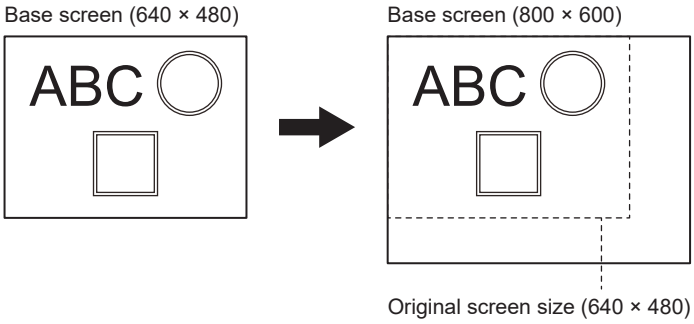
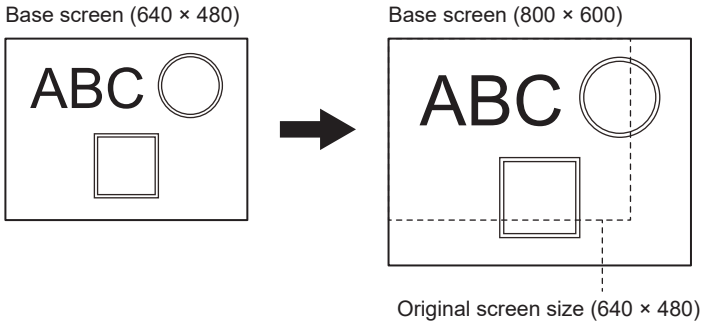
3) **[About Automatic Scaling] button**

This item appears when [Perform automatic scaling on the positions/sizes to fit the screen sizes] is selected as the method of changing the figures and objects.

Displays precautions for the automatic scaling.

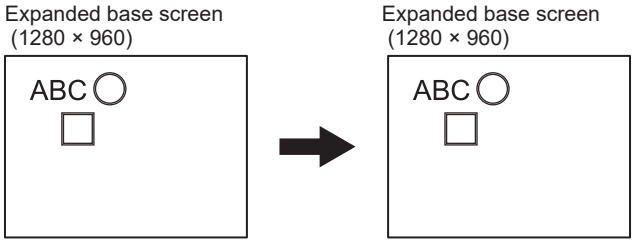
(1) How the original-size base screen data is converted

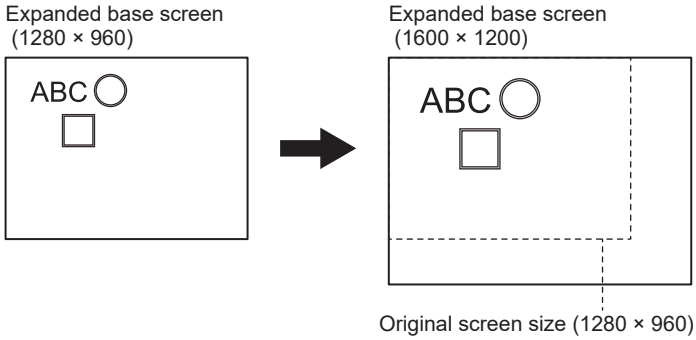
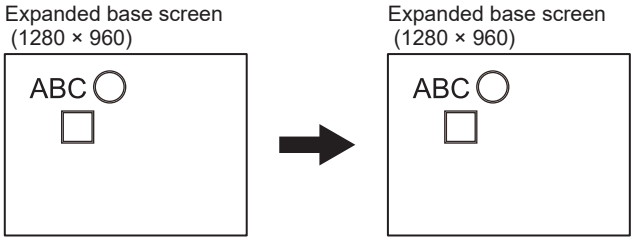
The original-size base screen data is converted as shown below.

Method of changing the figures and objects	Conversion specifications
[Retain the positions/sizes]	The base screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600) 
[Perform automatic scaling on the positions/sizes to fit the screen sizes]	The base screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are repositioned and resized in proportion to the screen resolution of the originally-selected GOT. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600) 

(2) How the expanded base screen data is converted (when enabling the base screen size expansion for the newly-selected GOT)

If you enable the base screen size expansion for the newly-selected GOT, the expanded base screen data will be converted as shown below.

Method of changing the figures and objects	[Apply to expanded base screens]	Conversion specifications
[Retain the positions/sizes]	-	The base screens are not resized, and the figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600)  Note that the screens are resized under the following condition. • The vertical or horizontal size of the screens is smaller than the vertical or horizontal screen size of the newly-selected GOT. The screens are resized to the screen size of the newly-selected GOT.

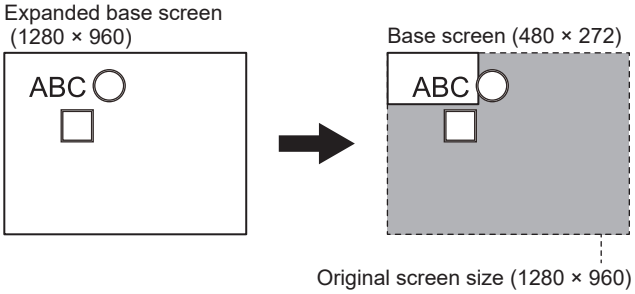
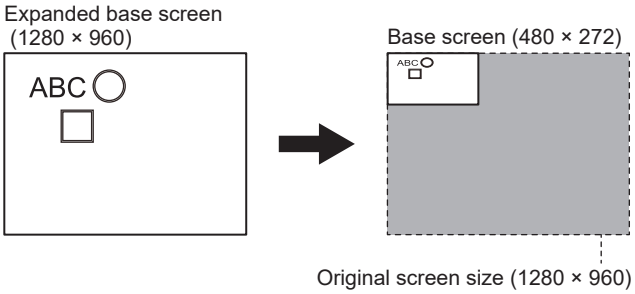
Method of changing the figures and objects	[Apply to expanded base screens]	Conversion specifications
[Perform automatic scaling on the positions/sizes to fit the screen sizes]	Selected	The base screens are resized and the figures and objects on the screens are repositioned and resized in proportion to the screen resolution of the originally-selected GOT. The base screen expanded to an integral multiple of the original size is resized proportionally. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600)  Note that the specifications vary under the following conditions. • Even after the screens are resized in proportion to the screen resolution of the originally-selected GOT, the vertical or horizontal size of the screens is smaller than the vertical or horizontal screen size of the newly-selected GOT. The screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are repositioned and resized based on the ratio of the base screen sizes before and after the GOT type change. • Even after the screens are resized in proportion to the screen resolution of the originally-selected GOT, the vertical or horizontal size of the screens exceeds 3000 dots. The base screens are not resized, and the figures and objects on the screens are not repositioned and resized.
	Deselected	The base screens are not resized, and the figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600)  Note that the screens are resized and the figures and objects on the screens are repositioned and resized under the following conditions. • The vertical or horizontal size of the screens is smaller than the vertical or horizontal screen size of the newly-selected GOT. The screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are repositioned and resized based on the ratio of the base screen sizes before and after the GOT type change.

(3) How the expanded base screen data is converted (when disabling the base screen size expansion for the newly-selected GOT)

The base screen size expansion is disabled under the following conditions.

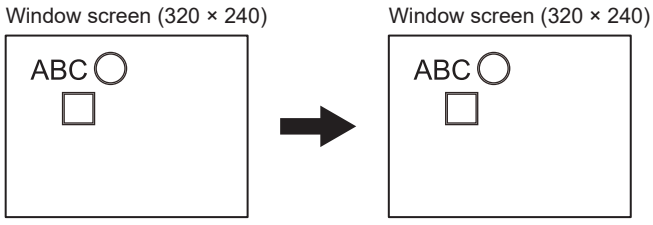
- The newly-selected GOT does not support the base screen size expansion.
- The setting of [Graphics Setting] has been changed from [GOT Graphic Ver.2] to [GOT Graphic Ver.1].
- [Expand base screen sizes] is deselected.

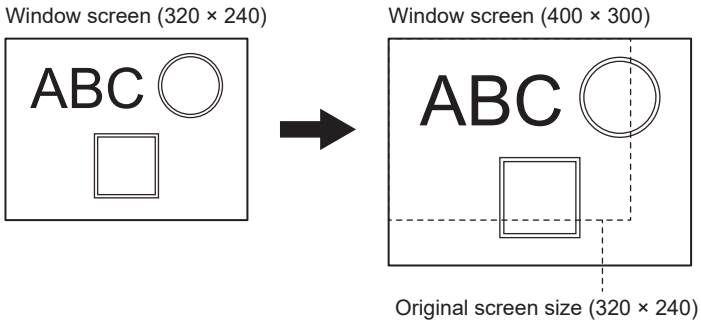
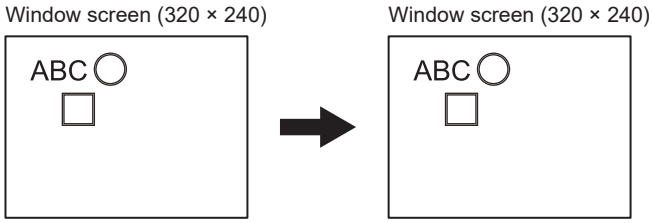
If you disable the base screen size expansion for the newly-selected GOT, the expanded base screen data will be converted as shown below.

Method of changing the figures and objects	Conversion specifications
[Retain the positions/sizes]	The base screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT2104-R (480 × 272) 
[Perform automatic scaling on the positions/sizes to fit the screen sizes]	The base screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are repositioned and resized based on the ratio of the base screen sizes before and after the GOT type change. Example) Changing the GOT type from GT27-V (640 × 480) to GT2104-R (480 × 272) 

(4) How the window screen data is converted

The window screen data is converted as shown below.

Method of changing the figures and objects	[Apply to Window Screen]	Conversion specifications
[Retain the positions/sizes]	-	The window screens are not resized, and the figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600)  Note that the screens are resized under the following condition. • The vertical or horizontal size of the screens is larger than the vertical or horizontal screen size of the newly-selected GOT. The screens are resized to the screen size of the newly-selected GOT.

Method of changing the figures and objects	[Apply to Window Screen]	Conversion specifications
[Perform automatic scaling on the positions/sizes to fit the screen sizes]	Selected	The window screens are resized and the figures and objects on the screens are repositioned and resized in proportion to the screen resolution of the originally-selected GOT. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600) 
	Deselected	The window screens are not resized, and the figures and objects on the screens are not repositioned and resized. Example) Changing the GOT type from GT27-V (640 × 480) to GT27-S (800 × 600)  Note that the screens are resized and the figures and objects on the screens are repositioned and resized under the following condition. • The vertical or horizontal size of the screens is larger than the vertical or horizontal screen size of the newly-selected GOT. The screens are resized to the screen size of the newly-selected GOT. The figures and objects on the screens are repositioned and resized based on the ratio of the base screen sizes before and after the GOT type change.

(5) How the figures and objects are changed

The figures and objects are repositioned and resized based on the ratio of the base screen sizes before and after the GOT type change.
How the figures and objects are changed depends on them.

○: Changed, ×: Not changed

Function	Specifications	
	Size	Other than size
Figure	○	For the text and the logo text, the setting of [Size] is changed. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard].
Touch Switch	○	The setting of [Text Size] is changed. When [Adjust Text Size] is selected, the setting of [Minimum Size] is also changed. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard].
Lamp	○	The setting of [Text Size] is changed. When [Adjust Text Size] of the bit lamp or word lamp is selected, the setting of [Minimum Size] is also changed. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard].

Function	Specifications	
	Size	Other than size
Numerical Display/Input	○	The setting of [Number Size] is changed according to the object size. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard]. When [Font] is set to [6x8dot], the object size is not changed.
Text Display/Input	○	The setting of [Text Size] is changed according to the object size. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard]. When [Font] is set to [6x8dot], the object size is not changed.
Date/Time Display	○	The setting of [Number Size] is changed according to the object size. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard]. When [Font] is set to [6x8dot], the object size is not changed.
Comment Display	○	The setting of [Text Size] is changed.
Parts Display	○	-
Parts Movement	○	When [Move Way] is set to any other than [Line], the object size is not changed.
Historical Data List Display	○	The setting of [Text Size] is changed.
Alarm Display	○	The setting of [Text Size] is changed. When [Font] is set to [6x8dot], the following items are not changed. • Object size • Setting of [Space] of the alarm display (user) or the alarm display (system)
Recipe Display (Record List)	○	The setting of [Text Size] and the scroll bar width are changed. When [Font] is set to [6x8dot], the following items are not changed. • Object size • [Space]
Graph	○	The setting of [Number Size] is not changed.
Graphical Meter	○	The setting of [Text Size] is changed. When [Adjust Text Size] is selected, the setting of [Minimum Size] is also changed. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard]. The setting of [Numerical Size] is not changed.
Meter	○	For the panelmeter, the setting of [Text Size] is changed. The setting of [Font] is changed as shown below. • [12dot Standard] is changed to [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21). • [16dot Standard Gothic] ([16dot Standard] for GT21 and GS21) is changed to [12dot Standard]. The setting of [Number Size] is not changed.
Slider	○	The setting of [Number Size] is not changed.
Document Display	○	-
Script parts	×	-
Video/RGB display object	○	-
Window Position	×	-
Key Window Object	○	The setting of [Text Size] is changed according to the object size. When [Font] is set to [6x8dot], the object size is not changed.
Hyperlink	×	-

■5 Project data for GOT1000 series

When project data for GOT1000 series is opened, the data is converted for GOT2000 series.
For the compatibility between project data for GOT1000 series and project data for GOT2000 series, refer to the following.

➟12.13 Compatibility with Conventional Products

5.1.2 Graphics mode ([Graphics Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

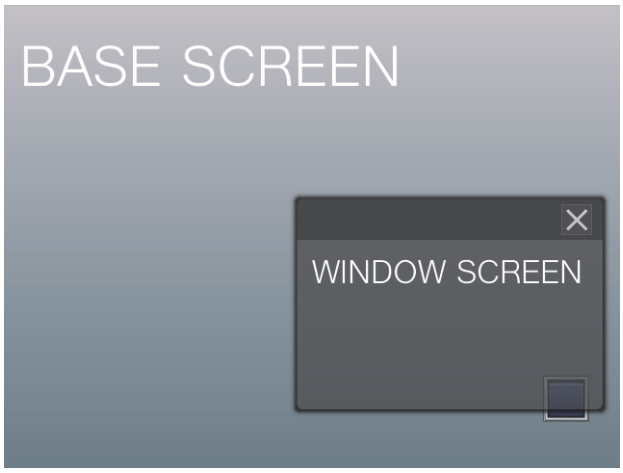
The following shows the graphics modes of the GOT.

- GOT Graphic Ver.2
- GOT Graphic Ver.1

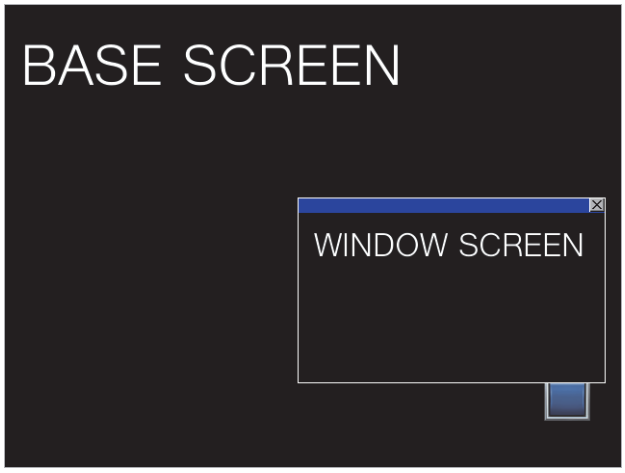
For GT23, only GOT Graphic Ver.1 is available.

GOT Graphic Ver.2 is optimized for the GOT2000 series, and it supports the following graphics.

- Screen background color gradient
- Semitransparent window screen
- Selectable contours of the window screen



GOT Graphic Ver.2



GOT Graphic Ver.1

■1 Specifications of the graphics modes

The following shows the specifications of GOT Graphic Ver.2 and GOT Graphic Ver.1.
(Some items may not be available depending on the GOT type.)

(1) Screen

Item		Graphics mode	
		GOT Graphic Ver.2	GOT Graphic Ver.1
Base screen	Screen background color gradient	Available	Not available
	Screen background pattern	The specified pattern is cut off at the edges of the relevant screen.	The relevant screen is outlined in the pattern color.
	Transparent color setting for the front layer	Not available	Available
	Size expansion	Available	Not available
Window screen	Screen background color gradient	Available	Not available
	Screen background pattern	The specified pattern is cut off at the edges of the relevant screen.	The relevant screen is outlined in the pattern color.
	Transparent color setting for the front layer	Not available	Available
	Changing the title bar design of the overlap window	Available	Not available
	Changing the standard key window design	Available	Not available
	Changing the title bar design of the user-created key window	Available	Not available
	Setting the transparency of the window screen	Available	Not available
	Setting the contours of the window screen	[Rectangle] or [Rounded] is selectable. When [Rounded] is selected, [Radius] can be set.	[Rectangle] (fixed)
	Display of a moving window	The window becomes semitransparent.	The color of the title bar changes.
	Cursor on the key window	A semitransparent rectangle cursor appears.	A white rectangle cursor appears.
	Display of a user-created dialog window	All screens are refreshed. The screens other than the dialog window appear dark.	The screens other than the dialog window are not refreshed.
Mobile screen	Behavior when a dialog window is displayed	Available	Not available
	Screen background pattern	The specified pattern is cut off at the edges of the relevant screen.	The relevant screen is outlined in the pattern color.

(2) Common setting

Item	Graphics mode	
	GOT Graphic Ver.2	GOT Graphic Ver.1
Graphics accelerator	Not available	Available
Antialiasing	Always enabled. The following shows the targets to which antialiasing is applied. • Outline font • Basic figure in the library • Line • Freeform line • Rectangle • Polygon • Circle • Arc • Sector • Piping • Lines plotted on a line graph • Points plotted on a trend graph (excluding the plotted straight lines) • Outline and demarcation lines of a statistics pie graph • Points plotted on a scatter graph • Points plotted on a historical trend graph (excluding the plotted straight lines) • Needle (whose shape is not set to [Straight Line]), meter frame, meter panel, core of a panelmeter • Figure drawn with a free figure drawing function (other than the d_line, d_textout, and d_commentout functions) Set whether to enable or disable antialiasing for Windows fonts. Antialiasing is applied when the above targets are displayed on the GOT. Antialiasing is not applied when the above targets are displayed on GT Designer3.	Enabled or disabled by the user Antialiasing is applied to outline fonts and Windows fonts.
Object stacking order adjustment	Always enabled.	Enabled or disabled by the user

(3) Figure

Item	Graphics mode	
	GOT Graphic Ver.2	GOT Graphic Ver.1
Paint	Not available	Available

(4) Object

Item	Graphics mode	
	GOT Graphic Ver.2	GOT Graphic Ver.1
Inverting the colors in the touch switch area ([Shape]: [None])	Not available	Available
Lamp area	Not available	Available
Display mode of the numerical display and the numerical input	[Transparent] (fixed)	[Transparent] or [XOR] is selectable.
Cursor on the numerical input or the text input	A semitransparent rectangle cursor blinks.	A white rectangle cursor blinks.
Display mode of the comment display	[Transparent] (fixed)	[Transparent] or [XOR] is selectable.
Display mode of the parts display (bit, word, or fixed parts)	[Replace] (fixed for all types of parts)	[Replace], [XOR], or [Overwrite] is selectable.
Display mode of the parts movement (bit, word, or fixed parts)	[Movement] (fixed)	[Movement] or [Locus] is selectable.
Movement methods for the parts movement (bit, word, or fixed parts)	Available for [Circle]	Not available for [Circle]

Item	Graphics mode	
	GOT Graphic Ver.2	GOT Graphic Ver.1
Scatter graph ([Graph Type]: [Sample], [Store Memory]: Deselected)	Available If the number of the plotted points or lines exceeds 1000, the oldest point or line is deleted and a new one is plotted.	Available
Scatter graph ([Graph Type]: [Batch], [Display Mode]: [Locus], [Store Memory]: Deselected)		
Level object	Available [Boundary Color] cannot be set.	Available
Display order when an object is superimposed on a level object (Object stacking order adjustment: enabled)	The display order conforms to the object stacking order.	The level object is displayed behind the other object regardless of the object stacking order.
Video/RGB display object	Available If a semitransparent window is displayed directly in front of the video/RGB display object, the screen background color becomes visible through the object.	Available

(5) Function running in the background on the GOT

Item	Graphics mode	
	GOT Graphic Ver.2	GOT Graphic Ver.1
Color of the text selected on the alarm display (user or system)	[XOR] (fixed)	[Reverse] or [XOR] is selectable.
Alarm popup display	A semitransparent popup window appears.	An opaque popup window appears.
Free figure drawing function of the object script	The maximum number of the text figures drawn with the d_textout or d_commentout function differs depending on the number of lines in the text figure. Example) • One-line text: 1280 figures • Two-line text: 640 figures	Up to 1280 figures can be drawn.

(6) Function using peripheral devices

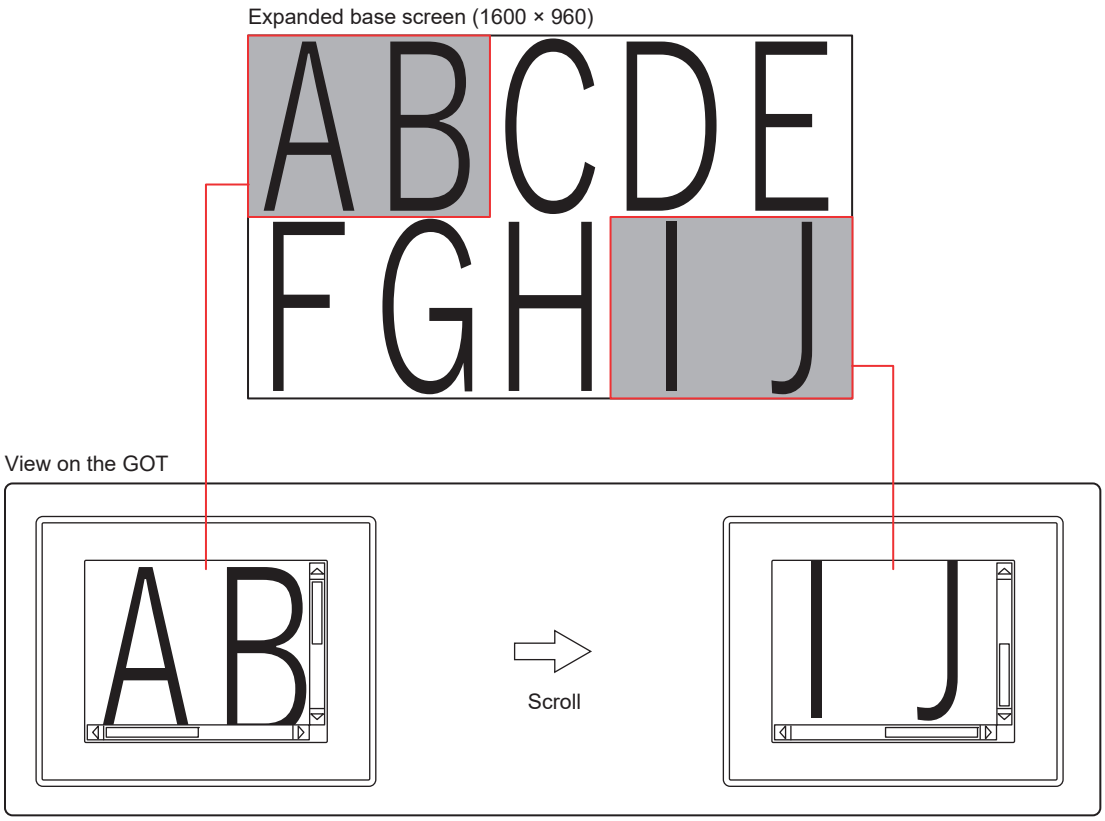
Item		Graphics mode	
		GOT Graphic Ver.2	GOT Graphic Ver.1
Remote personal computer operation (Ethernet)	Window display mode	Available	Available
	Full screen mode	Available	Not available
Displaying the video images of the multimedia function on a user-created screen		Available If a semitransparent window is displayed directly in front of the video window, the background color of the user-created screen becomes visible through the video window.	Available

5.1.3 Base screen size expansion ([Expand base screen sizes])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.2

Create a base screen that is larger than the GOT screen.
You can scroll the screen by using swipe gestures or the scroll bars.
Example) Displaying an expanded base screen (1600 × 960) on GT27-V (640 × 480)



■1 Settings of the base screen size expansion

To enable the base screen size expansion, select [Expand base screen sizes] in [Basic Setting] in the [Type Setting] dialog.

➟5.1.5 ■1 [Basic Setting]

To change the size of each base screen, open the [Basic] tab in the [Screen Property] dialog for the screen.

➟2.7.1 ■1 [Basic] tab

To change the size of multiple base screens in one go, select base screens in the [Screen] window and display the [Screen Property] dialog.

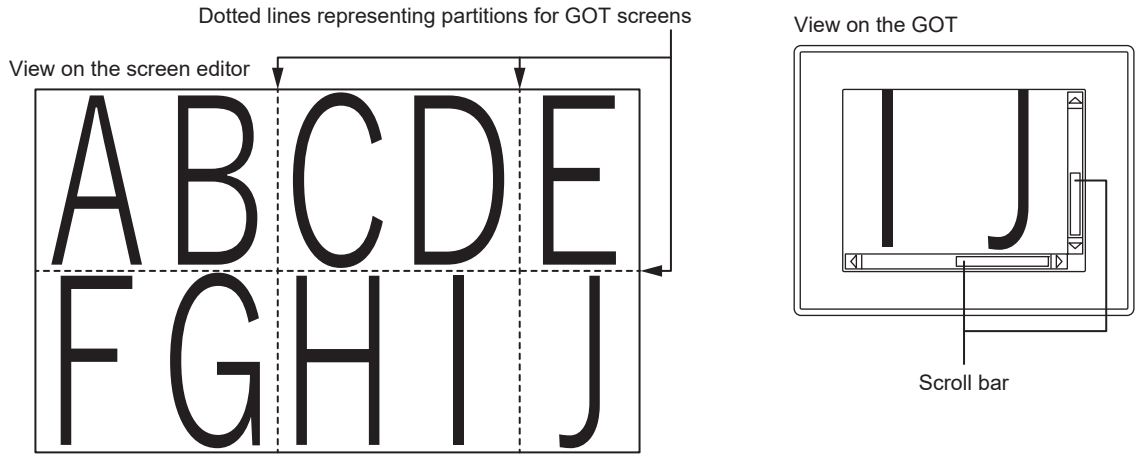
➟2.2.4 ■3 [Screen] window

■2 Screen editors for editing the expanded base screens

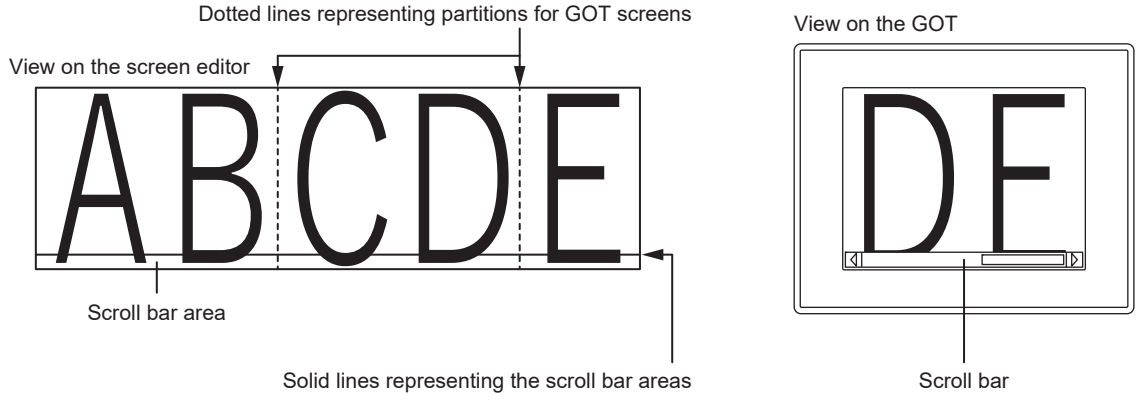
When you edit an expanded base screen, the following lines appear on the screen editor.
The lines are invisible on the GOT.

Line type	Description
Solid line	Appears when either the vertical or horizontal size of the base screen is larger than the vertical or horizontal size of the GOT screen. Represents the areas of the scroll bars to appear on the GOT. Appears 40 dots from the right or bottom edge of the screen display area. Place figures and objects so that they do not overlap the scroll bar areas.
Dotted line	Represents a partition for one GOT screen. Represents partitions for multiple GOT screens. The lines are usable as guidelines to specify the size of a base screen to an integral multiple of the GOT screen size.

Example) Displaying an expanded base screen (1600 × 960) on GT27-V (640 × 480)
The scroll bar areas are not displayed because the base screen is vertically and horizontally expanded.



Example) Displaying an expanded base screen (1600 × 480) on GT27-V (640 × 480)
A solid line representing the scroll bar area is displayed in the lower part of the base screen because the screen is horizontally expanded.
A scroll bar appears in the scroll bar area when the base screen is displayed on the GOT.



Whether to display the lines and the color of the lines are selectable.

➟2.6.7 Displaying the scroll bar areas for editing the expanded base screens
11.10.5 Customizing the display

The scroll bars are viewable in the screen preview.

➟2.9.1 Displaying a preview

The design of the scroll bars depends on the screen design selected.

➟2.4.3 [Screen Design] dialog

In the following cases, no scroll bar is displayed on the GOT, and no lines representing the scroll bar areas and partitions for GOT screens are displayed on the screen editors.

- The base screen is smaller than the GOT screen.
- The scroll bars are set to be hidden.

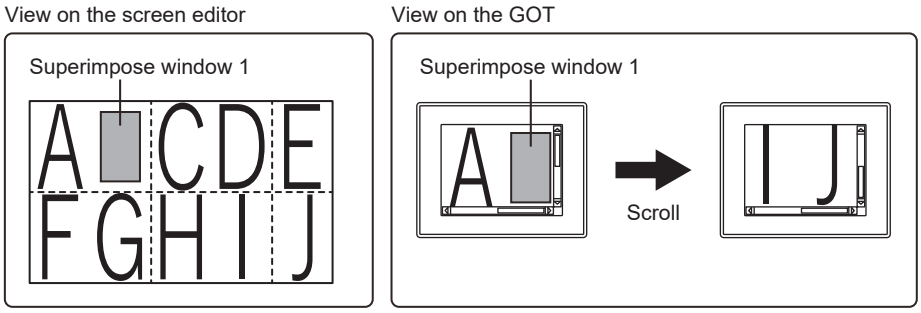
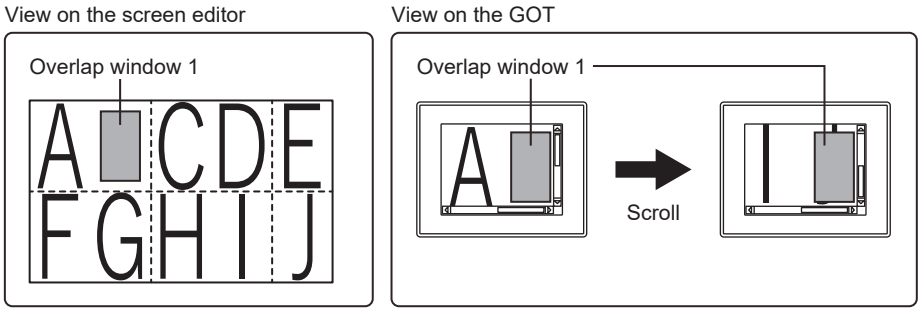
■3 Operation of the GOT displaying an expanded base screen

(1) Refreshing the display of the objects while the screen is being scrolled

The display of the objects are refreshed while the screen is being scrolled.

(2) Movements of the windows while the screen is being scrolled

The following shows how the windows move while the screen is being scrolled.

Window type	Operation
Superimpose window	The window as well as the figures and objects on the screen move along the screen while the screen is being scrolled. Example) When displaying superimpose window 1 
Other windows	The window keeps its current position on the GOT screen while the screen is being scrolled. Example) When displaying overlap window 1 

For the precautions for specifying the display positions of the overlap windows and key windows, refer to the following.

➟5.1.3 ■5 (4) Specifying the display positions of the overlap windows and key windows

(3) Switching the current screen to an expanded base screen

When the current screen switches to an expanded base screen, the upper-left corner of the expanded base screen appears on the GOT.

To specify any other area of the base screen to appear on the GOT, use GS635.b0, GS636, and GS637.

➟12.1.3 GOT special register (GS)

The position of the area displayed before screen switching is retained.

The position will be cleared if the following events occur.

- The GOT is turned off.
- The GOT is restarted by writing project data to the GOT.

(4) Size of images displayable on the expanded base screens

The size of images displayable on the GOT screen depends on the image file format.

Image file format	Displayable size on the GOT screen
BMP *1 JPEG PNG	Up to the size of the GOT screen with the base point at the upper left corner of the image
BMP *2	Up to 2000 dots × 1600 dots with the base point at the upper left corner of the image

*1 For using a BMP file stored in the data storage as a part

*2 For pasting an image on a screen editor or parts editor in GT Designer3

■4 Scrolling the expanded base screens

To scroll the expanded base screens on the GOT, perform the following operations.

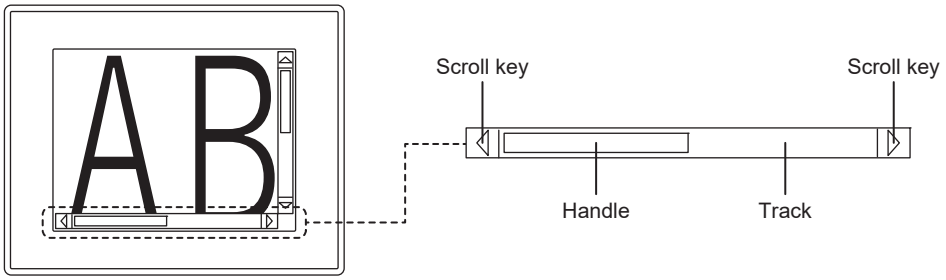
- Swiping the GOT screen
- Using the scroll bars
- Using the navigation window

(1) Swiping the GOT screen

Swipe somewhere on the GOT screen where no object is displayed to scroll the base screen.
To disable swiping to scroll the screen, turn on GS635.b1.

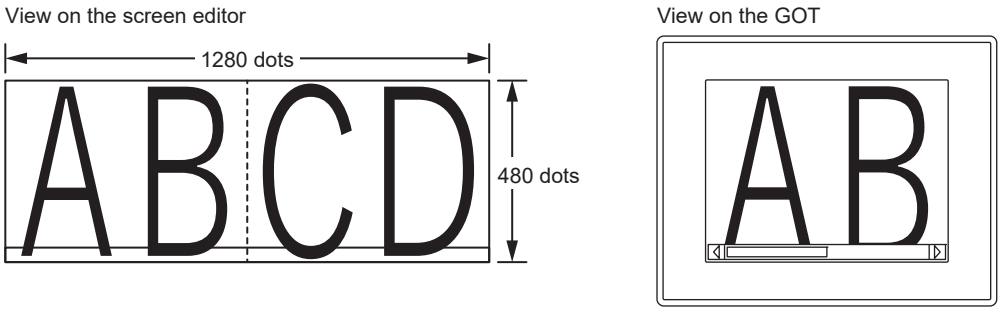
(2) Using the scroll bars

Touch the scroll keys or drag the handle to scroll the screen.
The scroll bars are displayed at the right and bottom edges of the GOT screen.



Item	Description
Handle	Drag the handle to scroll the screen.
Track	Touch somewhere on the track to scroll the screen one page.
Scroll key	Touch the scroll key to scroll the screen one dot.

Each scroll bar is displayed when the vertical or horizontal size of the base screen is larger than the vertical or horizontal size of the GOT screen.
Example) Displaying an expanded base screen (1280 × 480) on GT27-V (640 × 480)
A scroll bar is displayed only at the bottom edge of the GOT screen.

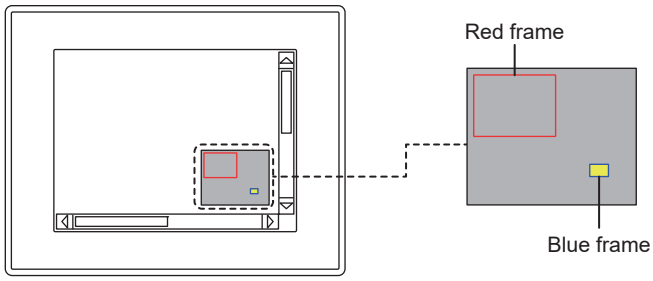


Whether to display the scroll bars is selectable.

➟5.1.5 ■1 (1) [Display Setting] dialog (Base screen size expansion)

(3) Using the navigation window

The navigation window shows your current location within the base screen.
The window is semi-transparent and one-ninth the size of the GOT screen.
Touch or swipe anywhere in the window to bring that point to the center of the GOT screen.



Objects behind the window are inoperable.
The following items appear in the window.

Item	Description
Red frame	Indicates the area of the base screen currently displayed on the GOT.
Blue frame (The area enclosed in the frame blinks in yellow.)	Indicates the position of the object where the cursor is located. The frame appears when the cursor moves to any object that is hidden from view.

You can specify the display timing and position of the navigation window.

➟5.1.5 ■1 (1) [Display Setting] dialog (Base screen size expansion)

When the cursor moves to any object that is hidden from view, the navigation window appears for two seconds, regardless of the display timing setting.
For the precautions for the navigation window, refer to the following.

➟5.1.3 ■5 (7) Displaying the navigation window and the comment window
5.1.3 ■5 (14) Display of the navigation window while a switch is being touched

■5 Precautions for the base screen size expansion

(1) Scrolling the screen and operating the objects on the screen

While scrolling the base screen, you cannot operate the objects on the screen.
You also cannot scroll the screen while operating any of the objects.

(2) Placing objects and the navigation window

Objects behind the navigation window are displayed but inoperable.
When placing an object to be operated on a base screen, make one of the following settings.

- Position the object so that it will not be overlapped by the navigation window.
- Select [While swiping/touching the screen] or [Not display] for [Display Timing].

For setting the timing to display the navigation window, refer to the following.

➟5.1.5 ■1 (1) [Display Setting] dialog (Base screen size expansion)

(3) Screen gesture function

You cannot enlarge or reduce the size of the base screen using the screen gesture function.

(4) Specifying the display positions of the overlap windows and key windows

When the following setting is configured, specify the display positions of the overlap windows and key windows so that the windows fit in the GOT screen.

- Setting of [Display windows beyond the screen area] for [Screen Switching/Window] in the [Environmental Setting] window

➟5.2.1 ■5 [Screen Switching/Window]

The overlap windows and key windows outside the GOT screen cannot be displayed on the GOT even the GOT screen is scrolled.
The following shows how to specify the display positions of the overlap windows and key windows.

Window type	Method
Overlap window	Place a window position object on the screen. ➟8.30 Specifying the Display Position of a Window Screen
	Specify the overlap window display position with a display position specification device. Select [Display Position] in [Screen Switching/Windows] of the [Environmental Setting] window to enable the display position specification device setting. ➟5.2.1 ■5 [Screen Switching/Window]

Window type	Method
Key window	Place a window position object on the screen. ➟8.30 Specifying the Display Position of a Window Screen
	Configure either of the following settings to display a key window near an object. • In the [Environmental Setting] window ([Key Window]), [Key Window Position Correction] is set to [Around the object] on the [Advanced Setting] tab. ➟5.2.4 ■4 (2) [Advanced Setting] tab • In the [Screen Property] dialog for the base screen, [Key Window Position Correction] is set to [Around the object] on the [Key Window Advanced Setting] tab. ➟2.7.1 ■3 [Key Window Advanced Setting] tab
	Specify the display position of a key window with the key window display switch. ➟8.2.10 ■1 [Key Input] tab

(5) Displaying images on the expanded base screens

If the following images (including figures and logo text) are displayed on a GOT screen, refreshing the screen may be delayed.

- Images (JPEG or PNG) that are larger than the size of the GOT screen
- Two or more images (JPEG or PNG) that are almost the same size as the GOT screen
- Large images (JPEG or PNG) that are displayed on the parts display objects and the parts movement objects

(6) Setting a shape for an object

When an object filled with a pattern is placed on an expanded base screen, the start point of the pattern may be different from the start point of the pattern of the object placed on an unexpanded base screen.
Note that the screen tends to flicker while scrolled.

(7) Displaying the navigation window and the comment window

The navigation window cannot be displayed simultaneously with the comment window for the following functions.

- Alarm display (user)
- Simple alarm display

If the navigation window is set to always be displayed, the comment window will not appear.

(8) Calling the expanded base screens using the set overlay screen function

When you use the set overlay screen function, you can call the expanded base screens.
The screen size settings of the calling base screen are applied to the expanded base screens called.
You can scroll the called screens within the calling base screen.

(9) Object scripts

Object scripts run even when the objects that correspond to the scripts are hidden from view on the GOT.
The free figure drawing function draws figures even in the hidden area of the expanded base screens.

(10) Functions that use popup displays

When a popup display overlaps the scroll bar at the bottom edge of the GOT screen, switch the position of the popup display by touching the popup display.
The following shows the functions that use popup displays.

- SoftGOT-GOT link function
- GOT network interaction function
- Alarm popup display
- VNC server function

In the [Alarm Popup Display] dialog, if you set [Display Position Switching] to [None] on the [Basic] tab, you cannot switch the position of the popup display.
You are recommended to select [Switch] for [Display Position Switching].

➟9.1.4 ■4 [Alarm Popup Display] dialog

(11) Screenshots captured by using the hard copy function

The hard copy function captures only the area of the expanded base screen currently displayed on the GOT.
The scroll bars and navigation window are captured in screenshots.

(12) Screen image display for the operation log information

If you select the log event that a user has operated any object on the expanded base screen, the image window for the event will not display the image of the entire base screen.
The window displays the image of the area which is centered around the object. The area fits with the GOT screen.

(13)Unintended object operation by swiping on the GOT screen

To avoid an unintended object operation by swiping on the GOT screen, turn on GS635.b1 to disable swiping to scroll the screen, and use the scroll bar or the navigation window to scroll the screen.

(14)Display of the navigation window while a switch is being touched

Although [While swiping/touching the screen] is set for the display timing of the navigation window, the window is not displayed while a switch is being touched.
During that time, the displayed objects are not refreshed.

■6 Settings relevant to the base screen size expansion

Set the relevant settings other than the specific settings for the base screen size expansion as required.
The following shows the functions that are available by configuring the relevant settings.

(1) GOT internal devices

➟12.1.3 GOT special register (GS)

Function	Setting item
Specifying the upper-left coordinates of the area of the expanded base screen to be displayed on the GOT	GS635.b0 GS636 GS637
Disabling swiping to scroll the screen	GS635.b1
Notifying the upper-left coordinates of the area of the expanded base screen currently displayed on the GOT	GS696 GS697

5.1.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the precautions for the base screen size expansion, refer to the following.

➡5.1.3 ■5 Precautions for the base screen size expansion

■1 Settings before the GOT type change

The settings that have been changed through the GOT type change cannot be restored.
The operation history of [Undo] is deleted at the GOT type change.
Saving the project before the GOT type change is recommended.

■2 Exiting GT Simulator3

Check that GT Simulator3 is not started before the GOT type change.
If the GOT type or the language of the standard font has been changed, the running GT Simulator3 is terminated.

■3 Operation when the GOT is installed vertically

When you install the GOT vertically, the GOT operates as follows.

Item	Operation at GOT vertical installation
Utility	The contents appear horizontally.
Monitor screen, data screen, or other screens called up from the utility	The screen appears horizontally. However, the following screens appear vertically. • Recipe operation window
User-created screen	The screen created according to the vertical installation is displayed. The key window and dialog window on the user-created screen are also displayed according to the vertical installation.
Startup logo	The startup logo appears according to the vertical installation.
Utility call key	The key is positioned according to the vertical installation. When the key is set to the upper left corner, the key is positioned on the upper left corner according to the vertical installation.
Remote Personal Computer Operation (Ethernet)	The remote personal computer operation function (Ethernet) cannot be used.
Remote Personal Computer Operation (Serial)	The touched position on the GOT is notified by using the upper left corner as the origin (0, 0) of coordinates according to the vertical installation.
VNC Server	The contents appear on the VNC client according to the vertical installation.
SoftGOT-GOT link function	The contents appear on GT SoftGOT2000 according to the vertical installation.
Video Display	The images taken with a video camera do not rotate, and appear horizontally. For the video window, the width and height of the display size and clip area are specified according to the horizontal installation. The video window display position is specified with the coordinates of the window upper left corner. The origin (0, 0) is on the GOT upper left corner according to the vertical installation.
RGB Display	The images of a personal computer are displayed in the resolution according to the vertical installation. For the RGB screen, the width and height of the display size and clip area are specified according to the horizontal installation. The RGB screen display position is specified with the coordinates of the screen upper left corner. The origin (0, 0) is on the GOT upper left corner according to the vertical installation.
Video output function	The contents appear on the external display according to the vertical installation. If you set vertical installation for the GOT and create a screen, use the display vertically.
Multimedia	The images taken with a video camera do not rotate, and appear horizontally. The multimedia screen of the utility appears horizontally.
Popup window	The popup window appears according to the vertical installation. However, the popup window does not support the scrolling display. When text extends off the screen, you cannot check the portions of text lying offscreen.
Hard Copy	Capturing images is performed according to the vertical installation.
USB mouse	The mouse pointer is displayed according to the vertical installation.
Touch status external notification (X-coordinate)(GS654), Touch status external notification (Y-coordinate)(GS655)	The coordinates are notified by using the upper left corner as the origin (0, 0) according to the vertical installation.

■4 Renaming the package folder

If you change the setting of [Package Folder Name] in the [Type Setting] dialog, the path to the public folder of the GOT Mobile function is automatically changed accordingly.
With the change of the package folder name, if the path to a file in the public folder contains more than 78 characters, the file becomes inaccessible.
For the details of the public folder in the GOT Mobile function, refer to the following.

➟10.19.2 ■7 Public folder

■5 Precautions for the object stacking order adjustment setting

GOT Graphic Ver.2

The object stacking order adjustment is always enabled.

GOT Graphic Ver.1

To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in [Option Setting] of the [Type Setting] dialog.

The following shows the functions to which the object stacking order adjustment is not applied.

(1) Objects for which the set stacking order is invalid

The following objects always appear in the front on a layer under specific conditions.
The object stacking order may not match between GT Designer3 and the GOT accordingly.

GOT Graphic Ver.2

Object	Condition
Scatter graph (Points on the graph only)	[Graph Type] is set to [Sample] on the [Data] tab, and [Store Memory] is not selected on the [Extended] tab.
	[Graph Type] is set to [Batch], and [Display Mode] is set to [Locus] on the [Data] tab. [Store Memory] is not selected on the [Extended] tab.

GOT Graphic Ver.1

Object	Condition
Scatter graph (Points on the graph only)	[Graph Type] is set to [Sample] on the [Data] tab, and [Store Memory] is not selected on the [Extended] tab.
	[Graph Type] is set to [Batch], and [Display Mode] is set to [Locus] on the [Data] tab. [Store Memory] is not selected on the [Extended] tab.
Parts display	[Display Mode] is set to [Overwrite].
Parts movement	[Display Mode] is set to [Locus].
Alarm display (user)	The scrolling display setting is made.
Alarm display (system)	The scrolling display setting is made.

(2) Free figure drawing function of the object script

GOT Graphic Ver.2

The figure drawn by the free figure drawing function of the object script is designed to appear in the front on a layer.
Even if the blink is set for the object using the free figure drawing function, the figure drawn by the function does not blink.

GOT Graphic Ver.1

The figure drawn by the free figure drawing function of the object script is designed to appear in the front on a layer.
Therefore, the object stacking order may not match between GT Designer3 and the GOT under the following conditions.

- The figure drawn by the function overlaps an object for which the set stacking order is invalid.
- The figure drawn by the function overlaps stacked objects on a layer.

Even if the blink is set for the object using the free figure drawing function, the figure drawn by the function does not blink.

(3) Object display color

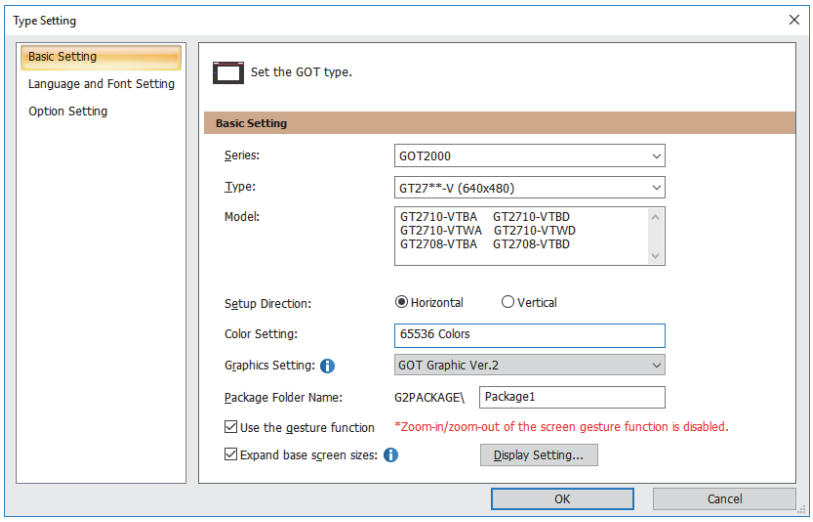
GOT Graphic Ver.1

If you set the screen transparent color ([Screen Property]) for an object for which the set stacking order is invalid, the object is invisible because of the transparent processing. (Regardless of the layer on which the object is placed)
When you select [Adjust object display order in GOT to the one in GT Designer3], specify a color different from the screen transparent color for such an object.

5.1.5 [Type Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

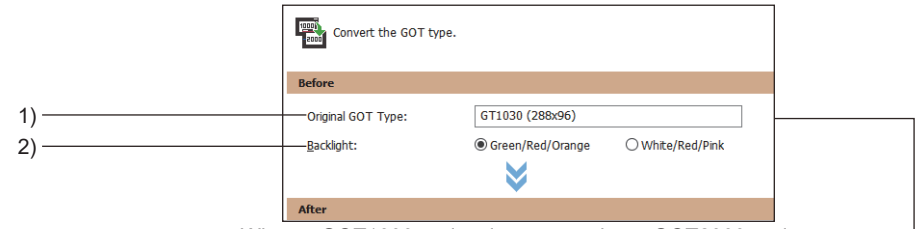
In the [Type Setting] dialog, set the model of the GOT to be used and the standard font.
Select [Common] → [GOT Type Setting] from the menu to display this dialog.



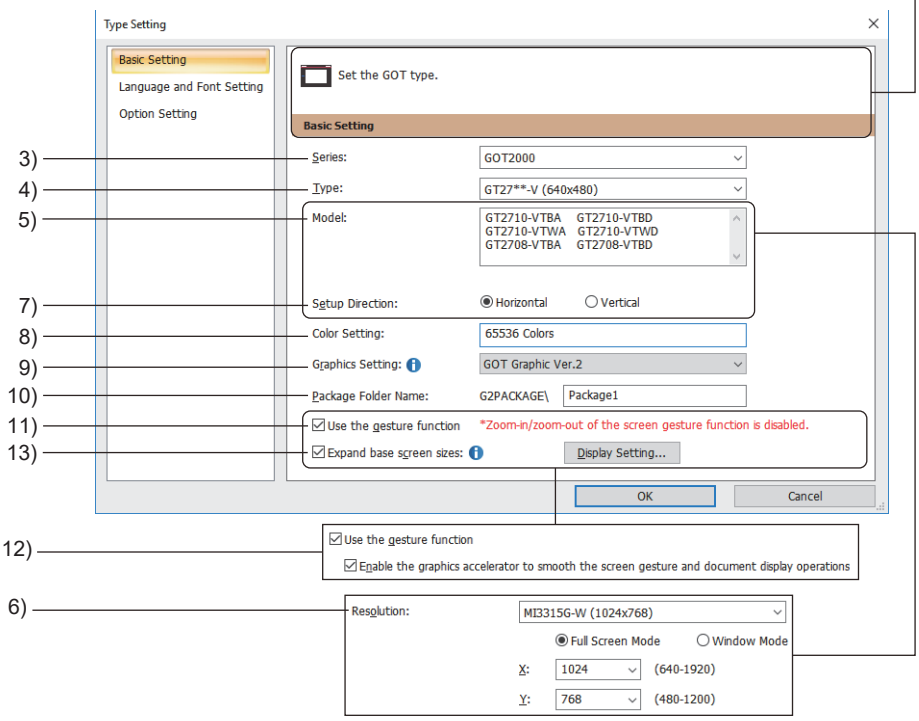
➥■1 [Basic Setting]
■2 [Language and Font Setting]
■3 [Option Setting]

■1 [Basic Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When a GOT1000 project is converted to a GOT2000 project



For GT SoftGOT2000

1) **[Original GOT Type]**

Displays the GOT type before the type is changed.

This item is active only when the project for GOT1000 series is to be converted forGOT2000 series.

2) **[Backlight]**

This item appears only when the GOT type is converted from GT1030 or GT1020 toGOT2000 series.

Select the display color of the backlight for the GOT type before the change.

The following shows the items to be selected.

- [Green/Red/Orange]
- [White/Red/Pink]

3) **[Series]**

Select the GOT series.

The following shows the items to be selected.

- [GOT2000]
- [GS Series]

4) **[Type]**

Set the GOT type.

The following shows the items to be selected.

- When [GOT2000] is selected for [Series]

  [GT27**-X(1024x768)]
  [GT27**-S (800x600)]
  [GT27**-V (640x480)]
  [GT2705-V (640x480)]
  [GT25**-WX (1280x800)]

[GT25**-W (800x480)]
[GT25**-S (800x600)]
[GT25**-V (640x480)]
[GT2505-V(640x480)]
[GT23**-V (640x480)]
[GT2107-W (800x480)]
[GT2105-Q (320x240)]
[GT2104-R (480x272)]
[GT2104-P (384x128)]
[GT2103-P (320x128)]
[GT SoftGOT2000]

• When [GS Series] is selected for [Series]

[GS25**-WX (1280x800)]
[GS21**-W-N (800x480)]
[GS21**-W (800x480)]

When this item has been changed, the confirmation dialog for the change appears.

➥5.1.1 ■4 Resizing the screens, figures, and objects

5) **[Model]**

Displays the models of the GOT type selected in [Type].

6) **[Resolution]**

Only available to GT SoftGOT2000.
Select the resolution of GT SoftGOT2000.
The following shows the items to be selected.

• [MI3315G-W (1024x768)]
Select [Full Screen Mode] or [Window Mode].
• [MI3321G-W (1920x1080)]
Select [Full Screen Mode] or [Window Mode].
• [VGA (640x480)]
• [SVGA (800x600)]
• [XGA (1024x768)]
• [HD (1280x720)]
• [WXGA (1280x800)]
• [FWXGA (1366x768)]
• [Full HD (1920x1080)]
• [WUXGA (1920x1200)]

To customize the resolution, set [X] and [Y].
When [X] or [Y] is set, [Resolution] is set to [Custom].

7) **[Setup Direction]**

Not available to GT SoftGOT2000.
Set the installation orientation of the GOT.

• [Horizontal]
• [Vertical]

Some operations of the GOT differ according to the GOT installation orientation.

➥5.1.4 ■3 Operation when the GOT is installed vertically

8) **[Color Setting]**

Displays the number of display colors of the GOT type selected in [Type].
When [GT2105-Q (320x240)] is selected for [Type], select the number of display colors.
The following shows the items to be selected.

• [65536 Colors]
• [32(Grayscale)]

9) **[Graphics Setting]**

Not available to GT23 because the setting is fixed to [GOT Graphic Ver.1].
Select a graphics mode.
The following shows the items to be selected.

• [GOT Graphic Ver.2]
• [GOT Graphic Ver.1]

For the details of the graphics modes, refer to the following.

➥5.1.2 Graphics mode ([Graphics Setting])

10) **[Package Folder Name]**

Set the name of the folder that stores the package data.

Use up to 32 alphanumeric characters and symbols for the folder name.

For the character strings available and unavailable for folder names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

This item is required for project creation. Always set this item.

11) **[Use the gesture function]**

Only available to GT27.

Enables the GOT operation by gesture.

➟11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function)
11.13 Operating Objects by the Gesture (Object Gesture Function)

12) **[Enable the graphics accelerator to smooth the screen gesture and document display operations]**

Only available to GT27.

GOT Graphic Ver.1

Enables the graphics accelerator for the screen gesture function and the document display.

When the graphics accelerator is enabled, the operations of the screen gesture function and the document displaybecome smooth.

Note that the GOT startup time becomes long.

➟11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function)
8.26.3 How to use the document display (for Document Converter output files)

To use the graphics accelerator, install the CoreOS version E or later to the GOT.

➟4.5.3 Installing the BootOS or the CoreOS to the GOT

For how to check the CoreOS version, refer to the following.

➟GOT2000 Series User's Manual (Utility)

13) [Expand base screen sizes]

Available to GT27, GT25, and GS25.

GOT Graphic Ver.2

Enables you to set a larger base screen by setting higher resolution than the original GOT resolution.

For details on the base screen size expansion, refer to the following.

➟5.1.3 Base screen size expansion ([Expand base screen sizes])

Click the [Display Setting] button to display the [Display Setting] dialog.

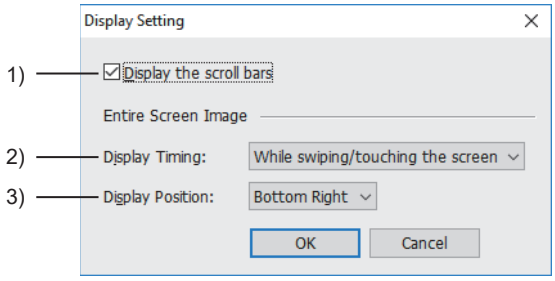
Configure the settings for displaying the scroll bars and navigation window on the GOT.

➟(1) [Display Setting] dialog (Base screen size expansion)

(1) [Display Setting] dialog (Base screen size expansion)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.2



1) [Display the scroll bars]

Displays the scroll bars on the expanded base screens.

Deselecting this item hides the scroll bars and the following items on the screen editors.

- Solid lines representing the scroll bar areas
- Dotted lines representing partitions for GOT screens

2) [Display Timing]

Select the timing for displaying the navigation window.

The navigation window shows your current location within the base screen.

The window is semi-transparent and one-ninth the size of the GOT screen.
For the details of the window, refer to the following.

➥5.1.3 Base screen size expansion ([Expand base screen sizes])

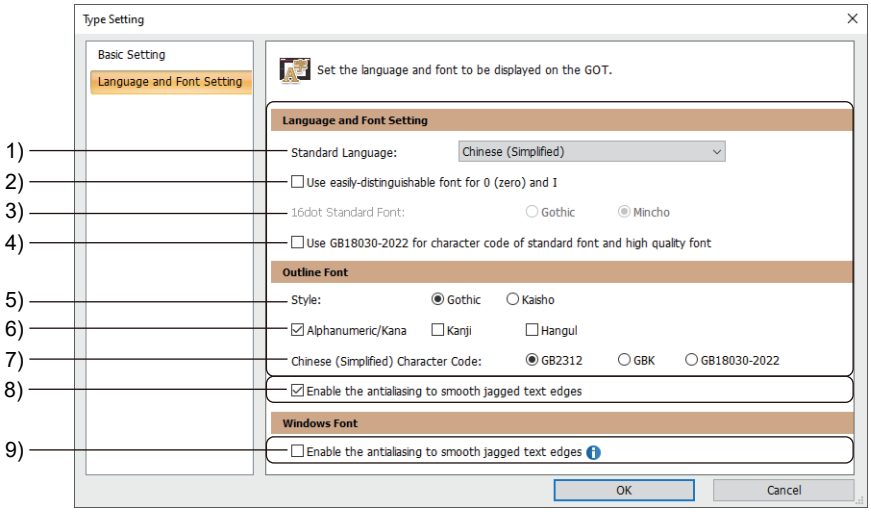
- [Always]
  Always displays the navigation window.
- [While swiping/touching the screen]
  Displays the navigation window when you touch somewhere on the screen where no object is displayed or the scroll bars.
  The window will be hidden one second after you release your finger from the GOT screen.
- [Not display]
  Does not display the navigation window.

3) [Display Position]
Set this item when [Display Timing] is set to [Always] or [While swiping/touching the screen].
Select the display position of the navigation window.
The following shows selectable items.

- [Top Left]
- [Top Right]
- [Bottom Left]
- [Bottom Right]

■2 [Language and Font Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Standard Language]**
Select the language used in the whole project.
The following shows the items to be selected for GT27, GT25, GT23, GT SoftGOT2000, and GS25.

- [Japanese]
- [English]
- [Chinese (Simplified)]
- [Chinese (Traditional)]
- [Korean (Hangul)]

The following shows selectable items for GT21 and GS21.

- [Japanese]
- [English]
- [Chinese (Simplified)]

2) **[Use easily-distinguishable font for 0 (zero) and l]**
Use a font having the slashed zero and the crossbar l.

➥1.2.5 ■1 Detailed font specifications

3) **[16dot Standard Font]**
Available to GT23, GT21, and GS21.
When [Standard Language] is set to [Japanese], [English], or [Korean (Hangul)], select a font of [16dot Standard

Font].
The following shows the items to be selected.
- [Gothic]
- [Mincho]

4) **[Use GB18030-2022 for character code of standard font and high quality font]**
This item can be selected when [Chinese (Simplified)] is selected for [Standard Language].
When this item is selected, GB18030-2022 is used as the character code for the standard font or high-quality font.

5) **[Style]**
Available to GT2107-W and GS21-W-N.
Select a typeface for the outline font.
The following shows the items to be selected.
- [Gothic]
- [Kaisho]

6) **Outline font type**
Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select the type of an outline font to be used.
The following shows the items to be selected.
- [Alphanumeric/Kana]
- [Kanji]
- [Hangul]

7) **[Chinese (Simplified) Character Code]**
Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select a character code used for Chinese (simplified) in the outline font.
The following shows the items to be selected.
- [GB2312]
- [GBK]
- [GB18030-2022]

When [GB18030-2022] is selected for the character code, the size of the file written to the GOT will be greater than [GB2312] or [GBK].
➟12.10.2 Transferred data size list

8) **[Enable the antialiasing to smooth jagged text edges] (outline fonts)**
Not available to GT23.
Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Enables antialiasing for outline fonts.
Enabling this setting smooths out the jagged text.

GOT Graphic Ver.2

As antialiasing is always enabled, no additional setting is required accordingly.

GOT Graphic Ver.1

To enable antialiasing, select this item.

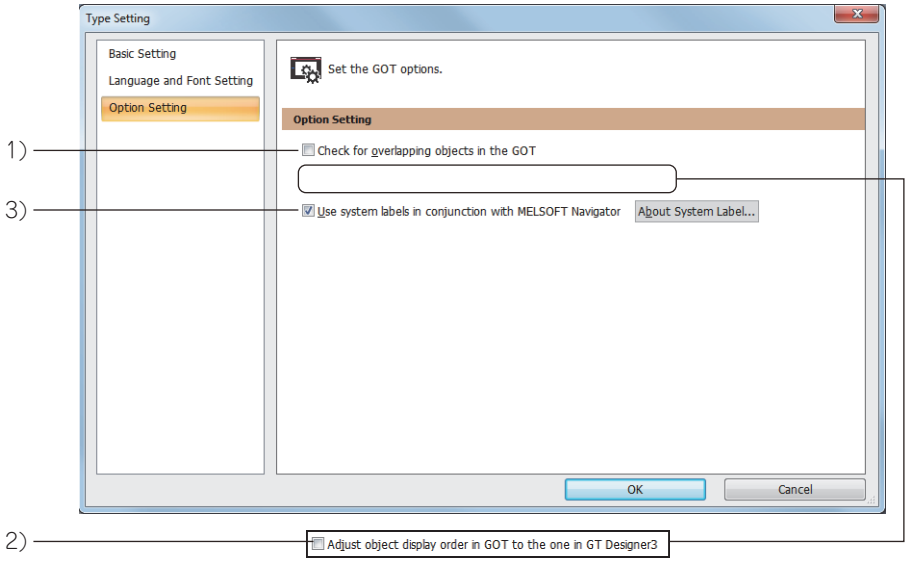
9) **[Enable the antialiasing to smooth jagged text edges] (Windows fonts)**
Selecting this item enables antialiasing for Windows fonts.
Enabling this setting smooths out the jagged text.

Point

When antialiasing is enabled for Windows fonts
When antialiasing is enabled, characters not included in European fonts may be displayed incompletely when you draw text using a Windows font.

■3 [Option Setting]

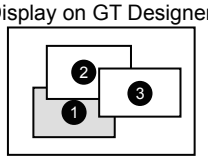
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Check for overlapping objects in the GOT]**
Not available to GT21 and GS21.
If objects are overlapped each other, the GOT displays a message.
If [Adjust object display order in GOT to the one in GT Designer3] is selected, this setting is unavailable.

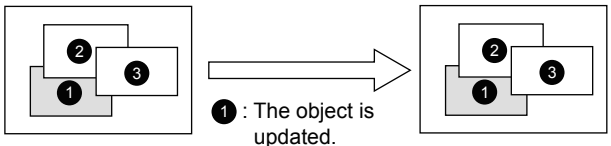
2) **[Adjust object display order in GOT to the one in GT Designer3]**
Not available to GT21 and GS21.
Select this item to adjust the display order of the overlapped objects on the GOT to the one in GT Designer3.
If [Check for overlapping objects in the GOT] is selected, this setting is unavailable.
This setting is available for the following screens: base screen, overlap window 1 to 5, superimpose window 1 to 2,dialog window, and key window.
Example) Displaying the objects overlapped on the same layer with GT Designer3 on the GOT

Display on GT Designer3



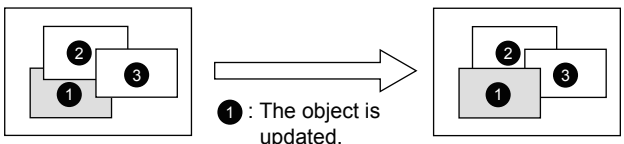
❸ Third placed object (Top)
❷ Second placed object (Middle)
❶ First placed object (Bottom)

• When the display order of the objects is adjusted to the one in GT Designer3



The objects are redrawn.
The display order of the overlapped objects on the GOT is adjusted to that of the overlapped objects on GT Designer3.

• When the display order of the objects is not adjusted to the one in GT Designer3



Only the updated object is redrawn and displayed at the top.
(The display order of the overlapped objects on the GOT differs from that of the overlapped objects on GT Designer3.)

Even if this item is selected, the setting becomes invalid for some objects.
For such objects, refer to the following.

➟5.1.4 ■5 Precautions for the object stacking order adjustment setting

For the details of superimposition of objects or figures, refer to the following.

➟6.5.4 Common setting for figures

GOT Graphic Ver.2

As the object stacking order adjustment is always enabled, no additional setting is required accordingly.

GOT Graphic Ver.1

To enable the object stacking order adjustment, select this item.

3) **[Use system labels in conjunction with MELSOFT Navigator]**

System labels can be used according to device settings of GT Designer3.
For the system label setting, refer to the following.

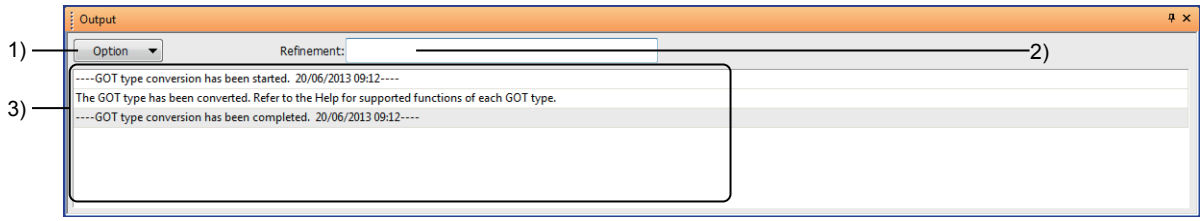
➟6.1.3 How to set system labels

Clear this item when a system label is not used.
When this item is cleared, the system label update/check is executed.
When no error occurs, a system label is converted to a device name to which the system label is assigned.
When any error occurs, a system label is not converted to a device name to which the system label is assigned.
Therefore, this item is not cleared.
Check or modify the system label setting, and clear this item again.

5.1.6 [Output] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This window displays operation histories that significantly affect the project in a list.
This window appears at the GOT type change.
To display this window manually, select [View] → [Docking Window] → [Output] from the menu.



1) **[Option] button**

Displays the option operations for the history list.

Item	Description
Export	Exports the history list as a CSV file or Unicode text file. After clicking the item, specify the storage folder, file name, and file type.

2) **[Refinement]**

Use this field to refine the messages displayed on the history list by keywords.

3) **History list**

Displays the history of operations that significantly affect the project, such as the GOT type change or import of other projects, in a list.

➟12.13.2 Specifications of the project conversion from GOT1000 to GOT2000

5.2 Setting the GOT Basic Operations ([GOT Environmental Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

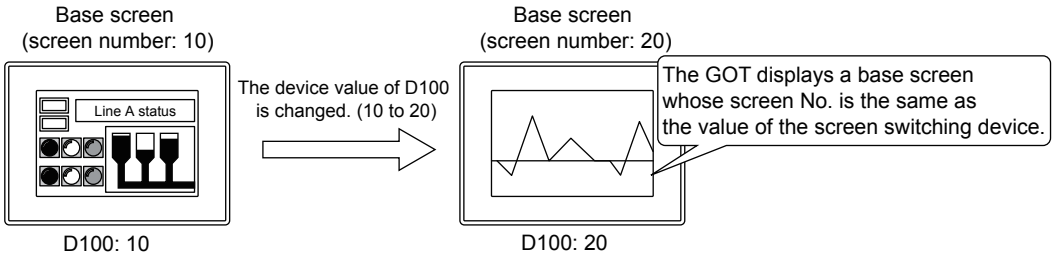
➡5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])
5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])
5.2.3 Setting dialog windows ([Dialog Window])
5.2.4 Setting key windows ([Key Window])
5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])
5.2.6 Configuring the security settings for the GOT screen ([Screen Security])
5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))
5.2.8 Configuring the security settings for the GOT screen ([Screen Security] (Level authentication))
5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])
5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])
5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])
5.2.12 Configuring the settings for retaining GOT internal device data at power failure ([Internal Device Retention])
5.2.13 Configuring the settings to convert a text into kanji or Simplified Chinese characters in the GOT ([Kana-Kanji/Pinyin Conversion])
5.2.14 Setting a screen to be displayed on the GOT at startup ([Startup Logo])

5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

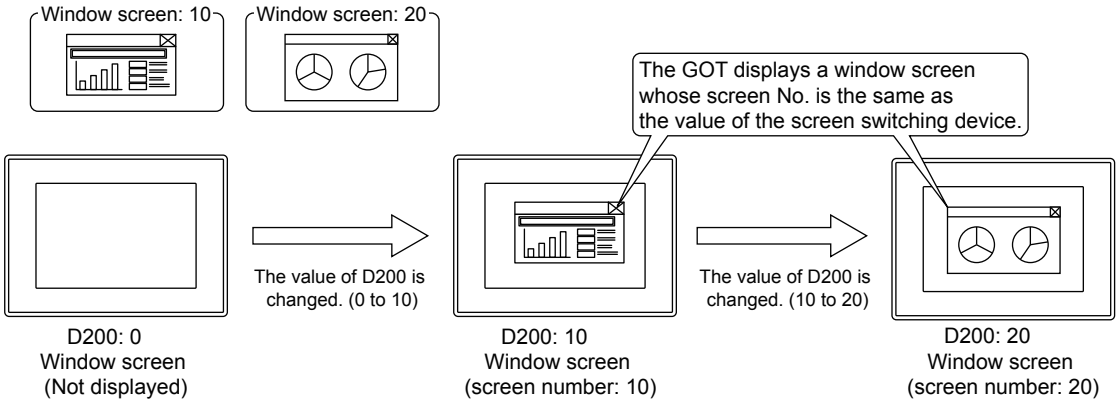
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the screen switching
■2 How to use the screen switching
■3 Moving an overlap window
■4 Precautions
■5 [Screen Switching/Window]

The GOT displays or switches the screens with screen switching devices.
The screens to be displayed on the GOT are switched by changing a value (screen number) of the screen switching device.
Example 1) Setting D100 for the screen switching device of a base screen



Example 2) Setting D200 for the screen switching device of the overlap window 1



■1 Specifications of the screen switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Target screens of the screen switching device

Set a screen switching device for each of the following screens.

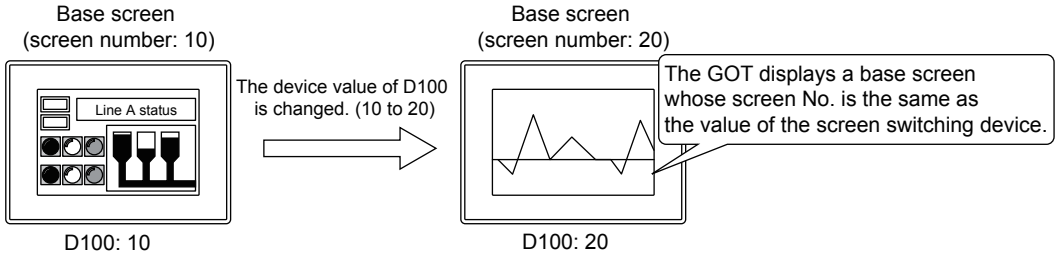
- Base screen
- Overlap window 1 to 5
  (Overlap window 1 and 2 for GT23, GT21, and GS21)
- Superimpose window 1, 2
- Dialog window
- Mobile screen (GT27, GT25, GT SoftGOT2000, and GS25)

For switching mobile screens, refer to the following.

➟10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

(2) Screen switching of base screens

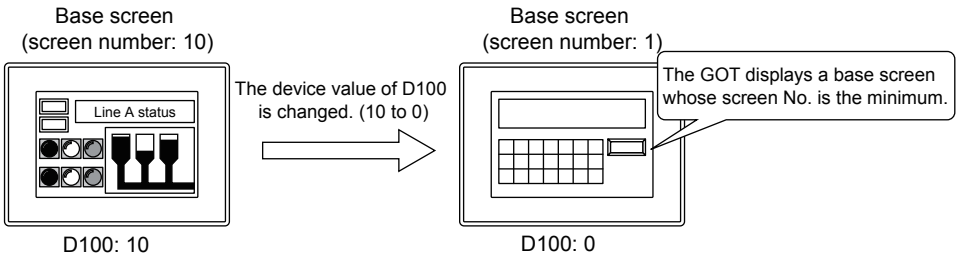
The GOT displays a base screen whose screen No. is the same as the value of the screen switching device.
Example) Storing 20 in the screen switching device (D100) while displaying the base screen whose screen No. is 10



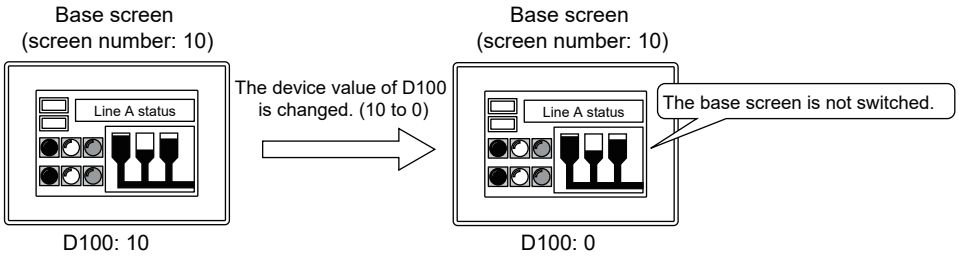
When the screen switching device stores 0, the response differs depending on the setting of [Retain the displayed screen when the base screen No. changes to 0 (GT10 series compatible function)] in the [Environmental Setting] window.

➟■5 [Screen Switching/Window]

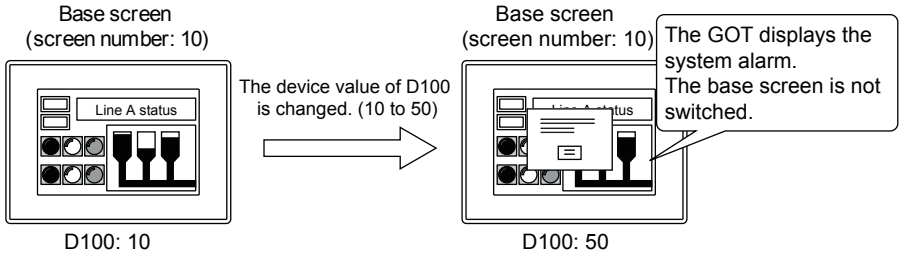
If [Retain the displayed screen when the base screen No. changes to 0 (GT10 series compatible function)] is deselected, the GOT displays the lowest numbered base screen.
Example) Storing 0 in the screen switching device (D100) when the lowest screen No. is 1



If this item is selected, the base screen is not switched.
Example) Storing 0 in the screen switching device (D100) while the GOT displays base screen No.10



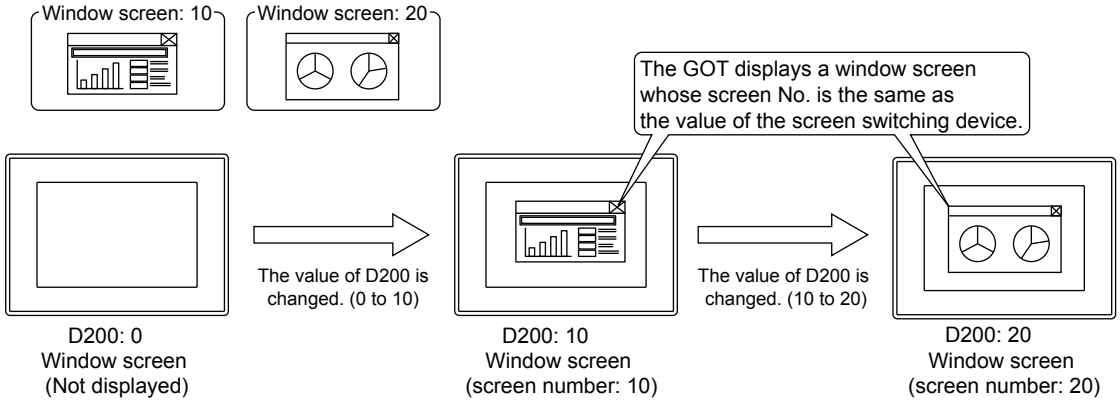
If the screen number which does not exist is stored in the screen switching device, the system alarm is displayed. In that case, the screen is not switched.
Example) Storing the screen No.50 of the base screen which does not exist in the screen switching device (D100)



(3) Screen switching of overlap windows and superimpose windows

The GOT displays the window screen whose screen No. is the same as the value of the screen switching device as an overlap window or a superimpose window.

Example 1) Setting D100 for the screen switching device of an overlap window

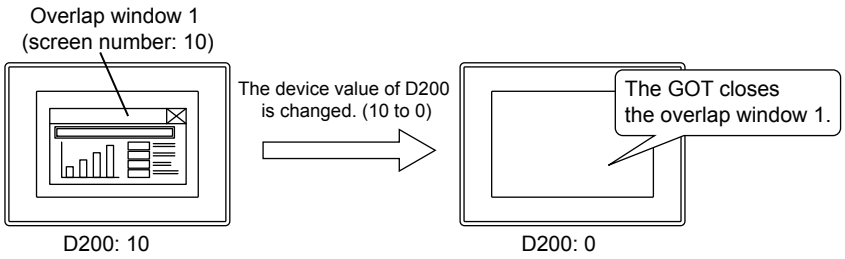


When the screen switching device stores the value set to [Screen No. of the window screen to be hidden] in [Environment Setting] dialog, the GOT closes the target overlap window or superimpose window.

➟■5 [Screen Switching/Window]

Example)

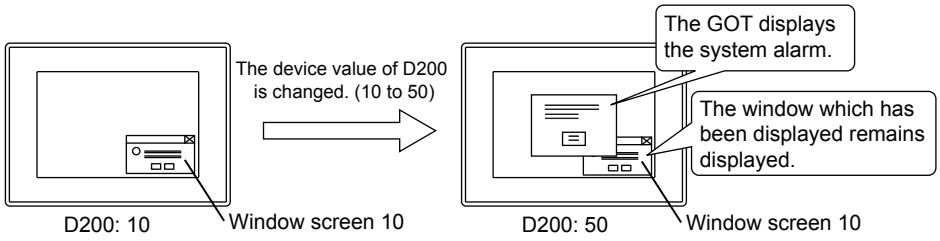
Storing 0 in the screen switch device (D200) while displaying the overlap window 1 ([Screen No. of the window screen to be hidden]: 0)



If the screen number which does not exist is stored in the screen switching device, the system alarm is displayed. In that case, the screen is not switched and the window which has been displayed remains displayed.

Example)

Storing the screen No.50 of the window screen which does not exist in the screen switching device (D200)



(4) Screen switching of dialog windows

For the details of dialog windows, refer to the following.

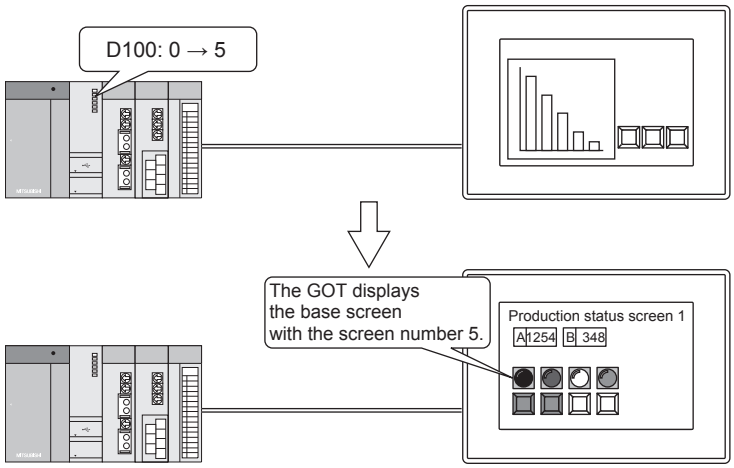
➟5.2.3 Setting dialog windows ([Dialog Window])

■2 How to use the screen switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Switching screens with the screen switching device

When a screen number is stored in the screen switching device, the corresponding screen is displayed on the GOT.
Example) Storing 5 in the screen switching device (D100)



Set the screen switching device in the [Screen Switching/Window] dialog.

➟5.2.1 ■5 [Screen Switching/Window]

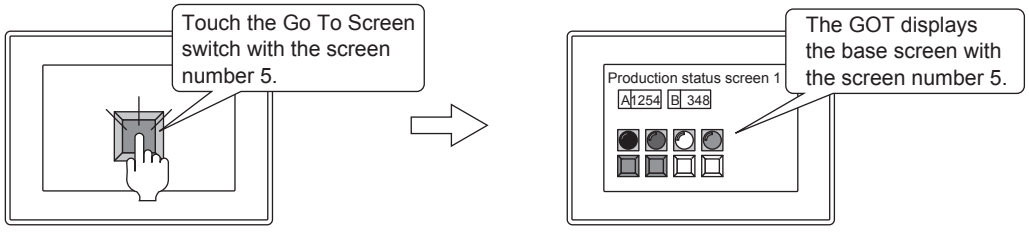
(2) Switching screens with touch switches (Go To Screen switch)

The screen is switched to another screen when you touch the Go To Screen switch placed on the screen.
The destination screen depends on the setting of the touch switch.
For how to set the Go To Screen switch, refer to the following.

➟8.2.7 [Go To Screen Switch] dialog

(a) Switching screens by specifying a screen number

The screen can be switched to the base screen or the window screen which is set for the touch switch.

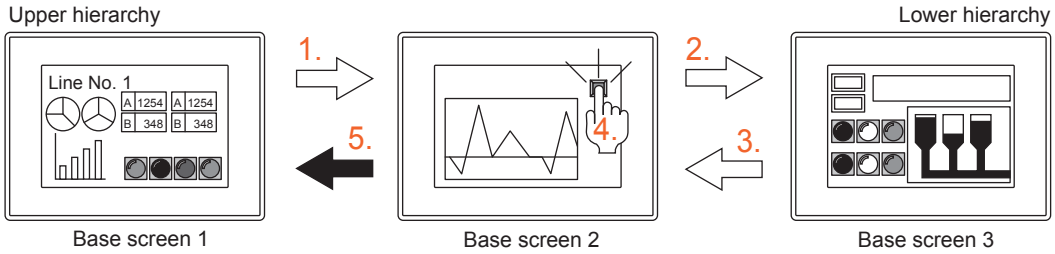


(b) Switching screens according to the hierarchy or history of the screens

The screens can be switched according to the operation (hierarchy mode/history mode) which is set for the touch switch.

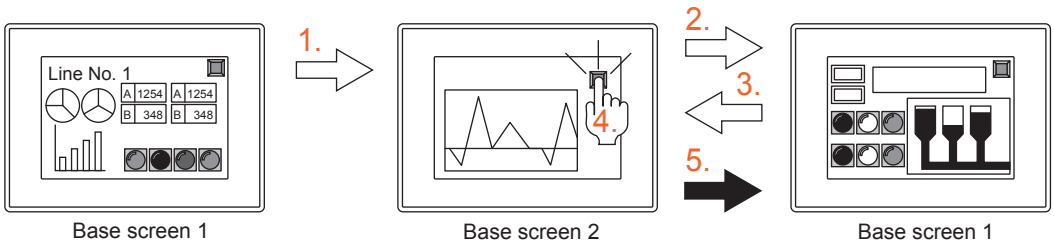
- Hierarchy mode

  This mode is for returning to a screen in the upper hierarchy according to the screen hierarchy based on the relation of a source screen and a destination screen.



- History mode

  This mode is for returning to the previously displayed screen according to the history of the screen switching.



(3) Selecting a screen switching device

To select a device used as the screen switching device, refer to the following depending on the method of screen switching.

(a) GOT internal device

Recommended for performing the screen switching by touch switches.
To control the screen switching by a controller, you need to use scripts or the device data transfer.

(b) Controller device

Recommended for controlling the screen switching by a controller.
You can also switch the screens with touch switches.

(4) Display position of an overlap window or a superimpose window

You can specify the display position of an overlap window or a superimpose window by setting [Window Position] on a base screen.
However, when you switch a base screen on which a window screen is being displayed, note the following: Even if you configure different [Window Position] settings on the destination base screen, the window screen remains in the same position after the base screen switching.
On the base screen having no [Window Position] setting, the display position of a window screen is as follows.

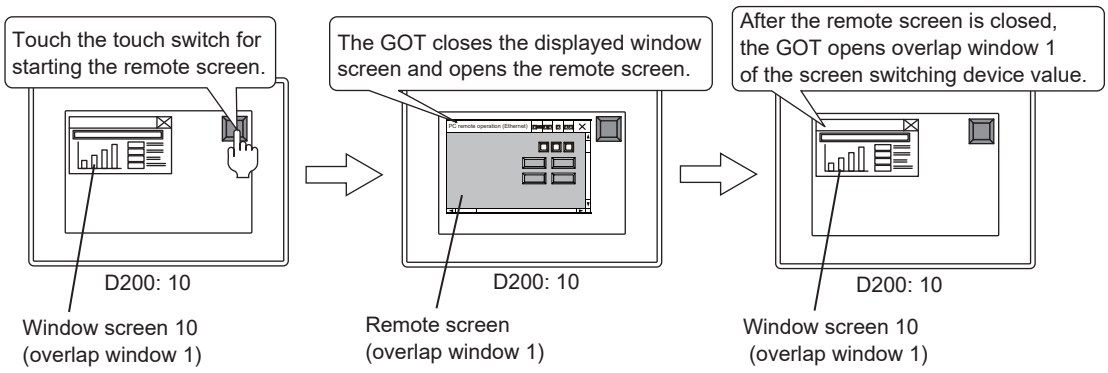
- A window screen initially appears in the center of the GOT screen.
- When a window screen has been displayed before, the window screen appears at the previously displayed position.

For how to set [Window Position], refer to the following.

➟8.30 Specifying the Display Position of a Window Screen

(5) Using an overlap window as the system window

Window screens used by system applications, including remote screens of remote personal computer operation via Ethernet, are referred to as system windows.
Use the system window by assigning any overlap window.
You can also display the window screen with an overlap window for which the system window is assigned when the system window is not used.
If the system window is called while a window screen is displayed with the overlap window, the GOT closes that window screen and opens that system window.
After the system window is closed, the window screen whose screen No. is the same as the value of the screen switching device is displayed again.
Example) Switching between a remote screen and a window screen
(Overlap window 1 is used as the remote screen and D200 is set for the screen switching device.)



Assign system windows in the [Screen Switching/Window] dialog.

➟5.2.1 ■5 [Screen Switching/Window]

(6) Displaying an overlap window off-screen

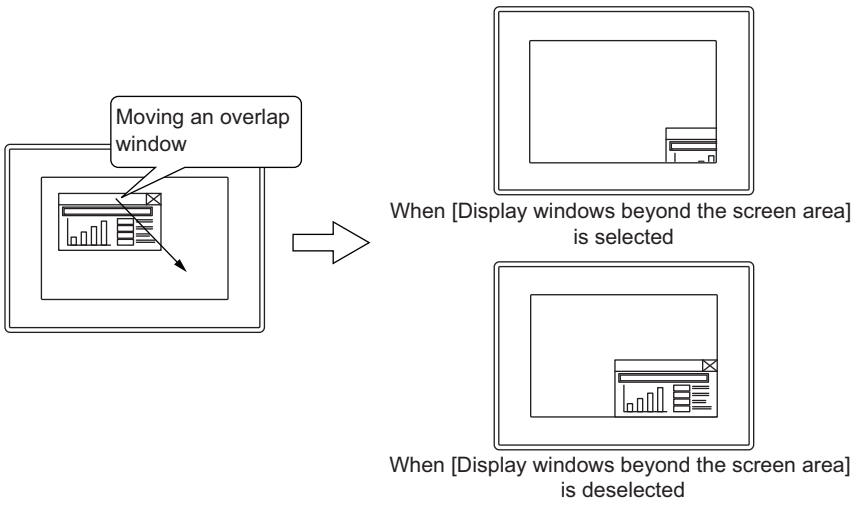
Not available to GT21 and GS21.

To display an overlap window off the GOT screen, select [Display windows beyond the screen area] in the [Screen Switching/Window] dialog.

Note that dialog windows cannot be displayed off the GOT screen.

The overlap window can be displayed off the right side or the bottom of the screen.

➟5.2.1 ■5 [Screen Switching/Window]



This setting also allows the following windows to be displayed off the GOT screen.

○: Displayable, ×: Not displayable

Window type		Graphics mode	
		GOT Graphic Ver.2	GOT Graphic Ver.1
Key window		○	○
Comment window		○	○
Recipe operation window		○	○
[Bookmark] window		○	○
Screen image of the operation log		○	○
Personal computer screen on the GOT during remote personal computer operation (Ethernet)		○	×
Window used for each function	iQSS Utility	○	○
	Drive recorder	○	○
	CC-Link IE TSN/CC-Link IE Field Network diagnostics	○	○
	System launcher	○	○
	System Launcher (Servo Network)	○	○
	Servo amplifier graph	○	○
	File Manager	○	○
	File Print	○	○
	Network drive setting	○	○

(7) Specifying the stacking order of overlap windows

Not available to GT21 and GS21.

To specify the stacking order of overlap windows, set [Specify the display order] in the detail setting for each overlap window.

The detail setting for the overlap window is configurable in the [Environmental Setting] window ([Screen Switching/Windows]).

➟■5 [Screen Switching/Window]

The stacking order number for an overlap window is settable ranging from 1 (Front) to 5 (Back).

The same stacking order number is settable for multiple overlap windows.

When an overlap window is set to be used as a system window, the user-specified stacking order number is invalid.

When you specify the stacking order number for some overlap windows, all overlap windows are classified into groups below.

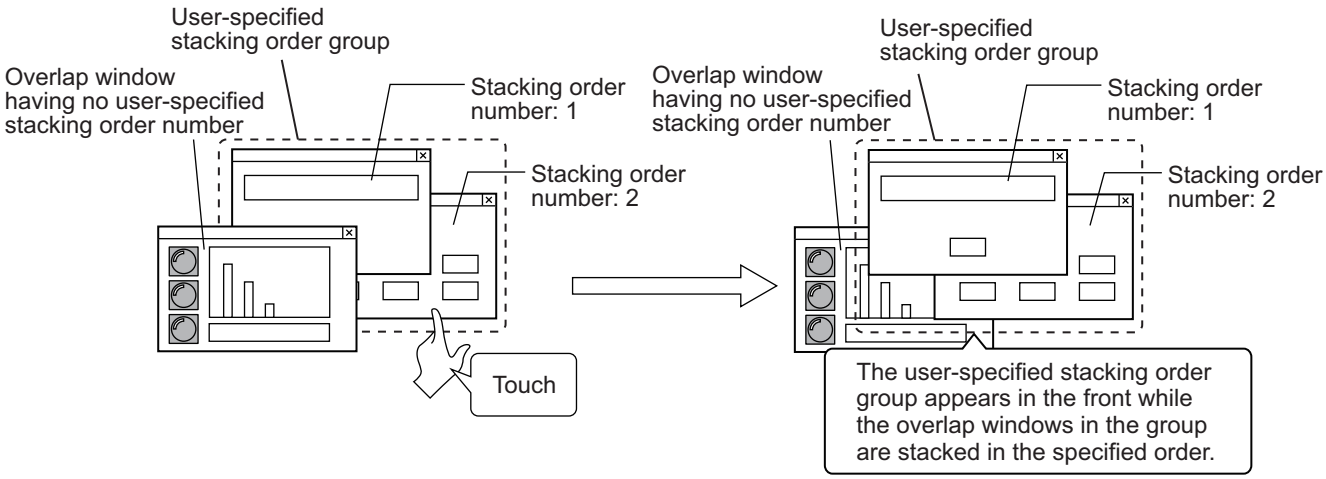
- User-specified stacking order group (Overlap windows having a user-specified stacking order number)
- Non-user-specified stacking order group (Overlap windows having no user-specified stacking order number)
- Group of overlap windows used as system windows

Within the user-specified stacking order group, the overlap windows always appear in the specified stacking order.

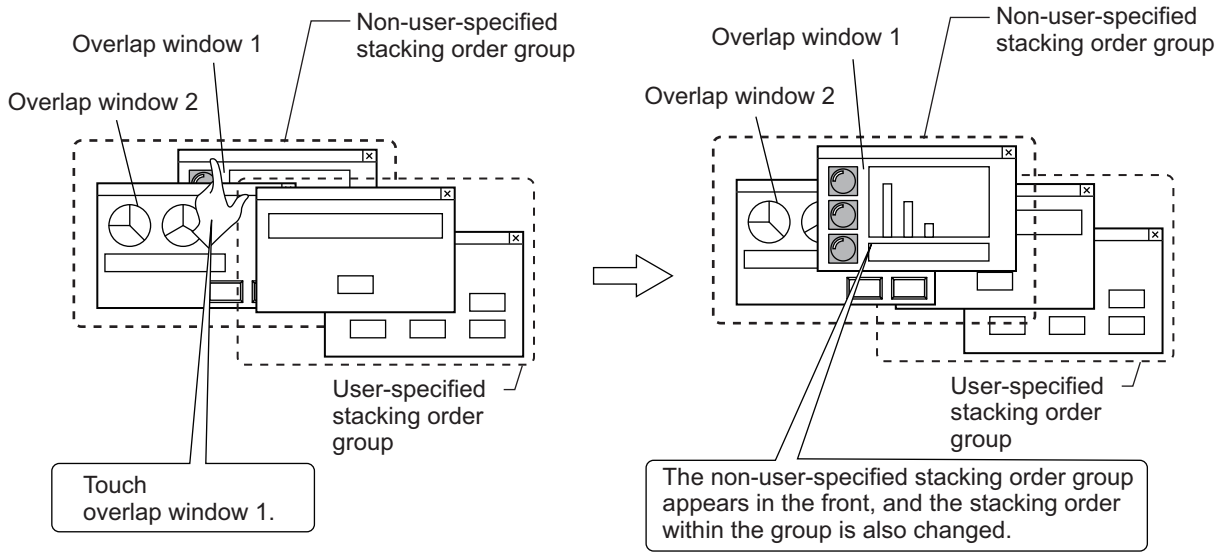
Within the other groups, the stacking order of the overlap windows varies with the user operation or GOT behavior.

The following shows examples where the overlap windows in the multiple groups are displayed.

- Example 1) When touching an overlap window having a user-specified stacking order number



- Example 2) When touching an overlap window having no user-specified stacking order number



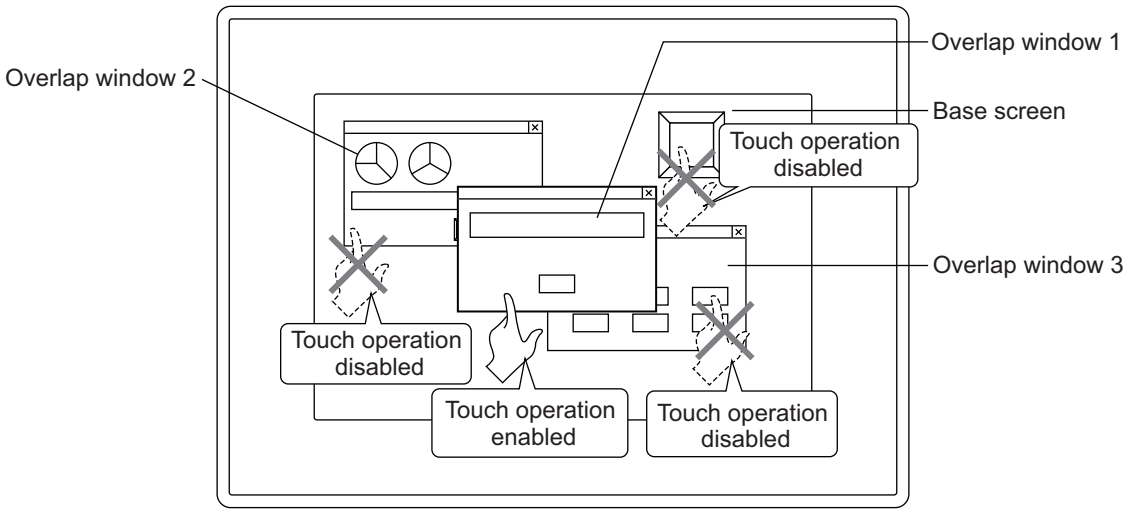
(8) Disabling the touch operation on the screens that are behind an overlap window

Not available to GT21 and GS21.

To disable the touch operation on the screens that are behind an overlap window, select [Disable the touch operation of a screen on the back] in the detail setting for the overlap window. The overlap window appears in the front, regardless of the stacking order number setting.

While this overlap window is being displayed, the touch operation is disabled in the area outside the window.

• Example) When disabling the touch operation on the screens that are behind overlap window 1



The detail setting for the overlap window is configurable in the [Environmental Setting] window ([Screen Switching/Windows]).

➥■5 [Screen Switching/Window]

A bit device is usable to enable or disable the touch operation.

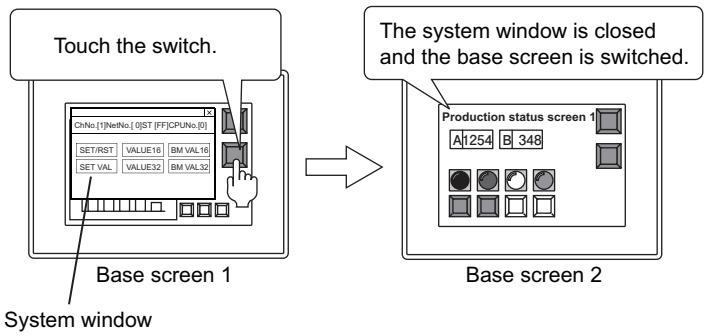
When this bit device control is used, the touch operation is disabled while the relevant bit device is on.

(9) Changing the action of the system window when the base screen is switched

Use GS522.b7 to set the action of the system window displayed when the base screen is switched.

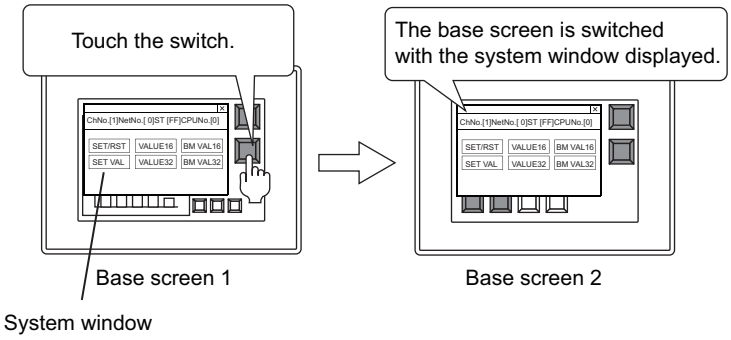
• When GS522.b7 is on

The displayed system window is closed when the base screen is switched.



• When GS522.b7 is off

The displayed system window is not closed when the base screen is switched.



For system windows, refer to the following.

➟(5) Using an overlap window as the system window

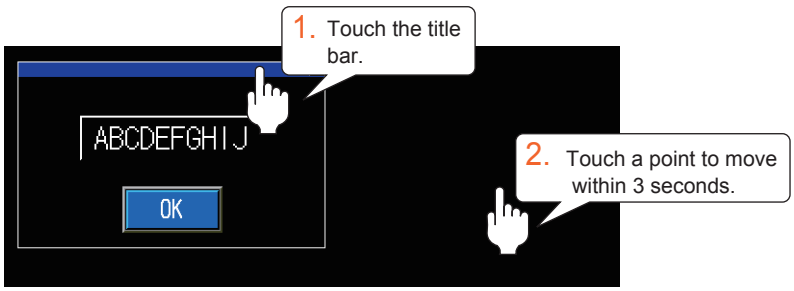
■3 Moving an overlap window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to move an overlap window which is displayed on the GOT.

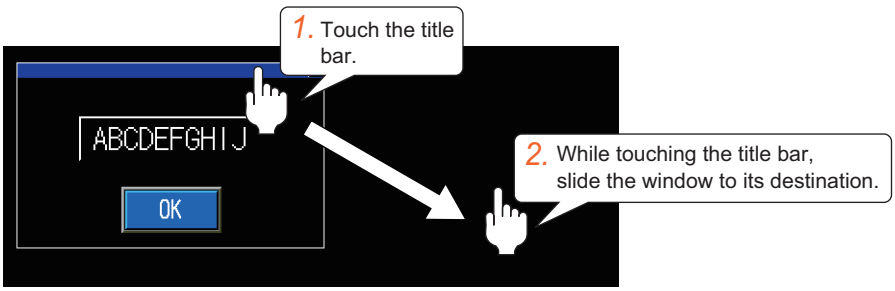
(1) Moving the window with touch operations

Touch the title bar of an overlap window, and then touch the position to move the window to within three seconds.
To enable this operation, the setting for displaying title bars must be configured.



(2) Moving the window with a slide operation

While touching the title bar of an overlap window, slide the window to its destination.
To enable this operation, the setting for displaying title bars must be configured.

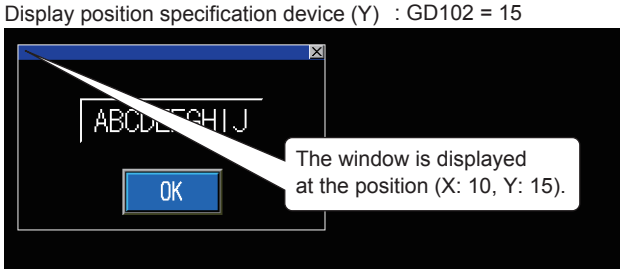


(3) Moving the window with devices

Set the coordinates of a position to move the window for the display position specification device (X and Y).
To enable this operation, the setting of the display position specification device must be configured.

➟■5 [Screen Switching/Window]

Screen switching device : GD100 = 1
Display position specification device (X) : GD101 = 10
Display position specification device (Y) : GD102 = 15



■4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Applications of the device which is set for the screen switching device

Use the device which is set for the screen switching device carefully.
A careless installing to the device may cause unexpected screen switching.

(2) Number of overlap windows used as system windows

The GOT can use the following overlap windows as system windows.

- Overlap window for which no screen switching device is set
- Overlap window for which [Use also as a system window] is set

The number of system windows cannot exceed that of these overlap windows.
Set as many such overlap windows as the number of system windows to be used.

(3) Displaying an overlap window off-screen with display position specification devices

When selecting [Display windows beyond the screen area] in the [Screen Switching/Window] dialog, you can move an overlap window off-screen by specifying the window coordinates outside the GOT screen area with display position specification devices.
The off-screen window is not movable by the touch operation.
To move the window back into view, specify the window coordinates within the screen area with display position specification devices.

(4) Detail setting for the overlap window

In the detail setting for an overlap window, if you select [Disable the touch operation of a screen on the back] and deselect [Display the title bar], make sure to place a touch switch for closing the overlap window.

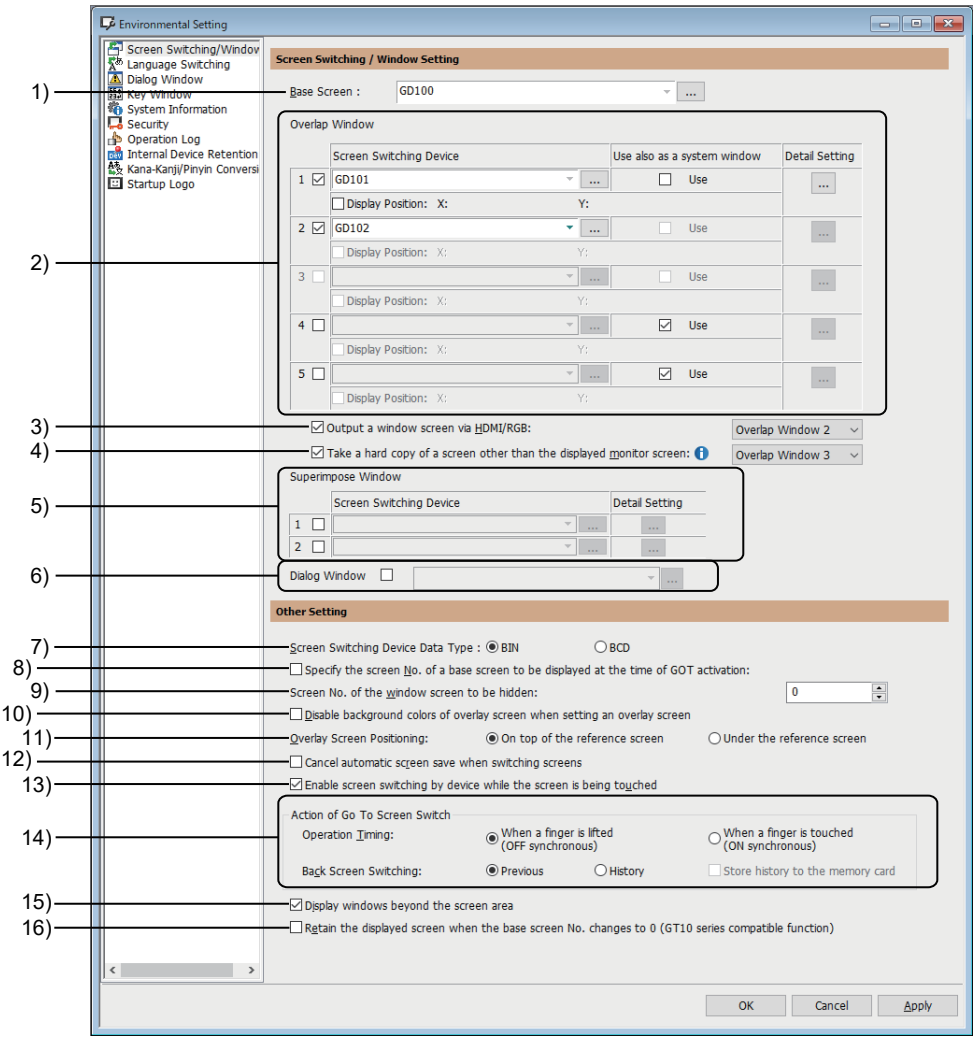
➟8.2.7 [Go To Screen Switch] dialog

Otherwise, you cannot close the overlap window.

■5 [Screen Switching/Window]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the screen switching and the display method of window screens.
Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window] from the menu to display this dialog.

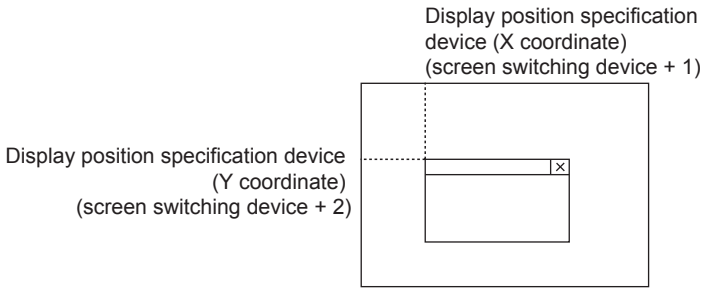
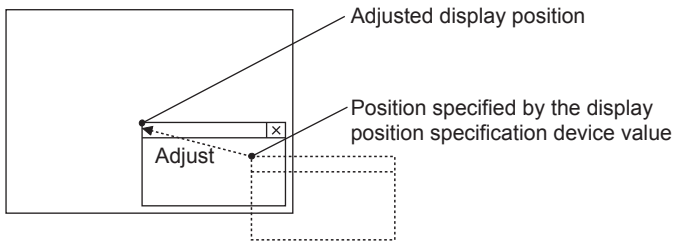
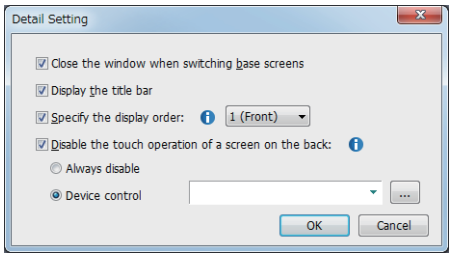


1) **Screen switching device for a base screen**
Set a screen switching device for a base screen.
Only a word device can be used for the screen switching device.

➟6.1.2 How to set devices

2) **Settings of overlap window 1 to 5**
Set whether to use overlap window 1 to 5, the screen switching devices, and the display method of those windows.
The overlap window which you selected becomes available.

Item	Description
[Screen Switching Device]	Set screen switching devices for overlap window 1 to 5. Only a word device can be used for the screen switching device. ➟6.1.2 How to set devices

Item	Description
[Display Position]	Specify the display positions of overlap window 1 to 5 with devices. A display position specification device is automatically assigned to each overlap window when you select this item. The device numbers of the display position specification devices for the X and Y coordinates are specified as follows: The horizontal coordinate (X coordinate) is the screen switching device + 1, and the vertical coordinate (Y coordinate) is the screen switching device + 2. Specify the display positions of overlap window 1 to 5 as follows.  If a value which cannot be displayed on the GOT is stored to the display position specification device, the display position is adjusted automatically. The adjusted display position is not reflected to the device value. 
[Use also as a system window]	Allows to use an overlap window as the system window. ➟5.2.1 ■2 How to use the screen switching
[Detail Setting]	Displays the [Detail Setting] dialog.  • **[Close the window when switching base screens]** Closes the overlap window when the base screen is switched. • **[Display the title bar]** Displays a title bar on the overlap window. • **[Specify the display order]** Select a stacking order number for the overlap window. The setting range is [1 (Front)] to [5 (Back)]. For the details of the stacking order, refer to the following. ➟5.2.1 ■2 (7) Specifying the stacking order of overlap windows • **[Disable the touch operation of a screen on the back]** Displays the overlap window in the front regardless of the setting of [Specify the display order], and disables the touch operation on the screens behind the overlap window. Select this item, and then select a condition for disabling the touch operation. • [Always disable]: Always disables the touch operation. • [Device control]: Uses a specified bit device to enable or disable the touch operation. For the details, refer to the following. ➟5.2.1 ■2 (8) Disabling the touch operation on the screens that are behind an overlap window

Item	Description
[Output a window screen via HDMI/RGB]	Only available to GT27. A selected overlap window is output to an external device using HDMI/RGB connection. Select this item and then select an overlap window to be output to the external device. The selected overlap window is not displayed on the base screen. For the details, refer to the following.

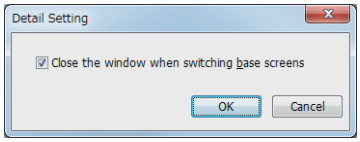
3) **[Output a window screen via HDMI/RGB]**
Available to GT27 models excluding GT2705-V.
A selected overlap window is output to an external device using HDMI/RGB connection.
Select this item and then select an overlap window to be output to the external device.
The selected overlap window is not displayed on the base screen.
For the details, refer to the following.

➟10.10 Displaying the GOT Screen on an External Display (Video Output Function)

4) **[Take a hard copy of a screen other than the displayed monitor screen]**
Available to GT27, GT25, and GS25.
To produce hard copy output of a screen other than the displayed monitor screen using the hard copy function, select one overlap window as the resource.
The selected overlap window is unavailable to specify the display position or as a system window.
Select this item, and then select an overlap window from the list.
Selectable overlap windows are overlap windows 1 to 5 whose use is deselected.
For the details on hard copy, refer to the following.

➟9.7 Capturing the GOT Screen and Outputting the Screen Image ([Hard Copy])

5) **Setting of superimpose window 1 and 2**
Set whether to use superimpose window 1 and 2 and the screen switching device.
The superimpose window which you selected becomes available.

Item	Description
[Screen Switching Device]	Set screen switching devices for superimpose window 1 and 2. Only a word device can be used for the screen switching device. ➟6.1.2 How to set devices
[Detail Setting]	Displays the [Detail Setting] dialog.  • **[Close the window when switching base screens]** Closes the superimpose window when the base screen is switched.

6) **Setting a dialog window**
Set whether to use the dialog window and the screen switching device.
The dialog window which you selected becomes available.

Item	Description
Screen switching device	Set a screen switching device for a dialog window. Only a word device can be used for the screen switching device.

7) **[Screen Switching Device Data Type]**
Set the data type of the screen switching device.
- [BIN]: Signed 16-bit binary or unsigned 16-bit binary
- [BCD]: 16-bit binary coded decimal

8) **[Specify the screen No. of a base screen to be displayed at the time of GOT activation]**
Set a screen number of the base screen to be displayed on the GOT at startup.

9) **[Screen No. of the window screen to be hidden]**
Set a screen number for closing a displayed overlap window or superimpose window.

10) **[Disable background colors of overlay screen when setting an overlay screen]**
Disables the background color of the called screen.

11) **[Overlay Screen Positioning]**
Select the position of the called screen.

12) **[Cancel automatic screen save when switching screens]**

Cancels the screen save mode when the screen is switched.

13) **[Enable screen switching by device while the screen is being touched]**

Not available to GT21 and GS21.

Enables screen switching by using the screen switching devices while the screen is being touched.

14) **[Screen switching operation]**

Set the operation of the Go To Screen switch.

Item	Description
[Operation Timing]	For GT27, GT25, GT23, GT SoftGOT2000, and GS25 Set the timing to operate the Go To Screen switch. Select [When a finger is lifted (OFF synchronous)] to switch screens at the timing when you release your finger from the switch. Select [When a finger is touched (ON synchronous)] to switch screens when you touch the switch. For GT21 and GS21 The screen is switched when you touch the switch.
[Back Screen Switching]	Set the operation for when [Back (Previous/History)] is selected for [Next Screen] in the setting of the Go To Screen switch. Select [Previous] to perform the screen switching in the hierarchy mode. Select [History] to perform the screen switching in the history mode. ➟5.2.1 ■2 (2) (b) Switching screens according to the hierarchy or history of the screens
[Store history to the memory card]	Stores the history of the screen switching in the data storage. This item can be selected if [History] is selected for [Back Screen Switching].

15) **[Display windows beyond the screen area]**

Enables overlap windows and key windows to be displayed off the GOT screen.

➟5.2.1 ■2 (6) Displaying an overlap window off-screen

5.2.4 ■2 (3) Displaying a key window off-screen

16) **[Retain the displayed screen when the base screen No. changes to 0 (GT10 series compatible function)]**

When the screen switching device stores 0, the currently displayed base screen is not switched.

If base screen No.0 exists, the current screen is switched to base screen No.0.

If this item is deselected, the GOT displays the lowest numbered base screen.

➟5.2.1 ■1 (2) Screen switching of base screens

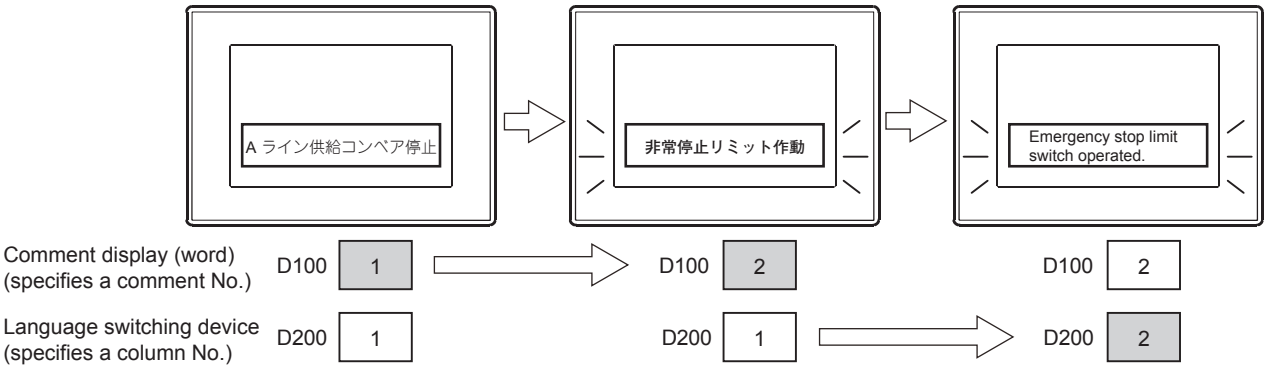
5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

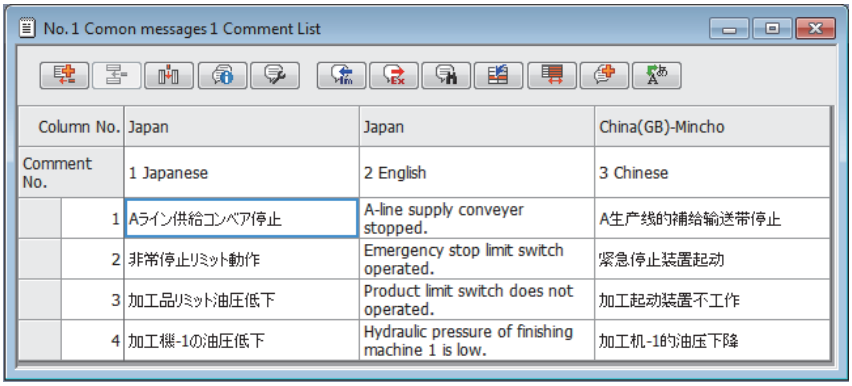
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the language switching
■2 How to use the language switching
■3 Precautions
■4 [Language Switching]

The GOT switches comments displayed on the object according to a value (column No. of the comment group) in the language switching device.
If messages of Japanese, English, Chinese, and other languages are registered in each column of the comment group, the language of the comment displayed can be switched.
For how to register comments, refer to the following.

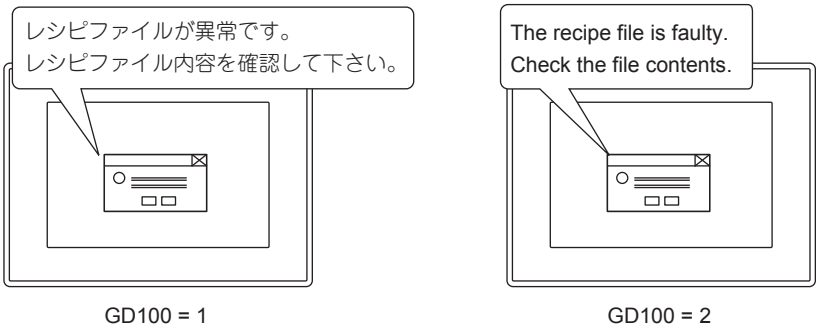
➟5.8.2 How to use comment





On the other hand, the system language used in the utility screen and others is switched by the system language switching device.
The system language can be switched to the language compatible with the language ID according to the value stored to the system language switching device (language ID).

System language switching device: GD100
Language ID = 1: Japanese, 2: English



■1 Specifications of the language switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Language switching device

The language switching device is used to switch the comment column of the comment group.
A language switching device can be set per project.
A word device whose data type is signed BIN 16 is available.
Store the column No. of the comment group to the language switching device to switch the comment column to be displayed.
For the setting of comments, refer to the following.

➟5.8 Comment Setting ([Comment])

For the setting of the language switching device, refer to the following.

➟5.2.2 ■4 [Language Switching]

(2) System language switching device

The system language switching device is used to switch the system language used for the utility, system alarm, and others.
A system language switching device can be set per project.
A word device whose data type is signed BIN 16 is available.
Language IDs are allocated to each language.
Store the language ID to the system language switching device to switch the system language.
By default, language IDs are allocated as shown below.

Language ID	Compatible language
1	Japanese
2	English
3	Chinese (Simplified)
4	Chinese (Traditional) Not available to GT21 and GS21.
5	Korean Not available to GT21 and GS21.
6 to 10	Not set

When a value other than the one above is stored to the system language switching device, the system language set in the utility is set.
For the setting of system language switching, refer to the following.

➟5.2.2 ■4 [Language Switching]

(3) Area setting

The formats of a sorting order of the date, decimal marker, and others which differ depending on areas can be switched associating with language switching.
This setting is applied to all the objects on the user screen.
However, this setting is not applied to the system screens, such as the utility screen and the system application screen.

(a) Date

Select [yy/mm/dd], [mm/dd/yy], or [dd/mm/yy] for a sorting order of the date.

(b) Decimal marker

Select [, (comma)] or [. (period)] for a decimal marker.

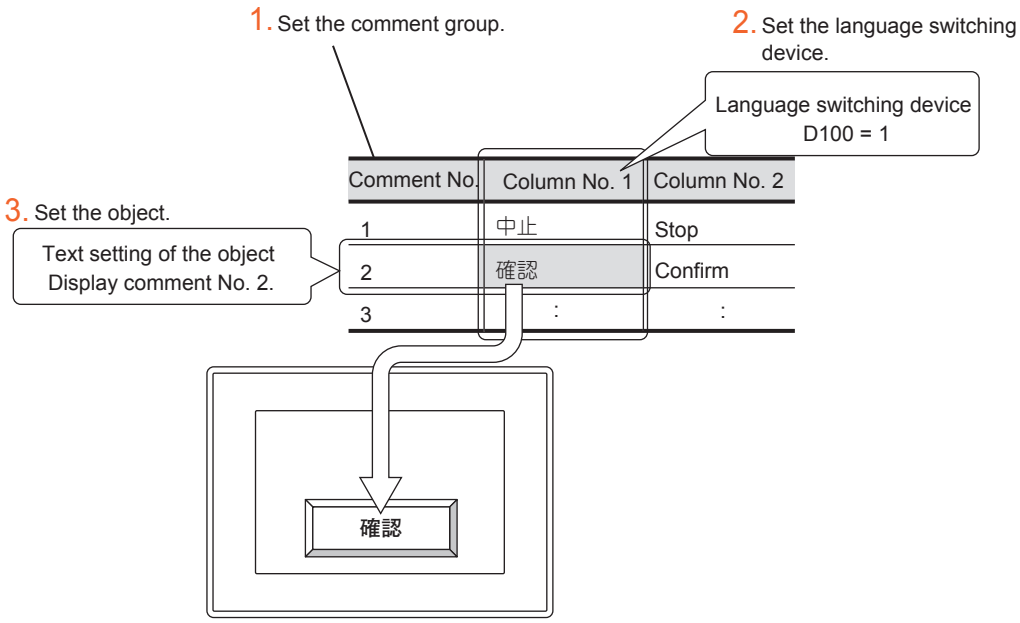
■2 How to use the language switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Switching the language of the comment to be displayed on the object (switching the comment column)

Switch the comment column to switch the language of the comment to be displayed on the object.
Store the column No. to the language switching device to switch the comment column.

(a) **Setting procedure**



Step 1 Set the comment group.

Set multiple comment columns in the comment group.

➟5.8.2 How to use comment

Step 2 Set the language switching device.

➟5.2.2 ■4 [Language Switching]

Step 3 Configure the setting of each object on the screen for displaying character strings set as a comment text.

➟8.2 Placing a Touch Switch
8.3 Placing a Lamp
8.7 Placing a Comment Display
8.10 Placing a Historical Data List Display
8.11 Placing an Alarm Display
8.12 Placing a Simple Alarm Display

(b) **Operation on the GOT**

Store the value of the column No. to the language switching device by a touch switch or a numerical input.
Storing the value switches the language of the comment to be displayed on the object.
When the value of the language switching device is out of the range (0, 31 or larger) or the column No. which does not exist is specified, a comment is not displayed.
However, when [Alternative Display (when the language switching device value is out of the range (1-30) or comment column No. does not exist)] is set, the column No. set previously is displayed.

(2) Switching the system language on the user-created screen

The system language is used on the screen other than the user-created screen, such as the utility screen and system alarm.
To change the system language on the user-created screen, use the system language switching device.
Store the value of the language ID to the system language switching device to switch the system language.
You can also change the system language on the utility screen of the GOT.
For how to change the system language on the utility screen, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(a) **Setting procedure**

Step 1 Enable language switching to set the system language switching device.

➟5.2.2 ■4 [Language Switching]

Step 2 Set the language ID to be allocated to the system language when required.

➟5.3.1 ■2 [Display Setting/Language Setting]

Step 3 Place an object such as a numerical input or a word switch for storing the language ID to the system language device.

(b) **Operation on the GOT**

Input the value of the language ID to the language switching device by a touch switch or a numerical input.
Inputting the value switches the system language to the language which is compatible with the language ID.
For the specifications of the language ID, refer to the following.

➟5.2.2 ■1 (2) System language switching device

The system language can be switched by the system language switching device only on the user-created screen.
The system language of the system window, the utility screen, the extended function screen, or other screens cannot be switched by the system language switching device while the screen is displayed.
Switch the system language by the device after closing all the screens above.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Effect of language switching or system language switching on objects

Language switching or system language switching switches screens.
Therefore, the operations of the following objects are affected at language switching.

(a) **Scatter graph**

When settings such as memory storage are not configured, the previously collected data of the occurrence time or others is deleted.
To store the previously collected data at language switching, set each object to store the memory.

➟8.20.4 ■4 [Extended] tab

(b) **Parts movement**

When a locus is displayed, the locus is deleted.

(c) **Display trigger of objects**

When the display trigger condition of objects is not satisfied before language switching, the description displayed on objects is deleted.

(d) **Alarm display, Simple alarm display**

When the display is scrolled, the display returns to the top after language switching.

(e) **Input object**

When the data is being input to objects, the cursor is deleted and the input is canceled.

(2) Restrictions at system language switching

(a) **System language switching while a dialog window is displayed**

When the system language is switched while a dialog window is displayed, the system language is switched after the dialog window is closed and the screen returns to the user-created screen.

(b) **System language switching when the SFC monitor or the ladder editor is used**

If the SFC monitor or the ladder editor is finished with a user-created screen displayed and GT Designer3 is started again with the system language different from the one of the previous run, the program displayed before the system language switching may not be acquired.
In that case, a system alarm occurs.
However, if only alphanumeric characters are used for the file name of the project to eliminate the difference between the text codes of the file names before and after the system language switching, the system alarm does not occur.

(c) **System language switching in an operation log**

When all the following settings are applied and an operation log file is converted, the operation log file is converted in the system language set in the utility.
(The file is not converted in the language specified by the system language switching device.)

- Set [System Language Switching Interlock] for [File Conversion Language].
- Use a file convert trigger or the auto conversion at log file switching.

For the operation log settings, refer to the following.

➟5.2.11 ■5 (3) [File Conversion] tab

(d) **Language switching at alarm log file conversion**

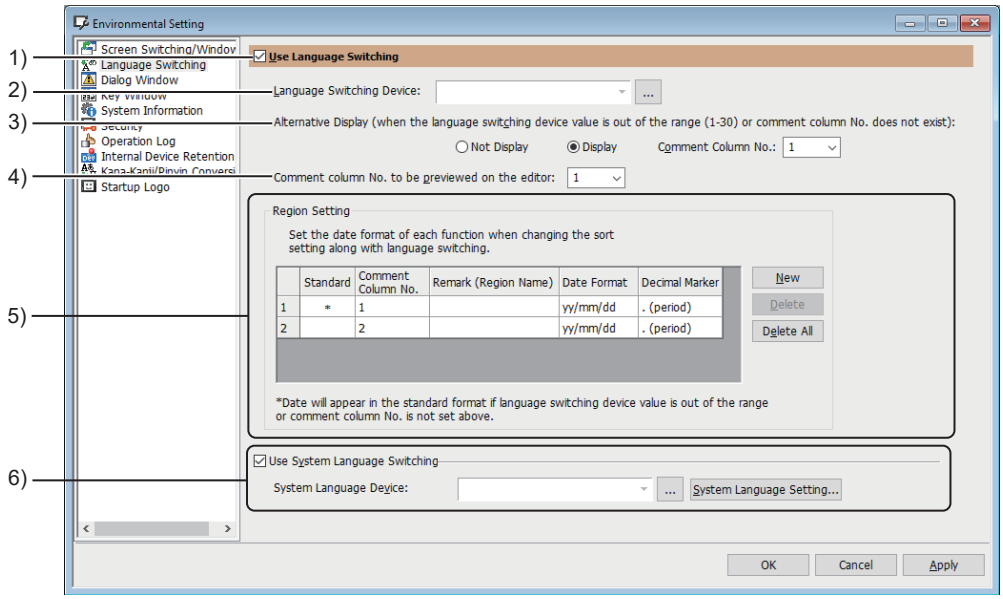
When the file conversion language is set to [System Language Switching Interlock] and an alarm log file is converted by the file convert trigger, the file is converted in the system language set in the utility.
(The file is not converted in the language specified by the system language switching device.)
For the setting of the alarm log file conversion, refer to the following.

➟9.1.2 ■5 [Alarm Common Setting] dialog

■4 [Language Switching]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Language Switching], the language switching device and the system language switching device are set.
Select [Common] → [GOT Environmental Setting] → [Language Switching] from the menu to display this window.



1) **[Use Language Switching]**
Select this item to enable language switching.
Set language switching.

2) **[Language Switching Device]**
Set the language switching device.
A word device whose data type is signed BIN 16 can be set.

3) **[Alternative Display (when the language switching device value is out of the range (1-30) or comment column No. does not exist)]**
When the comment column No. which matches with the value of the language switching device does not exist in the comment group, select whether to display a comment.
The following shows the items to be selected.
- [Not display]
  Comments are not displayed.
- [Display]
  A comment is displayed.

After selecting this item, set the comment column No. to be displayed to [Comment Column No.].
When the comment column No. which does not exist is set at this time, a comment is not displayed.

Item	Description
[Comment Column No.]	The setting range is [1] to [30].

4) **[Comment column No. to be previewed on the editor]**
Set the comment column No. to be used for a preview display on the screen editor.

5) **[Region Setting]**
Set the formats of a sorting order of the date, decimal marker, and others which differ depending on areas.

Item	Description
[Standard]	Set the row with [*] as the default value of the area setting.
[Comment Column No.]	Set the comment column No. which the area setting is applied to. The setting range is [1] to [30].
[Remark (Region Name)]	Set the remarks such as the area setting name. Up to 32 characters can be set.

Item	Description
[Date Format]	Select a sorting order of the date. The following shows the items to be selected. • [yy/mm/dd] • [mm/dd/yy] • [dd/mm/yy]
[Decimal Marker]	Select a symbol to be used as a decimal marker. The following shows the items to be selected. • [, (comma)] • [. (period)]
[New] button	Adds a new area setting.
[Delete] button	Deletes a selected area setting.
[Delete All] button	Deletes all the area settings.

6) **[Use System Language Switching]**

Select this item to enable system language switching.

Set the system language switching device.

When the language ID setting is required, click the [System Language Setting] button to set the language ID.

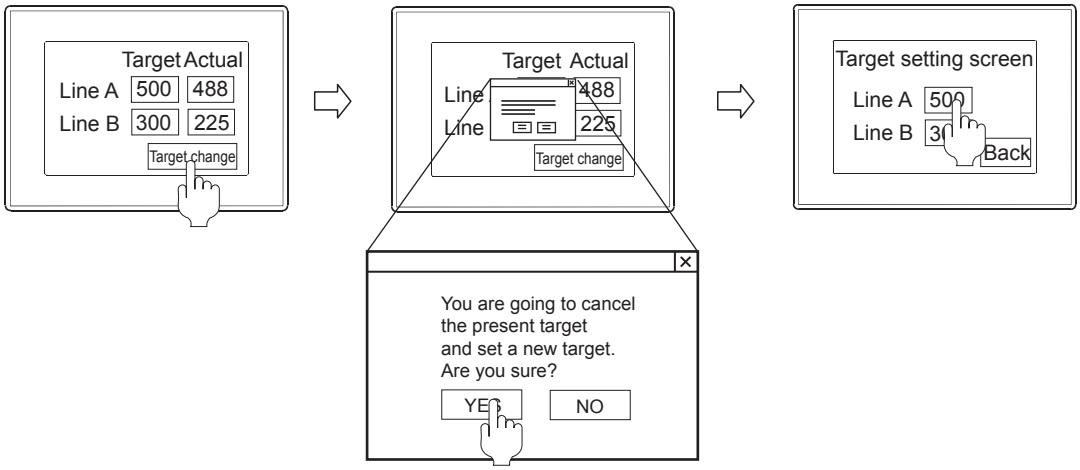
Item	Description
[System Language Device]	Set the system language switching device. A word device whose data type is signed BIN 16 can be set.
[System Language Setting] button	Displays the settings of the language ID to be used for system language switching. The system language setting can be displayed only when [Language Setting] is set in the GOT setup. ➟5.3.1 ■2 [Display Setting/Language Setting]

5.2.3 Setting dialog windows ([Dialog Window])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

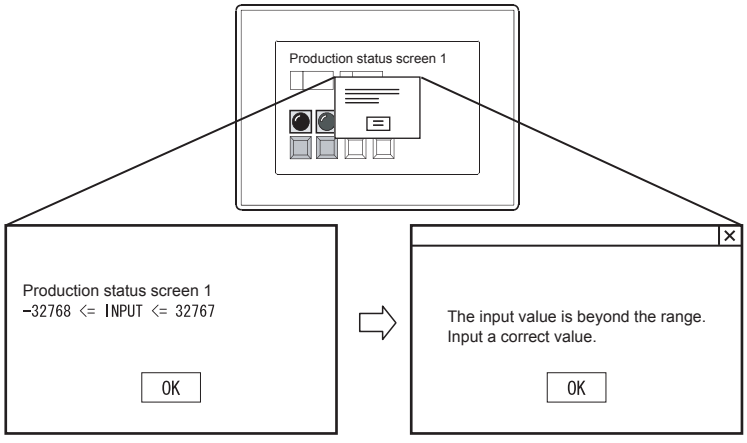
➟■1 Specifications of dialog windows
■2 How to use dialog windows
■3 Precautions
■4 [Dialog Window...]

You can create and replace system messages displayed on the GOT using the created dialog windows.
Example 1) Displaying a created dialog window as a new message
By creating a dialog window for an error or warning as a system, the GOT can display the dialog window as a system message.
You can set a window that does not display the next screen without an answer to the message or a window that is for confirmation for the information.



A dialog window such as guiding a user to confirm the operation can be displayed.

Example 2) Displaying a created dialog window instead of the system message of the GOT
You can replace the system message displayed by the GOT with the created dialog window.
The GOT can display more specific and system-matched messages.



System message displayed on the GOT Changed to the dialog window created by a user

■1 Specifications of dialog windows

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Available screen size and number of screens

For the specifications of dialog windows as window screens, refer to the following.

➟1.2.3 ■2 Screen specifications

(2) Available figures and objects

You can place all the figures and objects placeable on the window screen.
Some restrictions are placed on the use of the following objects.

Object	Restriction
Numerical input, text input	The input operation is not available.
Recipe display (record list)	The object is not displayed.
Key window object	The key window object is displayed only on the dialog window that appears instead of any of the following system messages. • [Input data error, too many integer places] • [Input data error, too many decimal places] • [Input data error, number too large/small] • [Input data error, out of range] • [Do you want to change?] For the system message replacement display, refer to the following. ➟5.2.3 ■2 (2) Displaying a created dialog window instead of the system message of the GOT

(3) Superimposition of objects

The superimposition of objects is not available.

(4) Layer setting

The front layer and the back layer are combined on the GOT.
The set object stacking order may be invalid.

(5) Screen script and trigger action

The screen scripts and trigger actions set in the dialog window do not run.

(6) Screen switching while a dialog window is displayed

GOT Graphic Ver.2

Screen switching is available while a dialog window is displayed.

GOT Graphic Ver.1

The screen is not switched while a dialog window is displayed.
If you have attempted to switch the screen, the screen switching is valid after the dialog window is closed.

(7) Priority between the displayed dialog window and a newly generated system message

A system message and a dialog window cannot be displayed together.
If you have attempted to display a dialog window together with a system message, the system message has the priority.

(a) When a user-created system message is generated while a dialog window is displayed

The displayed dialog window remains.
The newly generated system message is not displayed.

(b) When a system message of the GOT is generated

The displayed dialog window is closed, and 0 is stored in the screen switching device for the dialog window.
Then, the newly generated system message is displayed.
If a button is arranged on the displayed dialog window, the following processing is executed before the window is closed.

- For the dialog window with only a [OK] button, the processing is the same as when the [OK] button is pressed.
- For the dialog window with a cancel button, the processing is the same as when the [Cancel] button is pressed.

(8) Dialog window replacement setting on superimpose windows or called screens

On the screen as a superimpose window or called screen of the set overlay screen, screen-based dialog window replacement setting is invalid.
The dialog window replacement setting of the displayed base screen is valid.

■2 How to use dialog windows

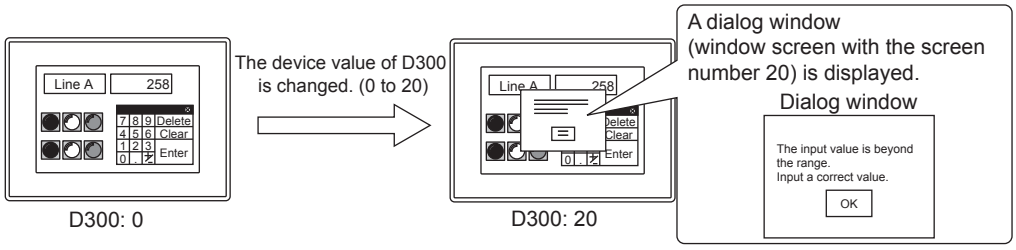
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To use a dialog window, set a screen switching device for the dialog window.
For how to set the screen switching devices, refer to the following.

➟5.2.1 ■5 [Screen Switching/Window]

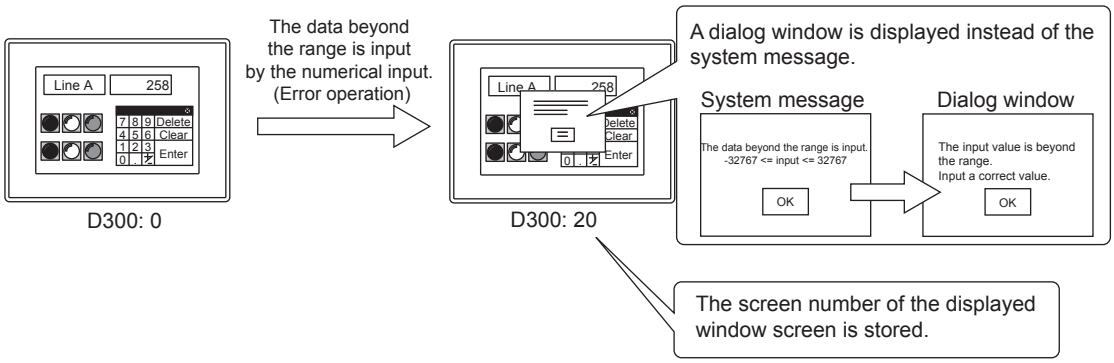
(1) Displaying a created dialog window as a new message

Storing the screen number of the created dialog window to the screen switching device enables the display of the dialog window.
Storing 0 to the screen switching device closes the displayed dialog window.
Example)
Storing the screen number of the window screen 20 to the screen switching device (D300) for the dialog window



(2) Displaying a created dialog window instead of the system message of the GOT

A created dialog window can be displayed instead of the system message of the GOT.
This is called the system message replacement display.
Storing 0 to the screen switching device closes the displayed dialog window.
Example)
Displaying the window screen with the screen number 20 instead of the system message at an error operation
(Screen switching device (dialog window): D300)



The following table lists the system messages available for the replacement display.

System message to be replaced	Setting item of the [Environmental Setting] window	Setting unit
[Communication error. Refer to System Alarm in Utility Menu.]	[Communication Circuit Check Demand]	Project
[Input data error, too many integer places]*1	[Input Digits Overflow (Integer Part)]	Project Screen
[Input data error, too many decimal places]*1	[Input Digits Overflow (Decimal Part)]	Project Screen
[Interlock not]	[Input Condition Failure]	Project Screen
[Input data error, number too large/small]	[Input Digits Overflow]	Project Screen
[Input data error, out of range]	[Out of Input Range]	Project Screen
[Do you want to change?]	[Input Confirmation]	Project Screen
[Coordinates error]	[Overlap of Objects]	Project
[Barcode/RFID data is invalid.]	[Invalid Bar Code/RFID Data]	Project Screen

*1 Available only when the data type of the monitor device is real number.

For how to set the [Environmental Setting] window, refer to the following.

➟5.2.3 ■4 [Dialog Window...]

(3) Setting procedure

Step 1 Set a screen switching device.

➟5.2.1 ■5 [Screen Switching/Window]

Step 2 Create a dialog window using the dialog window wizard.

For the creation procedure, refer to the following.

➟2.5.1 ■4 Creating a window screen for a dialog window

Step 3 Configure the setting of the dialog window in the [Environmental Setting] window when replacing a system message with the window.

For the setting procedure, refer to the following.

➟5.2.3 ■4 [Dialog Window...]

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Setting for closing the dialog window

Configure the setting for closing the dialog window.
If the dialog window is not closed, monitor screens or utility screens cannot be displayed.
The setting includes: arranging a touch switch for closing the window, script that writes 0 to the screen switching device, and a sequence program.

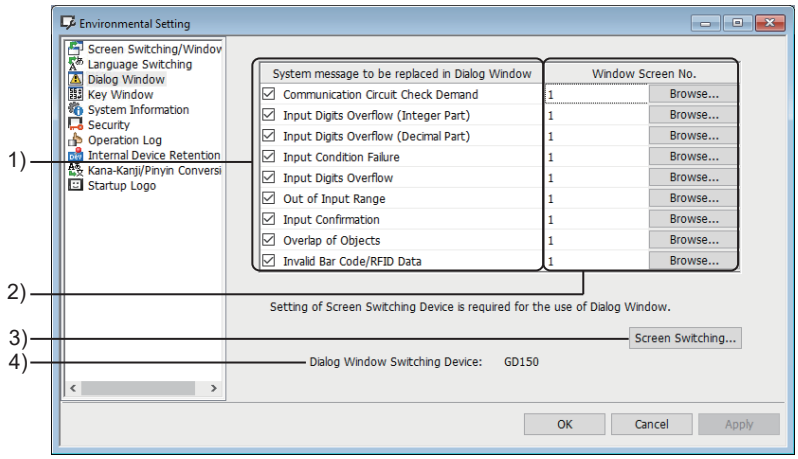
(2) Communication between the GOT and GT Designer3 while a dialog window is displayed

While a dialog window is displayed, communication between the GOT and GT Designer3 may not be established.
If communication between the GOT and GT Designer3 is not established, close the dialog window.

■4 [Dialog Window...]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Dialog Window...], set the display method of the dialog window.
Select [Common] → [GOT Environmental Setting] → [Dialog Window...] from the menu to display this window.



1) **[System message to be replaced in Dialog Window]**
Select a system message to be replaced by the dialog window.
The selected system message is replaced with the window screen set in [Window Screen No.].
The following shows the items to be selected.
- [Communication Circuit Check Demand]
- [Input Digits Overflow (Integer Part)]
- [Input Digits Overflow (Decimal Part)]
- [Input Condition Failure]
- [Input Digits Overflow]
- [Out of Input Range]
- [Input Confirmation]
- [Overlap of Objects] (Not available to GT21 and GS21)
- [Invalid Bar Code/RFID Data]

For the system messages of each item, refer to the following.

➟5.2.3 ■2 (2) Displaying a created dialog window instead of the system message of the GOT

2) **[Window Screen No.]**
Set a screen number of the window screen to be displayed instead of the system message.
The setting range is [0] to [32767].
When [0] is set, either system message or dialog window is not displayed.

3) **[Screen Switching] button**
Displays the setting screen for the screen switching devices.

➟5.2.1 ■5 [Screen Switching/Window]

4) **[Dialog Window Switching Device:]**
Displays the currently set screen switching device.

5.2.4 Setting key windows ([Key Window])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of key windows
■2 How to use key windows
■3 Precautions
■4 [Key Window]
■5 Relevant settings

The key window is a window for inputting numerical values and characters which are used for objects including numerical input and text input.
The key window has two types: GOT default key window (standard key window) and key window created by the user (user-created key window).

■1 Specifications of key windows

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥(1) Specifications of the standard key window
(2) Key window for inputting numeric values (GT27, GT25, GT23,GT SoftGOT2000, and GS25)
(3) Key window for inputting numeric values (GT21 and GS21)
(4) Key window for inputting characters (Alphabet or kana mode) (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
(5) Key window for text (key window that supports Kana-Kanji/Pinyin conversion) (GT27, GT25, GT SoftGOT2000, and GS25)
(6) Key window for inputting characters (Alphabet or kana mode) (GT21 and GS21)
(7) Specifications of the user-created key window
(8) Common specifications of the standard key window and user-created key window

(1) Specifications of the standard key window

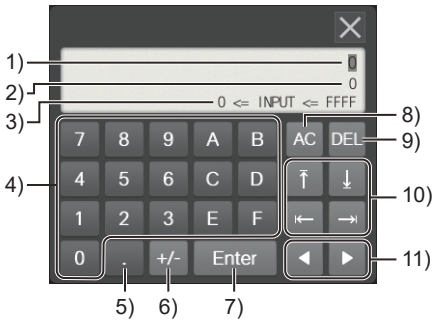
The standard key window is a GOT default window for inputting numerical values and characters.
The standard key window automatically appears according to the input area format (hexadecimal, decimal, octal, binary, or text).
The design of the standard key window varies depending on the design selected in the [Screen Design] dialog. (Not available to GT23, GT21, and GS21)

➥2.4.3 [Screen Design] dialog

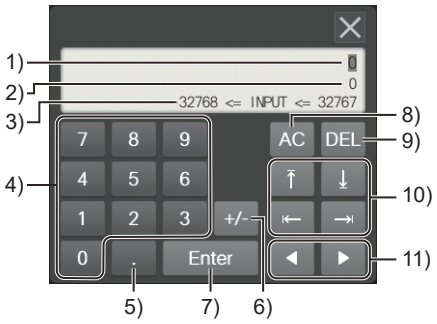
(2) Key window for inputting numeric values (GT27, GT25, GT23,GT SoftGOT2000, and GS25)

Item	Description
Hexadecimal input	The key window for inputting hexadecimal values is displayed.
Decimal input	The key window for inputting decimal values is displayed.
Octal input	While GS450.b7 is on, the key window for inputting octal values is displayed. While GS450.b7 is off, the key window for inputting hexadecimal values is displayed. After the key window is displayed, turning on or off GS450.b7 does not change the key window type.
Binary input	While GS450.b6 is on, the key window for inputting binary values is displayed. While GS450.b6 is off, the key window for inputting hexadecimal values is displayed. After the key window is displayed, turning on or off GS450.b6 does not change the key window type.

Example) Key window for inputting numeric values on GT27-S
When the design is set to [Basic-Black]

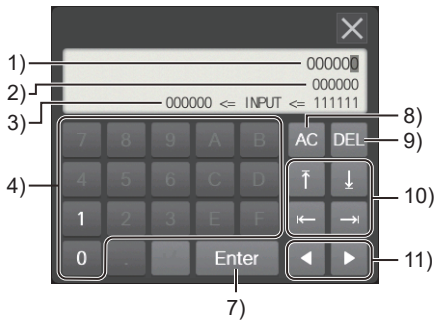


Key window for inputting hexadecimal values



Key window for inputting decimal values

Key window for inputting octal values



Key window for inputting binary values

1) **Input value display**
Displays the input value.

2) **Current value display**
Displays the current value of the device.

3) **Input range display**
Displays the valid input range.
The displayed input range depends on the number of displayed digits which is set for the numerical input.
The following shows the meaning of displayed symbols.
- [INPUT]: Value to be input
- [<]: The left side of the symbol is less than the right side.
- [<=]: The left side of the symbols is less than or equal to the right side.
- [==]: The left side of the symbols is equal to the right side.
- [!=]: The left side of the symbols differs from the right side.

4) **Numeric keys**
Input a numeric value.

5) **[+/-] key**
Switches the input value between + and -.

6) **[.] key**
Inputs a decimal point.

7) **[Enter] key (Enter key)**
Writes the input value to the device.

8) **[AC] key**
Deletes the input value.

9) **[Del] key**
Deletes the least significant digit in the character string.

10) **Keys to move the cursor within a screen**
Moves the input cursor in the screen.

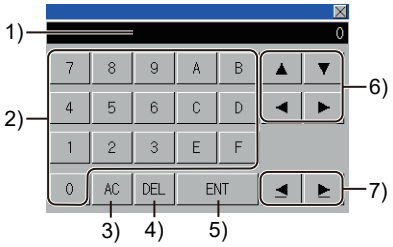
11) **Keys to move the cursor within an input object**
Moves the cursor in the currently input object.

(3) Key window for inputting numeric values (GT21 and GS21)

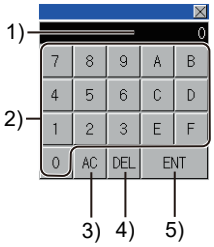
Item	Description
Hexadecimal input	The key window for inputting hexadecimal values is displayed.
Decimal input	The key window for inputting decimal values is displayed.
Octal input	The key window for inputting octal values is displayed.
Binary input	The key window for inputting binary values is displayed.

Example) Key window for inputting numeric values on GT21 and GS21

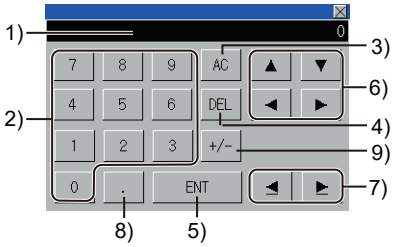
GT2107-W, GT2105-Q, GS21



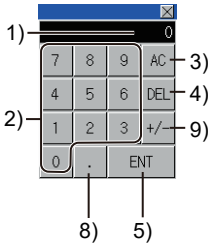
Large key window for inputting hexadecimal, octal, and binary values



Small key window for inputting hexadecimal, octal, and binary values

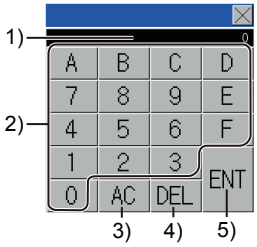


Large key window for inputting decimal values

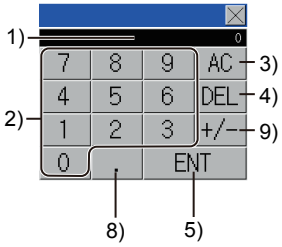


Small key window for inputting decimal values

GT2104-R



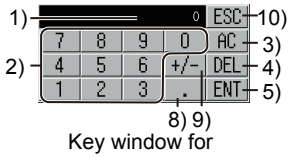
Key window for inputting hexadecimal, octal, and binary values



Key window for inputting decimal values

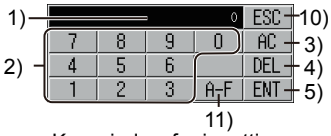
GT2104-P

Key window for inputting hexadecimal, octal, and binary values

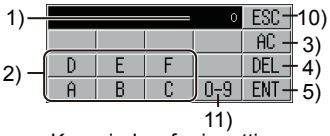


Key window for inputting decimal values

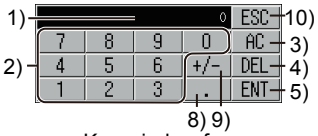
GT2103-P



Key window for inputting hexadecimal, octal, and binary values (Numeric mode)



Key window for inputting hexadecimal, octal, and binary values (Alphabetic mode)



Key window for inputting decimal values

1) **Input value display**

Displays the input value.

2) **Numeric keys**
Input a numeric value.
Moves the cursor in the currently input object.

3) **[AC] key**
Deletes the input value.

4) **[Del] key**
Deletes the least significant digit in the character string.

5) **[Enter] key (Enter key)**
Writes the input value to the device.

6) **Keys to move the cursor within a screen**
Moves the input cursor in the screen.

7) **Keys to move the cursor within an input object**
Not available to GT21.

8) **[.] key**
Inputs a decimal point.

9) **[+/-] key**
Switches the input value between + and -.

10) **[ESC] key (GT2104-P and GT2103-P only)**
Closes the key window.

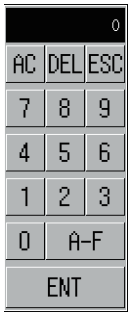
11) **Display switching keys (GT2103-P only)**
Switch between numeric mode and alphabetic mode.
To switch to alphabetic mode, touch the [A-F] key.
.To switch to numeric mode, touch the [0-9] key.

Point

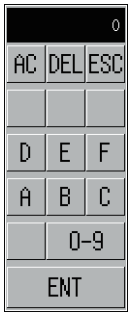
(1) **Displaying the vertically-oriented key window for inputting hexadecimal values (GT2104-P and GT2103-P only)**

The vertically-oriented key window cannot display all the alphanumeric characters for input at once.
Touch the [A-F] key or the [0-9] key to display alphabetic characters or numerics for input.

GT2104-P,GT2103-P



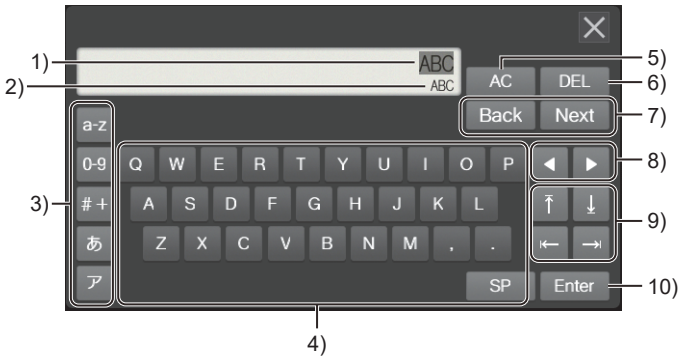
Key window for inputting hexadecimal values (Numeric mode)



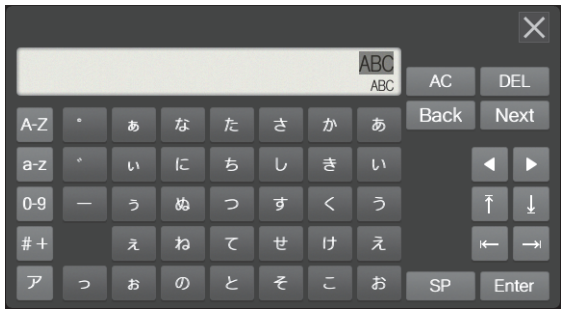
Key window for inputting hexadecimal values (Alphabetic mode)

(4) Key window for inputting characters (Alphabet or kana mode) (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

You can switch the input mode sequentially or to any mode directly with applicable keys.
In the input area of an object, characters are displayed in a character code specified in the setting dialog of the object.
Example) Key window for inputting characters on GT27-S
When the design is set to [Basic-Black]



Key window in alphabet mode

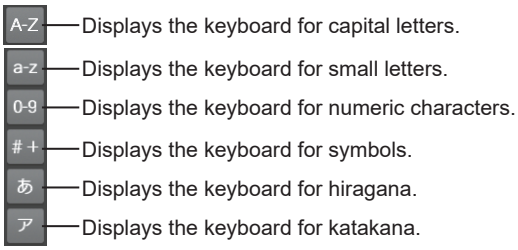


Key window in kana mode

1) **Input value display**
Displays the input value.

2) **Current value display**
Displays the current value of the device.

3) **Keys for switching character types directly**
Switches the character types of the key window directly.
The keys for switching to hiragana or katakana appear only when the system language is Japanese.

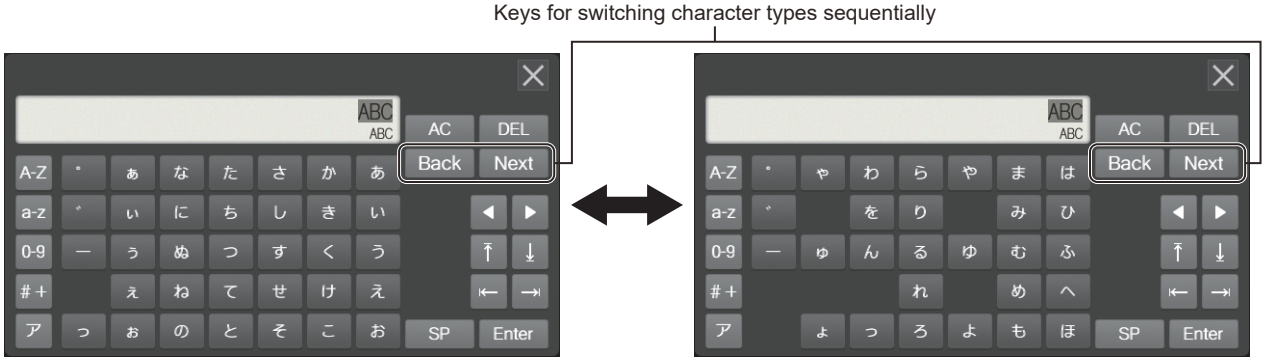


4) **Character keys**
Use the keys to input characters to objects.
The displayed keys depend on the character types of the key window.

5) **[AC] key**
Deletes the input character string.

6) **[DEL] key**
Deletes a character to the right of the cursor.

7) **Keys for switching character types sequentially**
Switches the character types of the key window sequentially.
Since all hiragana characters or katakana characters are too many to be displayed on one key window, the characters are separately listed in two windows (first half and latter half).
Use the keys for switching character types sequentially to switch the display between the first half and latter half.



Hiragana (first half)

Hiragana (latter half)

8) **Keys to move the cursor within an input object**
Moves the cursor in the currently input object.

9) **Cursor keys (screen)**
Moves the input cursor in the screen.

10) **[Enter] key (Enter key)**
Writes the input characters to the device.

(5) Key window for text (key window that supports Kana-Kanji/Pinyin conversion) (GT27, GT25, GT SoftGOT2000, and GS25)

The key window can be used when all the following conditions are satisfied.

- [Kana-Kanji/Pinyin Conversion] is selected in the [Text Input] dialog.
- The system language and Character Code Control are set.

➟5.2.13 ■1 (1) Conditions that enable KANA-KANJI conversion
5.2.13 ■1 (2) Conditions that enable Kana-Kanji/Pinyin conversion

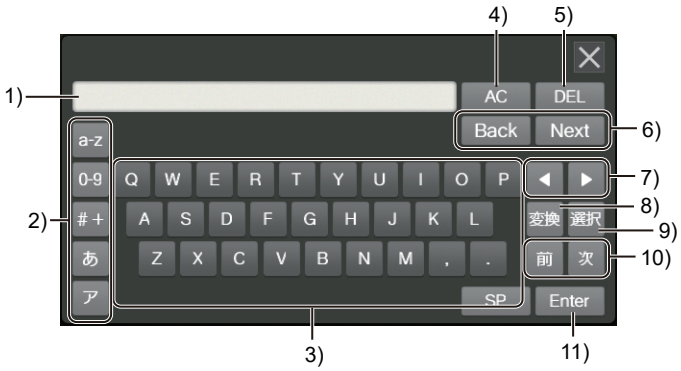
- Switch to Key Window capable of Kana-Kanji Conversion (GS467.b1) is turned on.

➟5.2.13 Configuring the settings to convert a text into kanji or Simplified Chinese characters in the GOT ([Kana-Kanji/Pinyin Conversion])
8.5.5 [Text Input] dialog

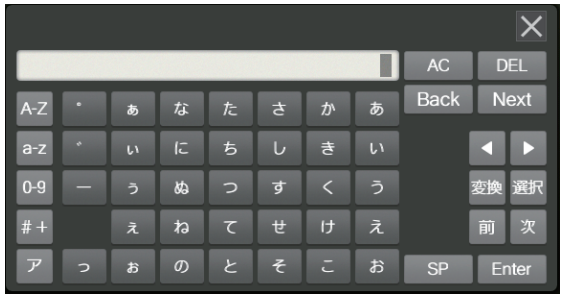
Kana-Kanji conversion and Pinyin conversion cannot be used simultaneously.
Set a conversion method in the [Kana-Kanji/Pinyin Conversion] window in the [Environmental Setting] dialog.

➟■4 [Kana-Kanji/Pinyin Conversion]

You can switch the character types of the key window using keys for switching character types sequentially or keys for switching character types directly.
Example) Key window for inputting characters on GT27-S
When the design is set to [Basic-Black]



Key window in alphabet mode



Key window in kana mode

1) **Input value display**
Displays the input value.

2) **Keys for switching character types directly**
Switches the character types of the key window directly.

3) **Character keys**
Use the keys to input characters to objects.
The displayed keys depend on the character types of the key window.

4) **[AC] key**
Deletes the input character string.

5) **[DEL] key**
Deletes a character to the right of the cursor.

6) **Keys for switching character types sequentially**
Switches the character types of the key window sequentially.
Since all hiragana characters or katakana characters are too many to be displayed on one key window, the characters are separately listed in two windows (first half and latter half).
Use the keys for switching character types sequentially to switch the display between the first half and latter half.

7) **Cursor keys**
The behavior differs depending on the status of the character string.
- The character string is not converted.
  The keys move the cursor.
- The character string is converted.
  The keys change the range of the characters to be converted.

8) **Convert key**
Converts the input character string.

If you touch this key during the conversion, the converted characters will be restored to their original state.

9) **Select key**
Confirms the entry.
When you convert multiple groups of hiragana characters, confirm each group of characters with the select key.

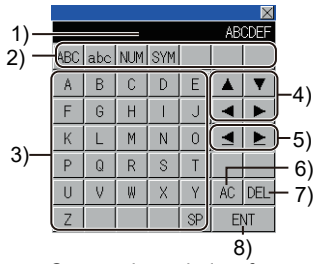
10) **Previous key or Next key**
Converts the input character string by group of characters.
If you touch this key during the conversion, another conversion candidate will be displayed.

11) **[Enter] key (Enter key)**
Writes the input characters to the device.

(6) Key window for inputting characters (Alphabet or kana mode) (GT21 and GS21)

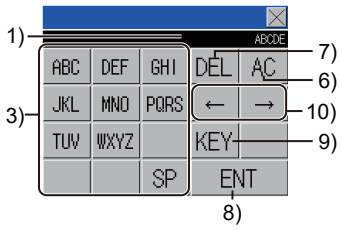
You can switch the input mode sequentially or to any mode directly with applicable keys.
In the input area of an object, characters are displayed in a character code specified in the setting dialog of the object.
Example) Key window for inputting characters on GT21 and GS21

GT2107-W, GT2105-Q, GS21



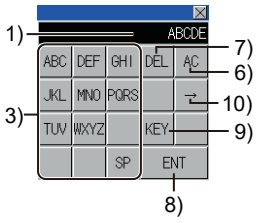
One-tap key window for inputting character strings

GT2107-W, GS21



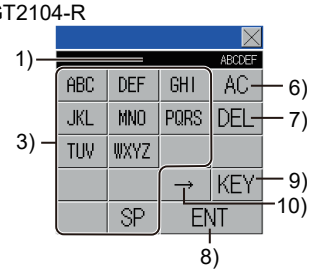
Multi-tap key window for inputting character strings

GT2105-Q



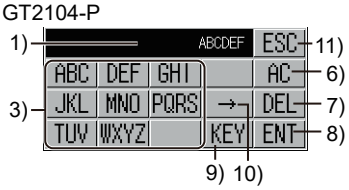
Multi-tap key window for inputting character strings

GT2104-R



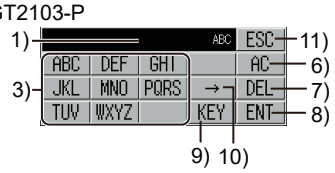
Multi-tap key window for inputting character strings

GT2104-P



Multi-tap key window for inputting character strings

GT2103-P



Multi-tap key window for inputting character strings

1) **Input value display**
Displays the input value.

2) **Character type switching keys (One-tap type only)**
Switches the character types of the key window directly.

3) **Character keys**
Use the keys to input characters to objects.
The displayed keys depend on the character types of the key window.

4) **Keys to move the cursor within a screen (One-tap type only)**
Move the input cursor to a different input object on the screen.

5) **Keys to move the cursor within an input object (One-tap type only)**
Not available to GT21 and GS21.

6) **[AC] key**
Deletes the input character string.

7) **[DEL] key**
Deletes a character to the right of the cursor.

8) **[Enter] key (Enter key)**
Writes the input characters to the device.

9) **Keys for switching character types sequentially**
Switches the character types of the key window sequentially one by one.

10) **Arrow key (Multi-tap type only)**
In the multi-tap key window, each character key bears multiple letters.
Repeatedly touching the same character key cycles through the letters on the key.
To enter the letters on a character key in succession, use an arrow key.

Example) when entering "TU"
Touch the [TUV] key once, touch the [→] key once, and then touch the [TUV] key twice.

11) **[ESC] key (GT2104-P and GT2103-P only)**
Closes the key window.

(7) Specifications of the user-created key window

The user-created key window is a window for inputting numerical values and characters which is created by the user.
Assign the window screen created by the user as a key window.

(a) Available screen size and number of screens

For the specifications of the user-created key window, refer to the following.

➟1.2.3 ■2 Screen specifications

(b) Key window types

The available key window types are the key window for decimal numbers, key window for hexadecimal numbers, and key window for character strings (ASCII, S-JIS).

GOT	Displayed key window
GT27, GT25, GT23, GS25	Key window for inputting hexadecimal values While GS450.b6 is on, the key window for inputting binary values is displayed. While GS450.b7 is on, the key window for inputting octal values is displayed.
GT21, GS21	For binary input on the numerical input: Key window for inputting binary values For octal input on the numerical input: Key window for inputting octal values

(c) Available figures and objects

You can place all the figures and objects placeable on the window screen.
Some restrictions are placed on the use of the following objects.

Object	Restriction
Numerical input, text input	The input operation is not available. The following shows applicable fonts. • 16-dot Standard (Gothic) • 16-dot Standard (Mincho) The font size can be specified by selecting an integral multiple (1 or 2) for width and height each.
Key Window Object	One object can be placed on one screen. The following shows applicable fonts. • 16dot Standard Gothic] • 16dot Standard Mincho] The font size can be specified by selecting an integral multiple (1 or 2) for width and height each.

(d) Superimposition of objects and layer setting

The superimposition of objects is available on the key window
The layer setting is also available.

(e) Setting of the screen script and trigger action

The screen scripts and trigger actions set for key windows are not executed.

(f) Placing key window objects

For the settings of the key window object, refer to the following.

➟8.31.4 [Input Value Area Setting] dialog
8.31.5 [Input Range Area Setting] dialog
8.31.6 [Input Maximum Value Area Setting] dialog
8.31.7 [Input Minimum Value Area Setting] dialog
8.31.8 [Previous Value Area Setting] dialog

(8) Common specifications of the standard key window and user-created key window

(a) Display position of the key window

The key window is displayed on the bottom right of the input object by default.
For how to set the window position, refer to the following.

➟8.30.2 How to use the window position

(b) Key window action

You can set the following key window actions for each project or screen.

- Actions of the cursor and key window when the operating condition is satisfied, the operating condition is not satisfied, and the screen is switched
- Display method of the cursor input area
- Display method and clear method of the key window

For how to configure the setting for each project, refer to the following.

➟5.2.4 ■4 (2) [Advanced Setting] tab

For how to configure the setting for each screen, refer to the following.

➟2.7.1 ■3 [Key Window Advanced Setting] tab

■2 How to use key windows

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

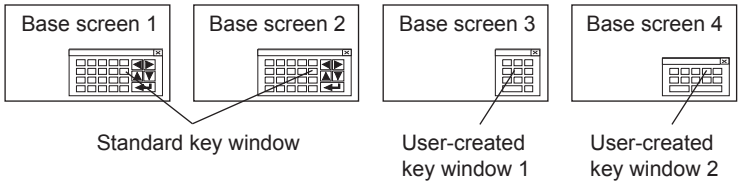
(1) How to display key windows

The key window appears when you touch an object such as numerical input and text input, which requires data input.
The input area format determines the key window type.
The key window for inputting binary or octal values is controllable with GS450. (Not available to GT21 and GS21)

➟5.2.4 ■1 (1) Specifications of the standard key window

5.2.4 ■1 (7) Specifications of the user-created key window

You can change the type of the key window to be displayed for each project or screen.
Create multiple key windows and set an appropriate key window for each screen.



For the settings of the key window displayed for each project, refer to the following.

➟5.2.4 ■4 (2) [Advanced Setting] tab

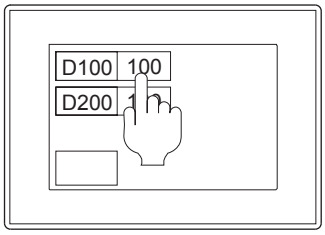
For the settings of the key window displayed for each screen, refer to the following.

➟2.7.1 ■3 [Key Window Advanced Setting] tab

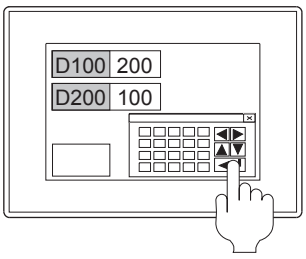
(2) How to operate key windows

The following shows the basic operations.

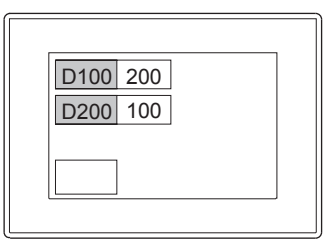
Step 1 Touch an object to which data is to be input.



Step 2 The key window appears. Input a numerical value or character string.
Then, touch the [Enter] button to write the numerical value or character string to the device.



Step 3 The input data is applied to the object and the key window closes.



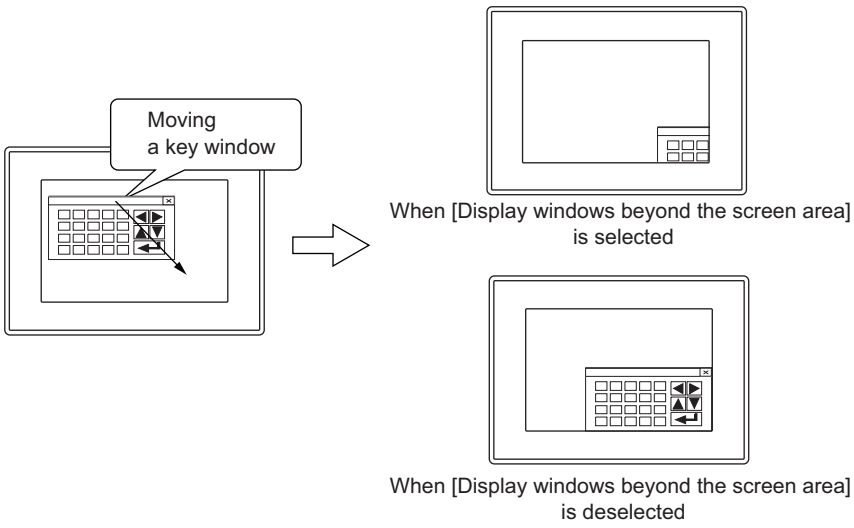
(3) Displaying a key window off-screen

Not available to GT21 and GS21.

To display a key window off the GOT screen, select [Display windows beyond the screen area] in the [Screen Switching/Window] dialog.

The key window can be displayed off the right side or the bottom of the screen.

➟5.2.1 ■5 [Screen Switching/Window]



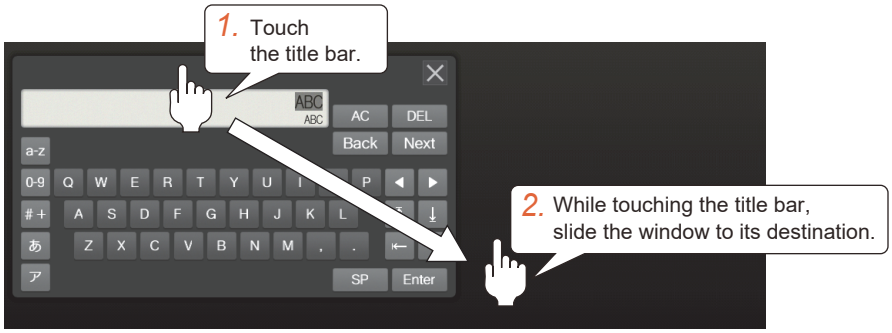
(4) How to move key windows

(a) Moving the window with touch operations

Touch the title bar of a key window, and then touch the position to move the window to within three seconds.

(b) Moving the window with a slide operation

While touching the title bar of a key window, slide the window to its destination.



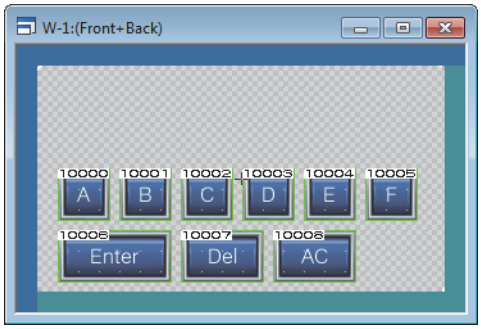
(5) How to create a user-created key window

(a) Outline procedure of creation

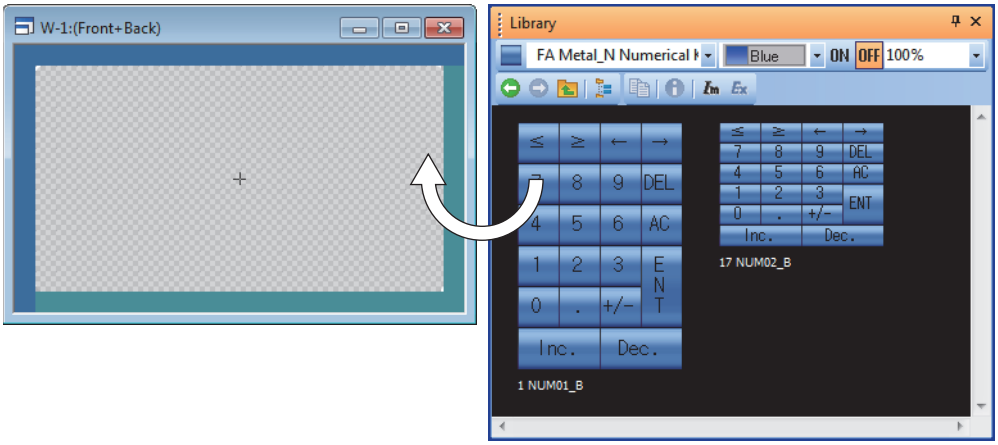
Step 1 Select [Screen] → [New] → [Window Screen...] from the menu to create a window screen.

➟2.5.1 ■2 Creating a window screen

Step 2 According to the application of the key window, place key code switches to which key codes are set, key window objects, and other objects and figures.



You can create a key window easily by using the buttons for numerical input and text input which are registered in the library.



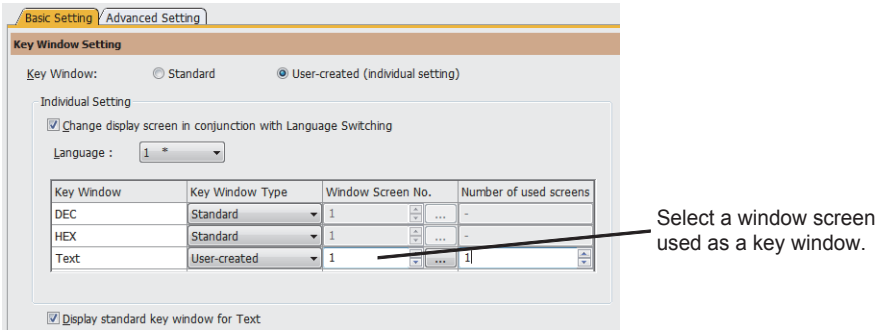
Various types of touch switches are registered in the library.
For how to use the library, refer to the following.

➟8.1.2 How to use the library

Step 3 Configure the setting to use the created window screen as a key window.

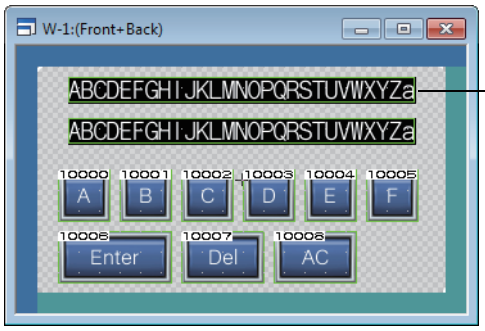
As appropriate, set also how to display the key window and the action of the cursor.

➟5.2.4 ■4 [Key Window]



Step 4 To display the input value and input range, configure the settings such as the display format and display position.

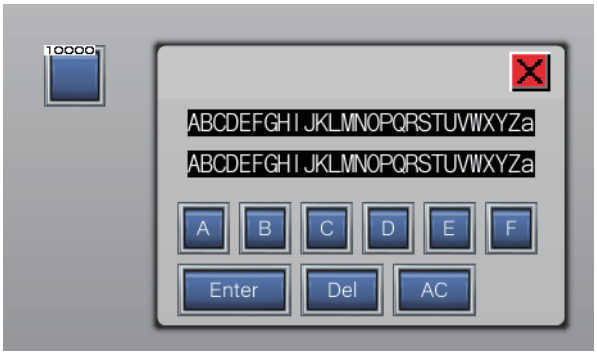
➟8.31 Placing an Object to Display the Input Information



Configure the setting such as the display position and the number of displayed digits for the input value.

Step 5 Check the display image on GT Designer3.

➟2.9.1 Displaying a preview



(b) **Buzzer setting**

You can set whether to sound the buzzer when moving the window on GT Designer3 or in the GOT utility.
For the setting on GT Designer3, refer to the following.

➟5.3.3 ■2 [Operation Setting/Utility Call Key]

For the setting on the GOT utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) When no cursor is displayed at an input target object

To input a value using key windows, a cursor must be displayed at the input target object.
If no cursor is displayed at the input target object when a key window is displayed, note the following precautions.

- Input values, valid input range, and previous values are not displayed on the displayed key window.
- Even if the operating condition which has been satisfied goes to be unsatisfied while a key window is displayed, the key window being displayed is not switched to another key window.

Even if the operating conditions of all the input objects go to be not satisfied, the key window remains displayed.

(2) Setting to close the key window whose title bar is hidden

When [Display the title bar on the user-created key window] is deselected in the [Display Detail Setting] dialog, you cannot close the key window with the [×] button because the button is hidden.
Configure one of the following settings to close the key window.

- Place a key code switch for which [key Code Type] is set to [Numerical/Text Input] and [Action] is set to [Cancel].
- Select [Clear the key window and the cursor] for [Defined key action] in the [Environmental Setting] window ([Advanced Setting] tab).

■4 [Key Window]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

On this window, set how to display the key window for each project.
Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display this window.

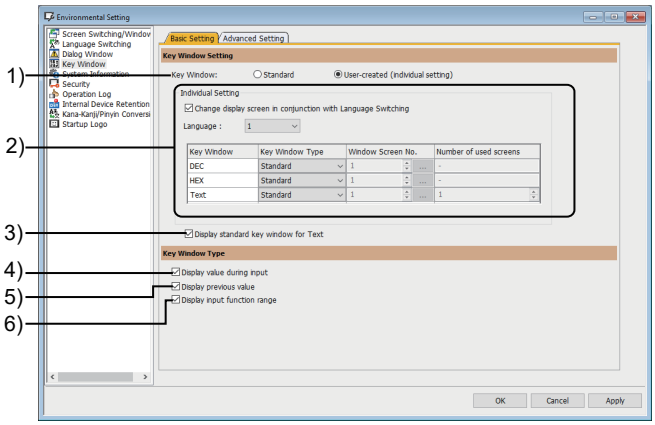
➟5.2.4 ■4 (1) [Basic] tab
5.2.4 ■4 (2) [Advanced Setting] tab

For how to display the key window for each screen, refer to the following.

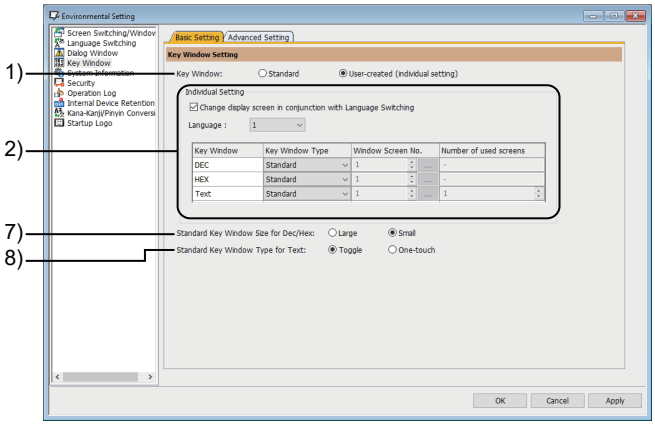
➟2.7.1 Property of base screens
2.7.2 Properties of window screens

(1) [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



For GT27, GT25, GT23, GT SoftGOT2000, and GS25



For GT21 and GS21

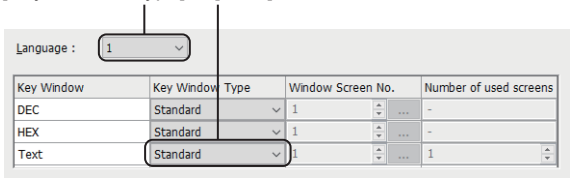
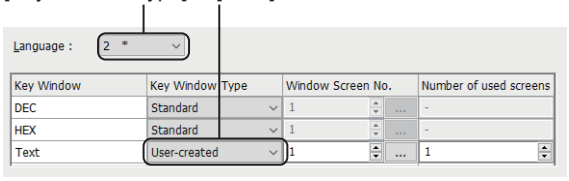
1) **[Key Window]**

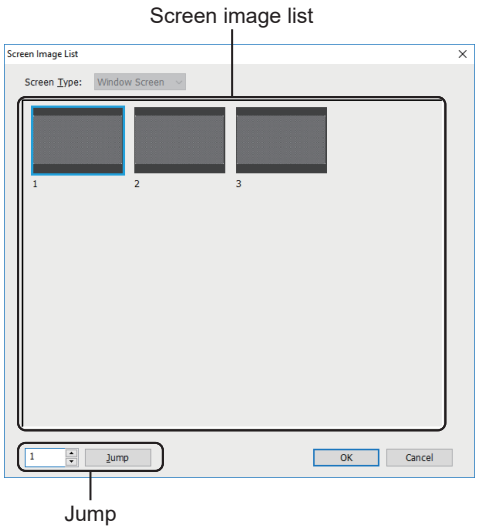
Select the type of a key window to be used.
The following shows the items to be selected.

- [Standard]
  Uses the standard key window pre-installed in the GOT.
- [User-created (individual setting)]
  Uses the standard key window or the user-created key window.
  Set the key window to be used in [Individual Setting].

2) **[Individual Setting]**

Set the key window to be used for each input target.

Item	Description
[Change display screen in conjunction with Language Switching]	Changes the key windows to be used in conjunction with the value of the language switching device.
[Language]	Select the value of the language switching device. The setting range is [1] to [30]. ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching]) For each value of the language switching device, you can set a key window to be used. If you select [User-created] in [Key window type], [*] is added to the value of the selected range. Example) • If the value of the language switching device is 1, the standard key window is used for text input. • If the value of the language switching device is 2, the user-created key window is used for text input. Select [1] for [Language] and select [Standard] for [Key Window Type] in [Text].  Select [2] for [Language] and select [User-created] for [Key Window Type] in [Text]. 
[Key Window...]	The use of each key window
[Key Window Type]	Select the type of key windows according to their uses. The following shows the items to be selected. • [Standard] Uses the standard key window. • [User-created] Uses the created window screen as a key window. Set the window screen to be used in [Window Screen No.].

Item	Description
[Window Screen No.]	If you select [User-created] in [Key Window Type], set the window screen number to be displayed as a key window. The setting range is [1] to [32767]. Click the [...] button to display the [Screen Image List] dialog. You can check the image on the screen when selecting a window screen.  • **[Screen Name]** Displays the screen type. • **Screen image list** Displays screen images. • **Jump** Specify a screen number and click the [Jump] button to select the screen in the screen image list.
[Number of used screens]	This can be set only to [Text]. Set the number of key windows used for text input. With the window screen set in [Window Screen No.] as the first on the list, window screens are used for the set number as key windows. To switch key windows, arrange key code switches to which the following operations are set. • [Switch window screens for ASCII (to the next)] • [Switch window screens for ASCII (to the previous)] • [Switch window screens for ASCII (screen no. specification)] ➟8.2.11 [Key Code Switch] dialog

3) **[Display standard key window for Text]**
Not available to GT21 and GS21.
Uses the standard key window for text input.

4) **[Display value during input]**
Not available to GT21 and GS21.
Displays the value being input in the key window.
To display the value in the user-created key window, arrange the input value area setting on the window screen.
➟8.31 Placing an Object to Display the Input Information

5) **[Display previous value]**
Not available to GT21 and GS21.
Displays the previous value in the key window.
To display the previous value in the user-created key window, arrange the previous value area setting on the window screen.
➟8.31 Placing an Object to Display the Input Information

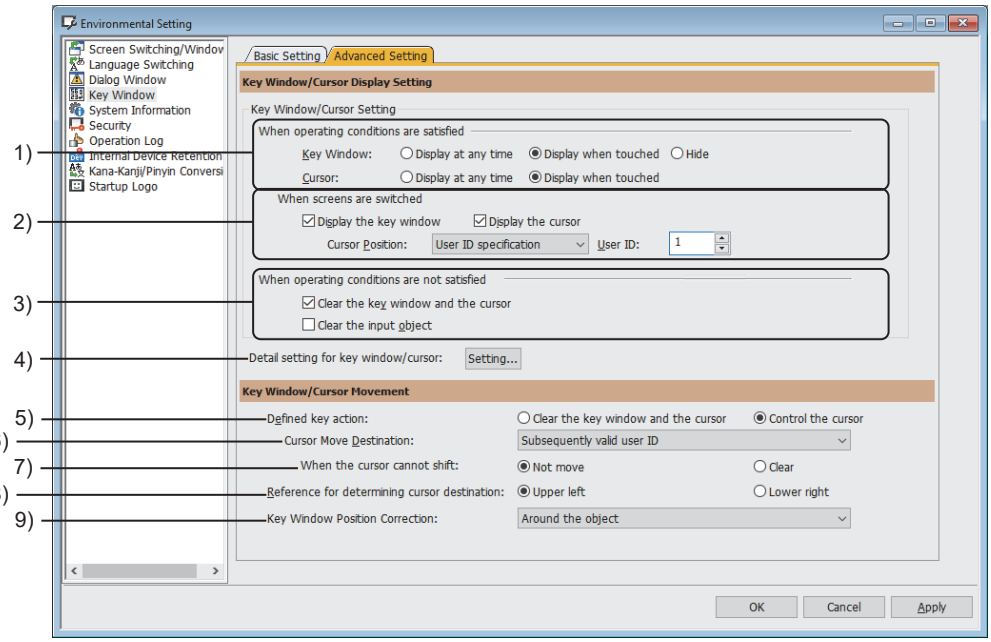
6) **[Display input function range]**
Not available to GT21 and GS21.
Displays the valid input range in the key window.
To display the valid input range in the user-created key window, arrange the input range area setting on the window screen.
➟8.31 Placing an Object to Display the Input Information

7) **[Standard Key Window Size for Dec/Hex]**
Not available to GT2104-R, GT2104-P, and GT2103-P.
Select the size of the key window.
The following shows the setting range.
- [Large]
- [Small]

8) **[Standard Key Window Type for Text]**
Not available to GT2104-R, GT2104-P, and GT2103-P.
Select the type of the key window.
The following shows the setting range.
- [Toggle]
- [One-touch]

(2) [Advanced Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[When operating conditions are satisfied]**
Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are satisfied.

Item	Description
[Key Window]	Configure the display settings of the key window for when the operating conditions of the objects for input are satisfied. The following shows the items to be selected. • [Display at any time] (Not available to GT21 and GS21) • [Display when touched] • [Hide]
[Cursor] (Not available to GT21 and GS21)	Configure the display settings of the cursor for when the operating conditions of the object for input are satisfied. The following shows the items to be selected. • [Display at any time] • [Display when touched]

2) **[When screens are switched]**
Configure the display settings of the key window and cursor to switch screens for when the operating conditions of the object for input are satisfied.

Item	Description
[Display the key window]	Displays a key window when the screen is switched.
[Display the cursor]	Displays a cursor when the screen is switched. Set the position to display the cursor in [Cursor Position].

Item	Description
[Cursor Position]	Select the position to display the cursor when the screen is switched. The following shows the items to be selected. • [Upper left] Displays the cursor at the object nearest to the upper left corner of the screen. • [User ID minimum] Displays the cursor at the object with the smallest user ID. • [User ID specification] Displays the cursor at the object with the specified user ID. Set the user ID of the object on which the cursor is displayed in [User ID].
[User ID]	Sets the user ID of the object on which the cursor is displayed. The setting range is [1] to [65535].

3) **[When operating conditions are not satisfied]**

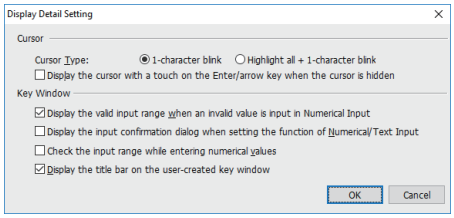
Not available to GT21 and GS21.

Configure the display settings of the key window and cursor for when the operating conditions of the objects for input are not satisfied.

Item	Description
[Clear the key window and the cursor]	Deletes the key window and cursor when the operating conditions of the objects for input are not satisfied.
[Clear the input object]	Deletes the key window, the cursor, and the objects for input when the operating conditions of the objects for input are not satisfied.

4) **[Detail setting for key window/cursor]**

Click the [Setting] button to display the [Display Detail Setting] dialog.



- **[Cursor Type]**
  Select the action of the cursor to be displayed at the input area.
  - [1-character blink]
    Blinks the area for one character in the input area.
  - [Highlight all + 1-character blink]
    Highlights the characters displayed in the input area, and blinks the area for one character.
- **[Display the cursor with a touch on the Enter/arrow key when the cursor is hidden]**
  Not available to GT21 and GS21.
  Displays the cursor when the enter key or an arrow key is touched while the cursor is hidden.
- **[Display the valid input range when an invalid value is input in Numerical Input]**
  Not available to GT21 and GS21.
  Displays the dialog indicating the valid input range when an invalid value is input in numerical input.
- **[Display the input confirmation dialog when setting the function of Numerical/ASCII Input]**
  Displays the confirmation dialog when numerical values or text are input.
- **[Check the input range while entering numerical values]**
  Not available to GT21 and GS21.
  This item is enabled only when an input range is set.
  The error message is displayed when a value out of the setting range is being entered.
  ➥8.4.5 ■3 [Input case] tab
- **[Display the title bar on the user-created key window]**
  Not available to GT2104-P and GT2103-P.
  Displays the title bar of a user-created key window.
  For the precautions on hiding the title bar, refer to the following.
  ➥5.2.4 ■3 (2) Setting to close the key window whose title bar is hidden

5) **[Defined key action]**

Select the action of the key window and cursor when the enter key is touched.

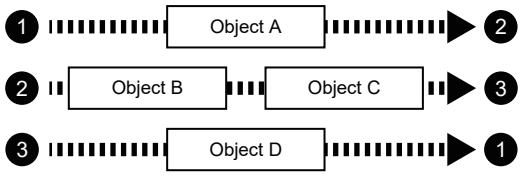
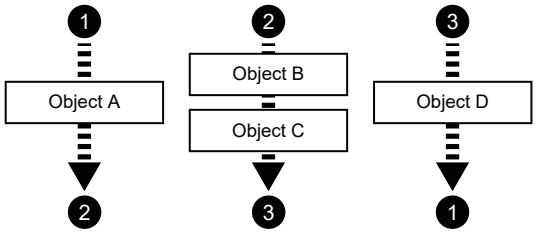
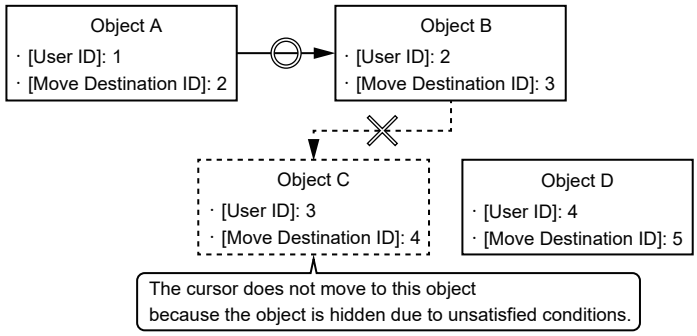
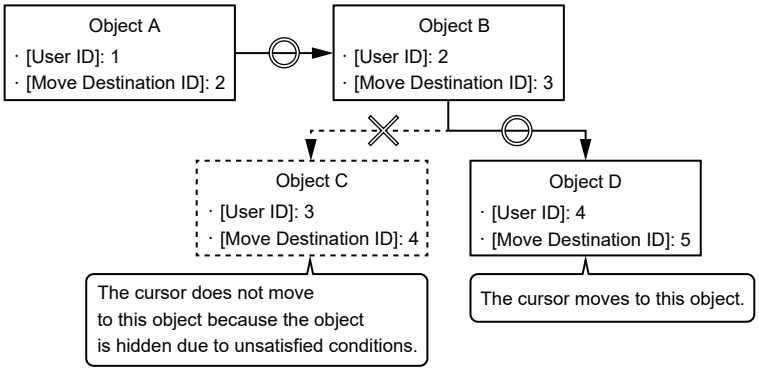
The following shows the items to be selected.

- [Clear the key window and the cursor]
  Deletes the key window and cursor.
- [Control the cursor]
  Moves the cursor to the specified position.
  Select a position to move the cursor in [Cursor Move Destination].

6) **[Cursor Move Destination]**

Select a position to move the cursor.

The following shows the items to be selected.

Item	Description
[Same operation as the right arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 
[Same operation as the down arrow key]	Moves the cursor using the specified coordinate point of the active object as a reference. Specify the reference coordinate point with [Reference for determining cursor destination]. The cursor moves as shown below. 
[In order of user ID]	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object.If the destination object is hidden due to unsatisfied conditions, the cursor does not move. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[Subsequently valid user ID] (Not available to GT21 and GS21)	Moves the cursor to the object that has the same user ID number as the move destination ID number of the active object.If the destination object is hidden due to unsatisfied conditions, the cursor moves to the object specified with [Move Destination ID] of the hidden destination object. To control the cursor movement, set [User ID] and [Move Destination ID] of the relevant objects. 
[Not move]	Does not move the cursor even after the entry is confirmed.

7) **[When the cursor cannot shift]**

This item is displayed when [Cursor Move Destination] is set to [In order of user ID] or [Subsequently valid user ID].
Select how the cursor moves when no destination object exists.
The following shows the items to be selected.

- [Not move]
- [Clear]

8) **[Reference for determining cursor destination]**

Select the standard to determine a position to move the cursor.
The following shows the items to be selected..

- [Upper left]
- [Lower right]

9) **[Key Window Position Correction]**

Select an action of the key window when it overlaps the input target object.
The following shows the items to be selected.

- [Not move]
  Keeps the key window displayed even if it overlaps the input target object.
- [To the four corners of the screen]
  Displays the key window at one of the four corners so that it does not overlap the input target object.
  Displays the key window on the lower right of the screen if it overlaps the input target object wherever it is.
- [Around the object]
  Displays the key window according to the position of the input target object.

Point

Cursor movement among the objects in a superimpose window

When a superimpose window is placed in the temporary area, the cursor moves among different objects depending on the position of the superimpose window.

- When placed in the temporary area on the right side of the screen display area

The cursor moves among the objects in the superimpose window.

- When placed in the temporary area at the bottom of the screen display area

The cursor does not move among the objects in the superimpose window.
The cursor moves to the next object, ignoring the objects in the superimpose window.

■5 Relevant settings

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Set the relevant settings other than the specific settings for the key window as required.
The following shows the functions that are available by the relevant settings.

(1) GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information...] from the menu to display the [Environmental Setting] window.

➟5.2.5 ■1 Specifications of the system information
5.2.5 ■4 [System Information]

Function	Setting item
Disabling touch operations and inputs from external devices (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying whether a key code is entered from an input object (touch switch, numerical input, or text input). (Write device: System signal 2-1.b3)	[System Signal 2-1]
Notifying that the input is determined. (Write device: System signal 2-1.b4)	[System Signal 2-1]
Notifying that a key window is displayed. (Write device: System signal 2-1.b11)	[System Signal 2-1]
Notifying the user ID of the numerical input to which an input is determined. (Write device)	[Numeric Value Input Number]
Notifying the key code which is set for the touched key. (Write device)	Not available to GT21 and GS21. [Key Code Input]
Notifying the value before the change (32 bits). (Write device)	[Previous Numeric Value Input(32bit)]
Notifying the fixed input value (32 bits). (Write device)	[Current Numeric Value Input(32bit)]

(2) Internal device

➟12.1.3 GOT special register (GS)

Function	Setting item
For a numerical input or text input, displaying a dialog to check the content before finalizing the input.	Not available to GT21 and GS21. GS450.b0
For a numerical input, displaying a notification dialog if the input value is outside the range.	Not available to GT21 and GS21. GS450.b1
Forcibly closing a key window when the input condition (the trigger condition or security level for the object) is not satisfied during a value or text input	Not available to GT21 and GS21. GS450.b5
Displaying the key window for inputting binary values when the format of the numerical input is binary	Not available to GT21 and GS21. GS450.b6
Displaying the key window for inputting octal values when the format of the numerical input is octal	Not available to GT21 and GS21. GS450.b7
Switching a key window for text input to a key window that supports Kana-Kanji conversion or Pinyin conversion	Not available to GT23, GT21, and GS21. GS467.b1

5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

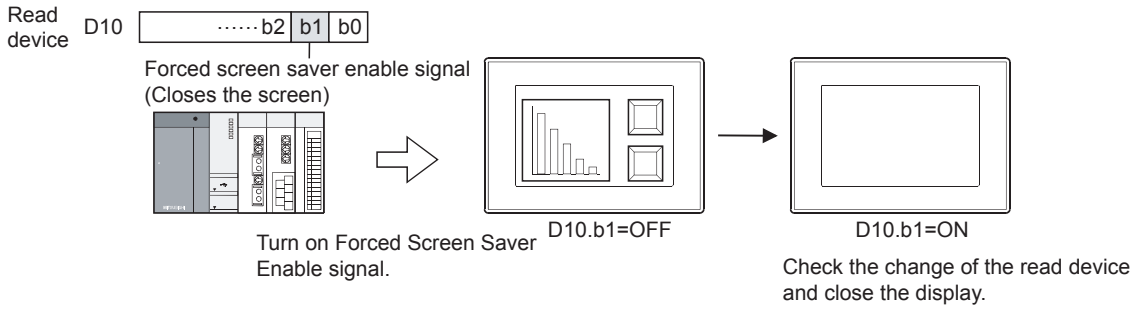
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of the system information
■2 How to use the system information
■3 Precautions
■4 [System Information]
■5 [Selection/Sort Setting] dialog
■6 Relevant settings

By setting devices that store the system information, you can control the GOT operations (closing a screen, disabling key input) from a controller and notify the GOT status to a controller.
The two types of devices that store system information are shown below.

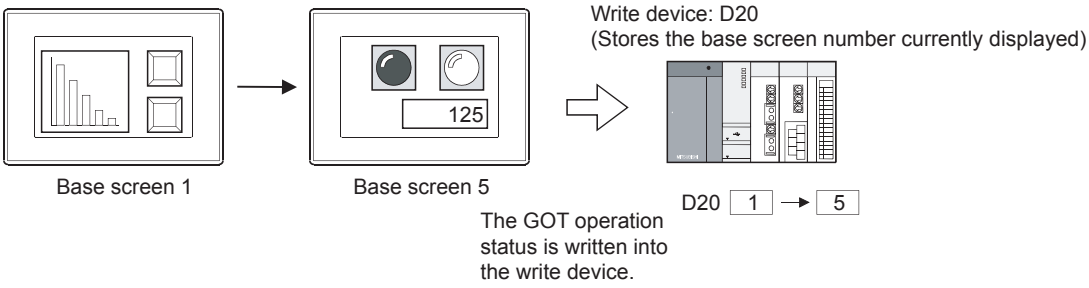
• Read device

This device controls the GOT operations by writing values from a controller to the read device for controlling the GOT operations.
The read device is monitored at the monitoring cycle of the GOT.
The read device value needs to be held for the interval of GOT monitoring cycle or longer.
Example) Turning the GOT to screen saver mode forcibly by a controller



• Write device

By writing a value to the write device for notifying the GOT status, the GOT notifies the GOT status itself to a controller.
The write device is updated when the GOT operation status has changed.
Example) Notifying the base screen number currently displayed on the GOT to a controller



■1 Specifications of the system information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The system information is stored in devices assigned to each system information.

• Read device

➥(1) System signal 1-1
(2) System signal 1-2
(3) External I/O output function/output function

• Write device

➥(4) System signal 2-1

(5) System signal 2-2
(6) System signal 2-3
(7) Numeric value input number
(8) Previous numeric value input (32 bits)
(9) Current numeric value input (32 bits)
(10) GOT error code
(11) GOT error code 2
(12) Printing report screen number
(13) Extended drive information
(14) Drive Empty Capacity Information
(15) On-screen base screen number
(16) On-screen window 1 to 5 screen number
(17) Current cursor display object ID
(18) Previous cursor display object ID
(19) Current cursor display user ID
(20) Previous cursor display user ID
(21) Key code input
(22) External I/O function/input information 1
(23) External I/O function/input information 2
(24) Previous numeric value input (64 bits)
(25) Current numeric value input (64 bits)

(1) System signal 1-1

This signal controls the GOT from a controller.
The following shows the control details of each bit.

Bit number	Signal name	Description	Supported models
b0	Automatic Screen Saver Disable signal	Turning on this signal disables the screen saver function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b1	Forced Screen Saver Enable signal	Turning on this signal forcibly turns the GOT into the screen saver mode. Turning off this signal displays the screen again.	
b2	Forced Screen Saver Touch-Cancel signal	Turning on this signal cancels the screen saver when the screen is touched even during forced screen saving. The operation condition of the Forced Screen Saver Enable signal (System signal 1-1.b1) varies according to on or off of this signal. • ON: Operates at the rising. • OFF: Operates during on.	
b3	Key Code Read Complete signal	Turning on this signal notifies that the reading of input key code has completed to the GOT. Turning on this signal turns off the Key Input signal (System signal 2-1.b3). ➟(4) System signal 2-1	
b4	Numeric Value Input Read Complete signal	Turning on this signal notifies the GOT that reading the input value of a numerical input object has completed. Turning on this signal turns off the Numeric Value Input signal (System signal 2-1.b4), and 0 is stored in the numerical value input number. For details, refer to the following. ➟(3) Confirm the numerical input determination timing To use this signal for a text input object, configure one of the following settings. • Selecting [Output object ID of Text Input to the system information device] for the [Environmental Setting] window ([System Information]) • Turning on GS450.b2 ➟(4) System signal 2-1 5.2.5 ■4 [System Information] 12.1.3 GOT special register (GS)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Turning on this signal notifies that the reading of input values for the numerical input and text input has completed to the GOT. Turning on this signal turns off the Numeric Value Input signal (System signal 2-1.b4), and 0 is stored in the numerical value input number. For details, refer to the following. ➟(3) Confirm the numerical input determination timing	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Bit number	Signal name	Description	Supported models
b5	Barcode Input Disable signal (CH8)	Turning on this signal disables the barcode function for the channel No. 8.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b6	External Device I/ O Complete signal (CH8)	Turning on this signal notifies the GOT that reading data from the device, which the barcode or the RFID input data is stored in, is completed. Turning on this signal turns off the External Device I/O signal (CH8) (System signal 2-1.b6). ⇒(4) System signal 2-1	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b7	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b8	Buzzer Three-shot Output signal	Turning on this signal sounds the buzzer three times. Set the buzzer length in the utility. The buzzer is sounded even when [Buzzer] is set to [None] in the [GOT Setup] window ([Operation Setting/Utility Call Key]). ⇒5.3.1 ■2 [Display Setting/Language Setting]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b9	Disable Touch Operation signal	Turning on this signal disables touch operations and inputs from external devices.	
b10	Hard Copy Setting Validate signal	Turning on this signal enables the reverse printing of the hard copy function with system signal 1-1.b12. When this signal is turned off, the reverse printing is settable in the [Hard Copy] dialog. ⇒9.7.6 ■2 [Printer] tab	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b11	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b12	Hard Copy White/Black Reverse signal	Turning on this signal reverses black and white of the monitor screen. Reversing black and white is enabled only when the output destination is a printer.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b13	GOT Error Reset signal	Turning on this signal processes the followings. • Storing 0 to the GOT error code (Write device) • Turning off the GOT Error Detection signal (System signal 2-1.b13) • Clearing system alarm messages ⇒(4) System signal 2-1 (10) GOT error code	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b14	Buzzer Output signal	While turning on this signal, the buzzer is sounded. The buzzer is sounded even when [Buzzer] is set to [None] in the [GOT Setup] window ([Operation Setting/Utility Call Key]).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b15	Buzzer One-shot Output signal	Turning on this signal sounds the buzzer once. Set the buzzer length in the utility. The buzzer is sounded even when [Buzzer] is set to [None] in the [GOT Setup] window ([Operation Setting/Utility Call Key]).	

(a) **Screen control at the screen saver mode**

The following shows the priority for the screen control at the screen saver mode.

Priority	System information and function	System information condition	Screen saving status
High ↕ Low	Forced Screen Saver Touch-Cancel signal (System signal 1-1.b2)	ON	Screen saver disabled
	Forced Screen Saver Enable signal (System signal 1-1.b1)	ON	Screen saver enabled
	Automatic Screen Saver Disable signal (System signal 1-1.b0)	ON	Screen saver disabled
	Screen saver function by the utility setting	-	Screen saver enabled
	Displaying user-created screens or the utility screen	-	Screen saver disabled

(b) **Relationship between the screen saver function and the Disable Touch Operation signal**

The following shows the relationship between the screen saver function and the Disable Touch Operation signal.

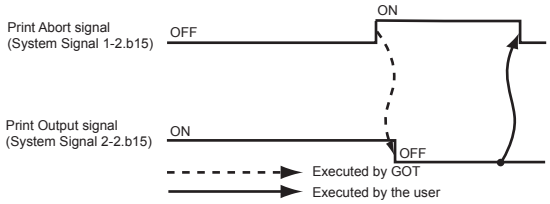
Forced Screen Saver Touch-Cancel signal (System signal 1-1.b2)	Forced Screen Saver Enable signal (System signal 1-1.b1)	Disable Touch Operation signal (System signal 1-1.b9)	Screen saver function by the utility setting	Screen status
ON	ON	ON	ON, OFF	The GOT enters the screen saver mode. Touching the screen cancels the screen saver mode. The screen does not respond to a touch operation even after the screen saver mode has been canceled.
		OFF		The GOT enters the screen saver mode. Touching the screen cancels the screen saver mode. The screen responds to a touch operation after the screen saver mode has been canceled.
OFF		ON, OFF		The GOT enters the screen saver mode. Touching the screen does not cancel the screen saver mode.
	OFF	ON		The GOT does not enter the screen saver mode. The screen does not respond to a touch operation.
		OFF	ON	The GOT enters the screen saver mode. Touching the screen cancels the screen saver mode. The screen responds to a touch operation after the screen saver mode has been canceled.
			OFF	The GOT does not enter the screen saver mode. The screen responds to a touch operation.

(2) System signal 1-2

This signal controls the GOT from a controller.

The following shows the control details of each bit.

Bit number	Signal name	Description	Supported models
b0	File Access Error Reset signal	Turning on this signal resets all the File Access Error signals (System signal 2-2.b7 to b9 and extended drive information.b2, b5, b8, and b11) in the drive A, B, D, E, F, and G. ➟(5) System signal 2-2 (13) Extended drive information	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b1	RFID Request signal (CH8)	By turning on this signal, the GOT requests to read the data with the channel No. 8.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b2	Barcode Input Disable signal (CH5)	Turning on this signal disables the barcode function for channel No. 5.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b3	External Device I/O Complete signal (CH5)	Turning on this signal turns off the External Device I/O signal (CH5) (System signal 2-3.b0). ➟(6) System signal 2-3	
b4	RFID Request signal (CH5)	By turning on this signal, the GOT requests to read the data with the channel No. 5.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b5	Barcode Input Disable signal (CH6)	Turning on this signal disables the barcode function for the channel No. 6.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b6	External Device I/O Complete signal (CH6)	Turning on this signal turns off the External Device I/O signal (CH6) (System signal 2-3.b1). ➟(6) System signal 2-3	
b7	RFID Request signal (CH6)	By turning on this signal, the GOT requests to read the data with the channel No. 6.	
b8	Barcode Input Disable signal (CH7)	Turning on this signal disables the barcode function for the channel No. 7.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b9	External Device I/O Complete signal (CH7)	Turning on this signal turns off the External Device I/O signal (CH7) (System signal 2-3.b2). ➟(6) System signal 2-3	
b10	RFID Request signal (CH7)	By turning on this signal, the GOT requests to read the data with the channel No. 7.	

Bit number	Signal name	Description	Supported models
b11	Enable Serial RFID Control During External Authentication signal	When this bit is turned on, the operator authentication data read by an RFID controller (serial connection) can be saved into devices.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b12 to b14	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b15	Print Abort signal	Turning on this signal aborts printing when this signal rises. In response to the abort of printing, the GOT turns off the Print Output signal (System signal 2-2.b15). The user must turn off this signal after confirming that the Print Output signal (System signal 2-2.b15) is turned off.  ➟(5) System signal 2-2	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(3) External I/O output function/output function

Functions for each signal differ depending on the GOT used.

(a) GT27, GT25-S, and GT25-V

GT2505-V is excluded.

Use the external I/O output function for the external output.

The following shows the control details of each bit.

Bit number	Signal name	Description
b0 to b15	Output signal Y0 to YF	Write the information for outputting to the external device, such as a lamp or relay. These signals are enabled only when an external I/O unit (extension unit) is used.

(b) GT25HS-V

Bit number	Signal name	Description
b0 to b5	Control Operation Switch LED signal	Not available to GT2505HS-V. Turning on each bit turns on the operation switch LED corresponding to the bit. The following shows the correspondences between the bits and the operation switch LEDs. • b0: SW1 LED • b1: SW2 LED • b2: SW3 LED • b3: SW4 LED • b4: SW5 LED • b5: SW6 LED
b6	Control Grip Switch LED signal	Turning on this signal turns on the grip switch LED.

(c) GT21-P

Use the external I/O output function for the external output.

The following shows the control details of each bit.

Bit number	Signal name	Description
b0 to b6	-	Use prohibited
b7	Control Backlight (5 Colors) signal	Turning on this signal enables the Specify Backlight Color (5 Colors) signal and the Control Backlight Blink signal.

Bit number	Signal name	Description
b8 to b10	Specify Backlight Color (5 Colors) signal	Controls the backlight color (5 colors). b8 / b9 / b10 / Backlight color OFF / OFF / OFF / -(Not lit) ON / OFF / OFF / White OFF / ON / OFF / Green ON / ON / OFF / Use prohibited OFF / OFF / ON / Red ON / OFF / ON / Pink OFF / ON / ON / Orange ON / ON / ON / Use prohibited
b11	-	Use prohibited
b12	Control Backlight (3 Colors) signal	Turning on this signal enables the Specify Backlight Color (3 Colors) signal and the Control Backlight Blink signal. Turning on the Control Backlight (5 Colors) signal and the Control Backlight (3 Colors) signal enables the Specify Backlight Color (5 Colors) signal.
b13	Control Backlight Blink signal	Turning on this signal blinks the backlight.
b14 to b15	Specify Backlight Color (3 Colors) signal	Specify Backlight Color (3 Colors) signal. The backlight color depends on whether [White/Red/Pink] or [Green/Red/Orange] is selected for [Backlight color selection for 3-color control] of [System Information] in the [Environmental Setting] window. ➟5.2.5 ■4 [System Information] b14 / b15 / Backlight color [White/Red/Pink] / Backlight color [Green/Red/Orange] OFF / OFF / -(Not lit) / -(Not lit) ON / OFF / White / Green OFF / ON / Red / Red ON / ON / Pink / Orange

(4) System signal 2-1

This signal notifies various notifications from the GOT to a controller or the user.
The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0	Screen Saving signal	Turns on while the GOT is in screen saver mode.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b1	GOT Ready signal	Shows the GOT status when the GOT is powered on. • ON: Normal • OFF: Abnormal If this signal does not turn on by resetting the GOT, the hardware error may occur in the GOT. Consult your local Mitsubishi service center or representative.	
b2	-	Use prohibited	
b3	Key Input signal	Shows whether a key code is entered from an input object (touch switch, numerical input, or text input). • ON: The key is input. • OFF: The key is not input. This signal turns off when the Key Code Read Complete signal (System signal 1-1.b3) turns on. ➟(1) System signal 1-1	

Bit number	Signal name	Description	Supported models
b4	Numeric Value Input signal	Turns on when a value is input in the numerical input, and the value is completed. Turning on the Numeric Value Input Read Complete signal (System signal 1-1.b4) turns off this signal. ⇒(1) System signal 1-1 To use this signal for the text input, configure any of the following settings. • Selecting [Output object ID of Text Input to the system information device] for the [Environmental Setting] window ([System Information]) • Turning on GS450.b2 This signal does not function when a value is input to the numerical input for which a user ID is not set.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Turns on when the data input to a numerical input object or a text input object is confirmed. Turning on the Numeric Value Input Read Complete signal (System signal 1-1.b4) turns off this signal. ⇒(1) System signal 1-1 This signal functions even when data is input to the numerical input object or the text input object without a user ID number.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b5	Human Sensor Detection signal	Turns on when the human sensor detects human motion. This signal turns on for approx. 60 seconds after GOT startup due to the sensor's characteristic. Available to GT27-X and GT27-S.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b6	External Device I/O signal (CH8)	Available when the channel No. 8 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Available when the channel No. 8 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device when the dedicated protocol is used. Turns on when the data transfer to the RFID controller is completed when the nonprocedural protocol is used. Turns off when the External Device I/O Complete signal (CH8) (System signal 1-1.b6) turns on.	
b7	Hard Copy Output signal	Turns on during an output by the hard copy function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b8	Report Output signal	Turns on during printing by the report function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b9	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b10	Recipe Processing Signal	Turns on during recipe process (Write/Read operation).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b11	Key Window Output signal	Turns on during displaying the key window.	
b12	Hardcopy Sub-signal	Enabled when [Delete the file with the smallest number and create another file when the capacity of the destination is exceeded] is selected in the [Hard Copy] dialog. ⇒9.7.6 [Hard Copy] dialog Turns on when the number of screen data files (file number) stored in a memory card by using the hard copy function is 9900 to 9999.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Bit number	Signal name	Description	Supported models
b13	GOT Error Detection signal	Turns on when an error occurs in the GOT. When this signal is turned on, check the GOT error code and eliminate the cause. After eliminating the cause, turn on the GOT Error Reset signal (System signal 1-1.b13). ➟(1) System signal 1-1 (10) GOT error code (11) GOT error code 2	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b14	Numeric Value Error Detection signal	Turns on when the value exceeding the input range is stored in the write target device of the numerical input. (This signal is checked when screens are switched.) When no input range formula is preset to the numerical input, detection is not performed.	
b15	Printer error detection signal	Turns on when a printer error occurs during printing, such as printer power-off, cable disconnection, no paper, or paper jam.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(5) System signal 2-2

This signal notifies various notifications from the GOT to a controller or the user.
The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0	Drive A File Accessing signal	Turns on while a file in the drive A is open or while a folder or file is operated.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b1	Drive B File Accessing signal	Not available to GT2505-V and GT25HS-V. Turns on while a file in drive B is open or a folder or file in drive B is manipulated.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b2	Drive C File Accessing signal	Turns on while a file in drive C is open or a folder or file in drive C is manipulated.	
b3	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b4	Drive A Full signal	Turns on when the available space of the drive A is less than 1k byte.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b5	Drive B Full signal	Not available to GT2505-V and GT25HS-V. Turns on when the available space of the drive B is less than 1k byte.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b6	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b7	Drive A File Access Error signal	Turns on while an access error with a file in the drive A occurs.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b8	Drive B File Access Error signal	Not available to GT2505-V and GT25HS-V. Turns on while an access error with a file in the drive B occurs.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Bit number	Signal name	Description	Supported models
b9 to b10	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b11	Cursor Displaying signal	Turns on during displaying the numerical input or text input cursor.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b12	Built-in Battery Voltage Drop signal	Not available to GT2103-P and GS21. Turns on when a voltage drop of the GOT built-in battery is detected. If a power failure occurs after this bit turns on, the battery backup data is held within the data retention period. Replace the battery immediately.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b13	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b14	Liquid Crystal Backlight Brightness Decrease/Failure Detection signal	Not available to GT2104-R, GT2104-P, and GT2103-P. Turns on when a decrease in brightness or a failure of the liquid crystal backlight is detected.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b15	Print Output signal	Turns on when the printing (printing for the hard copy function or the report function) starts. Turns off at the following timing. • When any device that notifies printing in progress is turned off while a serial printer or an Ethernet printer (PCL5) is in use • When the GOT receives a notification that printing is complete while a PictBridge-compatible printer or an Ethernet printer (ESC/P-R) is in use • When the Print Abort signal (System signal 1-2.b15) is turned on • When the abort trigger of the report function is turned on • When the abort trigger of the hard copy function is turned on • When communication with an Ethernet printer (ESC/P-R) is disconnected	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(6) System signal 2-3

This signal notifies various notifications from the GOT to a controller or the user.
The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0	External Device I/O signal (CH5)	Available when the channel No. 5 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Available when the channel No. 5 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device when the dedicated protocol is used. Turns on when the data transfer to the RFID controller is completed when the nonprocedural protocol is used. Turns off when the External Device I/O Complete signal (CH6) (System signal 1-2.b3) turns on. ⇒(2) System signal 1-2	
b1	External Device I/O signal (CH6)	Available when the channel No. 6 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Available when the channel No. 6 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device when the dedicated protocol is used. Turns on when the data transfer to the RFID controller is completed when the nonprocedural protocol is used. Turns off when the External Device I/O Complete signal (CH6) (System signal 1-2.b6) turns on. ⇒(2) System signal 1-2	

Bit number	Signal name	Description	Supported models
b2	External Device I/O signal (CH7)	Available when the channel No. 7 is used for the barcode function. Turns on when the data read by the barcode reader is stored in the specified device.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		Available when the channel No. 7 is used for the RFID function. Turns on when the data read by the RFID reader/writer is stored in the specified device when the dedicated protocol is used. Turns on when the data transfer to the RFID controller is completed when the nonprocedural protocol is used. Turns off when the External Device I/O Complete signal (CH7) (System signal 1-2.b9) turns on. ➟(2) System signal 1-2	
b3 to b15	b0	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(7) Numeric value input number

For GT27, GT25, GT23, GT SoftGOT2000, and GS25

This signal stores the user ID number of a numerical input object when a value input to the object is confirmed.

To clear the stored user ID, turn on the Numeric Value Input Read Complete signal (System signal 1-1.b4).

For details, refer to the following.

➟5.2.5 ■2 (3) Confirm the numerical input determination timing

To use this signal for a text input object, configure one of the following settings.

- Selecting [Output object ID of Text Input to the system information device] for the [Environmental Setting] window ([System Information])

➟5.2.5 ■4 [System Information]

- Turning on GS450.b2

➟12.1.3 GOT special register (GS)

For GT21 and GS21

This signal stores the user ID number of a numerical input object or a text input object when the data input to the object is confirmed.

To clear the stored user ID, turn on the Numeric Value Input Read Complete signal (System signal 1-1.b4).

For details, refer to the following.

➟5.2.5 ■2 (3) Confirm the numerical input determination timing

(8) Previous numeric value input (32 bits)

When a value is input in the numerical input, the value before the change (32 bits) is stored.

When the data type of the numerical input is 64 bits, the value of the lower 32 bits is stored.

Only the numerical input to which the user ID is set is effective.

(9) Current numeric value input (32 bits)

The input value (32 bits) determined in the numerical input.

When the data type of the numerical input is 64 bits, the value of the lower 32 bits is stored.

Only the numerical input to which the user ID is set is effective.

(10) GOT error code

Not available to GT21 and GS21.

The error code of errors occurred in the GOT is stored.

For details of errors, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(11) GOT error code 2

Not available to GT21 and GS21.

The classification code of errors occurred in the GOT is stored.

The upper 8 bits store ASCII code G (identification code indicating a GOT error).

The lower 8 bits store values indicating a classification code.

Example) For the GOT error (G01) related to the communication and controllers, 4701h is stored.

For details of errors, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(12) Printing report screen number

The screen number being printed is stored.

(13)Extended drive information

This signal notifies the usage status of the extended drive information.
The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0	Drive E File Accessing signal	Turns on while a folder or a file in drive E is manipulated.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b1	Drive E Full signal	Turns on when the free space of drive E is less than 1 kilobyte.	
b2	Drive E File Access Error signal	Turns on while an access error with a file in the drive E occurs.	(Only available to GT2107-W of GT21 models)
b3	Drive F File Accessing signal	Turns on while a folder or a file in drive F is manipulated.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b4	Drive F Full signal	Turns on when the free space of drive F is less than 1 kilobyte.	
b5	Drive F File Access Error signal	Turns on while an access error with a file in the drive F occurs.	
b6	Drive G File Accessing signal	Turns on while a folder or a file in drive G is manipulated.	
b7	Drive G Full signal	Turns on when the free space of drive G is less than 1 kilobyte.	
b8	Drive G File Access Error signal	Turns on while an access error with a file in the drive G occurs.	
b9	Drive N File Accessing signal	Turns on while a folder or a file in drive N is manipulated.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b10	Drive N Full signal	Turns on when the free space of drive N is less than 1 kilobyte.	
b11	Drive N File Access Error signal	Turns on when an error occurs while a file in drive N is being accessed.	
b12 to b15	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(14)Drive Empty Capacity Information

The free space information of each drive is stored.
For GT2107-W, drives A and E are available.
For GT2105-Q, GT2104-R, GT2104-P, GT2103-P, and GS21, only drive A is available.
The value is stored in two word devices.
The unit of the stored value can be specified by using the Unit of Drive Free Space device (GS466).

➥12.1.3 GOT special register (GS)

For the available drives by GOT model, refer to the following.

➥1.2.8 Drive configuration of the target GOT for data transfer

(15)On-screen base screen number

The base screen number being displayed is stored.
The following shows the screen number to be stored.

Display status	Base screen No. 0*1	Data format of the screen switching device	
		BIN	BCD
Displaying other than user-created screens (such as the utility)	Not existent	-1	Stores the number of the user-created base screen previously displayed
	Existent	-2	
Screen switching	Not existent	0*2	0*2
	Existent	-1*2	9999*2*3
Displaying base screen	Not existent	1 to 32767	1 to 9999
	Existent	0 to 32767	0 to 9999

*1 Base screen No. 0 exists under either of the following conditions:
- Screen No. 0 exists on the base screen or window screen.
- A screen number other than [0] is set in [Screen No. of the window screen to be hidden] in [Screen Switching / Window Setting] in the [Environmental Setting] window.

*2 When you select [Retain the screen number of on-screen] in [System Information] in the [Environmental Setting] window, the number of the screen displayed before the screen switching is stored.

➥5.2.5 ■4 [System Information]

*3 If the base screen number is also 9999, the GOT cannot distinguish base screen No. 9999 from the device value (9999) during screen switching.

The screen number stored when a password is requested during screen switching with level authentication differs depending on the GOT model.

- For GT27, GT25, and GT SoftGOT2000, the display status stores the same screen number as the displayed base screen.
- For GT21, the display status stores the same screen number as the non-user-created screen.

(16)On-screen window 1 to 5 screen number

The screen number of the window screen being displayed is stored.
For GT23, GT21, and GS21, only the screen number of window screen 1 or 2 is stored.
The following shows the screen number to be stored.

Display status	Window screen No. 0*1	Data format of the screen switching device	
		BIN	BCD
Not displayed or during screen switching	Not existent	0	
	Existent	When you select [Retain the screen number of on-screen] in [System Information] in the [Environmental Setting] window, the number of the screen displayed before the screen switching is stored. ➟5.2.5 ■4 [System Information] Otherwise, the value set to [Screen No. of the window screen to be hidden] in [Screen Switching / Window Setting] in the [Environmental Setting] window is stored. ➟5.2.1 ■5 [Screen Switching/Window]	
Displaying overlap window	Not existent	1 to 32767	1 to 9999
	Existent	0 to 32767	0 to 9999

*1 Window screen No. 0 exists under either of the following conditions:

- Screen No. 0 exists on the base screen or window screen.
- A screen number other than [0] is set in [Screen No. of the window screen to be hidden] in [Screen Switching / Window Setting] in the [Environmental Setting] window.

(17)Current cursor display object ID

The object ID of the object on which the numerical input or text input is currently displayed is stored.
By setting any of the followings, 0 is stored.

- No object that requires the cursor is displayed on the displayed screen.
- A cursor is not displayed when the screen is switched.

To store 0 when the cursor is deleted, set any of the followings.

- Selecting [Clear the cursor information when deleting the cursor] in the [Environmental Setting] window ([System Information])

  ➟5.2.5 ■4 [System Information]
- Turning on GS450.b3

  ➟12.1.3 GOT special register (GS)

(18)Previous cursor display object ID

The object ID of the object on which the numerical input or text input is previously displayed is stored.
By setting any of the followings, 0 is stored.

- No object that requires the cursor is displayed on the displayed screen.
- A cursor is not displayed when the screen is switched.

To store 0 when the cursor is deleted, set any of the followings.

- Selecting [Clear the cursor information when deleting the cursor] in the [Environmental Setting] window ([System Information])

  ➟5.2.5 ■4 [System Information]
- Turning on GS450.b3

  ➟12.1.3 GOT special register (GS)

(19)Current cursor display user ID

For GT27, GT25, GT23, GT SoftGOT2000, and GS25

This signal stores the user ID number of a numerical input object with the cursor being displayed.

To use this signal for a text input object, configure one of the following settings.

- Selecting [Output object ID of Text Input to the system information device] for the [Environmental Setting] window ([System Information])
- Turning on GS450.b2

For GT21 and GS21

This signal stores the user ID number of a numerical input object or a text input object with the cursor being displayed.

To store 0 when the cursor is deleted, set any of the followings.

- Selecting [Clear the cursor information when deleting the cursor] in the [Environmental Setting] window ([System Information])

  ➟5.2.5 ■4 [System Information]
- Turning on GS450.b3

  ➟12.1.3 GOT special register (GS)

(20)Previous cursor display user ID

For GT27, GT25, GT23, GT SoftGOT2000, and GS25

This signal stores the user ID number of a numerical input object with the cursor displayed previously.

To use this signal for a text input object, configure one of the following settings.

- Selecting [Output object ID of Text Input to the system information device] for the [Environmental Setting] window ([System Information])
- Turning on GS450.b2

For GT21 and GS21

The user ID of the object on which the numerical input or text input is previously displayed is stored.

To store 0 when the cursor is deleted, set any of the followings.

- Selecting [Clear the cursor information when deleting the cursor] in the [Environmental Setting] window ([System Information])

  ➟5.2.5 ■4 [System Information]
- Turning on GS450.b3

  ➟12.1.3 GOT special register (GS)

(21)Key code input

When inputting values with the input key (touch switch, numerical input, or text input), the specified key code is stored.

Not available to GT21 and GS21.

When a key code is stored, the Key Input signal (System signal 2-1.b3) is turned on.

➟(4) System signal 2-1

(22)External I/O function/input information 1

Use the external I/O output function for the external input.

The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0 to b7	Input signal X0 to X7	Input data are written. An external input can take up to three seconds to write data. For avoiding the delay time, use GOT internal devices (GB10 to GB25, GB30 to GB37, GB50 to GB57). ➟12.1.3 GOT special register (GS)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b8	Power supply signal	Turns on when the power is not supplied to an external I/O device.	
b9 to b15	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(23)External I/O function/input information 2

Use the external I/O output function for the external input.
The following shows the notification details of each bit.

Bit number	Signal name	Description	Supported models
b0 to b7	Input signal X8 to XF	Input data are written. An external input can take up to three seconds to write data. For avoiding the delay time, use GOT internal devices (GB10 to GB25, GB30 to GB37, GB50 to GB57). ➟12.1.3 GOT special register (GS)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
b8 to b15	-	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(24)Previous numeric value input (64 bits)

When a value is input in the numerical input, the value before the change (64 bits) is stored.
Only the numerical input to which the user ID is set is effective.

(25)Current numeric value input (64 bits)

The input value (64 bits) determined in the numerical input is stored.
Only the numerical input to which the user ID is set is effective.

■2 How to use the system information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the system information by assigning word devices to each signal.
Setting the read device and write device is required.
For how to set the devices, refer to the following.

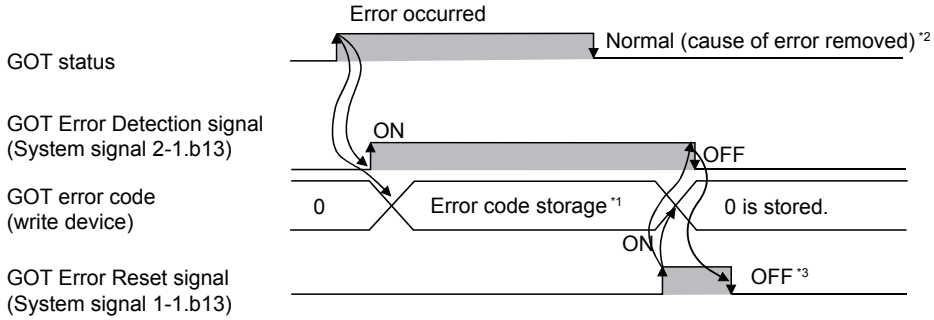
➟5.2.5 ■4 [System Information]

The following shows application examples of the system information.

(1) Confirm the error occurred in GOT

Not available to GT21 and GS21.
The error code of errors occurred in the GOT can be confirmed.
The error codes of error code 300 to 699 are displayed.
For details of the error codes, refer to the following.

➟GOT2000 Series User's Manual (Utility)

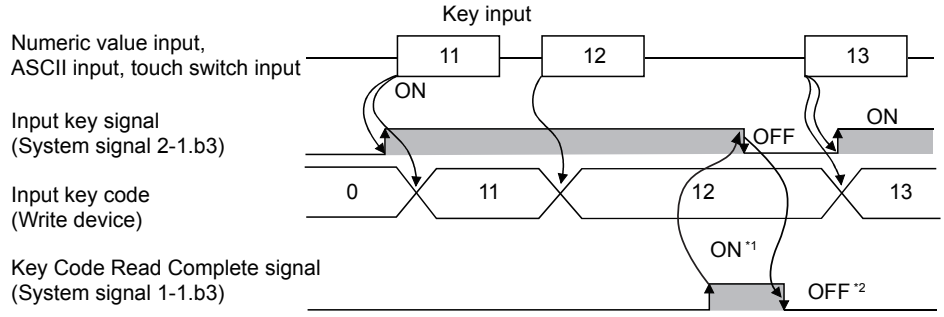


*1 When multiple errors occur simultaneously, the latest error code is stored.
*2 The GOT error code (write device) is not cleared automatically even if the error cause is removed.
Clear the error code by using the GOT Error Reset signal (System signal 1-1.b13).
*3 Check that the GOT Error Detection signal (System signal 2-1.b13) turns off, then turn off the GOT Error Reset signal (System signal 1-1.b13).
If the GOT Error Reset signal (System signal 1-1.b13) remains on, the GOT error code (write device) is reset in the next error occurrence.

(2) Confirm the input key code by input key

Not available to GT21 and GS21.

The input key code can be confirmed by input key (touch switch, numerical input, or text input).



*1 When key input is completed, the stored key code is held.

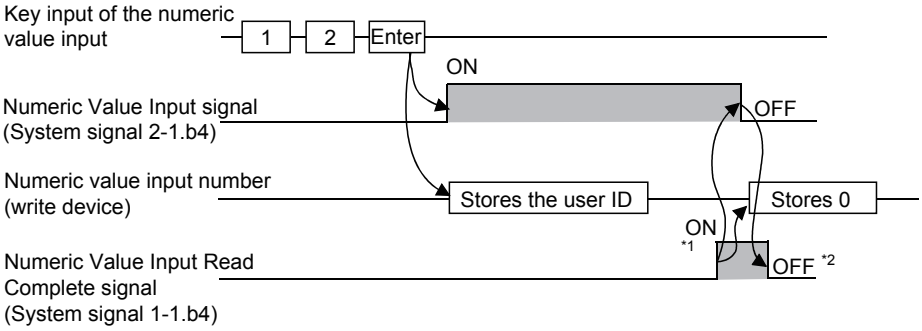
When the Key Code Read Complete signal (System signal 1-1.b3) turns on, the Input key signal (System signal 2-1.b3) turns off.

*2 Check that the Input key signal (System signal 2-1.b3) turns off, then turn off the Key Code Read Complete signal (System signal 1-1.b3).

If the Key Code Read Complete signal (System signal 1-1.b3) remains on, the stored key code is reset at the next key input.

(3) Confirm the numerical input determination timing

The timing of which the input value was determined can be confirmed with the user ID written in the numerical input number.



*1 After the numeric value input determination, the stored user ID is held.

The Numeric Value Input signal is cleared when the Numeric Value Input Read Complete signal (System signal 1-1.b4) turns on.

*2 Check that the Numeric Value Input signal (write device) turns off, then turn off the Numeric Value Input Read Complete signal (System signal 1-1.b4).

If the Numeric Value Input Read Complete signal (System signal 1-1.b4) remains on, the user ID cannot be stored or the Numeric Value Input signal cannot be turned on at the next value input and determination.

(4) Confirm cursor's display position

The cursor's display position can be confirmed by writing the information of the object (numerical input and text input) in which a cursor is displayed to the device.

The following shows the object information types to be written.

- User ID

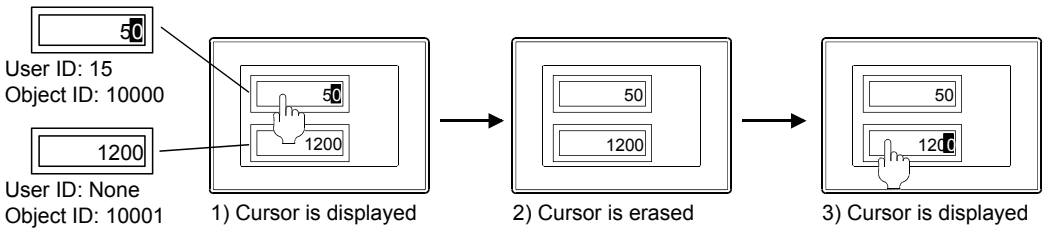
  Set any ID for an object.

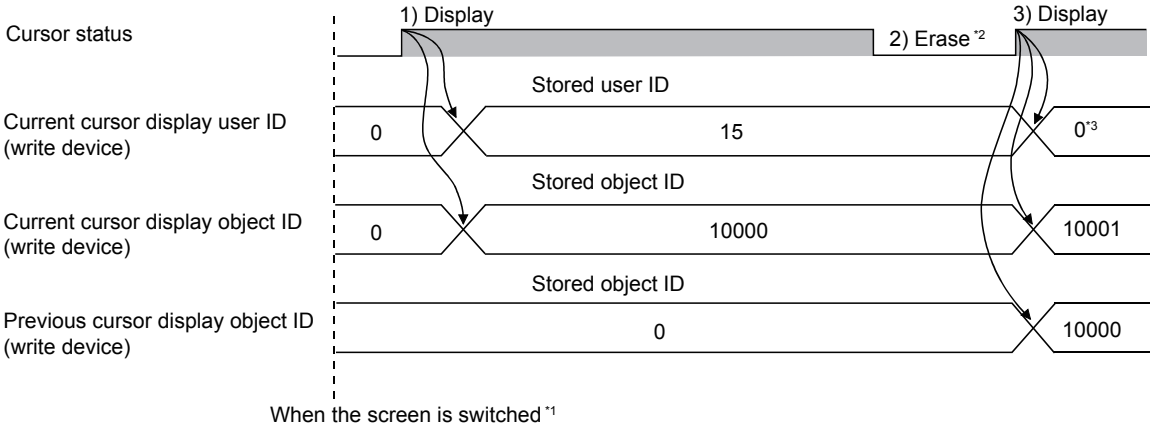
  Set the user ID in the setting dialog of each object.

- Object ID

  The ID is set automatically when an object is set with GT Designer3.

Example) Operation example of cursor display





*1 If a cursor is not displayed when the screen is switched, 0 is stored.

*2 The stored user ID and object ID are held even when a cursor is erased.

*3 If a cursor is displayed at the object (numeric input, text input) for which a user ID is not set, the cursor position numeric value input is 0.

*4 The current cursor display user ID and previous cursor display user ID operates with the text input when the GOT internal device GS450.b2 turns on.

(5) Delete the stored user ID and object ID when a cursor is deleted

To store 0 when the cursor is deleted, set any of the followings.

- Selecting [Clear the cursor information when deleting the cursor] in the [Environmental Setting] window ([System Information])

  ➟5.2.5 ■4 [System Information]

- Turning on GS450.b3

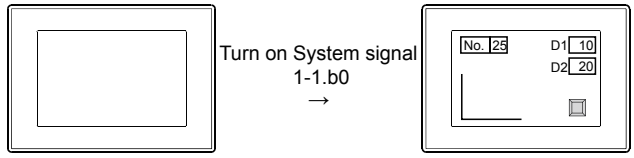
  ➟12.1.3 GOT special register (GS)

(6) Control screens

(a) Disable the screen saver function

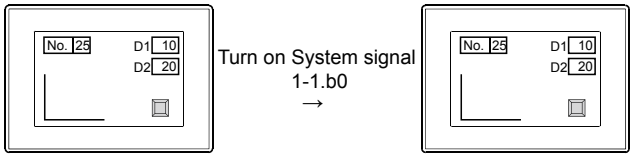
The screen saver function, which is set with the GOT utility, is designed to turn off the screen display if the GOT is not touched within a specified time. This function prevents the screen performance from deteriorating over its operable life. By turning on the Automatic Screen Saver Disable signal in the system information, the system information function set with the utility (setup) can be disabled.

Example 1) Displaying the monitor screen erased by automatic screen saver function



Screen is not displayed. Screen is displayed.

Example 2) Interrupting the screen saver function from starting after the time set elapses

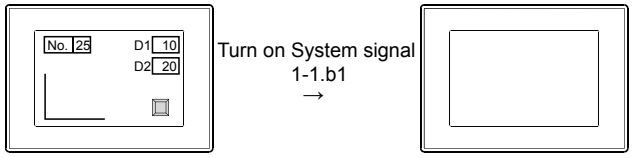


Set the screen saving time to 30 minutes

Screen does not turns to the screen saver mode after 30 minutes have elapsed
(The set time is disabled and the screen keeps displaying.)

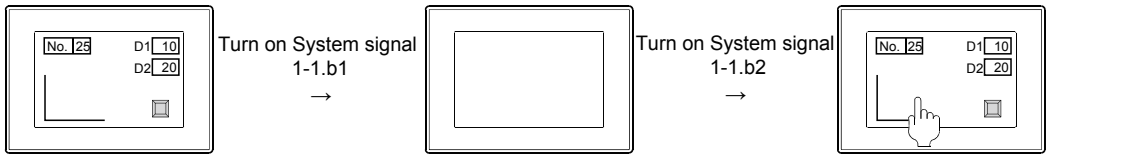
(b) Erase screens

By turning on the Forced Screen Saver Enable signal, the monitor screen can be erased.
While this bit is on, the monitor screen is not displayed even when the GOT screen is touched.
Example) Erasing the displayed monitor screen



Screen disappears.

In addition, the monitor screen can be displayed by turning on the Forced Screen Saver Touch-Cancel signal and touching the screen to cancel the forced screen saver function started with the Forced Screen Saver Enable signal.
Example) Displaying the monitor screen that is forcibly erased

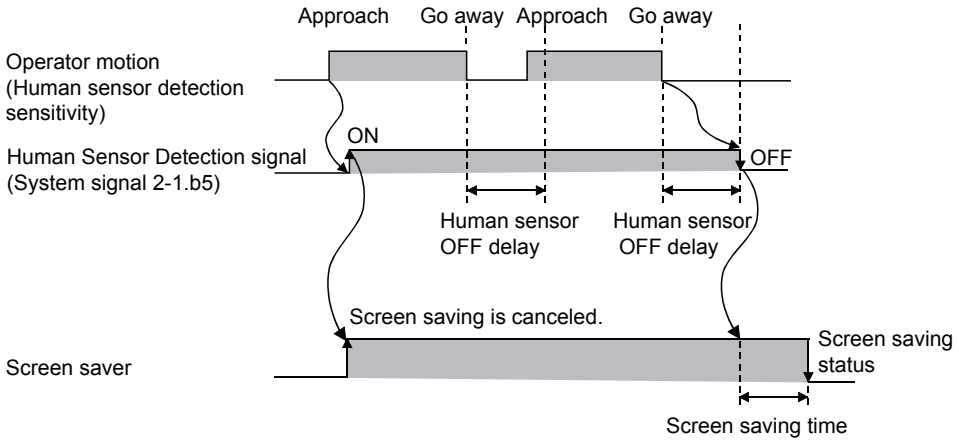


Screen disappears.

The screen appears when the GOT screen is touched.

(c) **Display control by human sensor**

The human sensor is a function that cancels the screen saver mode without the touch operation to the GOT.
By approaching the GOT, the screen saver mode can be canceled.

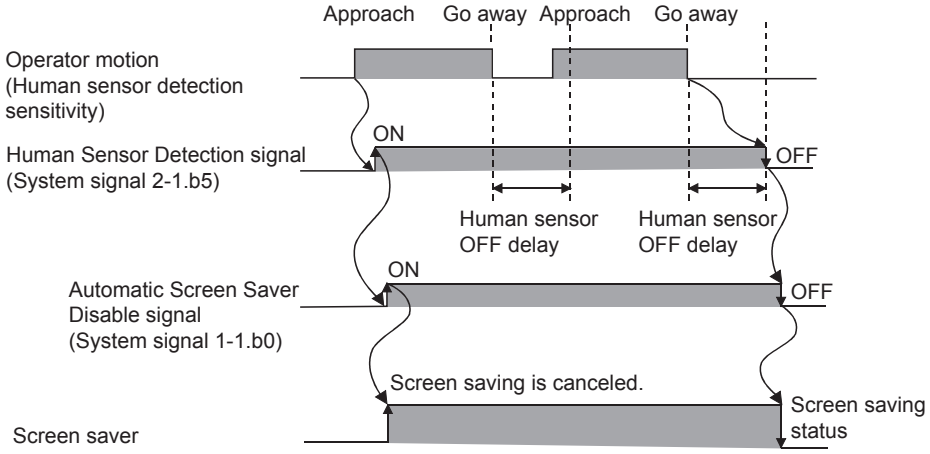


When no operator is not around the GOT for the time set in the human sensor OFF delay, the Human Sensor Detection signal (System signal 2-1.b5) turns off.
When the time set for the screen saving time elapses after the Human Sensor Detection signal turns off, the GOT turns to the screen saver mode.
Configure the human sensor settings (including the human sensor detection sensitivity and the human sensor OFF delay) with the GOT utility.
For the details of the utility setting, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(d) **Cancel the screen saver mode only when human movement is detected**

By disabling the GOT to cancel the screen saver mode with the touch or external operation, the GOT cancel the screen saver mode only when human movement is detected.



To control the screen saver mode, use a sequence program to link the Human Sensor Detection signal with the Automatic Screen Saver Disable signal.
With this setting, the GOT turns the screen saver mode after the human sensor OFF delay time elapses, regardless of the screen saving time.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Using a special register of the PLC

Do not use a special register of the PLC as a read device or write device of the system information.
The special register is an internal register whose specification is defined in the PLC.
If the special register is used, the PLC or the GOT may not operate correctly.

(2) Writing data to the system information device (write device)

Do not write data to a device set as a write device for the system information.
Depending on the operation on the GOT and the GOT internal status, the value of a write device may be overwritten with data retained in the GOT.

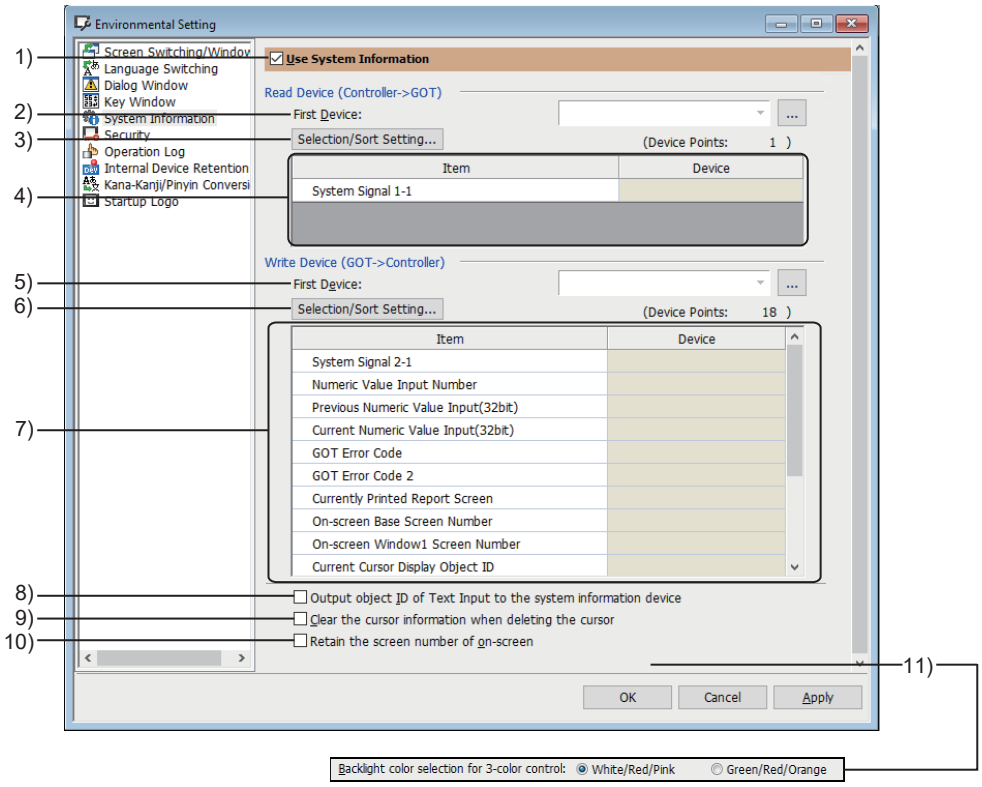
(3) When using global labels for the system information (write device)

When using global labels for the system information (write device), set the array-type global labels.
If a primitive data type global label is set, the system alarm (315: Device writing error) occurs.

■4 [System Information]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With [System Information], set the validity for each system information.
Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display this window.



For GT21-P

1) **[Use System Information]**
Select this item to enable the system information.

2) **[First Device] (Read)**
Set a read device where the system information (read) is stored.
The word device is available.
Up to contiguous 3 points of devices from the set device are used for the read device.

3) **[Select/Sort] button**
Displays the [Selection/Sort Setting] dialog.
Set the system information and order of the read device to be enabled.

➟5.2.5 ■5 [Selection/Sort Setting] dialog

4) **Selected item list (read device)**
Displays the enabled system information and the read device assigned to each system information in a list.

5) **[First Device] (Write)**
Set a write device where the system information (write) is stored.
The word device is available.
Up to contiguous 39 points of devices from the set device are used for the write device.

6) **[Select/Sort] button**
Displays the [Selection/Sort Setting] dialog.
Set the system information and order of the read device to be enabled.

➟5.2.5 ■5 [Selection/Sort Setting] dialog

7) **Selected item list (write device)**
Displays the enabled system information and the write device assigned to each system information in a list.

8) **[Output object ID of Text Input to the system information device]**
Outputs the object ID number of a text input object to the following system information devices when data is input to the object.
- Numeric Value Input Read Complete signal (System signal 1-1.b4)
- Numeric Value Input signal (System signal 2-1.b4)
- Numeric value input number
- Current cursor display user ID
- Previous cursor display user ID

For GT27, GT25, GT23, GT SoftGOT2000, and GS25
Selecting this item outputs the object ID number of a text input object to the system information devices when data is input to the object.
For GT21 and GS21
Regardless of whether this item is selected, the object ID number of a numerical input object or a text input object is output to the system information devices when data is input to the object.

9) **[Clear the cursor information when deleting the cursor]**
Stores 0 in the following devices when the cursor is deleted.
- Current cursor display object ID
- Previous cursor display object ID
- Current cursor display user ID
- Previous cursor display user ID

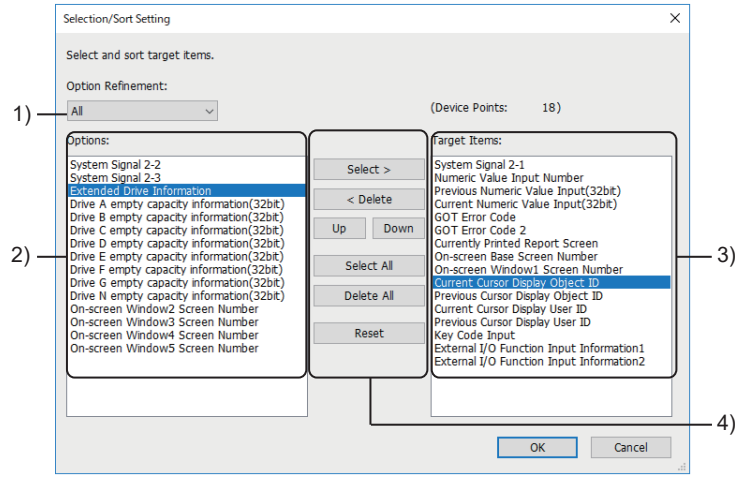
10) **[Retain the screen number of on-screen (not fill in zeros)]**
Holds the following device values while the screens are switched. (0 is not stored.)
- On-screen base screen number
- On-screen window 1 screen number
- On-screen window 2 screen number
- On-screen window 3 screen number
- On-screen window 4 screen number
- On-screen window 5 screen number

11) **[Backlight color selection for 3-color control]**
Select the backlight color of GT21-P.
- [White/Red/Pink]
- [Green/Red/Orange]

■5 [Selection/Sort Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Selection/Sort Setting] dialog, set targets to be enabled and the order of devices.
Display this window from the [Environmental Setting] window ([System Information]).



1) **[Option Refinement]**

Narrows down the items displayed in [Options].
This item is displayed only when a write device is set.
The following shows the items to be selected.

- [All]: Displays all items.
- [Basic Setting]: Displays only items related to the basic setting.
- [Drive Setting]: Displays the items only related to the free space of the drives.
- [Screen Setting]: Displays only items related to the base screen and the window screen.

2) **[Options]**

Items to be disabled with the system information are displayed in a list.
Click the buttons on the window to move the item to [Target Items].

3) **[Target Items]**

Items to be enabled with the system information are displayed in a list.
Contiguous devices are assigned to the items in the list from the top.
By clicking the buttons on the window, items can be moved to [Options] or the display oder of the items can be changed.
The display order of the following items is fixed.

- Drive N empty capacity information(32bit)
- Previous Numeric Value Input(64bit)
- Current Numeric Value Input(64bit)

4) **Buttons**

Selects, deletes, or changes the order of the display.

Item	Description
[Select] button	Moves an item selected in [Options] to [Target Items].
[Delete] button	Moves an item selected in [Target Items] to [Options].
[Up] button	Moves up an item selected in the target items.
[Down] button	Moves down an item selected in the target items.
[Select All] button	Moves all items displayed in [Options] to [Target Items].
[Delete All] button	Moves all items displayed in [Target Items] to [Options]. However, the System signal 1-1 (read device) and the System signal 2-1 (write device) are not moved.
[Reset] button	Resets [Options] and [Target Items] to the initial status.

■6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the system information as required.
The following shows the functions that are available by the relevant settings.

(1) Internal device

➡12.1.3 GOT special register (GS)

Function	Setting item
Specifying the unit of the drive free space	GS466

5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the screen security
■2 Precautions
■3 [Security] ([Screen Security] tab)
■4 Level authentication
■5 Operator authentication

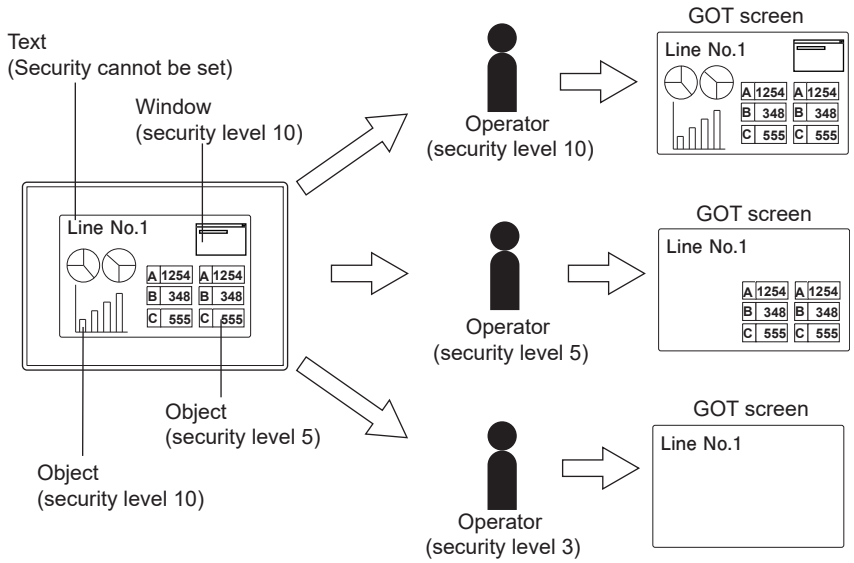
Set a security level for objects and windows to control the screen display.
Security setting is available as shown below.

- For objects
  You can set a security level for individual objects placed on the screen.
  For numerical input, numerical display, text input, and text display, you can set different security levels for input objects and display objects.
  ➟8. OBJECT FUNCTION
- For base screens, window screens, and mobile screens
  You can set a security level for the screen itself.
  ➟2.7 Changing Screen Property

The following authentication methods are selectable.

- Operator authentication
  Set a security level for each operator. Authentication is performed for each operator.
  ➟5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))
- Level authentication
  Set a password for each security level. Authentication is performed using the password.
  ➟5.2.8 Configuring the security settings for the GOT screen ([Screen Security] (Level authentication))

Example) GOT screens at login with operator accounts with different security levels



■1 Specifications of the screen security

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Operations restricted by the screen security

The screen security restricts the following operations.

- Displaying screen data and operating objects on the GOT

To restrict operations other than the above, use the following security functions.
Using multiple security functions in combination further strengthens the security.

(a) **Function restricting project operations**

Function	Description
Security key authentication	Restricts a project to be viewed on GT Designer3 or executed on the GOT by protecting the project with a security key. ➟2.12 Protecting a Project with a Security Key
Project security	Restricts unregistered users to view or edit a project by registering users with the project. Also restricts operations by screen according to the access level of each user. ➟2.13 Protecting a Project by Registering Users

(b) **Function restricting communication with the GOT**

Function	Description
Data transfer security	Restricts data transfer between the personal computer (GT Designer3) and the GOT with a password. ➟5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])
IP filter	Restricts access to the GOT by Ethernet by registering IP addresses with the filtering list. ➟5.4.3 Setting the IP filter

(c) **Function restricting the GOT operations**

Function	Description
Functional operation security	Restricts the display of the utility, and operations of some monitor functions. ➟5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])

(2) Authentication method

The following two authentication methods are available: operator authentication and level authentication.
The operator authentication is performed based on the operator management information corresponding to each operator.
For the details, refer to the following.

➟5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))

The level authentication is performed using user-specified passwords corresponding to each security level.
For the details, refer to the following.

➟5.2.8 Configuring the security settings for the GOT screen ([Screen Security] (Level authentication))

■2 Precautions

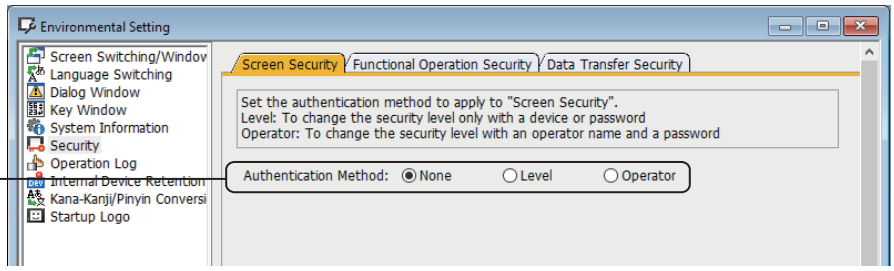
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When designing screens, do not set security to the initial screen appearing upon startup of the GOT. You can use the screen switching function or others to switch the initial screen to a screen with security.

■3 [Security] ([Screen Security] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the security for the GOT in [Security].
Select [Common] → [GOT Environmental Setting] → [Security] from the menu to display this window.
Display the [Screen Security] tab and select the authentication method used in [Authentication Method].



1) **[Authentication Method]**

Select the authentication method for the screen security.
The following shows selectable items.

- [None]
  The screen security is not used.
- [Level]

The level authentication is an authentication method with a password set for each security level.

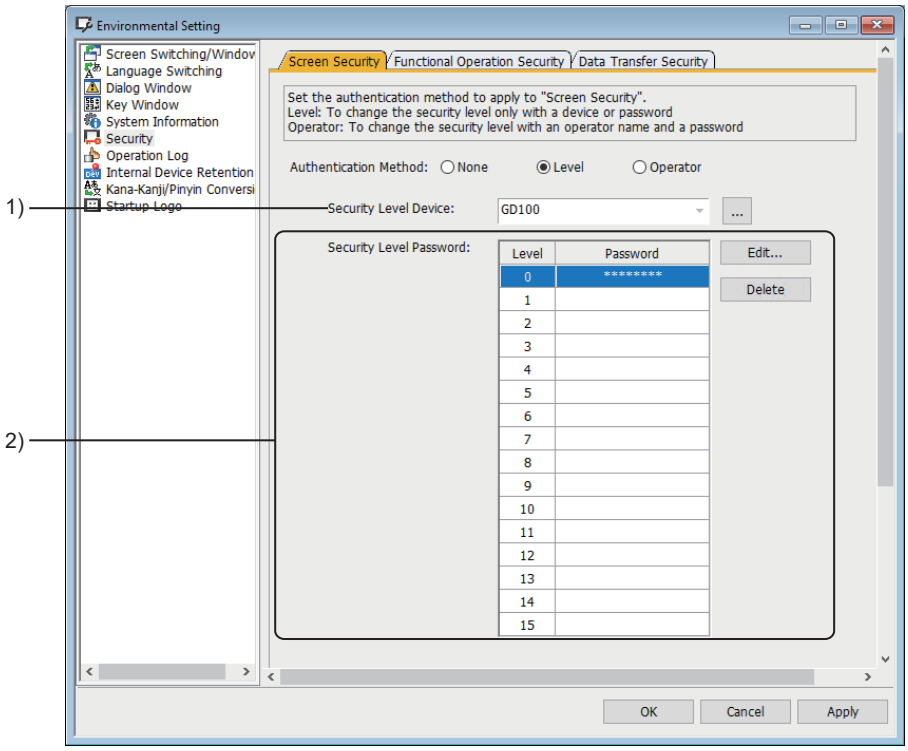
➟■4 Level authentication

• [Operator]

The operator authentication is an authentication method with the operator management information set for each operator.

➟■5 Operator authentication

■4 Level authentication



1) **[Security Level Device]**

Set the device to which the security level value of the screen displayed on the GOT is stored.

Set the device to set a password for each security level in [Security Level Password].

To change the security level, change the level device value from a controller.

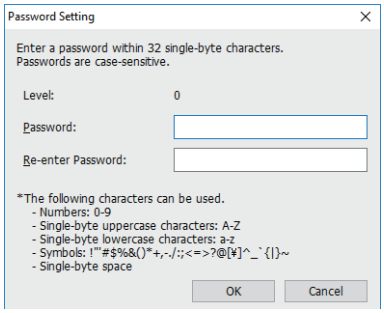
2) **[Security Level Password]**

The authentication password for each security level is displayed in a list.

The password is displayed in [********].

Select the security level and click the [Edit] button. The password of the selected security level can be edited.

When registering a new password, the [Password Setting] dialog appears.

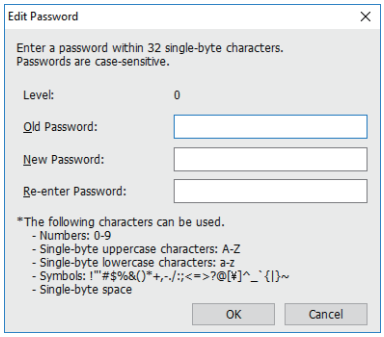


• **[Level]**
Displays the security level for the password.

• **[Password]**
Set a password.

• **[Re-enter Password]**
Input the password set in [Password] for the confirmation.

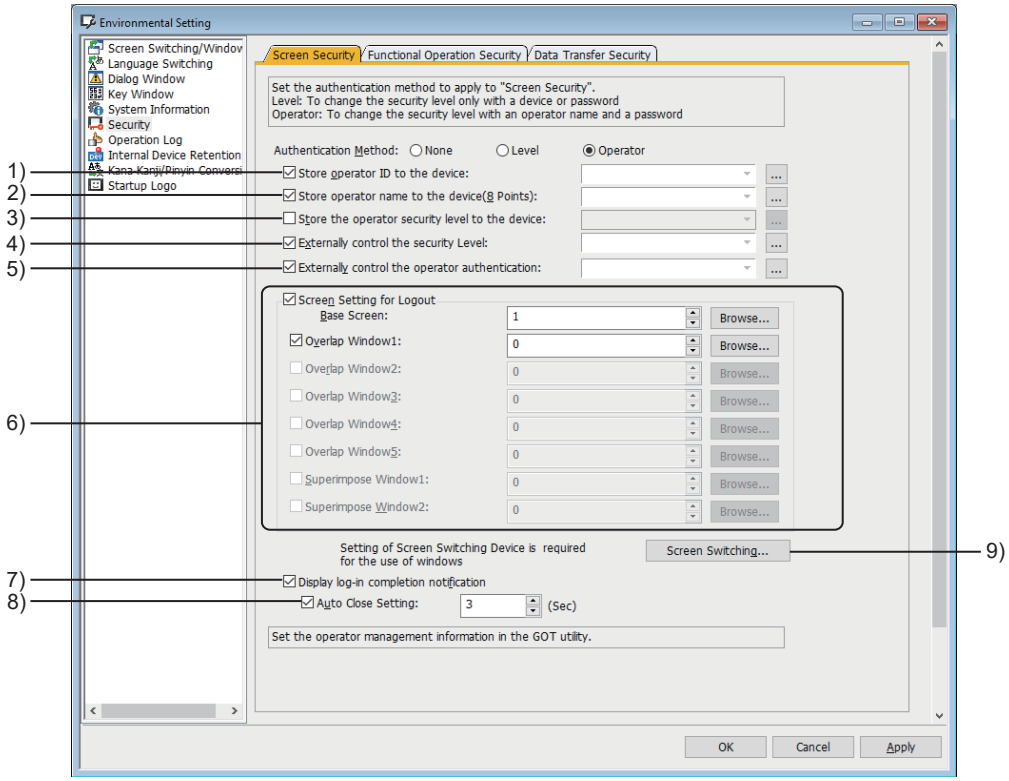
When changing the password, the [Editing password] dialog appears.



- **[Level]**
  Displays the security level for the password.
- **[Old Password]**
  Set the password currently set for the project.
- **[New Password]**
  Set a new password.
- **[Re-enter Password]**
  Input the password set in [New Password] for the confirmation.

Select the security level and click the [Delete] button. The password of the selected security level can be deleted.
When deleting the password, inputting the current password is not required.

■5 Operator authentication



1) **[Store operator ID to the device]**
Set a device to store the operator ID of a login operator (operator ID external notification device).
The word device and bit device specified as a word device are available.
The specified device stores 0 when the operator logs out.

2) **[Store operator name to the device (8 points)]**
Set a device to store the operator name of a login operator (operator name external notification device).
The word device and bit device specified as a word device are available.
Setting the device reserves 8 points of the word device or 128 points of the bit device.
If the operator name contains less than 16 characters, blank devices store 0.
All the devices store 0 when the operator logs out.

3) **[Store the operator security level to the device]**
Set a device to store the security level of a login operator (operator level external notification device).
The word device and bit device specified as a word device are available.
The specified device stores 0 when the operator logs out.

4) **[Externally control the security level]**
Set a device to change the security level of the login operator externally (security level external control device).
The word device and bit device specified as a word device are available.

➟5.2.7 ■1 (8) Security level control from an external device

5) **[Externally control the operator authentication]**

Set a device to control the operator authentication externally (operator authentication external control device).
The word device and bit device specified as a word device are available.

➟5.2.6 ■5 (1) (1) Operator authentication external control device

6) **[Screen Setting for Logout]**

Set a screen displayed when logging out of the GOT.
Select each window screen to set a window screen displayed when logging out of the GOT.
To set a window screen, set the screen switching device.
Timing to display the set screen differs according to operation when logging out of the GOT.

- Logging out of the GOT by a touch switch (special function switch) or the automatic logout function
  After logging out of the GOT, the set screen appears.
- Logging out of the GOT by the utility
  After logging out of the GOT, the utility screen appears.
  After changing the utility screen to a user-created screen, the set screen appears.

7) **[Display log-in completion notification]**

Not available to GT23, GT21, GT SoftGOT2000, and GS21.
Displays the login completion notification dialog when logging in the GOT.

8) **[Auto Close Setting]**

Not available to GT23, GT21, GT SoftGOT2000, and GS21.
Closes the login completion notification dialog automatically.
Set the time period between displaying the login completion notification dialog and closing the dialog.
The setting range is [1] to [60] second(s).

9) **[Screen Switching] button**

Displays the [Screen Switching/Window] of the [Environmental Setting] window.

➟5.2.1 ■5 [Screen Switching/Window]

(1) Operator authentication external control device

Bit number	Signal name	Description
.b0	Forced Logout signal	Turning on this signal forcibly logs out an operator currently logging in. The Forced Logout signal operates at the signal rising. Therefore, this signal does not operate even if it is always turned on. Also, without the user login, this signal does not operate even if it is turned on. Before turning off this signal, check that the Operator ID External Notification device stores 0.
.b1 to .b15	-	Use prohibited

Point

Security level after the forced logout

When an operator security level becomes lower than the one set for the currently-displaying screen after the forced logout, each screen operates as follows.

- Base screen
  The login screen is displayed.
- Window screen
  The window screens (overlap windows and superimposed windows) are deleted.

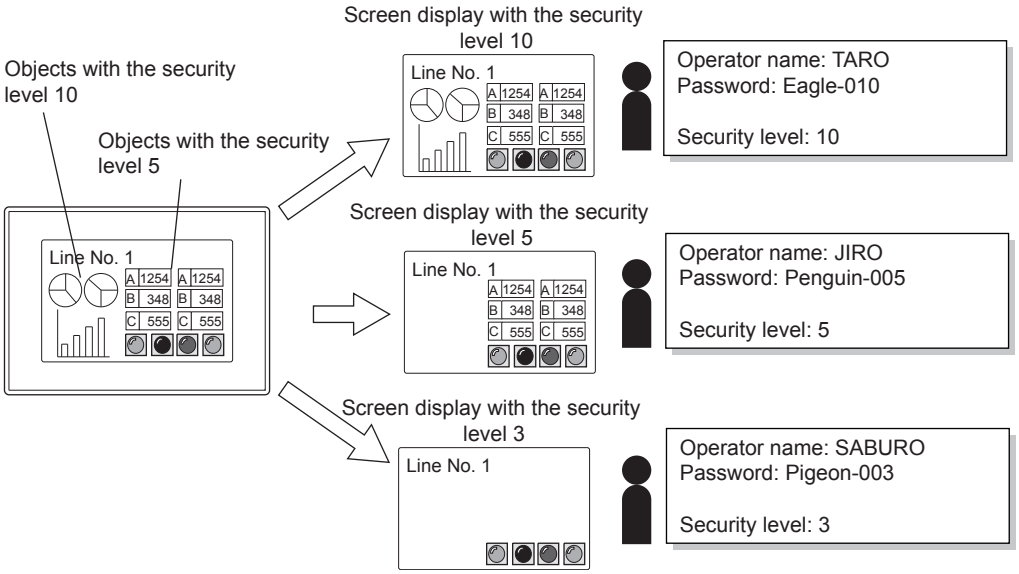
5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Specifications of the operator authentication

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The operator authentication is performed based on the operator management information corresponding to each operator.
To record the operator login information, use the operation log function in combination.
To strengthen the security, set the automatic logout and the password expiration date.

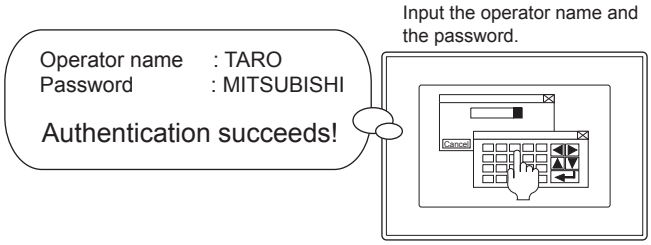


(1) Authentication type

The operator authentication includes the following authentication types.

(a) **Authentication with a password**

The operator is authenticated with an operator name and password that are input by the operator.

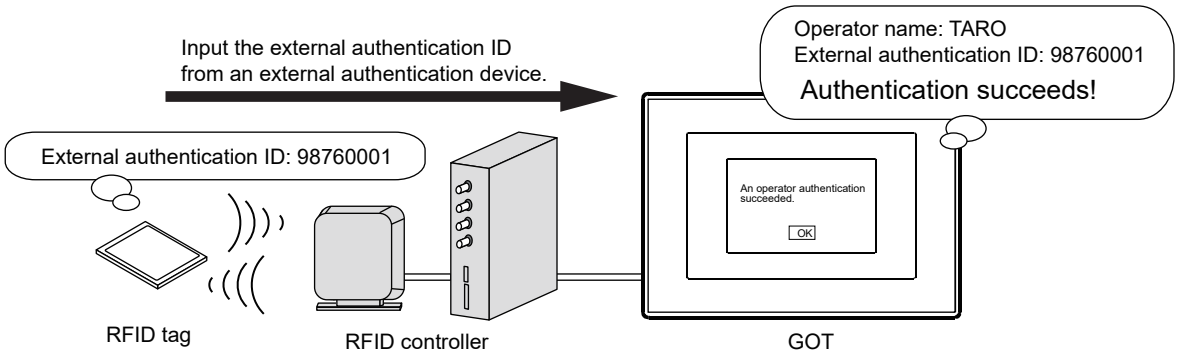


(b) **Authentication with an external authentication device**

The operator is authenticated with the external authentication ID that is input using an external authentication device.
For the usable external authentication devices, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

Example) When using an RFID controller as an external authentication device



(2) Operator management information

The operator management information is the information to determine and authenticate the login operator, which includes the operator name and the password.

The following shows the number of pieces of operator management information registrable for one project.

- GT27, GT25, GT SoftGOT2000, and GS25: 1000 pieces
- GT23, GT21, and GS21: 255 pieces

Input the operator management information with the [Operator information management] screen of the utility or a personal computer.

For inputting the operator management information from the GOT utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

For editing the operator management information on a personal computer, refer to the following.

➟■4 Editing the operator management information on a personal computer

The following shows the detailed operator management information.

Item	Description
Operator name	Name to identify an operator. Up to 16 uppercase and lowercase alphabetic characters, numbers, one-byte spaces, and the symbols below are usable for an operator name. ! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~ (The administrator name is fixed to [Administrator].)
Operator ID	ID number assigned to an operator. The setting range is 1 to 32766. (The administrator ID number is fixed to [-].)
Password	Password for the operator to log in the GOT. Up to 32 uppercase and lowercase alphabetic characters, numbers, one-byte spaces, and the symbols below are usable for a password. ! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~ You are recommended to set an unpredictable password consisting of uppercase and lowercase alphabetic characters, numbers, and symbols.
External authentication ID	ID number to be input from an external authentication device when an operator is authenticated with the device. This item cannot be set for the administrator account. The setting range is 4 to 32 digits (up to 8 words) in hexadecimal. If you do not use an external authentication device, this setting is unnecessary.
Security level	Security level set for an operator. This item cannot be set for the administrator account. The setting range is [0] to [15].
Password expiration date setting	Set whether to enable or disable the password expiration date. This item cannot be set for the administrator account.
Disabling an operator account	Not available to GT21 and GS21. Set whether to disable an operator account. The disabled operator account is not usable for login. (The administrator account or a sub administrator account can be disabled.)
Changing a password at the next login	Not available to GT21 and GS21. Set whether to display a message prompting for a password change at the next login. The message does not appear after the password change. This setting prompts each operator to change the initial password set by the administrator.

Item	Description
Administrator privileges	Not available to GT21 and GS21. Set whether to grant administrator privileges to an operator. An operator with administrator privileges becomes a sub administrator.
Password history	Not available to GT21 and GS21. The specified number of passwords used are saved. The setting range is [0] (Invalid), or [1] times to [5] times.

You can export the set operator management information to the data storage and import to other GOTs.
By using the operation log function together at the operator authentication setting, you can store the operator's information (operator name and operator ID) as a history.

(3) Administrator and sub administrator

Administrator refers to the account preset in the GOT for management use only.
(Operator name: Administrator, operator ID number: -)
The administrator can register, edit, or delete the operator management information on each operator.
The administrator can also change the function setting for the operator authentication in the utility.
However, the administrator cannot log in as an operator to perform operations on the GOT.

Sub administrator refers to an operator with administrator privileges.
GT21 and GS21 do not support the use of sub administrators.
The sub administrator can register, edit, or delete the operator management information on an operator having a lower security level.
The sub administrator can also change the function setting for the operator authentication in the utility.
To enable the use of sub administrators, configure the relevant setting in [Function setting] in the utility.
For the setting, refer to the following.

➟GOT2000 Series User's Manual (Utility)

To grant administrator privileges to an operator, set the operator management information on the operator.
For the details of the operator management information, refer to the following.

➟(2) Operator management information

To change the operator management information, function setting, or other settings with administrator privileges, the administrator password authentication is required.
This authentication is required even when a logged-in sub administrator tries to change the above settings.
The following shows the utility settings changeable by the administrator or sub administrators.
(○: Available, ×: Not available)

Settings in the utility			Administrator	Sub administrator	
				When [Allow function setting] is selected	When [Allow function setting] is deselected
Operator management	Registering, editing, or deleting the operator management information		○	○*1	○*1
	Editing the operator management information on the administrator		○	○*2	×
Function setting	Settings other than the administrator setting		○	○*3	×
	Administrator setting	Enabling the use of sub administrators	○	×	×
		Displaying uneditable operator information	○	○*2	×
		Allowing the function setting to be changed	○	×	×
		Security level required to change the function setting	○	○*2	×

*1 A sub administrator can manipulate the operator management information on an operator having a lower security level.
*2 To set this item, a sub administrator must have security level 15.
*3 A sub administrator having a security level lower than the level specified in [Allow function setting] cannot configure the settings.

(4) Password expiration date

You can set an expiration date for a password.
Set the password expiration date in [Function setting] (Operator authentication) in the utility.
For how to set the expiration date for the password, refer to the following.

➟GOT2000 Series User's Manual (Utility)

You can enable or disable the set password expiration date for each operator by using the setting of the operator management information.

For the details of the operator management information, refer to the following.

➟(2) Operator management information

(5) Password expiration prenotification

Not available to GT21 and GS21.

You can display a dialog prenotifying the password expiration date at login.

Set the password expiration prenotification in [Function setting] (Operator authentication) in the utility.

For setting the password expiration prenotification, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(6) Saving the password history

Not available to GT21 and GS21.

The history of passwords used is saved.

When saving the password history is enabled, you cannot set the same password as the one saved in the history.

Enable saving the password history in [Function setting] (Operator authentication) in the utility.

For the setting procedure, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(7) Automatic logout

You can set operator accounts to automatically log out after a certain period of inactivity.

Set the automatic logout in [Function setting] (Operator authentication) in the utility.

For how to set the automatic logout, refer to the following.

➟GOT2000 Series User's Manual (Utility)

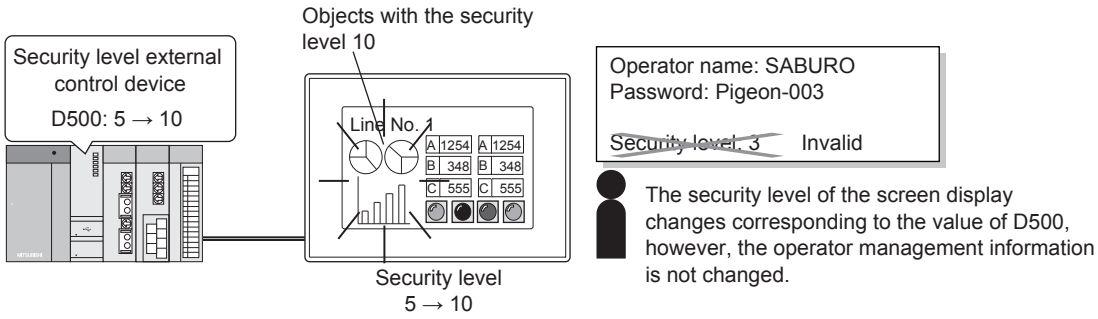
(8) Security level control from an external device

You can control the security level of the targets that can be displayed by the operator who is logged in the GOT from an external device.

Store the security level value to the security level external control device to change the security level of the operator.

In this case, the new security level is not reflected to the relevant operator management information.

When this setting is enabled, the security level specified in the operator management information becomes invalid.



To enable the security level control from an external device, select [Externally control the security Level] in the [Screen Security] tab in [Security] of the [Environmental Setting] window.

Then, set the security level external control device.

➟5.2.6 ■5 ■5 Operator authentication

(9) Forced logout

When the operator authentication external control device is set, operators can be forcibly logged out by turning on the Forced Logout signal (.b0).

For how to set the operator authentication external control device, refer to the following.

➟5.2.6 ■5 Operator authentication

(10)Auxiliary authentication

For the operator authentication with an external authentication device, the operator authentication may not be properly executed due to an error such as a device failure.

Enable the auxiliary authentication beforehand so that the authentication is executed by switching to the operator authentication with a password.

For how to set the auxiliary authentication, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(11)Block of login due to incorrect login attempts

Not available to GT21 and GS21.

When login attempts fail consecutively more than the specified number of failed login times ([Invalid login count]) within five minutes, the GOT recognizes an incorrect login.

In such a case, all operators cannot log in to the GOT until the login block time elapses.

To unblock the login before the lapse of the block time, perform the administrator password authentication with the administrator account or a sub administrator account.

Set the invalid login count and the login block time in [Function setting] (operator authentication) in the utility.

For the setting, refer to the following.

➟GOT2000 Series User's Manual (Utility)

You can check whether the login is blocked due to incorrect login attempts with a GOT special register (GS).

When the login is blocked within the login block time period, GS242.b0 (Incorrect Login signal) is on.

For the details of GS242 (Incorrect Login signal), refer to the following.

➟12.1.3 ■2 (43) Incorrect Login (GS242)

(12)Lock of an operator account due to incorrect login attempts

Not available to GT21 and GS21.

If an operator consecutively fails to log in more than the specified number of failed login times ([Operator lock count]), the operator account is locked.

The locked operator account is not usable for logins until the administrator or a sub administrator unlocks this account.

Set the operator lock count in [Function setting] (operator authentication) in the utility.

Unlock an operator account in [Operator information management] (operator authentication) in the GOT utility.

For the setting, refer to the following.

➟GOT2000 Series User's Manual (Utility)

You can check whether an operator account is locked with a GOT special register (GS).

When an operator account is locked, GS242.b1 (Operator Locked signal) is on.

For the details of GS242 (Incorrect Login signal), refer to the following.

➟12.1.3 ■2 (43) Incorrect Login (GS242)

(13)Password requirements

Not available to GT21 and GS21.

You can set the minimum number of characters and the character types as password requirements.

For setting the password requirements, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■2 Operator authentication setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To perform the operator authentication, configure the relevant settings in the project and the utility.

(1) Setting on GT Designer3

Step 1 Configure the setting in the project on GT Designer3.

Open the [Security] setting screen of the [Environmental Setting] window. Select [Operator] for [Authentication Method] of the [Screen Security] tab.

Configure other settings and set various devices as necessary.

➟■3 [Security] ([Screen Security] tab)

5.2.7 ■6 Relevant settings

Step 2 To use an external authentication device, configure the settings as shown below.

- When using an RFID controller, set the RFID controller for channel No. 8 and select [Use RFID] in the [RFID] dialog.

  ➟10.2.5 [RFID] dialog

- When using a USB device, select [Use USB Bar Code] in the [Bar Code] dialog and turn on b1 of [Control Device].

  GT SoftGOT2000 does not support authentication with a USB device.

  ➟10.1.5 ■2 [USB] tab

Step 3 Set the security level for each screen and objects on the screens.

➟2.7.1 Property of base screens

2.7.2 Properties of window screens

8. OBJECT FUNCTION

Step 4 Install the package data on the GOT.

(2) Setting on the GOT

Step 1 At the first startup, set the administrator password.

In the [Operator information management] screen, set a password for the administrator.

Step 2 Configure the function setting for the operator authentication.

Select [GOT basic set] → [Operator Authentication] → [Function setting] from the utility main menu, and configure the setting in the [Function setting] screen as shown below.

For the operator authentication with a password

- [Auth method]: [Operator name + password]

For the operator authentication with an external authentication device

- [Authentication Method]

  Select [External auth (serial)] or [External auth (USB)].
- [Front position]

  Set the starting position of the external authentication ID in the data read from the external authentication device.
- [Available bite number]

  Set the number of bytes for the external authentication ID.

➟GOT2000 Series User's Manual (Utility)

(Setting example of operator authentication with an external authentication device)

When the character string of the received data is as follows and the external authentication ID is [25A3B7]

Received character string: [STX] 2 5 A 3 B 7 [ETX]

Hexadecimal notation : 02 32 35 41 33 42 37 03

Set the following values.

[Initial position input]: 0

[Valid byte count input]: 6

Step 3 Display the [Operator information management] screen from the [Operator setting menu] screen, and register the operator management information.

The following shows the items to set.

- Operator name
- Operator ID
- Password
- Security level

For the details of the operator management information, refer to the following.

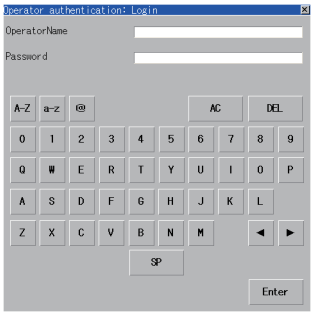
➟5.2.7 ■1 (2) Operator management information

■3 How to use the operator authentication

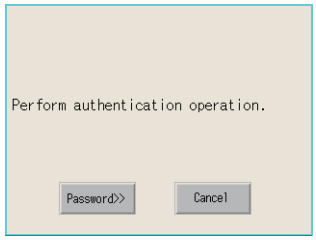
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Login for the operator authentication with a password

Step 1 Display the login screen.



Login screen for the operator authentication with a password



Login screen for the operator authentication with an external authentication device

Display the login screen by the following methods.

- Touch the special function switch to which [Log-in/Log-out (Operator Authentication)] is set.
- Display the utility and touch the [Login/Logout] button.

When the security level is inadequate for input, if you touch a special function switch for which [Switch Action] is set to the utility or any monitor function screen, the login screen appears.
(The touch switch does not function if its operating condition is unsatisfied.)

Step 2 The operation differs depending on the authentication type.

- Operator authentication with a password
  Input the user name and a password then touch the [ENT] button.
- Operator authentication with an external authentication device
  Input the external authentication ID by using the external authentication device such as an RFID.

Step 3 For the operator authentication with a password, you can log in when the correct user name and password are input.

For the operator authentication with an external authentication device, you can log in when the correct external authentication ID is input.

(2) Logout

Step 1 Perform either of the following operations.

- Touch the special function switch to which [Log-in/Log-out (Operator Authentication)] is set.
- Display the utility and touch the [Login/Logout] button.

For GT21 and GS21, log out of the operator authentication.
For any models other than GT21 and GS21, the [Confirm] dialog for logging out appears.

[Confirm] dialog

Step 2 To log out, touch the [Logout] button.

To switch the operator, touch the [Switch] button to display the login screen.
The current operator account is still in the logged-in state.
To cancel logging out, touch the [Cancel] button.

(3) Forced logout

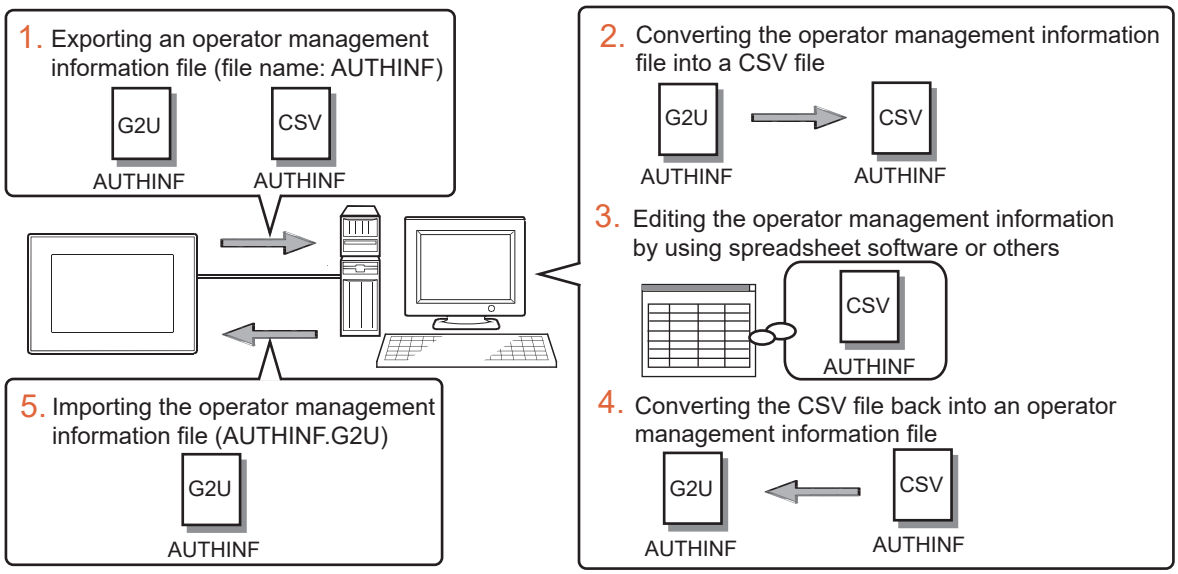
You can force the operator to log out by turning on the Forced Logout signal (.b0) of the operator authentication external control device.
Do not leave this signal on because the forced logout is triggered with each turn-on of this signal.
For the details of the operator authentication external control device, refer to the following.

➟5.2.6 ■5 (1) Operator authentication external control device

■4 Editing the operator management information on a personal computer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With GOT Operator Management Information Conversion Tool, you can convert the operator management information file (AUTHINF.G2U) exported from the GOT into a CSV file.
After editing the CSV file on a personal computer, you can convert the CSV file back into AUTHINF.G2U.
Thus, you can import AUTHINF.G2U to the GOT to reflect the results of the registration, change, and deletion of operator management information.
With GT21 and GS21, you can convert a CSV file into an operator management information file only.



Step 1 Export an operator management information file (AUTHINF.G2U or AUTHINF.CSV) from the GOT to the data storage.

Display the [Operator information management] screen from the [Security setting] screen of the utility to export the operator management information.

➟GOT2000 Series User's Manual (Utility)

(When exporting an operator management information file in CSV format, proceed to step 3.)

Step 2 Convert the operator management information file into a CSV file on a personal computer where this tool is installed.

➟(4) How to convert AUTHINF.G2U into a CSV file

Step 3 Edit the operator management information by using spreadsheet software or others.

➟(8) CSV file (AUTHINF.CSV) configuration

Step 4 Convert the edited CSV file back into an operator management information file.

➟(5) How to convert a CSV file into AUTHINF.G2U

Store the operator management information file in a data storage.

Step 5 Import the operator management information file (AUTHINF.G2U) from the data storage to the GOT.

Display the [Operator information management] screen from the [Security setting] screen of the utility to import the operator management information.

➟GOT2000 Series User's Manual (Utility)

(1) How to obtain the GOT Operator Management Information Conversion Tool

Contact your local distributor.

(2) Operating environment

The following shows the operating environment for the GOT Operator Management Information Conversion Tool.

Item	Description
Model	Personal computer that Windows runs on.
OS(English version)*1*5	• Microsoft Windows 11 Education (64 bit)*3 • Microsoft Windows 11 Enterprise (64 bit)*3 • Microsoft Windows 11 Pro (64 bit)*3 • Microsoft Windows 11 Home (64 bit)*3 • Microsoft Windows 10 Enterprise (32 bit, 64 bit)*3 • Microsoft Windows 10 Pro (32 bit, 64 bit)*3 • Microsoft Windows 10 Home (32 bit, 64 bit)*3 • Microsoft Windows 8.1 Enterprise (32 bit, 64 bit)*3*4 • Microsoft Windows 8.1 Pro (32 bit, 64 bit)*3*4 • Microsoft Windows 8.1 (32 bit, 64 bit)*3*4 • Microsoft Windows 8 Enterprise (32 bit, 64 bit)*3*4 • Microsoft Windows 8 Pro (32 bit, 64 bit)*3*4 • Microsoft Windows 8 (32 bit, 64 bit)*3*4 • Microsoft Windows 7 Ultimate (32 bit, 64 bit)*2*3 • Microsoft Windows 7 Enterprise (32 bit, 64 bit)*2*3 • Microsoft Windows 7 Professional (32 bit, 64 bit)*2*3 • Microsoft Windows 7 Home Premium (32 bit, 64 bit)*3 • Microsoft Windows 7 Starter (32 bit) • Microsoft Windows Vista Ultimate (32 bit) Service Pack1 or later • Microsoft Windows Vista Enterprise (32 bit) Service Pack1 or later • Microsoft Windows Vista Business (32 bit) Service Pack1 or later • Microsoft Windows Vista Home Premium (32 bit) Service Pack1 or later • Microsoft Windows Vista Home Basic (32 bit) Service Pack1 or later • Microsoft Windows XP Professional (32 bit) Service Pack2 or later • Microsoft Windows XP Home Edition (32 bit) Service Pack2 or later • Microsoft Windows 2000 Professional Service Pack4 or later
CPU	The system requirements for the above OSs must be met.*6
Memory	The system requirements for the above OSs must be met.*6
Display	Resolution: SVGA (800 × 600 dots) or higher
Hard disk space	500 KB or more
Display color	High Color (16 bits) or higher
Other hardware	Use a mouse and a keyboard compatible with the above OSs.

*1 The following functions are not supported.
- Application start in Windows compatibility mode
- Fast user switching
- Changing your desktop themes (fonts)
- Remote desktop
- DPI setting other than the normal size (For Windows XP and Windows Vista)
- Setting the size of text and illustrations on the screen to any size other than [Small-100%] (for Windows 11, Windows 10, Windows 8.1, Windows 8, and Windows 7)

*2 Windows XP Mode is not supported.

*3 The touch feature is not supported.

*4 Modern UI Style is not supported.

*5 Operation in a virtual environment such as Hyper-V is not supported.

*6 For the system requirements for the OSs, refer to the following.

➟Microsoft official website

(3) How to start GOT operator management information conversion tool

Installing GOT operator management information conversion tool is not required.

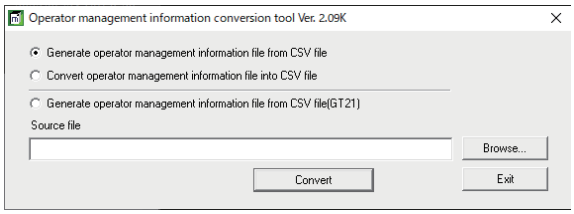
Copy the execution file (GTOperatorInfoConv.exe) in a folder, and then execute the file in the folder.

(4) How to convert AUTHINF.G2U into a CSV file

Step 1 Start GOT Operator Management Information Conversion Tool to display the following dialog.

Enter the full path of the operator management information file (AUTHINF.G2U) in [Source file], and select [Convert operator management information file into CSV file].

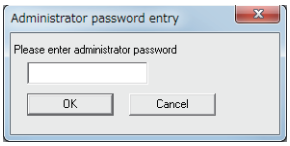
Click the [Convert] button.



Step 2 The authentication type varies with the function setting of the conversion source file.

• When the use of sub administrators is disabled in the function setting

In the [Administrator password entry] dialog, enter the administrator password and click the [OK] button.

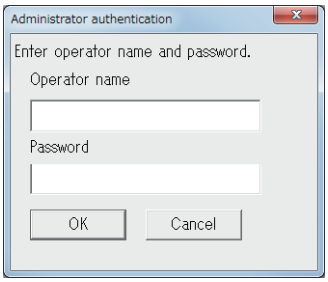


When the use of sub administrators is disabled

• When the use of sub administrators is enabled in the function setting

In the [Administrator authentication] dialog, enter the operator name and password of the administrator or sub administrator, and click the [OK] button.

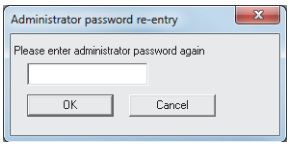
After authentication succeeds, a CSV file (AUTHINF.CSV) is created in the folder where the conversion source file is stored.



When the use of sub administrators is enabled

Step 3 When the use of sub administrators is disabled in the function setting, re-enter the administrator password and click the [OK] button in the [Administrator password re-entry] dialog.

After authentication succeeds, a CSV file (AUTHINF.CSV) is created in the folder where the conversion source file is stored.

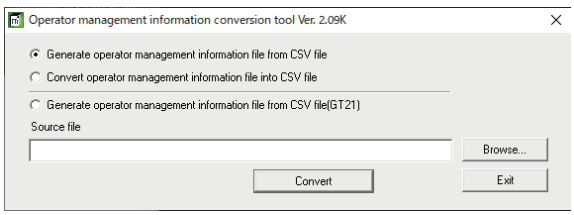


(5) How to convert a CSV file into AUTHINF.G2U

If a sub administrator performs the file conversion, the conversion source file and the exported operator management information file (AUTHINF.G2U) must be stored in the same folder before the conversion.
Otherwise, the file conversion cannot be performed.

Step 1 Start GOT Operator Management Information Conversion Tool to display the following dialog.

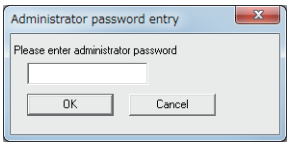
Enter the full path of a CSV file (AUTHINF.CSV) in [Source file], and select [Generate operator management information file from CSV file] or [Generate operator management information file from CSV file(GT21)]. Click the [Convert] button.



Step 2 The authentication type varies with the configuration of the CSV file specified in [Source file].

• When [SUB_ADMIN_FORMAT] is nonexistent in the header part of the CSV file

In the [Administrator password entry] dialog, enter the administrator password and click the [OK] button.

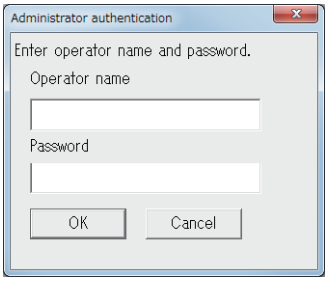


When [SUB_ADMIN_FORMAT] is nonexistent

• When [SUB_ADMIN_FORMAT] is existent in the header part of the CSV file

In the [Administrator authentication] dialog, enter the operator name and password of the administrator or sub administrator, and click the [OK] button.

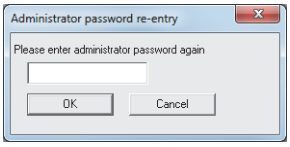
The contents of the CSV file are imported to the operator management information file (AUTHINF.G2U) stored in the same folder.



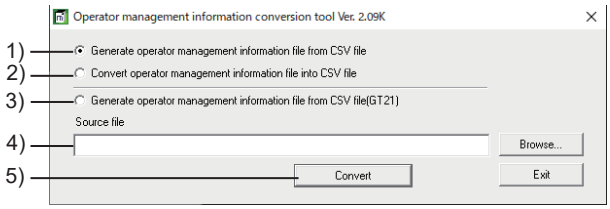
When [SUB_ADMIN_FORMAT] is existent

Step 3 When [SUB_ADMIN_FORMAT] is nonexistent in the header part of the CSV file, re-enter the administrator password and click the [OK] button in the [Administrator password re-entry] dialog.

An operator management information file (AUTHINF.G2U) is created in the same folder.



(6) Setting items of GOT Operator Management Information Conversion Tool



1) **[Generate operator management information file from CSV file] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)**

Converts a CSV file into an operator management information file.

Clicking the [Convert] button performs the operation according to the contents of the CSV file.

• When [SUB_ADMIN_FORMAT] is nonexistent in the header part of the CSV file

The CSV file specified in [Source file] is converted into an operator management information file.

• When [SUB_ADMIN_FORMAT] is existent in the header part of the CSV file

The contents of the CSV file specified in [Source file] are imported to the exported operator management information file.

Before the conversion, make sure to store the CSV file and the exported operator management information file in the same folder.

After the conversion, a log file is output.

2) **[Convert operator management information file into CSV file]**

Converts an operator management information file into a CSV file.

Select this item and click the [Convert] button to convert the operator management information file specified in [Source file] into a CSV file.

After the conversion, the CSV file and the conversion source file are stored in the same folder.

3) **[Generate operator management information file from CSV file(GT21)] (GT21 and GS21)**
Converts a CSV file into an operator management information file.
After the conversion, a log file is output.

4) **[Sourse of Conversion]**
Specify a path of the conversion source file.
By clicking the [Brouse] button, the path of the conversion source file can be specified in the [Open CSV file] dialog.

5) **[Convert] button**
Executes the file conversion.

(7) Operation with a command line

You can operate GOT Operator Management Information Conversion Tool with Command Prompt.
Perform one of the following operations to open Command Prompt.

- Select [Windows System] → [Command Prompt] from the Windows start menu.
- Enter "cmd" in the search box on the taskbar, and run a search.

Command Prompt opens differently depending on the Windows OS.
Describe a command line in the following formats.
GTOperatorInfoConv.exe filename [password] [/f] [/l] [/-c] [/s operator name] [/help] [/?]
(The options in square brackets are omittable.)

Type	Format	Description
Command	GTOperatorInfoConv.exe	The file conversion is performed as shown below. • Converting AUTHINF.G2U into a CSV file The conversion source file and the CSV file are stored in the same folder. • Converting a CSV file (without [SUB_ADMIN_FORMAT]) into AUTHINF.G2U An operator management information file (AUTHINF.G2U) is created in the folder where the conversion source file is stored. • Converting a CSV file (with [SUB_ADMIN_FORMAT]) into AUTHINF.G2U The contents of the CSV file are imported to the operator management information file (AUTHINF.G2U) stored in the same folder. After the conversion, another command prompt window appears, displaying the conversion result.
Option	filename	Specifies the operator management information file to be converted (CSV or G2U) with the absolute path. If the path contains spaces, enclose the path in double quotation marks (" ").
	password	Specifies the administrator password.
	/f	If the conversion destination folder already has a file with the same name, the file is overwritten. When the contents of a CSV file is imported to the exported operator management information file (AUTHINF.G2U), this option is invalid.
	/l	Outputs the conversion result to an operator management information conversion log file. The operator management information conversion log file is output to the folder where the conversion source file is stored. If the folder already has a file with the same name as that of the operator management information conversion log file, the file is overwritten.
	/-c	Does not start the command prompt to display the conversion result.
	/s operator name	Specifies a sub administrator to execute the file conversion. After "/s", enter the operator name of the sub administrator.
	/help	Displays how to use options on the command prompt. If these options are specified, the other options are ignored and the conversion is not executed.
	/?	

(8) CSV file (AUTHINF.CSV) configuration

A CSV file consists of the header part and the data part.
Set each setting item without changing the order of the items.

➟(9) Header part
(10) Data part

When a sub administrator converts a CSV file into AUTHINF.G2U, the items uneditable by the sub administrator are not output.
In the following cases, the data format is invalid and a CSV file is not converted into an operator management information file.

- A necessary setting item is deleted.
- The order of the setting items is changed.

• Any of the settings is incorrect.
• An unnecessary item exists.

(9) Header part

In the header part, configure the common setting for each operator information.
Items to be output vary with the settings, such as administrator privileges.

1)	GOT_OPERATOR_AUTHENTICATION_INFO		
2)	DATA_VERSION	5	
3)	SUB_ADMIN_FORMAT	USER:Username	15
4)	AUTH_TYPE	EXT_AUTH	
5)	PASS_TYPE	ENCRYPTED	
6)	AUTO_LOGOUT_TIME	0	
7)	PASS_EXP_DATE	0	
8)	EXT_AUTH_ID_TOP	0	
9)	EXT_AUTH_ID_LEN	5	
10)	EXT_UNIT_CH	8	
11)	LOGIN_LOCK_NUM	4	
12)	LOGIN_LOCK_CANCEL_TIME	10	
13)	LOGIN_LOCK_TIME	5	
14)	OPE_LOCK_NUM	0	
15)	OPE_LOCK_TIME	5	
16)	PASS_REQ_FLG	1	
17)	PASS_REQ_MIN_LENGTH	8	
18)	PASS_REQ_STR_TYPE	2	
19)	PASS_EXP_NOTICE	10	
20)	SUB_ADMIN_FLG	1	
21)	OUTPUT_ALL_OPE	1	
22)	IS_FUNC_SET	1	
23)	FUNC_SET_LEVEL	15	
24)	PASS_HIST_NUM	5	
25)	PASS_HIST_DEL_FLG	1	

1) **[GOT_OPERATOR_AUTHENTICATION_INFO]**
Keyword to declare that the file is an operator management information file for GT27, GT25, GT23, GT SoftGOT2000 or GS25.
When the file is an operator management information file for GT21 or GS21, the item name is [GOT_OPERATOR_AUTHENTICATION_INFO_GT21].

2) **[DATA_VERSION]**
Data structure version of the CSV file.
The data structure version varies with the version of the GOT Operator Management Information Conversion Tool used.

3) **[SUB_ADMIN_FORMAT]**
Not available to GT21 and GS21.
Keyword to indicate the information on a sub administrator.
After the keyword, the operator name and security level of the sub administrator who has performed the file conversion are output.
The operator name is output in the following format: [USER:Username].
The security level is output in the range from [0] to [15].
When the administrator converts AUTHINF.G2U into a CSV file, this item is not output.

4) **[AUTH_TYPE]**
Set the authentication type of the operator authentication.
Set either of the following.
- [ID_PASS]: Performs the operator authentication with a password.
- [EXT_AUTH]: Performs the operator authentication with a serial device.
- [EXT_AUTH+P]: Performs both the operator authentication with a serial device and the auxiliary authentication.
- [EXT_AUTHUSB]:
  Only available to GT2107-W for GT21.
  Performs the operator authentication with a USB device.
- [EXT_AUTHUSB+P]:
  Only available to GT2107-W for GT21.
  Performs both the operator authentication with a USB device and the auxiliary authentication.

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

5) **[PASS_TYPE]**
Set the password type.
Set either of the following.

• [ENCRYPTED]
Set this item to specify an encrypted password.
An unencrypted password is encrypted when AUTHINF.G2U is converted into a CSV file.
• [PLAIN]
Set this item to specify an unencrypted password.

6) **[AUTO_LOGOUT_TIME]**
Set the automatic logout time.
The setting range is [0] (Invalid) minutes to [60] minutes.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

7) **[PASS_EXP_DATE]**
Set the password expiration date.
The setting range is [0] (Invalid) days to [1000] days.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

8) **[EXT_AUTH_ID_TOP]**
Set the starting position of the external authentication ID.
The setting range is [0] to [1998] bytes.
When a CSV file is converted into an operator management information file, [0] is set in the following case.
• When nothing or invalid value is set
The total set value of [EXT_AUTH_ID_TOP] and [EXT_AUTH_ID_LEN] must be 2000 or less.
If the total set value exceeds 2000, the file cannot be converted correctly.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

9) **[EXT_AUTH_ID_LEN]**
Set the number of bytes for the external authentication ID.
The setting range is [2] to [16] bytes.
When a CSV file is converted into an operator management information file, the set value varies depending on the case as shown below.
• When nothing or invalid value is set: 4
The total set value of [EXT_AUTH_ID_TOP] and [EXT_AUTH_ID_LEN] must be 2000 or less.
If the total set value exceeds 2000, the file cannot be converted correctly.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

10) **[EXT_UNIT_CH]**
Set the channel for connecting an external authentication device.
The setting range is [8].
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

11) **[LOGIN_LOCK_NUM]**
Set the number of consecutive failed login attempts for the GOT to recognize an incorrect login.
The setting range is [0] (Invalid), or [3] times to [10] times.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

12) **[LOGIN_LOCK_CANCEL_TIME]**
Set the time period in which all operator accounts except the administrator one are locked upon an incorrect login.
The setting range is [1] (second) to [3600] (seconds).
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

13) **[LOGIN_LOCK_TIME]**
Set the time period in which consecutive failed login attempts increment the failed login count.
The settable value is [5] minutes. (Fixed)
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

14) **[OPE_LOCK_NUM]**
Set the number of consecutive failed login attempts to an operator account for the GOT to recognize an incorrect login.
The setting range is [0] (Invalid), or [3] times to [10] times.
When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV

file, this item is not output.

15) **[OPE_LOCK_TIME]**

Set the time period in which consecutive failed login attempts to an operator account increment the failed login count.

The settable value is [5] minutes. (Fixed)

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

16) **[PASS_REQ_FLG]**

Set whether to enable the password requirement setting.

- [0]: Disabled
- [1]: Enabled

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

17) **[PASS_REQ_MIN_LENGTH]**

Set the minimum number of characters of a password.

The setting range is [1] character to [32] characters.

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

18) **[PASS_REQ_STR_TYPE]**

Set the character types of a password.

Set value	Description
[0]	Does not check the character types.
[1]	Checks if a password contains the following two types of characters. • Alphabet (A to Z and a to z) • Numbers, symbols, and one-byte spaces
[2]	Checks if a password contains the following three types of characters. • Alphabet (A to Z and a to z) • Numbers • Symbols and one-byte spaces
[3]	Checks if a password contains the following four types of characters. • Uppercase alphabet (A to Z) • Lowercase alphabet (a to z) • Numbers • Symbols and one-byte spaces

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

19) **[PASS_EXP_NOTICE]**

Set the number of days before password expiration to start notifying the password expiration date.

When the number of remaining days is equal to or less than the set number of days, a message prompting for a password change appears at login.

The setting range is [0] days (Invalid), or [1] day to [30] days.

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

20) **[SUB_ADMIN_FLG]**

Not available to GT21 and GS21.

Set whether to enable the use of sub administrators.

- [0]: Disabled
- [1]: Enabled

When a sub administrator performs the file conversion, this item is not output.

21) **[OUTPUT_ALL_OPE]**

Not available to GT21 and GS21.

If a sub administrator converts AUTHINF.G2U into a CSV file, set whether to output the operator information uneditable by the sub administrator to the data part of the CSV file.

- [0]: Not output
- [1]: Output

When one of the following operators converts AUTHINF.G2U into a CSV file, this item is output.

- Administrator
- Sub administrator who has security level 15 and is allowed to edit the function setting

22) **[IS_FUNC_SET]**

Not available to GT21 and GS21.

Set whether to allow sub administrators to set the function setting.

- [0]: Not allowed
- [1]: Allowed

When a sub administrator performs the file conversion, this item is not output.

23) **[FUNC_SET_LEVEL]**

Set the security level of the sub administrator that can edit the function setting.

The setting range is [0] to [15].

When one of the following operators converts AUTHINF.G2U into a CSV file, this item is output.

- Administrator
- Sub administrator who has security level 15 and is allowed to edit the function setting

24) **[PASS_HIST_NUM]**

Enable saving the password history.

The setting range is [0] (Invalid), or [1] times to [5] times.

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

25) **[PASS_HIST_DEL_FLG]**

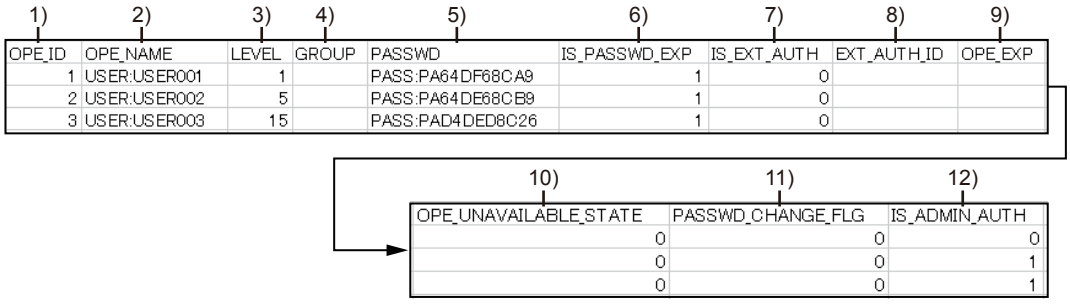
Set whether to delete the password history when the operator management information file is imported.

- [0]: Disabled
- [1]: Enabled

When a sub administrator who is not allowed to configure the function setting converts AUTHINF.G2U into a CSV file, this item is not output.

(10)Data part

In the data part, set the individual operator information.



1) OPE_ID	2) OPE_NAME	3) LEVEL	4) GROUP	5) PASSWD	6) IS_PASSWD_EXP	7) IS_EXT_AUTH	8) EXT_AUTH_ID	9) OPE_EXP
1	USER:USER001	1		PASS:PA64DF68CA9	1	0		
2	USER:USER002	5		PASS:PA64DE68CB9	1	0		
3	USER:USER003	15		PASS:PAD4DED8C26	1	0		

10) OPE_UNAVAILABLE_STATE	11) PASSWD_CHANGE_FLG	12) IS_ADMIN_AUTH
0	0	0
0	0	1
0	0	1

1) **[OPE_ID]**

Set the operator ID.

The setting range is [1] to [32766].

2) **[OPE_NAME]**

Set the operator name.

Up to 16 one-byte alphanumeric characters (a to z, A to Z, 0 to 9) and symbols as shown below can be used. (Alphabets are case sensitive.)

- ! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~
- One-byte space (However, a one-byte space used at the end of the operator name is invalid.)

When editing a CSV file directly, add [USER:] to the start of data.

Otherwise, an error occurs when the CSV file is converted to an operator management information file (AUTHINF.G2U).

3) **[LEVEL]**

Set the security level for an operator.

The setting range is [0] to [15].

When a sub administrator converts AUTHINF.G2U into a CSV file, a security level lower than that of the sub administrator can be set for an operator.

4) **[GROUP]**

Not used.

Leave the area blank.

5) **[PASSWD]**

Set the password for the operator.

Up to 32 one-byte alphanumeric characters (a to z, A to Z, 0 to 9) and symbols as shown below can be used. (Alphabets are case sensitive.)

- ! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

• One-byte space (However, a one-byte space used at the end of the operator name is invalid.)

When you set a password in a CSV file, prepend the string "PASS:" to the password.
Otherwise, an error occurs when the CSV file is converted to an operator management information file (AUTHINF.G2U).
The password in the CSV file is visible.
Handle the CSV file with extreme caution accordingly.
To prevent the password in the CSV file from showing up, perform one of the following operations.

• Do not set any password in the CSV file. (Set passwords on the GOT.)
• Convert the CSV file into AUTHINF.G2U, and then convert AUTHINF.G2U back into the CSV file to encrypt the password in the file.

For the password encryption by the above method, refer to the following.

➟(14) Encrypting a password

6) **[IS_PASSWD_EXP]**

Set whether to set the password expiration date.
The following shows the setting range.

• [0]: Without expiration
• [1]: With expiration

7) **[IS_EXT_AUTH]**

Set whether to set the external authentication ID.
The following shows the setting range.

• [0]: Without setting
• [1]: With setting

8) **[EXT_AUTH_ID]**

Set the external authentication ID.
The number of bytes for the external authentication ID is the value set for [EXT_AUTH_ID_LEN] (number of bytes for the external authentication ID).
The setting method varies depending on the setting for [AUTH_TYPE].

• [ID_PASS]
The external authentication ID setting is not required.
When an operator management information file exported from the GOT is converted into a CSV file, the external authentication ID is displayed with ASCII characters. However, the ID is not recognized.
• [EXT_AUTH] and [EXT_AUTH+P]
Set the external authentication ID with hexadecimal numbers.
When editing a CSV file directly, add [BIN:] to the start of data.
Otherwise, an error occurs when the CSV file is converted to an operator management information file (AUTHINF.G2U).

9) **[OPE_EXP]**

Not used.
Leave the area blank.

10) **[OPE_UNAVAILABLE_STATE]**

Set whether to disable an operator account.
The following shows the setting range.

• [0]: Enables the operator account.
• [1]: Disables the operator account.

11) **[PASSWD_CHANGE_FLG]**

Set whether to display a message prompting for a password change at the next login.
The following shows the setting range.

• [0]: Does not display the message.
• [1]: Displays the message.

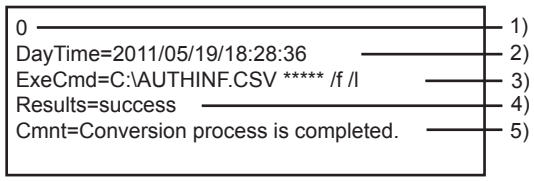
12) **[IS_ADMIN_AUTH]**

Set whether to grant administrator privileges to an operator.
The following shows the setting range.

• [0]: Not granted
• [1]: Granted

(11)Operator management information conversion log file (GTOperatorInfoConvResult.txt) configuration

The operator management information conversion log file is output when the conversion is executed with a command line.
The file is output to the folder where the conversion source file is stored.



1) **Conversion result code**
The conversion result code is output in the following formats.
- 0: Normal end
- 1: Abnormal end

2) **Conversion date**
The conversion date is output in the following format.
- Year/Month/Day/Hour:Minute:Second

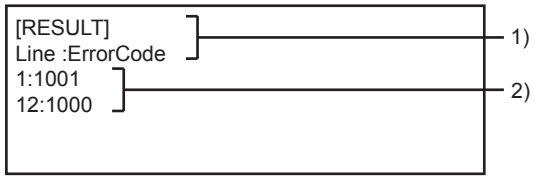
3) **Executed command**
The executed command is output.

4) **Conversion result**
The conversion result is output in the following formats.
- success: Normal end
- failure: Abnormal end

5) **Message**
The message at the conversion completion is output.

(12)Error log file (GTOperatorInfoConv.log) configuration

Checking the error location (line) in the CSV file and the error cause (error code) is available.
The file is output when a CSV file is converted into a G2U file only.
With no error, the file is not output.
The file is output to the folder where the conversion source file is stored.
If the folder already has a file with the same name, the file is overwritten.



1) **Header part**
The header part of the error file. (The character strings are fixed.)

2) **Error code**
The error line numbers and the error codes are displayed. (Line number: Error code)
➟(13) Error code list

(13)Error code list

The following shows the errors and the corrective actions corresponding to the error codes output to the error log file and others.

Error code	Description	Corrective action
1000	The configuration of the CSV file is invalid. (An error other than the errors corresponding to error codes 1001 to 1024)	Check if the specified CSV file is correct.
1001	The header data of the CSV file is invalid.	Check that the order of the keywords, the character strings, and the set values in the header part are correct. Correct them as necessary.
1010	The specified operator ID number is invalid.	Check that each operator ID number in the data part is within the setting range and does not contain invalid characters. Correct the operator ID number as necessary.
1011	The operator name is invalid.	Check that each operator name in the data part is within the setting range and does not contain invalid characters. Correct the operator name as necessary.
1012	The specified security level is invalid.	Check that each security level in the data part is within the setting range and does not contain invalid characters. Correct the security level as necessary.

Error code	Description	Corrective action
1013	The specified password is invalid.	Check that each password in the data part is within the setting range and does not contain invalid characters. For an encrypted password, check that all characters of the password can be represented in hexadecimal. Correct the password as necessary.
1014	The set value of the setting whether to set the password expiration date is invalid.	Check that the set value is valid. Correct the value as necessary.
1015	The set value of the setting whether to set the external authentication ID is invalid.	Check that the set value is valid. Correct the value as necessary.
1016	The specified external authentication ID number is invalid.	Check that each external authentication ID number is valid. Correct the ID number as necessary. Check that the authentication type set in the header part requires the setting of external authentication ID numbers.
1017	The set value of the function setting is invalid.	The conversion source file contains setting items uneditable by the authenticated sub administrator. Perform the file conversion with the administrator account or the sub administrator account in a security level that can edit all items in the conversion source file.
1018	The specified security level is invalid.	The specified security level is higher than that of the authenticated sub administrator. Perform the file conversion with the administrator account or the sub administrator account in a security level that can edit all items in the conversion source file.
1019	The specified operator name has already existed.	Register a different operator name.
1020	The specified operator ID number has already existed.	Register a different operator ID number.
1021	The specified external authentication ID number has already existed.	Register a different external authentication ID number.
1022	The number of operator accounts has exceeded the registration limit.	Delete some operator accounts to make the number of the accounts within the registration limit. • For GT27, GT25, GT SoftGOT2000, and GS25: 1000 accounts or less • For GT23, GT21, and GS21: 255 accounts or less
1023	The operator management information on the administrator is invalid.	For the operator management information on the administrator (operator name: Administrator), you can only change the password or disable the administrator account. Set [-] for the other items.
1024	The specified item of the function setting is invalid.	Perform the file conversion with the administrator account or the sub administrator account in a security level that can edit all items in the conversion source file.
2000	The file format of AUTHINF.G2U is invalid.	Check that the specified file (AUTHINF.G2U) is correct.
2001	The security level of the authenticated sub administrator is inappropriate.	Perform authentication with the administrator account or the sub administrator account in the same security level as [SUB_ADMIN_FORMAT] of a CSV file.

(14)Encrypting a password

When you edit a CSV file on a personal computer, encrypt the password ([PASSWD]) in the file by using the following procedure.

Step 1 In the header part of the CSV file, set [ENCRYPTED] for [PASS_TYPE].

Step 2 Convert the CSV file into an operator management information file by using GOT Operator Management Information Conversion Tool.

Step 3 Convert the operator management information file back into the CSV file.

The password is encrypted at the conversion.

■5 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Precautions on drawing (operator authentication)

Set the security level of 0 for the screen displayed when logging out of the GOT.

When a security level (1 or more) is set for the screen displayed when logging out of the GOT, the screen for login is displayed after logging out of the GOT.

(2) Prohibiting sharing the external authentication ID

Do not use the external authentication ID among multiple operators.
When the external authentication ID is used among multiple operators, the authentication cannot be executed correctly because the operators cannot be specified by the external authentication ID.

(3) Password management

Delete the operator management information of the operator who has stopped using the GOT.
Leaving the operator management information increases the risk of invalid operations.
The administrator password cannot be checked later. Therefore, always make a note of the password. When the administrator password is forgotten, the operator management information cannot be registered, edited, and deleted.

(4) Solutions when forgetting the password or external authentication ID

Situation	Solution
When forgetting the password of an operator	Delete the operator information with the forgotten password, and register the operator information again.
When forgetting the external authentication ID	Check the operator information on the operator information management screen, and then set the external authentication ID for the external authentication device again.
When forgetting the administrator password	Delete the operator management information file (AUTHINF.G2U) and register all operator management information again. The operator management information file is deleted after the BootOS is installed. For GT SoftGOT2000, use GT SoftGOT2000 of another module. To use GT SoftGOT2000 with the forgotten password, install it again.

(5) Corrective action when the login is blocked due to incorrect login attempts

If login attempts fail consecutively more than the specified number of times within five minutes, all operator accounts except the administrator one are locked until the login block time elapses.
To log in during the block time, perform one of the following operations.

- Log in with the administrator account, and unlock operator accounts in [Function setting] (Operator authentication).
- Restart the GOT.

For information on how to cancel the login block, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(6) Corrective action when an operator ID is locked due to incorrect login attempts

If an operator consecutively fails to log in more than the specified number of times, the operator ID is locked even after the login block time elapses.
Log in with the administrator account and unlock the target operator ID in the operator information edit screen.
For information on how to unlock an operator ID, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(7) Target of password requirements

When you set a password on the GOT, the password is checked for password requirements.
The passwords set before the requirements are specified, and the passwords set in the operator management information file (*.CSV) are not checked.

(8) Handling of the password in a CSV file

When you set a password ([PASSWD]) in a CSV file converted with GOT Operator Management Information Conversion Tool, the password in the CSV file is visible.
Handle the CSV file with extreme caution accordingly.
To prevent the password in the CSV file from showing up, perform one of the following operations.

- Do not set any password in the CSV file. (Set passwords on the GOT.)
- Convert the CSV file into AUTHINF.G2U, and then convert AUTHINF.G2U back into the CSV file to encrypt the password in the file.

For the password encryption by the above method, refer to the following.

➟5.2.7 ■4 (14) Encrypting a password

(9) How to input a value beginning with zeros

When editing a CSV file by using spreadsheet software, the leading zeros of a value beginning with zeros may be removed.
To input a value beginning with zeros, add @ to the beginning or end of the value.
@ is not recognized as a value during conversion.

(10)Automatic addition of @

When an operator management information file is converted into a CSV file, @ may automatically be added to the set values of some setting items to not to remove zeros by spreadsheet software.
When the CSV file is converted into an operator management information file, @ is not recognized as a value. Therefore, deleting @ is not required.

■6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the security function as required.
The following shows the functions that are available by the relevant settings.

(1) Internal device

➟12.1.3 GOT special register (GS)

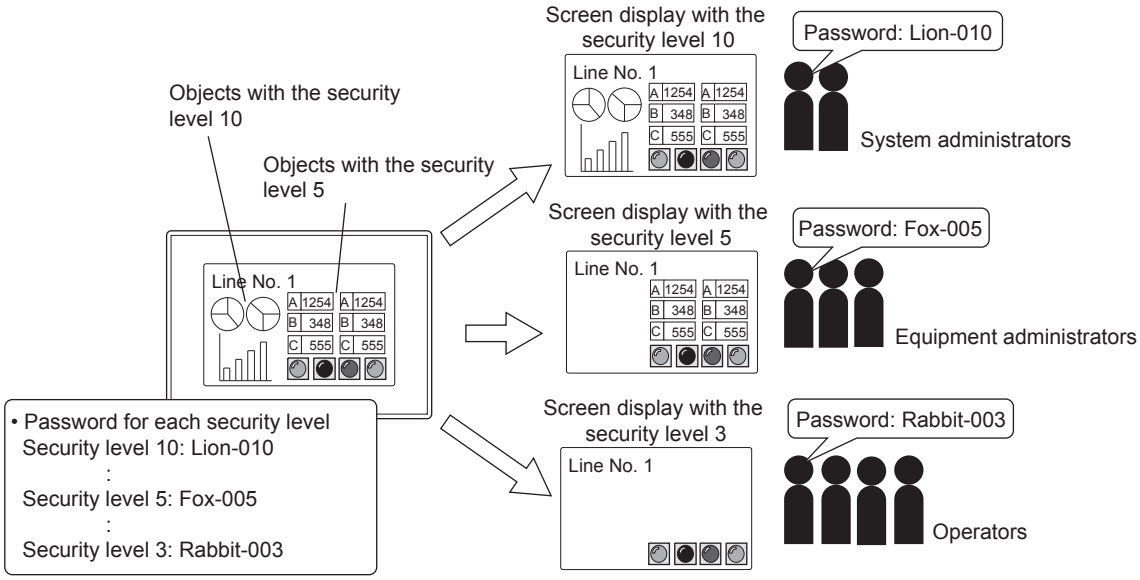
Function	Setting item
Notifying that the authentication by the external authentication device succeeds.	GS240.b0
Notifying that the authentication by the external authentication device fails.	GS240.b1
Notifying that the login screen or operator re-authentication screen is being displayed regardless of authentication method.	GS240.b13
Notifying that the login screen for the authentication by the external authentication device is displayed.	GS240.b14
Notifying that the external authentication ID input key window is displayed.	GS240.b15
Notifying the screen that cannot be displayed because of the insufficient security level.	GS241.b1 to b4, b8 to b12 GS1241.b0 to b2, b8 to b10
Notifying that the login is blocked due to incorrect login attempts	GS242.b0
Notifying that an operator ID is locked due to incorrect login attempts	GS242.b1
Prohibiting deletion of the existing operator information	GS621.b0
Prohibiting editing of the inactivated operator information	GS621.b1
Inactivating the [Import] button on the [Operator management] screen of the utility.	GS621.b2

5.2.8 Configuring the security settings for the GOT screen ([Screen Security] (Level authentication))

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Specifications of the level authentication

The level authentication is performed using user-specified passwords corresponding to each security level.
Use the level authentication to configure a system which allows the operators in upper hierarchies to control all the operations which can be made by the operators in lower hierarchies.



■2 Settings for the level authentication

The following shows the procedure for configuring the level authentication settings.

Step 1 Configure the setting for the project with GT Designer3.

Display [Security] of the [Environmental Setting] window and configure the following settings in the [Screen Security] tab.

- [Authentication Method]
  Select [Level].
- [Security Level Device]
  Set any word device or bit device specified as a word device.
- [Security Level Password]
  Set a password for each security level.
  The password must be set for each security level.
  (The password must not be overlapped.)

➟5.2.6 ■4 Level authentication

Step 2 Set the security level for each screen and objects on the screens.

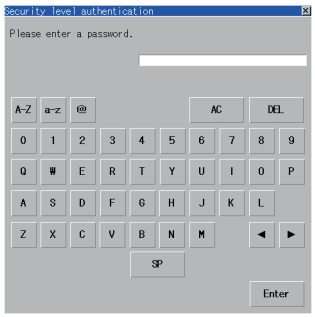
➟2.7 Changing Screen Property
8. OBJECT FUNCTION

■3 How to switch the security level in the GOT

Two methods are available for switching the security level in the GOT as follows.

(1) Input the password for each security level in the [Security level authentication] dialog.

Display the [Security level authentication] dialog by touching the special function switch to which [Password (Security Level)] is set.
The [Security level authentication] dialog can also be displayed by displaying the utility and touching the [Security level authentication] button.

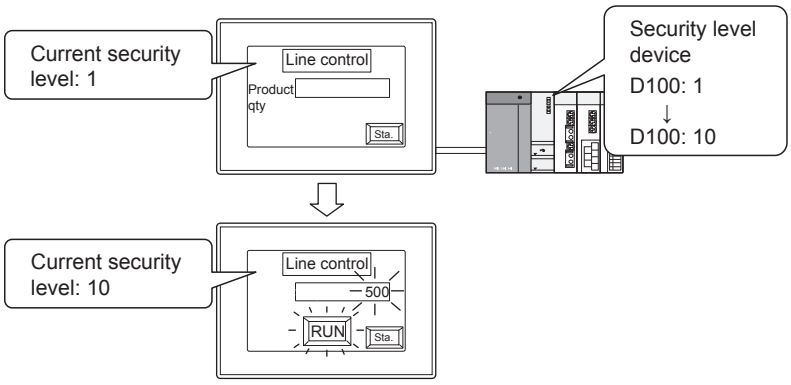


[Security level authentication] dialog

When the security level is inadequate for input, if you touch a special function switch for which [Switch Action] is set to the utility or any monitor function screen, the [Security level authentication] dialog appears.
(The touch switch does not function if its operating condition is unsatisfied.)

(2) Store the security level value to the security level device.

The security level device is a device to notify and change the current security level.
Store the value of the security level to this device, and the security level is switched accordingly.
For example, when the security level is [1], writing [10] to the security level device [D100] switches the security level to [10].



The display is changed according to the changed security level.

Place a word switch to which security levels are assigned on the screen, so that the user can switch between the security levels with a single touch on the switch.
For a user who switches the security level between the high security level for maintenance and inspection and security level for regular operation, the switch is useful when switching the security level to the level for regular operation.
The switch eliminates the need for distributing multiple passwords according to the operation level.

■4 Precautions

(1) Password management

The level authentication increases the risk of invalid operations because all operators can know the password for each security level.
When using the level authentication, manage the password strictly by changing the password frequently.
The registered password cannot be checked later. Therefore, always make a note of the password.
When the password is forgotten, security levels cannot be changed.

(2) Solutions when forgetting the password

Delete the password with GT Designer3 and set a new password.
After setting, write the project to the GOT again.

(3) Precautions when switching the security level temporarily to the higher level

When switching the security level temporarily to the higher level for maintenance and inspection or other operations, make sure to return the security level to the level for regular users after the operation.
Otherwise, an unauthorized user can perform operation that must not be performed by that user.

(4) When the value in the security level device changes

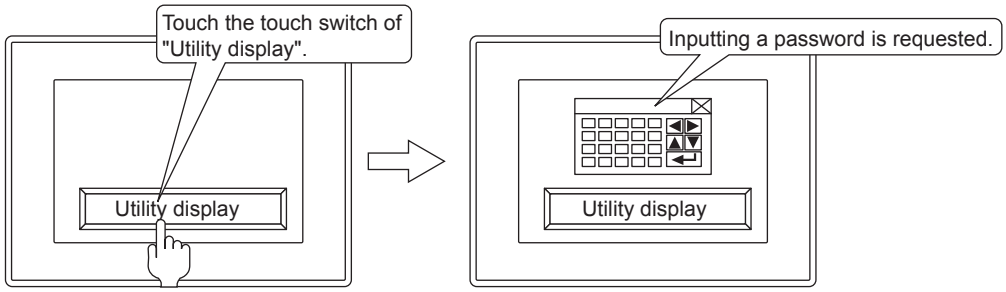
The processing, such as the following, performed at screen switching is also performed when the value in the security level device changes.
Initial operation of a project script, screen script, or script parts object

5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Specifications of the functional operation security

The functional operation security restricts displaying the utility and parameter setting screens.



(1) Operations restricted by the functional operation security

The functional operation security restricts the following operations.

- Displaying the utility and operating some monitor functions

To restrict operations other than the above, use the following security functions.
Using multiple security functions in combination further strengthens the security.

(a) Function restricting project operations

Function	Description
Security key authentication	Restricts a project to be viewed on GT Designer3 or executed on the GOT by protecting the project with a security key. ➟2.12 Protecting a Project with a Security Key
Project security	Restricts unregistered users to view or edit a project by registering users with the project. Also restricts operations by screen according to the access level of each user. ➟2.13 Protecting a Project by Registering Users

(b) Function restricting communication with the GOT

Function	Description
Data transfer security	Restricts data transfer between the personal computer (GT Designer3) and the GOT with a password. ➟5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])
IP filter	Restricts access to the GOT by Ethernet by registering IP addresses with the filtering list. ➟5.4.3 Setting the IP filter

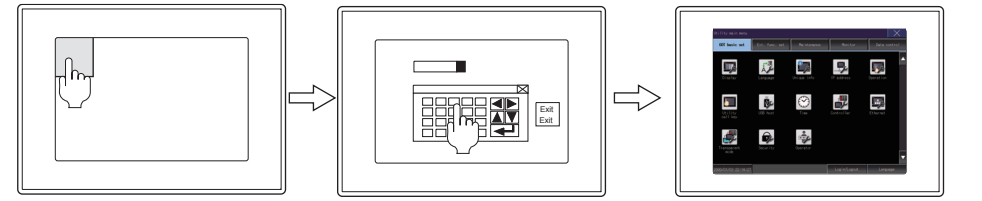
(c) Function restricting the screen display

Function	Description
Screen security	Restricts the display of screens and objects according to the security level. The display restriction is managed per user or password. ➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

(2) Restricting starting up the utility

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To start the utility, the security authentication is required.
Restricting the start of the utility avoids unnecessary operations to the utility.

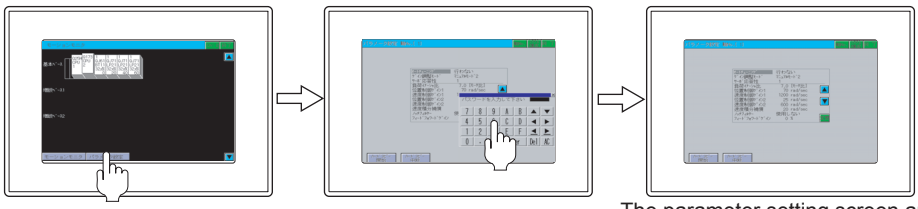


Switching the screen to the utility | Input a password. | The utility appears when the input password is correct.

(3) Restricting displaying the servo amplifier or motion parameters

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To display the parameter setting screen with the servo amplifier monitor or the motion monitor, the password authentication is required.
Restricting the display avoids unwanted change of the parameter setting.



Switching the screen to the parameter setting screen | Input a password. | The parameter setting screen appears when the input password is correct.

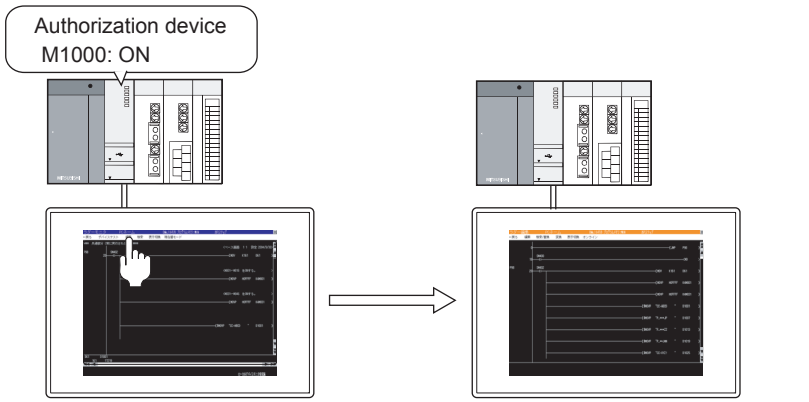
(4) Restricting displaying the ladder editor screen and the device test operation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The security authentication can restrict unnecessary ladder editor operations and device test operations.
Displaying the ladder editor screen and the device test operation can be restricted.
The ladder editor operations and device test operations can be restricted by the authentication with a device, authentication with a password, or authentication with a device and password combined.
Select the authentication type according to the purpose.

(a) Authentication with an authorization device

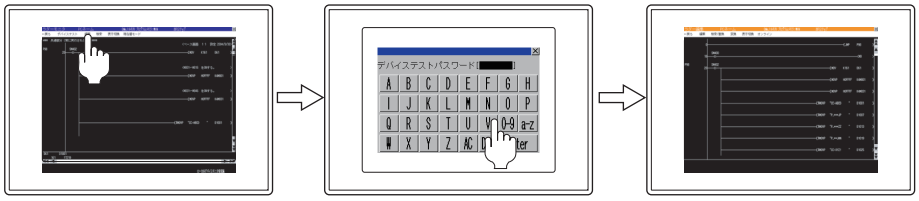
While an authorization device turns on, the operation is allowed.



Calling a ladder editor screen from a ladder monitor screen | A ladder editor screen appears when the authorization device is on.

(b) Authentication with a password

When the input password matches the set password, the operation is allowed.



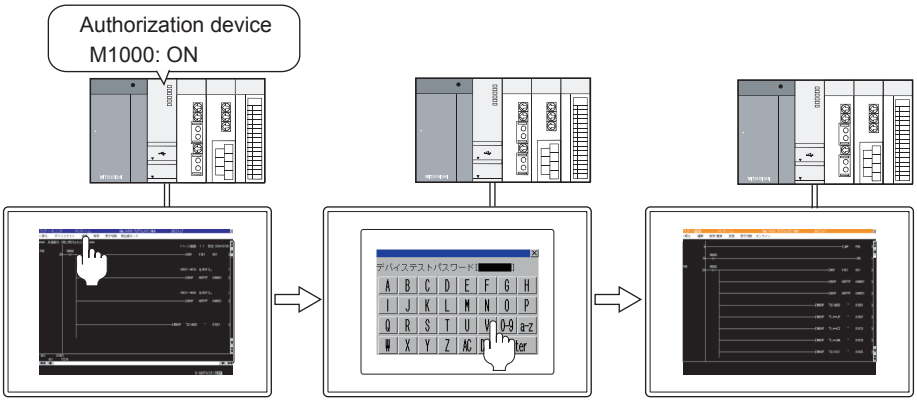
Calling a ladder editor screen from a ladder monitor screen

Input a password.

A ladder editor screen appears when the input password is correct.

(c) **Authentication with an authorization device and password combined**

When the input password matches the set password and an authorization device turns on, the operation is allowed.



Calling a ladder editor screen from a ladder monitor screen

Input a password.

A ladder editor screen appears when the input password is correct and the authorization device is on.

■2 Settings for the functional operation security

The following shows the procedure for setting the functional operation security.

Step 1 Configure the setting in the project on GT Designer3.

Select [Common] → [GOT Environmental Setting] → [Security] from the menu to display the [Environmental Setting] window ([Security]).

Step 2 In the [Functional Operation Security] tab, set the password for a target item.

➟■4 [Security] ([Functional Operation Security] tab)

■3 Precautions

(1) Password management

The registered password cannot be checked later. Therefore, always make a note of the password.

When the password is forgotten, the following operations may be disabled.

- Displaying the utility
- Displaying the parameter setting screen of the servo amplifier and the motion controller
- Displaying the device test screen and the ladder editor screen

(2) Solutions when forgetting the password

Use [Utilize Project] to create a new project.

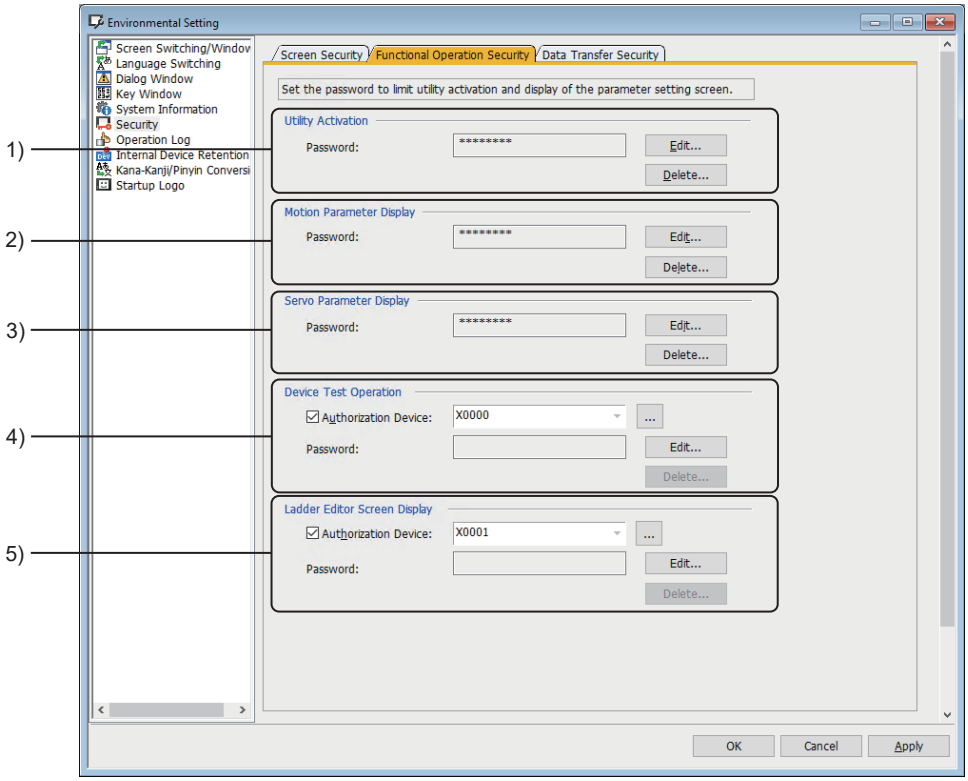
Deselect [GOT Environmental Setting/GOT Setup] from items to be utilized to initialize all the settings for the GOT environmental settings and the GOT setup.

At this time, the password is deleted.

After configuring the settings for the GOT environmental settings and the GOT setup, write the created project to the GOT.

■4 [Security] ([Functional Operation Security] tab)

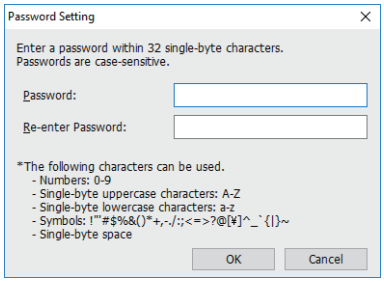
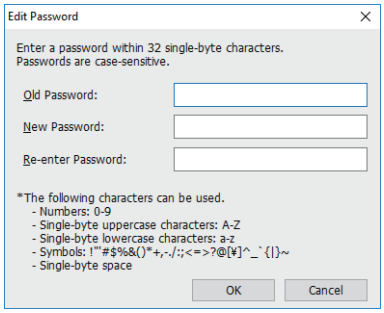
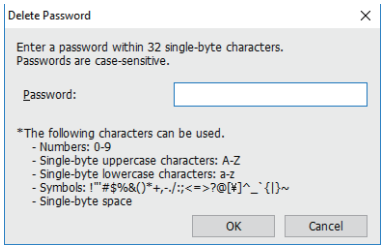
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Utility Activation]**

Set a password to restrict starting up the utility.

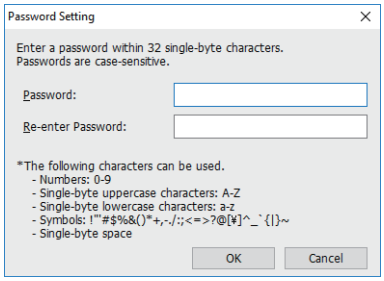
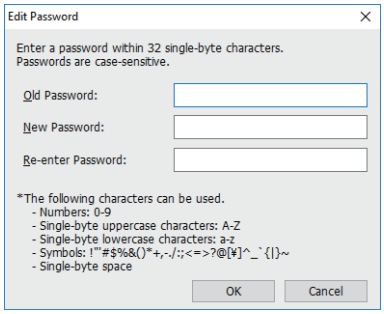
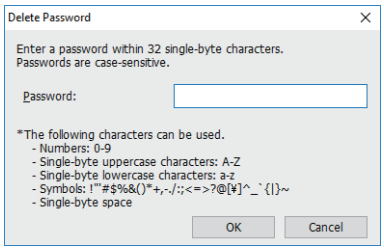
Item	Description
Password	When the password is set, [********] is displayed. Up to 32 characters are available.

Item	Description
[Edit] button	Edit the password. When registering a new password, the [Password Setting] dialog appears.  • **[Password]** Set a password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When changing the password, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Displays the [Delete Password] dialog.  • **[Password]** Set the password currently set for the project.

2) **[Motion Parameter Display]**

Not available to GT21, GT SoftGOT2000, and GS21.

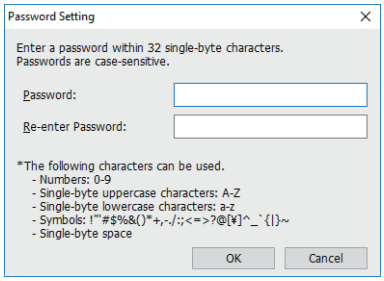
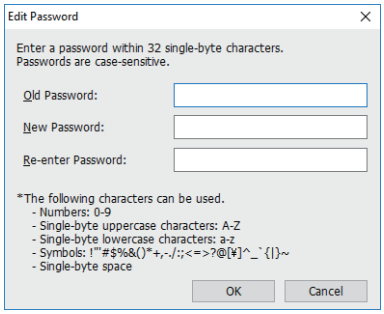
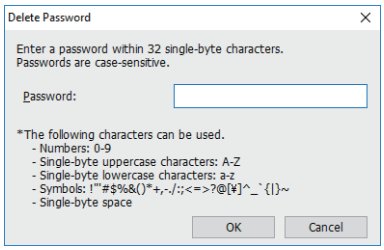
Set the password to restrict displaying the parameters for the R motion monitor or Q motion monitor.

Item	Description
Password	When the password is set, [********] is displayed. Up to 32 characters are available.
[Edit] button	Edit the password. When registering a new password, the [Password Setting] dialog appears.  • **[Password]** Set a password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When changing the password, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Displays the [Delete Password] dialog.  • **[Password]** Set the password currently set for the project.

3) **[Servo Parameter Display]**

Not available to GT21, GT SoftGOT2000, and GS21.

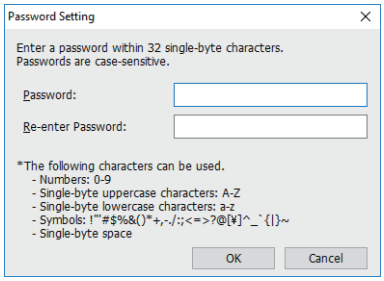
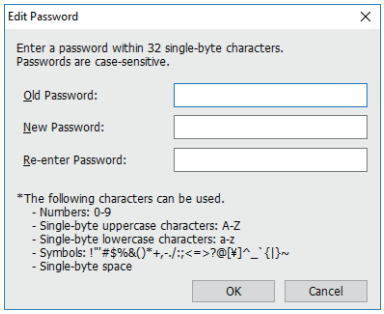
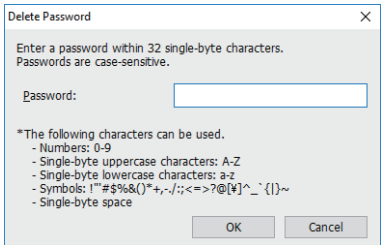
Set the password to restrict displaying the parameters for the servo amplifier monitor.

Item	Description
Password	When the password is set, [********] is displayed. Up to 32 characters are available.
[Edit] button	Edit the password. When registering a new password, the [Password Setting] dialog appears.  • **[Password]** Set a password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When changing the password, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Displays the [Delete Password] dialog.  • **[Password]** Set the password currently set for the project.

4) [Device Test Operation]

Not available to GT21, GT SoftGOT2000, and GS21.

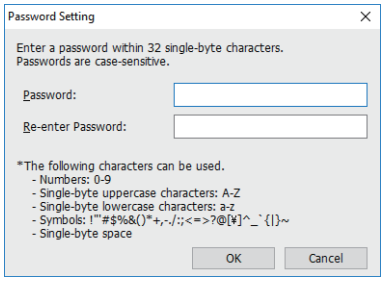
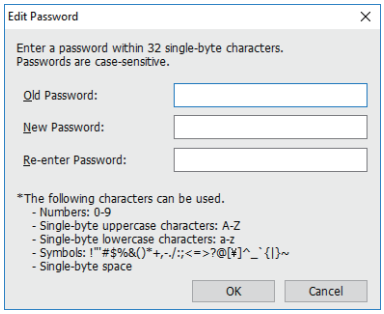
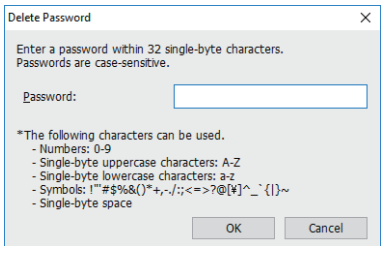
Set a device and a password to restrict the device test operation.

Item	Description
Authorization device	Set an authorization device for the device test. A bit device can be set for the authorization device. • ON: Device test operation permitted • OFF: Device test operation prohibited
Password	When the password is set, [********] is displayed. Up to 32 characters are available.
[Edit] button	Edit the password. When registering a new password, the [Password Setting] dialog appears.  • **[Password]** Set a password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When changing the password, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Displays the [Delete Password] dialog.  • **[Password]** Set the password currently set for the project.

5) **[Ladder Editor Screen Display]**

Not available to GT21, GT SoftGOT2000, and GS21.

Set a device and a password to restrict displaying the ladder editor screen.

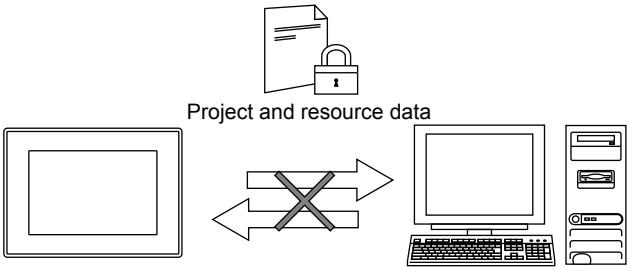
Item	Description
Authorization device	Set the authorization device for the ladder editor screen display. A bit device can be set for the authorization device. • ON: Display of ladder editor screen permitted • OFF: Display of ladder editor screen prohibited
Password	When the password is set, [********] is displayed. Up to 32 characters are available.
[Edit] button	Edit the password. When registering a new password, the [Password Setting] dialog appears.  • **[Password]** Set a password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When changing the password, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Displays the [Delete Password] dialog.  • **[Password]** Set the password currently set for the project.

5.2.10 Configuring the security setting for transferring data ([Data Transfer Security])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Specifications of the data transfer security

The data transfer security prevents unauthorized reading and writing of a project and resource data by password-based authentication.



For information on how to set the data transfer security, refer to the following.

➟■4 [Security] ([Data Transfer Security] tab)

(1) Operations restricted by the data transfer security

The data transfer security restricts the following operations.

- Transferring data between a personal computer (GT Designer3) and GOT
- Data transfer to the GOT using a memory card (except GT21 and GS21)

To restrict operations other than the above, use the following security functions.
Using multiple security functions in combination further strengthens the security.

(a) **Function restricting project operations**

Function	Description
Security key authentication	Restricts a project to be viewed on GT Designer3 or executed on the GOT by protecting the project with a security key. ➟2.12 Protecting a Project with a Security Key
Project security	Restricts unregistered users to view or edit a project by registering users with the project. Also restricts operations by screen according to the access level of each user. ➟2.13 Protecting a Project by Registering Users

(b) **Function restricting communication with the GOT**

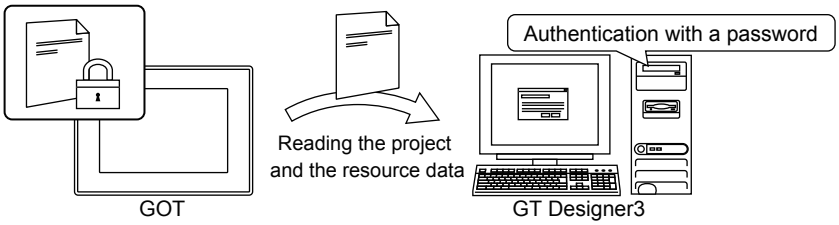
Function	Description
IP filter	Restricts access to the GOT by Ethernet by registering IP addresses with the filtering list. ➟5.4.3 Setting the IP filter

(c) **Function restricting the GOT operations**

Function	Description
Screen security	Restricts the display of screens and objects on the GOT by registering users with the GOT. ➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])
Functional operation security	Restricts the display of the utility, and operations of some monitor functions. ➟5.2.9 Configuring the security settings for operations in the utility ([Functional Operation Security])

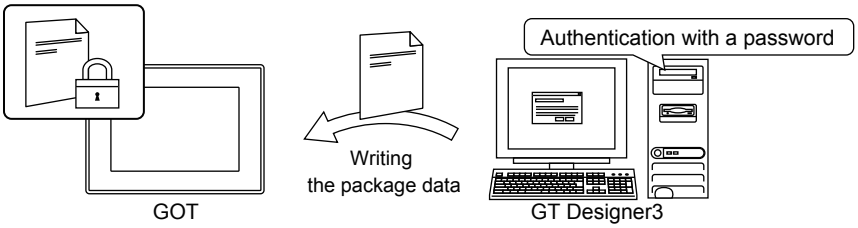
(2) Restricting reading the project and the resource data

After the data transfer security is set for the project, an authentication with a password is required for reading the project or the resource data.



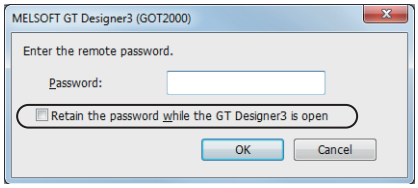
(3) Protecting the project written to the GOT

For the project which the data transfer security is set to, an authentication with a password is required for overwriting.



When all the following conditions are satisfied, inputting a password is not required because the authentication is performed automatically.

- The project IDs or package folder names match each other between the project contained in package data to be written and the existing project in the GOT.
- The set data transfer passwords match each other between the project contained in package data to be written and the existing project in the GOT.
- At the first writing of package data, [Retain the password while the GT Designer3 is open] was selected in the dialog for inputting the data transfer password.



You can check and change the project ID in the [Project Information] dialog.

➟2.3.5 Giving a title to a project

■2 Settings for the data transfer security

The following shows the procedure for setting the data transfer security.

Step 1 Configure the setting in the project on GT Designer3.

Select [Common] → [GOT Environmental Setting] → [Security] from the menu to display the [Environmental Setting] window ([Security]).

Step 2 In the [Data Transfer Security] tab, set the password.

➟■4 [Security] ([Data Transfer Security] tab)

■3 Precautions

(1) Password management

The registered password cannot be checked later. Therefore, always make a note of the password.
When the password is forgotten, the following operations may be disabled.

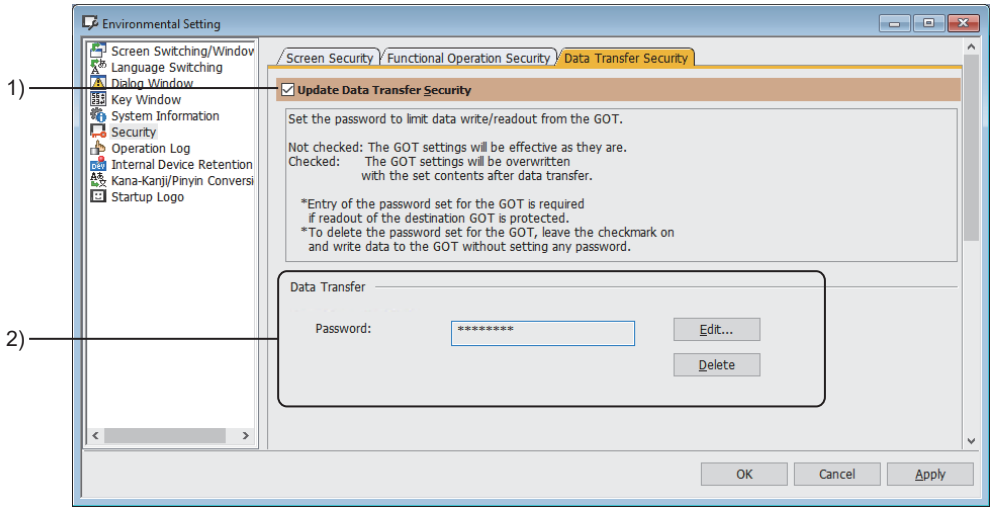
- Writing the package data to the GOT
- Reading the project and the resource data from the GOT

(2) Solutions when forgetting the password

Install the BootOS again.
Installing the BootOS again deletes all data in the GOT, such as the project and the resource data.

■4 [Security] ([Data Transfer Security] tab)

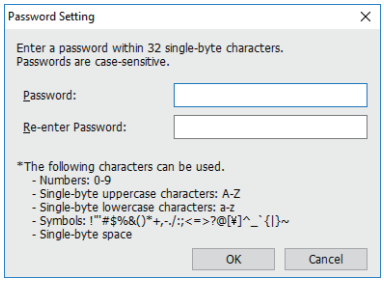
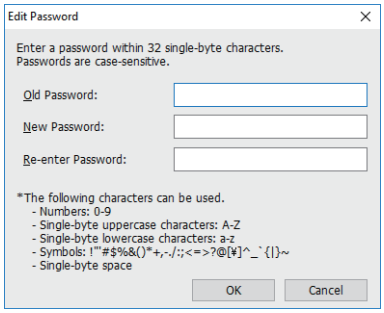
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Update Data Transfer Security]**
Overwrites the data transfer security set with GT Designer3 to the GOT when the package data is written. Select this item to set [Data Transfer] items.

2) **[Data Transfer]**
Set or delete the data transfer security.

Item	Description
[Password]	When the data transfer password is set, [*******] is displayed.

Item	Description
[Edit] button	Edit the data transfer password. When the data transfer password is not set, the [Password Setting] dialog appears.  • **[Password]** Set a data transfer password. • **[Re-enter Password]** Input the password set in [Password] for the confirmation. When the data transfer password is set, the [Editing password] dialog appears.  • **[Old Password]** Set the password currently set for the project. • **[New Password]** Set a new data transfer password. • **[Re-enter Password]** Input the password set in [New Password] for the confirmation.
[Delete] button	Deletes the set password.

5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

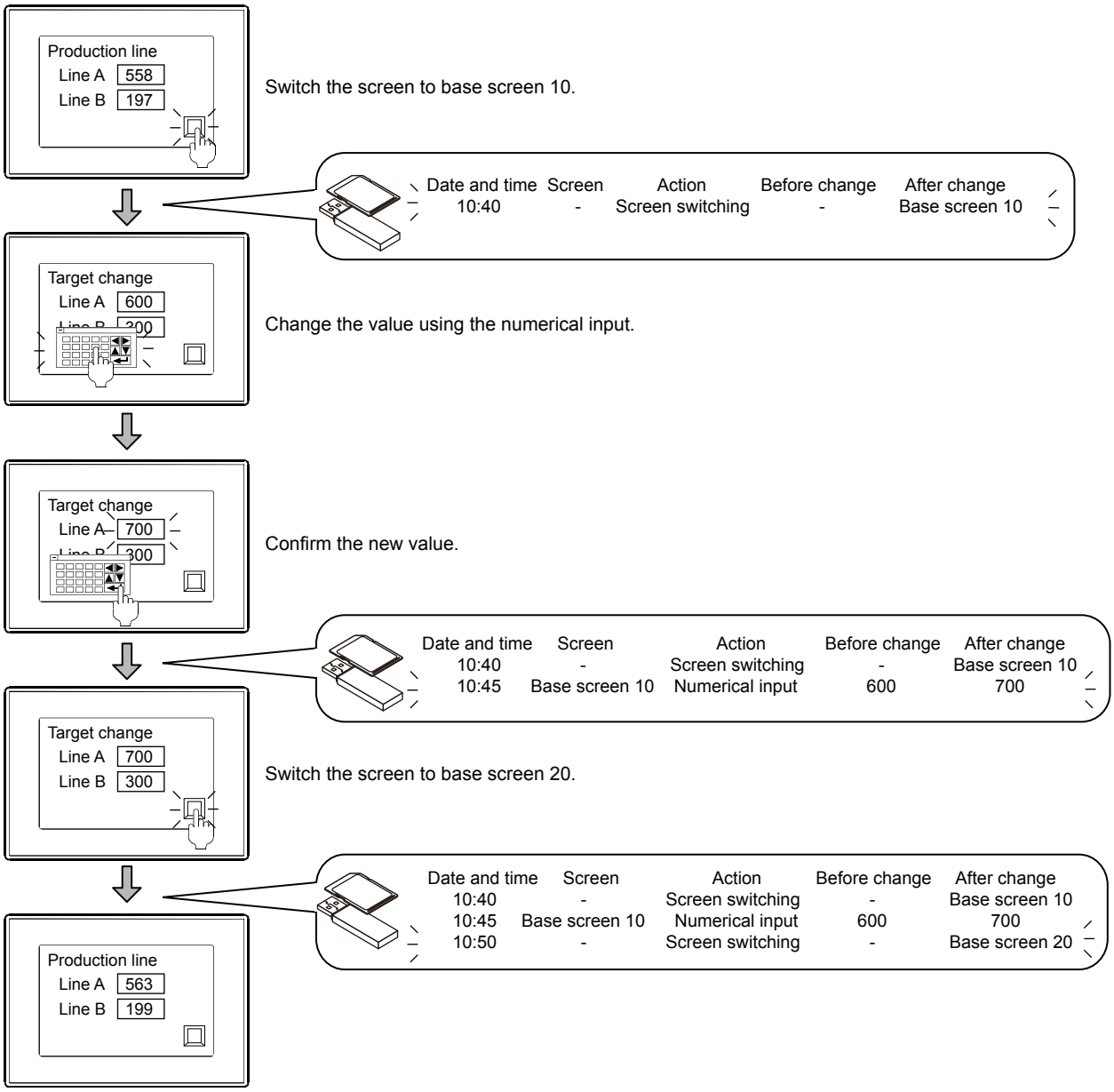
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

➥■1 Specifications of the operation log
■2 How to use the operation log
■3 Recording the operator name as the character string stored in the device
■4 Precautions
■5 [Operation Log...]
■6 [Operation Log File Conversion] dialog
■7 Relevant settings

The history of operations performed on the GOT can be saved to data storage.
Operation histories can be used to specify the cause of troubles occurring at the production site.
A saved history can be checked by the following methods.

- Using the GOT utility
- Using the resource file viewer of the personal computer
- Using the text editor or other tools of the personal computer



■1 Specifications of the operation log

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

(1) Target operations for recording operation logs

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
The operation logs of the following operations can be recorded.
There are items that need a setting on GT Designer3 to get their operation logs recorded and those that do not need any setting.
Some items are not recorded depending on the GOT model.
The operation logs of those that do not need any setting are always recorded while the logs are valid.
For the setting procedure, refer to the following.

➟5.2.11 ■5 (2) [Log Target] tab

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
GOT startup	When the GOT is powered on or restarted ➟(a) GOT startup	Not needed	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
GOT termination	When the GOT is terminated with a GOT special register (GS639.b14) ➟(b) GOT termination 12.1.3 ■5 (81) GOT Reset Control (GS639)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GOT restart	• When the GOT is restarted without reset (simple restart by changing the GOT basic settings in the utility) or with reset (Simple restart does not occur in GT21 and GS21.) • When the GOT is restarted with reset using a GOT special register (GS639.b15) ➟(c) GOT restart 12.1.3 ■5 (81) GOT Reset Control (GS639)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
GOT offline mode transition	When transitioning to the offline mode (monitor stop mode) due to package data writing or while monitor screens are displayed ➟(d) GOT offline mode transition		
GOT background processing stop, restart	When background processing of functions such as the backup/restore and logging functions stop or restart ➟(e) GOT background processing stop, restart		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Log corruption information	When logs cannot be recorded in the file ➟(f) Log corruption information		
Unknown logs	When unknown information is contained in collected operation logs ➟(g) Unknown logs		
Application switching	• When monitor screens are displayed • When utilities are launched • When a screen is displayed from the utility • When the setting screen for the operator authentication is displayed • When various monitors such as the sequence program monitor are started • When the backup/restore function is performed • When the GOT is restarted after the package data is written to it ➟(h) Application switching	[Application Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Application startup, exit	When the functions that use window screens, such as the remote personal computer operation (Ethernet) and the device monitor, are started or terminated. ➟(i) Application startup, exit		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Time zone setting	When the GOT is started (only when the local time is used) ➟(j) Time zone setting		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
Clock setting	• When the clock is set by time notifications from external devices • When the clock is set in time synchronization with the SNTP server • When the time is changed by using the GOT special register (GS) ➟(k) Clock setting, time change	[Time Change (Clock Setting and GS Change)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Time change by using utilities	When the time is changed by using utilities ➟(l) Time change in the utility	[Time Change (Change from Utilities)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
System language switching	• When the system language is changed by using utilities • When the system language is changed by using the system language devices ➟(m) System language switching	[System Language Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Displayed system language	When the system language is changed by using the system language devices ➟(n) Displayed system language		
GOT No. switching	When the GOT is switched ➟(o) GOT No. switching	[GOT No. Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Screen switching	When screen switching is complete (base screen, overlap window, superimpose window, dialog window) ➟(p) Screen switching	[Screen Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Station No. switching	When station No. switching is complete (common station number, base screen station number, overlap window station number, superimpose window station number, dialog window station number) ➟(q) Station No. Switching	[Station No. Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
Buffer memory unit No. switching	When the buffer memory unit No. switching is complete ➟(r) Buffer memory unit No. switching	[Buffer Memory Unit No. Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Language switching	When language switching is complete ➟(s) Language switching	[Language Switching]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Object script	When object scripts are executed ➟(t) Object script The logs are recorded only when all the following settings are made. • [Operation Log Target] is valid in the object setting. • The trigger type of an object script is set to [Key Code Input], [Input Fixation], or [Device Writing].	[Object Script]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
Touch switch	When the following actions are executed by using touch switches • Bit set • Bit reset • Bit momentary • Bit alternate • Storing values in word devices • Activating various extended functions • Screen switching • Station No. switching • Starting or exiting the auto repeat • Switching to the screen gesture mode ➟(u) Touch switch Because multiple actions can be set for a touch switch, the operation logs are recorded by action.	[Object]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Numerical input	When the following operations are executed by using numerical inputs • Storing input values in the target devices • Storing input values in the target devices for writing • Turning on the write completion devices ➟(v) Numerical input The operation logs of numerical inputs are recorded in the operation log file every time the input values are written to devices.		
Text input	When the following actions are executed by using text inputs • Storing input values in the target devices • Turning on the write completion devices ➟(w) Text input The actions of text inputs are recorded in the operation log file every time the input data is written to devices.		
Alarm operation (deletion)	When each (or all) alarm is deleted by using alarm displays (user) or alarm displays (system) ➟(x) Alarm display (alarm deletion) This log is recorded only when each (or all) alarm that has been occurred is deleted. No operation log of the delete operations is recorded when the delete operations are performed in the situation that the alarms from which the system was recovered are selected, or no alarm is selected.		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Device reset (user alarm, system alarm)	When device resetting is executed by using alarm displays (user) or alarm displays (system) ➟(y) Alarm display (device reset) This log is recorded only when device resetting is executed only for alarms that have been occurred. No operation log of the delete operations is recorded when the delete operations are performed in the situation that the alarms from which the system was recovered are selected, or no alarm is selected. Reset operations at a higher level or middle level in the hierarchy also do not record operation logs.		
Slider	When the following operations are executed by using sliders • Touching the knob or the bar • Releasing the finger from the knob or the bar ➟(z) Slider		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Recipe display (record list)	When the following operations are executed by using the recipe display (record list) • Renaming a record • Reading a record • Writing a record • Deleting a record ➟(aa) Recipe display (record list)		(Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Level authentication (password entry)	When passwords are confirmed or otherwise by the level authentication ➟(ab) Level authentication (password entry)	[Password Authentication (Password Entry)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
Level authentication (level device change)	When security levels are changed by using the security level devices ➟(ac) Level authentication (level device change)	[Password Authentication (Level Device Change)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Operator authentication (login, login failure)	When operators succeed in logging in or fail to log in. ➟(ad) Operator authentication (login)	[Operator Authentication]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Operator authentication (logout)	• When operators log out • When operators are automatically logged out • When operators are forcibly logged out ➟(ae) Operator authentication (logout)		
Operator authentication (operator switching)	When operator switching is successful or results in failure ➟(af) Operator authentication (operator switching)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Operator authentication (password change)	When a password change succeeds or fails ➟(ag) Operator authentication (password change)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Operator authentication (operator account lock)	When an operator account becomes locked due to an operator authentication failure ➟(ah) Operator authentication (operator lock)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
Operator management (start, end)	When the operator management screen or the function setting screen is displayed, fails to load, or is closed in the utility ➟(ai) Operator management (start, end)	[Operator Management]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
Operator management (save, undo)	When the changes of the operator management information are saved or canceled ➟(aj) Operator authentication (save, undo)		
Operator management (import, export)	When the operator management information file is imported or exported ➟(ak) Operator management (import, export)		
Operator management (function settings)	When the function setting screen is closed in the utility (The changed function settings are output only.) ➟(al) Operator management (function setting)		
Operator management (operator management information)	When the operator management screen is closed in the utility (The added, edited, or deleted operator information is output only.) ➟(am) Operator management (operator management information)		
Operator management (new file creation at startup)	When the operator management information file cannot be read and a new file is created at GOT startup ➟(an) Operator management (new file creation at startup)		
Operator management (file corruption at startup)	When the operator management information file fails to be read at GOT startup due to file corruption ➟(ao) Operator management (file corruption at startup)		
Operator management (corrupted file restoration)	When a corrupted operator management information file is restored from the backup file ➟(ap) Operator management (corrupted file restoration at startup)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Operator management (abnormal end)	When the GOT is restarted after the GOT was accidentally powered off while displaying the operator management screen or the function setting screen in the utility ➟(aq) Operator management (illegal end)		
Functional operation security	When succeeding in being confirmed by the functional operation security authentication or resulting in failure ➟(ar) Functional operation security authentication	[Functional Operation Security Authentication]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
SoftGOT-GOT link (start, end)	When SoftGOT-GOT linking starts or ends ➟(as) SoftGOT-GOT link (start, end)	[SoftGOT-GOT Link]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
SoftGOT-GOT (authorization transfer)	Via a SoftGOT-GOT link, when the authorization is transferred ➟(at) SoftGOT-GOT (authorization transfer)		
VNC server (connection, disconnection)	When connected to/disconnected from the VNC server (GOT) ➟(au) VNC server (connection, disconnection)	[VNC Server]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
VNC server (authorization transfer)	When the VNC server (GOT) obtains or releases the authorization ➟(av) VNC server (authorization transfer)		
GOT network interaction function (master GOT)	When the authorization of the GOT network interaction function is transferred (Logging on the master GOT) ➟(aw) GOT network interaction function (master GOT)	[GOT Network Interaction]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GOT network interaction function (equipment except the master GOT)	When the authorization of the GOT network interaction function is transferred (Logging on the equipment except the master GOT) ➟(ax) GOT network interaction function (equipment except the master GOT)		

Item	Timing of operation log being recorded	Setting on GT Designer3	Supported models
GOT Mobile function (successful authentication)	When the client becomes authenticated to the server (GOT) ➟(ay) GOT Mobile function (successful authentication)	[GOT Mobile]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GOT Mobile function (authentication failed)	When the client fails to be authenticated to the server (GOT) ➟(az) GOT Mobile function (authentication failed)		
GOT Mobile function (disconnection)	When the client becomes disconnected from the server (GOT) ➟(ba) GOT Mobile function (disconnection)		
GOT Mobile function (GOT Mobile device assignment)	When the client becomes authenticated to the server (GOT) ➟(bb) GOT Mobile function (GOT Mobile device assignment) The operation events are recorded for VGB and VGD respectively.		
Screen gesture	When the screen gesture mode and the normal operation mode is switched ➟(bc) Screen gesture	Not needed	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
File print (start)	When printing a file starts ➟(be) File print (start)	[File Print]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
File print (end)	When printing a file ends ➟(bf) File print (end)		
Network drive (connection)	When the network drive is connected ➟(bd) Network drive (connection)	[Network Drive]	

(2) Output items of operation logs

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
The following lists the items to be output into the operation log files.
For the timing of each log being recorded, refer to the following.

➟5.2.11 ■1 (1) Target operations for recording operation logs

(a) GOT startup

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT being started or restarted. *1
ACT_ABBR	Function abbreviation	Records [Start].
ACTION	Function name	Records [Start GOT].
OPNAME	Operation name	Records the projects' names.
USER_ID	User ID	Records the project ID numbers of initiated project data.
CHG_VALUE	Change value	Records the GOT model numbers. Example) Model No.1: GOT_No-1

*1 When no battery has been installed in the GOT, the clock is initialized on startup. Hence the date and time in initial state are recorded.
When time synchronization is performed after the initialization, operation logs that were collected before the synchronization may be lost.
If the startup time needs correct recording, install a battery in the GOT.

(b) GOT termination

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT being terminated.
ACT_ABBR	Function abbreviation	Records [End].
ACTION	Function name	Records [Terminate GOT].

(c) GOT restart

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT being restarted.
ACT_ABBR	Function abbreviation	Records events as shown below. • When simply restarted: [ReStart] • When restarted by resets: [ReStartR]
ACTION	Function name	Records events as shown below. • When simply restarted: [Simple restart of GOT] • When restarted by resets: [Reset & Restart GOT]

(d) GOT offline mode transition

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT transitioning to the offline mode.
ACT_ABBR	Function abbreviation	Records [Offline].
ACTION	Function name	Records [Shift to GOT offline mode].

(e) GOT background processing stop, restart

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of background processing stopping or restarting.
ACT_ABBR	Function abbreviation	Records events as shown below. • When background processing stops: [BGStop] • When background processing restarts: [BGRStart]
ACTION	Function name	Records events as shown below. • When background processing stops: [Stop GOT background process] • When background processing restarts: [Resume GOT background process]

(f) Log corruption information

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT abandoning operation logs.
ACT_ABBR	Function abbreviation	Records [LostLog].
ACTION	Function name	Records [LostLog].
CHG_VALUE	Change value	Records the number of the logs that were abandoned.

(g) Unknown logs

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of unknown operation logs being collected.
ACT_ABBR	Function abbreviation	Records [Unknown].
ACTION	Function name	Records [Unknown].

(h) Application switching

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of applications being switched.
ACT_ABBR	Function abbreviation	Records [AppChng].
ACTION	Function name	Records [Switch applications].

Output item	Name	Description
CHG_VALUE	Change value	Records events as shown below. • When monitor screens are displayed: [Monitor] • When utilities are launched: [Utility] • When the device monitor is started: [Device monitor] • When the sequence program monitor (iQ-R/iQ-L ladder) is started: [Sequence Program Monitor(iQ-R/iQ-L Ladder)] • When the sequence program monitor (iQ-F ladder) is started: [Sequence Program Monitor(iQ-F Ladder)] • When the sequence monitor is started: [Seq program monitor] • When the FX list editor is launched: [List editor for FX] • When the FX list monitor is started: [Ladder monitor for FX] • When the intelligent module monitor is started: [Intelligent unit monitor] • When the network monitor is started: [Network monitor] • When the Q motion monitor is started: [Q motion monitor] • When the R motion monitor is started: [R motion monitor] • When the servo amplifier monitor is started: [Servo amp monitor] • When the CNC monitor is started: [CNC monitor] • When the CNC data I/O is started: [CNC data I/O function] • When the CNC machining program is edited: [CNC program editor] • When the multimedia screen is activated: [Multimedia screen] • When the setting screen for the backup/restore function is displayed: [Backup/restoration] • When the setting screen for the operator authentication is displayed: [Operator authentication] • When the list screen for the operator management information is displayed: [Operator information mng. (List)] • When the log viewer is launched: [Log viewer] • When the Q motion SFC monitor is started: [Q motion SFC monitor] • When the motion program editor is started: [Motion program editor] • When the motion program I/O is started: [Motion program I/O] • When the iQSS utility is started: [iQSS utility] • When the system launcher is started: [System launcher] • When the CNC monitor 2 is started: [CNC monitor 2] • When the file manager is started: [File management] • When the drive recorder is started: [Drive recorder] • When the CC-Link IE TSN/CC-Link IE Field Network diagnostics is started: [CC-Link IE TSN/CC-Link IE Field Network diagnostics] • When the servo amplifier graph function is started: [Servo amplifier graph] • When the file print function is started: [File print] • When the personal computer screen on the GOT is displayed in the full screen mode: [PC Remote Operation (Ethernet)] • When the R motion SFC monitor is started: [R motion SFC monitor] • When the vision sensor monitor is started: [Vision sensor monitor] • When unknown applications are launched: [Unknown]*1

*1 If [Unknown] is displayed, update the BootOS to the latest version.
The BootOS version may be earlier than that of the GOT which created the operation log file.

(i) **Application startup, exit**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of applications being launched or exited.
ACT_ABBR	Function abbreviation	Records events as shown below. • When applications are launched: [AppStart] • When applications are exited: [AppEnd]
ACTION	Function name	Records events as shown below. • When applications are launched: [Start application] • When applications are exited: [End application]

Output item	Name	Description
CHG_VALUE	Change value	Records the names of the applications that are launched or exited. • When the personal computer screen on the GOT is displayed in the window display mode: [PC Remote Operation (Ethernet)] • When the device monitor is used: [Device monitor] • When the recipe operation is used: [Recipe operation] • When the drive recorder is used: [Drive recorder] • When the document display (search and bookmark functions for PDF files) is used: [PDF search, bookmark function] • When the servo amplifier graph is used: [Servo amplifier graph] • When the network drive setting is used: [Network drive setting] • When unknown applications are used: [Unknown]
PREV_VALUE	Previous value	Records the window screens that applications use. • Overlap window 1 to 5: [OVA1] to [OVA5] • Superimpose window 1 to 2: [SPI1] to [SPI2]

(j) Time zone setting

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the time zone being changed.
ACT_ABBR	Function abbreviation	Records [TimeZone].
ACTION	Function name	Records [Set time zone].
CHG_VALUE	Change value	Records the time zone setting. The following takes the time zone (Japan) of Greenwich Mean Time + 9 hours as an example. • [GMT+9:00]

(k) Clock setting, time change

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	When the clock is changed, records the dates and time of the clock being changed using the previous clock.
ACT_ABBR	Function abbreviation	Records events as shown below. • When notified from external devices: [GetTime] • When synchronized with SNTP: [GetTimeS] • When changed by using the GOT special register (GS): [SetTime]
ACTION	Function name	Records events as shown below. • When notified from external devices: [Adjust (External device)] • When synchronized with SNTP: [Set time (SNTP)] • When changed by using the GOT special register (GS): [Adjust (GS)]
CHG_VALUE	Change value	When the time is changed, records the new time.
PREV_VALUE	Previous value	When the time is changed, records the previous time.

(l) Time change in the utility

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	When the clock is changed, records the dates and time of the clock being changed using the previous clock.
ACT_ABBR	Function abbreviation	Records [ChngTime].
ACTION	Function name	Records [Change clock].
OPERATOR	Operator name	When operator authentication is performed, records the name of the operator who has been logging in. If operations are performed by VNC clients, the logs are prefixed with asterisk (*).
OPE_ID	Operator ID	When operator authentication is performed, records the ID No. of the operator who has been logging in.
CHG_VALUE	Change value	When the time is changed, records the new time.
PREV_VALUE	Previous value	When the time is changed, records the previous time.

(m) System language switching

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the system language being changed by using utilities.* 1
ACT_ABBR	Function abbreviation	Records [SysLang].
ACTION	Function name	Records [Switch system languages].
OPERATOR	Operator name	When operator authentication is performed, records the name of the operator who has been logging in. If operations are performed by VNC clients, the logs are prefixed with asterisk (*).
OPE_ID	Operator ID	When operator authentication is performed, records the ID No. of the operator who has been logging in.
CHG_VALUE	Change value	When the system language is changed, records the new system language.

*1 If the system language switching devices have been enabled, system language switching by using utilities is disabled.
In this case, if you try to change the system language with utilities, the corresponding operation log is output; however, the system languages are not switched.
You can check if the system languages have been switched by checking the operation log of [Display system language] that is output after system language switching.

(n) Displayed system language

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of system language switching being performed.
ACT_ABBR	Function abbreviation	Records [DspSysLg].
ACTION	Function name	Records [Display system language].
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
CHG_VALUE	Change value	When the system language is changed, records the new system language.

(o) GOT No. switching

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of GOT No. switching being performed.
ACT_ABBR	Function abbreviation	Records [ChgGOTNo].

Output item	Name	Description
ACTION	Function name	Records [Display system language].
OPERATOR	Operator name	When operator authentication is performed, records the name of the operator who has been logging in. If operations are performed by VNC clients, the logs are prefixed with asterisk (*).
OPE_ID	Operator ID	When operator authentication is performed, records the ID No. of the operator who has been logging in.
CHG_VALUE	Change value	When the GOT model No. is changed, records the new No. Example) Model No.1: GOT_No-1

(p) Screen switching

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of screen switching being performed.
ACT_ABBR	Function abbreviation	Records events as shown below. • When base screens are switched: [BASE] • When overlap windows 1 to 5 are switched: [OVL1] to [OVL5] • When superimpose windows 1 to 2 are switched: [SPI1] to [SPI2] • When dialog windows are switched: [DLG] • When the key windows that a user created are switched: [KEY]
ACTION	Function name	Records events as shown below. • When base screens are switched: [Screen switching: Base] • When overlap windows 1 to 5 are switched: [Screen switching: Overlap 1] to [Station No. switching: Overlap 5] • When superimpose windows 1 to 2 are switched: [Screen switching: Superimpose 1] to [Screen switching: Superimpose 2] • When dialog windows are switched: [Screen switching: Dialog] • When the key windows that a user created are switched: [Screen switching: Key]
OPNAME	Operation name	Records the titles of the screens that appear after screen switching.
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
CHG_VALUE	Change value	Records the numbers of the screens that appear after screen switching. Example) Screen No.100 (base screen): [BASE_100]

(q) **Station No. Switching**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of station No. switching being performed.
ACT_ABBR	Function abbreviation	Records events as shown below. • When the common station numbers are switched: [CmnST] • When base screen station numbers are switched: [BaseST] • When the station numbers of overlap windows 1 to 5 are switched: [Ovl1ST] to [Ovl5ST] • When the station numbers of superimpose windows 1 to 2 are switched: [Spi1ST] to [Spi2ST] • When the station numbers of dialog windows are switched: [DlgST]
ACTION	Function name	Records events as shown below. • When the common station numbers are switched: [Station No. switching: Common] • When base screen station numbers are switched: [Station No. switching: base] • When the station numbers of overlap windows 1 to 5 are switched: [Station No. switching: Overlap 1] to [Station No. switching: Overlap 5] • When the station numbers of superimpose windows 1 to 2 are switched: [Station No. switching: Superimpose 1] to [Station No. switching: Superimpose 2] • When the station numbers of dialog windows are switched: [Station No. switching: Dialog]
CHG_VALUE	Change value	When station numbers are changed, records the new numbers in the following form. • ST_network No.-PC station No. Example) Network No.1, PC station number 2: [ST_1-2]

(r) **Buffer memory unit No. switching**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time of the buffer memory unit No. switching.
ACT_ABBR	Function abbreviation	Records events as shown below. • When the common buffer memory unit number is switched in the project: [CmnBM] • When the buffer memory unit number is switched in a base screen: [BaseBM] • When the buffer memory unit number is switched in overlap windows 1 to 5: [Ovl1BM] to [Ovl5BM] • When the buffer memory unit number is switched in superimpose windows 1 to 2: [Spi1BM] to [Spi2BM] • When the buffer memory unit number is switched in a dialog window: [DlgBM]
ACTION	Function name	Records events as shown below. • When the common buffer memory unit number is switched in the project: [BM unit switching: Common] • When the buffer memory unit number is switched in a base screen: [BM unit switching: Base] • When the buffer memory unit number is switched in overlap windows 1 to 5: [BM unit switching: Overlap 1] to [BM unit switching: Overlap 5] • When the buffer memory unit number is switched in superimpose windows 1 to 2: [BM unit switching: Superimpose 1] to [BM unit switching: Superimpose 2] • When the buffer memory unit number is switched in a dialog window: [BM unit switching: Dialog]
CHG_VALUE	Change value	Records the destination module number specified after the buffer memory unit No. switching. Example) Module No. 10: [U10]

(s) **Language switching**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of language switching being performed.
ACT_ABBR	Function abbreviation	Records [DispLang].
ACTION	Function name	Records [Switch languages].

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
CHG_VALUE	Change value	When the comment column numbers are changed, records the new numbers.

(t) Object script

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of object scripts being initiated.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the objects have been placed. The following takes screen No.10 as an example of a display. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records [ObScr].
ACTION	Function name	Records [Object Script].
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➟5.2.11 ■5 (2) [Log Target] tab
OPERATOR	Operator name	When operator authentication is performed, records the name of the operator who has been logging in. If operations are performed by VNC clients, the logs are prefixed with asterisk (*).
OPE_ID	Operator ID	When operator authentication is performed, records the ID No. of the operator who has been logging in.
USER_ID	User ID	Records the ID numbers of the objects for which the object scripts have been set.
DATA_TYPE	Data type	Records the data types of the trigger devices.
CH_NUM	Channel No.	Records the channel number that is specified for the trigger device.
NET_STA	Network No., station No., and CPU No.	Records the network number, station number, and CPU number that are specified for the trigger device. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3
DEV_NAME	Device name	Records the names of the trigger devices.
CHG_VALUE	Change value	Records the operation results of the object scripts. *1
CHG_VALUE_CONT	Change value (operation)	Records the values input into the objects by operators.

*1 If internal devices are used as the target devices for writing operation results, the results are not output to the operation log file.
When needing the logs of the operation results, use devices of external devices as the target devices.

(u) **Touch switch**

Because multiple actions can be set for a touch switch, the operation logs are recorded by action.

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of touch switches being operated.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the touch switches have been placed. The following takes screen No.10 as an example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records the following logs for each action that has been set for the touch switches. • Bit set: [TSW_SET] • Bit reset: [TSW_RST] • Bit alternate: [TSW_ALT] • Bit momentary: [TSW_MMT] • Word set: [TSW_DAT] • Special function: [TSW_APP] • Special function (Recipe data operation) When importing a file: [TSW_RCIN] When exporting a file: [TSW_RCEX] • Screen Switching: [TSW_SCRN] • Station No. switching: [TSW_ST] • Screen gesture: [TSR_GES] If the auto repeat has been set for the touch switches, the following logs are recorded. • When the auto repeat starts: [TSW_REPB] • When the auto repeat ends: [TSW_REPE]
ACTION	Function name	Records the following logs for each action that has been set for the touch switches. • Bit set: [Touch switch: Bit SET] • Bit reset: [Touch switch: Bit RST] • Bit alternate: [Touch switch: Bit ALT] • Bit momentary: [Touch switch: Bit Momentary] • Word set: [Touch switch: Word write] • Extended functions: [Touch switch: Application switching] • Special function (Recipe data operation) When importing a file: [Touch switch: Recipe operation import] When exporting a file: [Touch switch: Recipe operation export] • Screen switching: [Touch switch: Screen switching] • Station No. switching: [Touch switch: Station No. switching] • Screen gesture: [Touch switch: Screen gesture] If the auto repeat has been set for the touch switches, the following logs are recorded. • When the auto repeat starts: [Touch switch: Start auto repeat] • When the auto repeat ends: [Touch switch: End auto repeat]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➥5.2.11 ■5 (2) [Log Target] tab The text displayed on a touch switch immediately before the first operation of the switch is recorded regardless of the settings of [Operation Timing] and [Press Twice]. If text is set for each display position (up, down, right, left, or center), only the centered text will be recorded. When [Text Type] is set to [Text], text is recorded under the following constraints. • The characters completely extending off the object area are not recorded. • Multiple-line text is recorded by merging the lines into one.

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
USER_ID	User ID	Records the user ID numbers of the touch switches. If no user ID number has been set, [-] is recorded.
SUB_NO	Action No.	When multiple actions are set for a touch switch, the order of the actions is recorded.
DATA_TYPE	Data type	Records the data types of the devices that have been set for the touch switches. • Bit: [BIT] • Signed 8-bit binary data: [BIN8] • Unsigned 8-bit binary data: [BIN8_Unsigned] • Signed 16-bit binary data: [BIN16] • Unsigned 16-bit binary data: [BIN16_Unsigned] • Signed 32-bit binary data: [BIN32] • Unsigned 32-bit binary data: [BIN32_Unsigned] • Signed 64-bit binary data: [BIN64] • Unsigned 64-bit binary data: [BIN64_Unsigned] • BCD16: [BCD16] • BCD32: [BCD32] • BCD64: [BCD64] • Real numbers (32 bits): [REAL] • Real numbers (64 bits): [REAL64]
CH_NUM	Channel No.	Records the channel number that is specified for the device of a touch switch.
NET_STA	Network No., station No., and CPU No.	Records the network number, station number, and CPU number that are specified for the device of a touch switch. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3
DEV_NAME	Device name	Records the devices that have been set for the touch switches.

Output item	Name	Description
CHG_VALUE	Change value	Records the following logs for each action that has been set for the touch switches. • [Bit Set], [Bit Reset], [Bit Momentary], [Bit Alternate], [Word Set]: As a result of the actions, the values stored in the devices are output. • [Screen Switching]: Records the screen numbers of the screens that appear after screen switching. • [Station No. Switching]: When station numbers are switched, records the type of the switching and the new station number. Example) In common station No. switching, when switching to network No.1 and PC station No.2.: [CmnST_1-2] • [SP Function] ([Recipe Data Operation]): Records the recipe number of the import destination or export source. If the auto repeat has been set for the touch switches, the following logs are recorded. • When the auto repeat ends: The number of the repeats
CHG_VALUE_CONT	Change value (operation)	Records the values input by touch switches. When [Switch Action] is set to [Recipe Data Operation], the full path to the import source file or export destination file is recorded.
PREV_VALUE	Previous value	When device values are changed, records the previous device values. To log the values, select [Collect previous device values at the time of touch switch operation] in the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
PREV_VALUE_DISP	Previous value (display)	When device values are changed, records the previous device values that have been displayed on the objects. To log the values, select [Collect previous device values at the time of touch switch operation] in the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.

(v) **Numerical input**

The operation logs of numerical inputs are recorded in the operation log file every time the input values are written to devices.

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of numerical inputs being operated.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the numerical inputs have been placed. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records the following logs of each target device for writing. • Monitor devices: [NUM_VAL] • Write devices: [NUM_WDEV] • Write completion devices: [NUM_WCHK]
ACTION	Function name	Records the following logs of each target device for writing. • Monitor devices: [Numerical Input] • Write devices: [Numerical Input (Write device)] • Write completion devices: [Numerical Input (Write check)]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➥5.2.11 ■5 (2) [Log Target] tab

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
USER_ID	User ID	Records the user ID numbers of the numerical inputs. If no user ID number has been set, [-] is recorded.
SUB_NO	Action No.	Records the number corresponding to an action. • Writing data to the monitor device: [1] • Writing data to the write device: [2] • Turning on the write completion device: [3]
DATA_TYPE	Data type	Records the data types of the devices that have been set for the numerical inputs. • Bit: [BIT] • Signed 8-bit binary data: [BIN8] • Unsigned 8-bit binary data: [BIN8_Unsigned] • Signed 16-bit binary data: [BIN16] • Unsigned 16-bit binary data: [BIN16_Unsigned] • Signed 32-bit binary data: [BIN32] • Unsigned 32-bit binary data: [BIN32_Unsigned] • Signed 64-bit binary data: [BIN64] • Unsigned 64-bit binary data: [BIN64_Unsigned] • BCD16: [BCD16] • BCD32: [BCD32] • BCD64: [BCD64] • Real numbers (32 bits): [REAL] • Real numbers (64 bits): [REAL64]
CH_NUM	Channel No.	Records the channel number that is specified for the device of a numerical input.
NET_STA	Network No., station No., and CPU No.	Records the network number, station number, and CPU number that are specified for the device of a numerical input. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3
DEV_NAME	Device name	Records the names of the target devices for writing from the numerical inputs. If the offset function has been set, records device numbers to which offset device values were added.
CHG_VALUE	Change value	When device values are changed, records the new device values. The execution results of data operations and scripts are also reflected to the device values.
CHG_VALUE_CONT	Change value (operation)	Records the values input into numerical inputs.

Output item	Name	Description
PREV_VALUE	Previous value*1	When device values are changed, records the previous device values.
PREV_VALUE_DISP	Previous value (display)*1	Records the previous device value that is displayed on the numerical input object before a key code is entered.

*1 While a key code is being entered, the corresponding device value is not reflected to the display on the numerical input object until the entry is confirmed.
If the device value is changed before the entry is confirmed, inconsistencies occur in the data of PREV_VALUE and PREV_VALUE_DISP.

(w) **Text input**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of text inputs being operated.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the text inputs have been placed. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records the function abbreviation corresponding to an action. • Writing data to the monitor device: [STR_VAL] • Turning on the write completion device: [STR_WCHK]
ACTION	Function name	Records the function name corresponding to an action. • Writing data to the monitor device: [Input text] • Turning on the write completion device: [Input text (Write check)]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➥5.2.11 ■5 (2) [Log Target] tab
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.

Output item	Name	Description
USER_ID	User ID	Records the user ID numbers of the text inputs. If no user ID number has been set, [-] is recorded.
SUB_NO	Action No.	Records the number corresponding to an action. • Writing data to the monitor device: [1] • Turning on the write completion device: [2]
DATA_TYPE	Data type	Records the character code of the monitor device to which data is written. • Alphanumeric characters (ASCII): [ASCII] • Alphanumeric characters (Unicode): [Unicode] • Japanese (SJIS): [SJIS] • Chinese (Simplified) (GB): [GB] • Korean (KS): [KS] • Chinese (Traditional) (Big5): [Big5] Records the data type of the write completion device that is on. • Bit: [BIT]
CH_NUM	Channel No.	Records the channel number that is specified for the device of a text input.
NET_STA	Network No., station No., and CPU No.	Records the network number, station number, and CPU number that are specified for the device of a text input. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3
DEV_NAME	Device name	Records the names of the target devices for writing from the text inputs.
CHG_VALUE	Change value	Records the new device value when data is written to the monitor device. The execution results of scripts are also reflected to the device values. Records [1] when the write completion device is on.
CHG_VALUE_CONT	Change value (operation)	Records the input data of the text input when data is written to the monitor device. Records [1] when the write completion device is on.
PREV_VALUE	Previous value	Records the previous device value when data is written to the monitor device.*1 Records nothing when the write completion device is on.
PREV_VALUE_DISP	Previous value (display)	Records the previous device value displayed on the text input when data is written to the monitor device. Records nothing when the write completion device is on.

*1 When the previous values are displayed, the new text codes are used.
If the text codes are changed after the values are changed, the previous values may not be displayed normally.

(x) **Alarm display (alarm deletion)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of alarm data being deleted.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the alarm displays have been placed. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records events as shown below. • When user alarms are deleted: [UALM_DEL] • When system alarms are deleted: [SALM_DEL] • When all user alarms are deleted: [UALM_DEA] • When all system alarms are deleted: [SALM_DEA]
ACTION	Function name	Records events as shown below. • When user alarms are deleted: [User alarm: Delete] • When system alarms are deleted: [System alarm: Delete] • When all user alarms are deleted: [User alarm: Delete all] • When all system alarms are deleted: [System alarm: Delete all]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➟5.2.11 ■5 (2) [Log Target] tab

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
USER_ID	User ID	Records the user ID numbers of the alarm displays. If no user ID number has been set, [-] is recorded.
SUB_NO	Alarm ID	Records the alarm ID numbers of the user alarms. For system alarms, [-] is recorded.

(y) **Alarm display (device reset)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of devices being reset using alarm displays.
SCRN_NO	Screen No.	Records the screen numbers of the screens on which the alarm displays have been placed. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records events as shown below. • When user alarms are used: [UALM_RST] • When system alarm are used: [SALM_RST]
ACTION	Function name	Records events as shown below. • When user alarms are used: [User alarm: Reset] • When system alarms are used: [System alarm: Reset]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➡5.2.11 ■5 (2) [Log Target] tab

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
USER_ID	User ID	Records the user ID numbers of the alarm displays. If no user ID number has been set, [-] is recorded.
SUB_NO	Alarm ID	Records the alarm ID numbers of the user alarms. For system alarms, [-] is recorded.
DATA_TYPE	Data type	For user alarms, [BIT] is recorded. (data types of the devices that are reset) For system alarms, nothing is recorded.
CH_NUM	Channel No.	For user alarms, the channel number specified for the reset device is recorded.
NET_STA	Network No., station No., and CPU No.	For user alarms, the network number, station number, and CPU number that are specified for the reset device are recorded. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3 For system alarms, nothing is recorded.
DEV_NAME	Device name	For user alarms, records the names of the devices that are reset. For system alarms, nothing is recorded.
CHG_VALUE	Change value	For user alarms, when device values are changed, records the new device values. For system alarms, nothing is recorded.
PREV_VALUE	Previous value	For user alarms, when device values are changed, records the previous device values. For system alarms, nothing is recorded.

(z) Slider

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the slider being operated.

Output item	Name	Description
SCRN_NO	Screen No.	Records the screen number of the screen on which the slider has been arranged. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Key windows: [KEY_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records [SLR_OPE].
ACTION	Function name	Records [Slider Control].
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. 5.2.11 ■5 (2) [Log Target] tab
OPERATOR	Operator name	When operator authentication is performed, records the name of the operator who has been logging in. If operations are performed by VNC clients, the logs are prefixed with asterisk (*).
OPE_ID	Operator ID	When operator authentication is performed, records the ID No. of the operator who has been logging in.
USER_ID	User ID	Records the user ID of the slider. If no user ID number has been set, [-] is recorded.
DATA_TYPE	Data type	Records the data type of the device that has been set for the slider. • Bit: [BIT] • Signed 8-bit binary data: [BIN8] • Unsigned 8-bit binary data: [BIN8_Unsigned] • Signed 16-bit binary data: [BIN16] • Unsigned 16-bit binary data: [BIN16_Unsigned] • Signed 32-bit binary data: [BIN32] • Unsigned 32-bit binary data: [BIN32_Unsigned] • Signed 64-bit binary data: [BIN64] • Unsigned 64-bit binary data: [BIN64_Unsigned] • BCD16: [BCD16] • BCD32: [BCD32] • BCD64: [BCD64] • Real numbers (32 bits): [REAL] • Real numbers (64 bits): [REAL64]
CH_NUM	Channel No.	Records the channel number that is specified for the device of the slider.
NET_STA	Network No., station No., and CPU No.	Records the network number, station number, and CPU number that are specified for the device of the slider. Example) When network No. 2, station No. 1, and CPU No. 3 are specified: '2-1/3
DEV_NAME	Device name	Records the name of the device where data is written from the slider. For system alarms, nothing is recorded. If the offset function has been set, records device numbers to which offset device values were added.
CHG_VALUE	Change value	When device values are changed, records the new device values. The execution results of data operations and scripts are also reflected to the device values.
CHG_VALUE_CONT	Change value (operation)	Records the position of the knob.
PREV_VALUE	Previous value	When device values are changed, records the previous device values.
PREV_VALUE_DISP	Previous value (display)	Records the previous position of the knob when the position of the knob is changed.

(aa) **Recipe display (record list)**

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which a record is manipulated by using the recipe display (record list).

Output item	Name	Description
SCRN_NO	Screen No.	Records the screen number of the screen on which the recipe display (record list) has been placed. The following takes screen No.10 as a record example of each screen. • Base screens: [BASE_10] • Overlap windows 1 to 5: [OVL1_10] to [OVL5_10] • Superimpose windows 1 to 2: [SPI1_10] to [SPI2_10] • Dialog windows: [DLG_10] • Base screens (GOT Mobile): [MBL-BASE_10] • Overlap windows 1 to 2 (GOT Mobile): [MBL-OVL1_10] to [MBLOVL2_10] • Superimpose windows 1 to 2 (GOT Mobile): [MBL-SPI1_10] to [MBLSPI2_10]
ACT_ABBR	Function abbreviation	Records events as shown below. • When renaming a record: [RVW_RN] • When reading a record: [RVW_RD] • When writing a record: [RVW_WT] • When deleting a record: [RVW_DEL]
ACTION	Function name	Records events as shown below. • When renaming a record: [Recipe (record list): Change record name] • When reading a record: [Recipe (record list): Read] • When writing a record: [Recipe (record list): Write] • When deleting a record: [Recipe (record list): Delete record]
OPNAME	Operation name	Records the object operation name specified on the [Log Target] tab of [Operation Log] in the [Environmental Setting] dialog. ➟5.2.11 ■5 (2) [Log Target] tab
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
USER_ID	User ID	Records the user ID for the recipe display (record list). If no user ID number has been set, [-] is recorded.
SUB_NO	Recipe No.	Records the recipe number for the records displayed on the recipe display (record list).
CHG_VALUE	Change value	Records the record number targeted for manipulation.
CHG_VALUE_CONT	Change value (operation)	Records the record name targeted for manipulation. When the record is renamed, a new record name is recorded.
PREV_VALUE_DISP	Previous value (display)	Records the old record name when the record is renamed. When any other manipulation is performed, [-] is recorded.

(ab) **Level authentication (password entry)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of passwords being entered for level authentication.
ACT_ABBR	Function abbreviation	Records [ScrtPwd].
ACTION	Function name	Records [Change security levels(password)].

Output item	Name	Description
OPERATOR	Operator name	Records events as shown below. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	Records the security levels at the time of password inputs.
CHG_VALUE	Change value	When security levels are changed, records the new security levels.
PREV_VALUE	Previous value	Records the result of authentication. • If confirmed: [OK] • If not confirmed: [NG]

(ac) **Level authentication (level device change)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	When level authentication is performed, records the dates and time of levels being changed by using the security level devices.
ACT_ABBR	Function abbreviation	Records [ScrtLv].
ACTION	Function name	Records [Change levels (device)].
OPERATOR	Operator name	Records events as shown below. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
CHG_VALUE	Change value	When security levels are changed, records the new security levels.

(ad) **Operator authentication (login)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of attempts to log in being made.
ACT_ABBR	Function abbreviation	Records events as shown below. • When succeeding in logging in: [Login] • When failing to log in: [LoginNG]
ACTION	Function name	Records events as shown below. • When succeeding in logging in: [Login] • When failing to log in: [Login failed]
OPERATOR	Operator name	Records events as shown below. • When performing operations on the GOT: Operator name entered at login • When performing operations on the VNC client: *(Operator name entered at login)[(VNC client IP address)] Example) *user1[192.168.3.20] • When performing operations on the GOT Mobile function client: *(Operator name entered at login)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] When login attempts fail, the following is recorded. • When inputting an incorrect operator name: Operator name specified at authentication (blank when no operator name is specified) • When inputting an incorrect password: Operator name specified at authentication • When failing to log in with the external authentication or GOT Mobile function: [-]
OPE_ID	Operator ID	When logging in is successful, records the ID numbers of the confirmed operators. When logging in results in failure, [0] is recorded.

(ae) **Operator authentication (logout)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of operations logging out.
ACT_ABBR	Function abbreviation	Records events as shown below. • When operators log out: [Logout] • When operators are automatically logged out: [ALogout] • When operators are forcibly logged out: [CLogout]
ACTION	Function name	Records events as shown below. • When operators log out: [Logout] • When operators are automatically logged out: [Automatic logout] • When operators are forcibly logged out: [Forced logout]
OPERATOR	Operator name	Records events as shown below. • When performing operations on the GOT: Logged-out operator name • When performing operations on the VNC client: *(Logged-out operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] • When performing operations on the GOT Mobile function client: *(Logged-out operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21]
OPE_ID	Operator ID	Records the ID numbers of the operators who logged out.

(af) **Operator authentication (operator switching)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of attempts to switch operators being made.
ACT_ABBR	Function abbreviation	Records events as shown below. • When operator switching is successful: [ChgOp] • When operator switching results in failure: [ChgOpNG]
ACTION	Function name	Records events as shown below. • When operator switching is successful: [Switch operator] • When operator switching results in failure: [Operator switching failed]
OPERATOR	Operator name	Records events as shown below. • When performing operations on the GOT: Operator name after operator switching • When performing operations on the VNC client: *(Operator name after operator switching)[(VNC client IP address)] Example) *user1[192.168.3.20] • When performing operations on the GOT Mobile function client: *(Operator name after operator switching)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21]
OPE_ID	Operator ID	When operators are changed, records the ID numbers of the new operators.

(ag) **Operator authentication (password change)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which a password change succeeded or failed.
ACT_ABBR	Function abbreviation	Records events as shown below. • When a password change succeeds: [ChPass] • When a password change fails: [ChPassNG]
ACTION	Function name	Records events as shown below. • When a password change succeeds: [Password change] • When a password change fails: [Password change (failure)]
OPERATOR	Operator name	Records the name of the operator who has changed the password.
OPE_ID	Operator ID	Records the ID No. of the operator who has changed the password.

(ah) **Operator authentication (operator lock)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which an operator account was locked due to an authentication failure.

Output item	Name	Description
ACT_ABBR	Function abbreviation	Records [OpLock].
ACTION	Function name	Records [Operator lock].
OPERATOR	Operator name	Records the name of the locked-out operator.
OPE_ID	Operator ID	Records the ID number of the locked-out operator.

(ai) **Operator management (start, end)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time of the following events. • When the operator management screen or the function setting screen is displayed in the utility • When the operator management screen or the function setting screen fails to load in the utility • When the operator management screen or the function setting screen is closed in the utility
ACT_ABBR	Function abbreviation	Records events as shown below. • When the screen is displayed: [OpMStart] • When the screen fails to load: [OpMNG] • When the screen is closed: [OpMEnd]
ACTION	Function name	Records events as shown below. • When the screen is displayed: [Operator management: start] • When the screen fails to load: [Operator management: start failure] • When the screen is closed: [Operator management: end]
OPERATOR	Operator name	Records the operator name of the administrator or sub administrator who has been authenticated by the administrator password authentication.
OPE_ID	Operator ID	Records the operator ID number of the administrator or sub administrator who has been authenticated by the administrator password authentication.
CHG_VALUE	Change value	Records events as shown below. • When the operator management screen is displayed: [Operator management] • When the function setting screen is displayed: [Function setting]

(aj) **Operator authentication (save, undo)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the following dates and time. • When the changes of the operator management information are saved • When the changes of the operator management information are canceled
ACT_ABBR	Function abbreviation	Records events as shown below. • When the changes of the operator management information are saved: [OpMSave] • When the changes of the operator management information are canceled: [OpMUndo]
ACTION	Function name	Records events as shown below. • When the changes of the operator management information are saved: [Operator management: save] • When the changes of the operator management information are canceled: [Operator management: undo]
OPERATOR	Operator name	Records the operator name of the administrator or sub-administrator who has been authenticated by the administrator password authentication.
OPE_ID	Operator ID	Records the operator ID of the administrator or sub-administrator who has authenticated the administrator password.

(ak) **Operator management (import, export)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the operator management information file was imported or exported.
ACT_ABBR	Function abbreviation	Records events as shown below. • When importing a file: [OpMImp] • When exporting a file: [OpMExp]

Output item	Name	Description
ACTION	Function name	Records events as shown below. • When importing a file: [Operator management: import] • When exporting a file: [Operator management: export]
OPERATOR	Operator name	Records the operator name of the administrator or sub-administrator who has authenticated the administrator password.
OPE_ID	Operator ID	Records the operator ID of the administrator or sub-administrator who has authenticated the administrator password.
CHG_VALUE	Change value	Records the full path to the import source file or export destination file.

(al) Operator management (function setting)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the function setting screen was closed in the utility.
ACT_ABBR	Function abbreviation	Records the changed function settings. • Authentication type: [OpMAuthM] • Automatic logout time: [OpMALOut] • Password expiration date: [OpMPassE] • External authentication ID: [OpMEAuID] • Login block: [OpMAuthP] • Operator account lock: [OpMLock] • Password requirements: [OpMPassR] • Password history: [OpMPassH] • Use of sub administrators: [OpMSuAdm]
ACTION	Function name	Records the items changed in the function setting. • Authentication type: [Operator management: auth. method] • Automatic logout time: [Operator management: automatic logout] • Password expiration date: [Operator management: pwd. exp. date] • External authentication ID: [Operator management: ext. auth. ID] • Login block: [Operator management: auth. prohibited] • Operator account lock: [Operator management: operator lock] • Password requirements: [Operator management: pwd requirements] • Password history: [Operator management: password history] • Sub administrator: [Operator management: sub admin.]
OPERATOR	Operator name	Records the operator name of the administrator or sub-administrator who has authenticated the administrator password.
OPE_ID	Operator ID	Records the operator ID of the administrator or sub-administrator who has authenticated the administrator password.

Output item	Name	Description
CHG_VALUE	Change value	Records the changes that have been made to the function settings. If multiple entries are present in a sub field, the entries are separated by a slash mark (/). "n" represents a number. • Authentication type Authentication with an external authentication device: [External auth (serial)] Authentication with an external authentication device and auxiliary authentication: [Ext. auth. (serial)/Op. name + pwd.] Authentication with an external authentication device: [External auth (USB)] Authentication with an external authentication device and auxiliary authentication: [Ext. auth. (USB)/Op. name + pwd.] • Automatic logout time Automatic logout time: [n min] • Password expiration date Expiration date: [Expiration: n days] Prenotification: [Notification: n days] • External authentication ID Starting position: [Initial: n bytes] Valid data length: [Data length: n bytes] • Login block setting Number of failed login attempts: [Continuous failure count: n] Login block time: [Prohibition: n s] • Operator account lock Number of consecutive failed login attempts to lock an account: [Continuous failure count: n] • Password requirements Password requirement setting: [Enabled] or [Disabled] Minimum number of characters in password: [Minimum: n characters] Password character type: [Type: <No check>], [Type: <[A-Z,a-z]/[0-9,Other]>], [Type: <[A-Z,a-z]/0-9/Other>], or [Type: <A-Z/a-z/0-9/Other>] • Password history Number of passwords saved: [History count: n] Deleting the history when importing the operator management information file: [Deletion on import: enabled], [Deletion on import: disabled] • Sub-administrator: [Operator management: sub admin.] Use of sub administrators: [Enabled] or [Disabled] Showing of uneditable operator information: [Uneditable display: enabled] or [Uneditable display: disabled] Security level to change the function setting: [Level n or higher]
PREV_VALUE	Previous value	Records the entries that have been made before the function setting changes. The sub fields are the same as for [CHG_VALUE] (Change value).

(am) **Operator management (operator management information)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the operator management screen was closed in the utility.
ACT_ABBR	Function abbreviation	Records the changes of the operator management information. • When a piece of operator information is added: [OpMAddOp] • When a piece of operator information is deleted: [OpMDelOp] • When a piece of operator information is edited: [OpMEdiOp]
ACTION	Function name	Records the changes of the operator management information. • When a piece of operator information is added: [Operator management: add operator] • When a piece of operator information is deleted: [Operator management: add operator] • When a piece of operator information is edited: [Operator management: delete operator]
OPERATOR	Operator name	Records the operator name of the administrator or sub-administrator who has authenticated the administrator password.
OPE_ID	Operator ID	Records the operator ID of the administrator or sub-administrator who has authenticated the administrator password.
DEV_NAME	Device name	Records the operator name and ID number of a piece of operator information that has been added, deleted, or edited.

Output item	Name	Description
CHG_VALUE	Change value	When a piece of operator information is added, the new entries are recorded in the following sub fields. When a piece of operator information is deleted, the entries before the deletion are recorded in the following sub fields. When a piece of operator information is edited, the entries after editing are recorded in the following sub fields. The entries are separated by a slash mark (/) in each sub field. n indicates a numerical value. • Security level Security level set for an operator: [Level: n] • Password When the password is changed: [Password change] • Administrator authority When the administrator authority is enabled: [Administrator authority: enabled] When the administrator authority is disabled: [Administrator authority: disabled] • Password expiration date setting When no expiration date is set: [Permanent password: enabled] When an expiration date is set: [Permanent password: disabled] • Disabling an operator account When the operator account is disabled: [Disable operators: enabled] When the operator account is enabled: [Disable operators: disabled] • Changing a password at the next login When the password change setting is enabled: [Change password next login: enabled] When the password change setting is disabled: [Change password next login: disabled] • External authentication When the external authentication is enabled: [External authentication: enabled] When the external authentication is disabled: [External authentication: disabled] When the external authentication ID number is changed: [Change external authentication ID] • Operator lock When the operator account is locked: [Locked] When the operator account is unlocked: [Unlock]
PREV_VALUE	Previous value	Records the entries only if any operator information has been edited. Records the entries that have been made before the operator management information edit. Items to be recorded are the same as [CHG_VALUE] (change value).

(an) Operator management (new file creation at startup)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which an operator management information file was created.
ACT_ABBR	Function abbreviation	Records [OpMNewOp].
ACTION	Function name	Records [Operator management: new].

(ao) Operator management (file corruption at startup)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which an operator management information file failed to be read due to file corruption.
ACT_ABBR	Function abbreviation	Records [OpMInfBr].
ACTION	Function name	Records [Operator management: corrupted].

(ap) Operator management (corrupted file restoration at startup)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which an operator management information file was restored.
ACT_ABBR	Function abbreviation	Records [OpMRstor].
ACTION	Function name	Records [Operator management: restore].
OPERATOR	Operator name	Records the operator name of the administrator or sub administrator who has restored the corrupted file.

Output item	Name	Description
OPE_ID	Operator ID	Records the operator ID number of the administrator or sub administrator who has restored the corrupted file.

(aq) **Operator management (illegal end)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the GOT was restarted after the GOT was accidentally powered off while displaying the operator management screen or the function setting screen in the utility.
ACT_ABBR	Function abbreviation	Records [OpMUnEnd].
ACTION	Function name	Records [Operator management: illegal end].
OPERATOR	Operator name	Records the operator name of the administrator or sub administrator who was logged in when the GOT was accidentally powered off.
OPE_ID	Operator ID	Records the operator ID number of the administrator or sub administrator who was logged in when the GOT was accidentally powered off.
CHG_VALUE	Change value	Records the date and time on which the administrator or sub administrator logged into before the GOT was accidentally powered off.

(ar) **Functional operation security authentication**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	When function operating security authentication is performed, records the dates and time of attempts to be confirmed being made.
ACT_ABBR	Function abbreviation	Records [AppOpe].
ACTION	Function name	Records [Functional Operation Security Authentication].
CHG_VALUE	Change value	Records the names of the functions that are confirmed by authentication. • When utilities are launched: [Utility (start)] • When the device monitor is started: [Device monitor (start)] • When device tests of the sequence program monitor (SFC) are started: [Seq program monitor_SFC (device test)] • When device tests of the sequence program monitor (ladder) are started: [Seq program monitor_ladder (dev.test)] • When the editor screen for the sequence program monitor (ladder) is displayed: [Seq program monitor_ladder (edit)] • When device tests of the sequence program monitor (iQ-R/iQ-L ladder) are started: [iQ-R/iQ-L Seq program monitor_ladder (test)] • When the editor screen for the sequence program monitor (iQ-R/iQ-L ladder) is displayed: [iQ-R/iQ-L Seq program monitor_ladder (edit)] • When device tests of the sequence program monitor (iQ-F ladder) are started: [iQ-F Seq program monitor_ladder (test)] • When the editor screen for the sequence program monitor (iQ-F ladder) is displayed: [iQ-F Seq program monitor_ladder (edit)] • When the parameter setting screen for the Q motion monitor is displayed: [Q motion monitor (parameter setting)] • When the parameter setting screen for the servo amplifier monitor is displayed: [Servo amp monitor (parameter setting)]
PREV_VALUE	Authentication result	Records the result of authentication. • If confirmed: [OK] • If not confirmed: [NG]

(as) **SoftGOT-GOT link (start, end)**

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of SoftGOT-GOT linking starting or ending.
ACT_ABBR	Function abbreviation	Records events as shown below. • When starting: [SLCnctG] • When ending: [SLDCnctG] The SoftGOT records the following logs. • When starting: [SLCnctS] • When ending: [SLDCnctS]

Output item	Name	Description
ACTION	Function name	Records events as shown below. • When starting: [Connect Soft GOT-GOT link] • When ending: [Disconnect Soft GOT-GOT link]
CHG_VALUE	Change value	Records the IP addresses of connection request sources.

(at) SoftGOT-GOT (authorization transfer)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the authorization being transferred via a SoftGOT-GOT link.
ACT_ABBR	Function abbreviation	Records events as shown below. • In the GOT: [SLChCtlG] • In the SoftGOT: [SLChCtlS]
ACTION	Function name	Records [Shift Soft GOT-GOT link authorization].
CHG_VALUE	Change value	Records the destinations to which the authorization is transferred. When the destination is the SoftGOT, the IP address is also recorded. Example) When transferred from the GOT to the SoftGOT: [SoftGOT:192.168.3.40]
PREV_VALUE	Previous value	Records the transfer sources of the authorization. When the source is the SoftGOT, the IP address is also recorded. Example) When transferred from the GOT to the SoftGOT: [GOT]

(au) VNC server (connection, disconnection)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the establishment of the connection to the VNC server or the disconnection from the server.
ACT_ABBR	Function abbreviation	Records events as shown below. • When connected: [VSCnct] • When disconnected: [VSDCnct]
ACTION	Function name	Records events as shown below. • When connected: [Connect VNC server] • When disconnected: [Disconnect VNC server]
CHG_VALUE	Change value	Records the IP addresses of connection request sources.

(av) VNC server (authorization transfer)

Output item	Name	Description
[No.]	Log number	Records a log number.
DATE	Date and time	Records the dates and time of the GOT obtaining or releasing the authorization.
ACT_ABBR	Function abbreviation	Records [VSChCtlC].
ACTION	Function name	Records [Shift VNC server authorization].
CHG_VALUE	Change value	Records the destinations to which the authorization is transferred. When the destination is a VNC client, the IP address is also recorded. Example) When transferred from the VNC server to a VNC client: [Client:192.168.3.39]
PREV_VALUE	Previous value	Records the transfer sources of the authorization. When the source is a VNC client, the IP address is also recorded. Example) When transferred from the VNC server to a VNC client: [Server]

(aw) GOT network interaction function (master GOT)

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the authorization is transferred.
ACT_ABBR	Function abbreviation	Records events as shown below. • When any equipment in the control group obtains the authorization: [MngCtrlGet] • When the authorized equipment releases the authorization: [MngCtrlRls]
ACTION	Function name	Records events as shown below. • When any equipment in the control group obtains the authorization: [Obtain operating authority] • When the authorized equipment releases the authorization: [Release operating authority]

Output item	Name	Description
CHG_VALUE	Change value	Records information on the equipment that obtained or released the authorization. • For the GOT: IP address • For the VNC client: VNC:(IP address) • For the GOT Mobile function client: M(Client No.):(IP address) • For GT SoftGOT2000: SG(Module No.):(IP address)

(ax) GOT network interaction function (equipment except the master GOT)

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the authorization is transferred.
ACT_ABBR	Function abbreviation	Records events as shown below. • When the equipment obtains the authorization: [UsrCtrlGet] • When the equipment releases the authorization: [UsrCtrlRls] • When the equipment fails to obtain the authorization: [UsrCtrlFail]
ACTION	Function name	Records events as shown below. • When the equipment obtains the authorization: [Obtain operating authority use] • When the equipment releases the authorization: [Release operating authority use] • When the equipment fails to obtain the authorization: [Failed to obtain operating authority]
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *[M(Client No.):(Client IP address)] Example) *[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT or VNC client: Security level • When performing operations on the GOT Mobile function client: [-] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT or VNC client: Operator ID If no operator is logged in, the operator ID number is 0. • When performing operations on the GOT Mobile function client: [-] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
CHG_VALUE	Change value	Records the IP address of the master GOT.

(ay) GOT Mobile function (successful authentication)

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the client became authenticated to the server (GOT).
ACT_ABBR	Function abbreviation	Records events as shown below. • When the connection becomes established: [MBLCnct] • When the trial connection becomes established: [MBLTrialCnct]
ACTION	Function name	Records events as shown below. • When the connection becomes established: [GOT Mobile connection] • When the trial connection becomes established: [GOT Mobile trial connection]
OPERATOR	Operator name	Records events as shown below.*(Operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.20]
OPE_ID	Operator ID	Records events as shown below. • When [GOT Mobile Authentication Method] is set to [GOT Mobile exclusive]: 0 • When [GOT Mobile Authentication Method] is set to [Operator]: Operator ID
CHG_VALUE	Change value	Records information obtained from the User-agent header of the HTTP request (such as the browser name of the client).

(az) GOT Mobile function (authentication failed)

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the client failed to be authenticated to the server (GOT).
ACT_ABBR	Function abbreviation	Records events as shown below. • When authentication fails: [MBLAuthNG] • When authentication fails because the number of connected clients has exceeded the upper limit: [MBLOver]
ACTION	Function name	Records events as shown below. • When the connection authentication fails: [GOT Mobile authentication failure] • When authentication fails because the number of connected clients has exceeded the upper limit: [GOT Mobile connection limit over]
OPERATOR	Operator name	Records events as shown below.*(Operator name entered at authentication)[M-:(Client IP address)] Example) *user1[M-:192.168.3.20]
OPE_ID	Operator ID	Always records [0].
CHG_VALUE	Change value	Records information obtained from the User-agent header of the HTTP request (such as the browser name of the client).

(ba) GOT Mobile function (disconnection)

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which the client became disconnected from the server (GOT).
ACT_ABBR	Function abbreviation	Records events as shown below. • When the connection becomes disconnected: [MBLDCnct] • When the connection is forcibly disconnected using the client control device or the utility: [MBLCDCnct] • When the trial connection ends: [MBLTrialDCnct] • When the connection is disconnected due to a communication error: [MBLTimeOut]
ACTION	Function name	Records events as shown below. • When the connection becomes disconnected: [GOT Mobile disconnection] • When the connection is forcibly disconnected using the client control device or the utility: [GOT Mobile forced disconnection] • When the trial connection ends: [GOT Mobile end of trial] • When the connection is disconnected due to a communication error: [GOT Mobile timeout]
OPERATOR	Operator name	Records events as shown below.*[M(Client No.):Client IP address] Example) *[M3:192.168.3.20]

(bb) GOT Mobile function (GOT Mobile device assignment)

Output item	Name	Description
NO	Log number	Records a log number.

Output item	Name	Description
DATE	Date and time	Records the date and time on which the client became authenticated to the server (GOT).
ACT_ABBR	Function abbreviation	Records [MBLVtlDev].
ACTION	Function name	Records [GOT Mobile virtual device allocation].
OPERATOR	Operator name	Records events as shown below.*[M(Client No.):Client IP address] Example) *[M3:192.168.3.20]
DATA_TYPE	Data type	Records the device type of the GOT internal devices that are assigned to the GOT Mobile devices. • Bit: [BIT] • Signed 16-bit binary data: [BIN16] • Unsigned 16-bit binary data: [BIN16_Unsigned] • Signed 32-bit binary data: [BIN32] • Unsigned 32-bit binary data: [BIN32_Unsigned] • BCD16: [BCD16] • BCD32: [BCD32] • Real numbers (32 bits): [REAL]
DEV_NAME	Device name	Records the start device of the GOT internal devices that are assigned to the GOT Mobile devices.
CHG_VALUE	Change value	Records the number of the GOT internal devices that are assigned to the GOT Mobile devices.
PREV_VALUE	Previous value	Records the start device of the GOT Mobile devices.

(bc) **Screen gesture**

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the dates and time when the gesture mode is switched.
ACT_ABBR	Function abbreviation	Records [ChScrGes].
ACTION	Function name	Records [Switch screen gesture].
CHG_VALUE	Change value	Records the changed gesture mode. Example) When transferred from the normal mode to the screen gesture mode: [Screen gesture mode]

(bd) **Network drive (connection)**

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which connecting the network drive has succeeded or failed.
ACT_ABBR	Function abbreviation	Records events as shown below. • When the connection has succeeded: [VlmCnct] • When the connection has failed: [VlmCnctNG]
ACTION	Function name	Records events as shown below. • When the connection has succeeded: [Connect network drive] • When the connection has failed: [Network drive connection failed]
CHG_VALUE	Change value	Records events as shown below. (Drive name):(User name) Example) N:user
PREV_VALUE	Previous value	Records events as shown below. \\(IP address of the file server)\(Share name)\(Folder path) Example) \\192.168.3.44\share\mount\doc

(be) **File print (start)**

When multiple files are printed, operations are recorded for each file.

Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the printing date and time. If multiple files are printed, the same date and time is recorded for each file.
ACT_ABBR	Function abbreviation	Records [PntStart].
ACTION	Function name	Records [File print: start printing].

Output item	Name	Description
OPERATOR	Operator name	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
CHG_VALUE	Change value	Records the name of the first printed file.

(bf) **File print (end)**

When multiple files are printed, operations are recorded for each file.

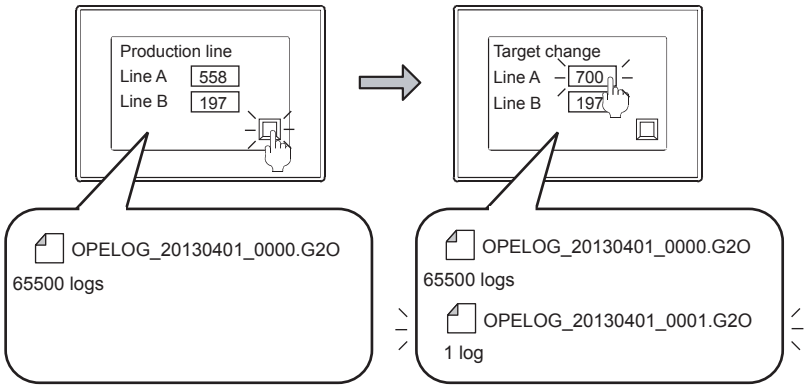
Output item	Name	Description
NO	Log number	Records a log number.
DATE	Date and time	Records the date and time on which printing ends.
ACT_ABBR	Function abbreviation	Records events as shown below. • When printing is complete: [PntEnd] • When printing is aborted by the user: [PntUStop] • When printing is aborted due to an access error: [PntCStop] • When printing is aborted due to a printer error: [PntPStop] • When printing is aborted due to a timeout error: [PntTStop] • When printing is aborted by the system: [PntSStop]
ACTION	Function name	Records events as shown below. • When printing is complete: [File print: normal end] • When printing is aborted by the user: [File print: cancelled (user)] • When printing is aborted due to an access error: [File print: cancelled (access error)] • When printing is aborted due to a printer error: [File print: cancelled (printer error)] • When printing is aborted due to a timeout error: [File print: cancelled (timeout error)] • When printing is aborted by the system: [File print: cancelled (system)]

Output item	Name	Description
OPERATOR	Operator name	Records events only when printing is aborted by the user. The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. When [None] or [Level] is selected for [Authentication Method], the following contents are recorded. For [None], the security level is 0. • When performing operations on the GOT: Level(Security level number) Example) Level5 • When performing operations on the VNC client: *Level(Security level number)[(VNC client IP address)] Example) *Level5[192.168.3.20] • When performing operations on the GOT Mobile function client: *Level(Security level number)[M(Client No.):(Client IP address)] Example) *Level5[M3:192.168.3.21] To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window. When [Operator] is selected for [Authentication Method], the following contents are recorded. • When performing operations on the GOT: Operator name If no operator is logged in, the operator name is left blank. • When performing operations on the VNC client: *(Logged-in operator name)[(VNC client IP address)] Example) *user1[192.168.3.20] The operator name is not recorded when the operator is not logged in. • When performing operations on the GOT Mobile function client: *(Logged-in operator name)[M(Client No.):(Client IP address)] Example) *user1[M3:192.168.3.21] The operator name is not recorded when the operator is not logged in. To record operations performed on the client, select [Collect operation logs of clients being connected to the server of GOT Mobile function] on the [Log Target] tab in [Operation Log] of the [Environmental Setting] window.
OPE_ID	Operator ID	Records events only when printing is aborted by the user. The contents to be recorded vary depending on the item selected for [Authentication Method] on the [Screen Security] tab in [Security] of the [Environmental Setting] window. Records the security level when [None] or [Level] is selected for [Authentication Method]. For [None], the security level is 0. Records the operator ID number when [Operator] is selected for [Authentication Method]. If no operator is logged in, the operator ID number is 0.
CHG_VALUE	Change value	Records the name of the last printed file.

(3) Specifications of the operations log file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

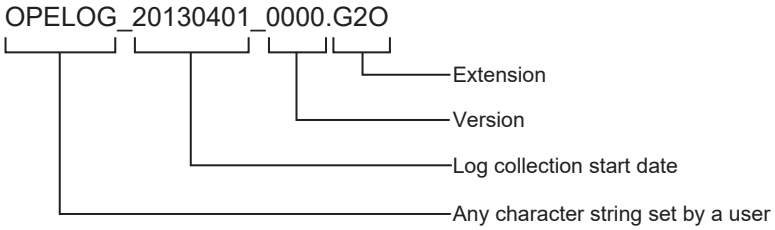
Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Operation logs are saved in operation log files.
Up to 65500 logs can be recorded in a single operation log file.
When the number of logs exceeds 65500, another operation log file is newly created.



Data storage is needed to save operation logs.

(4) Operation log file name

The file name extension of operation log files is [.G2O].
A file name is any character string set by a user, followed by the automatically added log collection start date (YYYYMMDD) for the file and the version.



The version starts from 0000, and is incremented by one every time a new file is created.
After the number reaches 9999, it returns to 0000 in the name of the next new file.
For the character type and the number of characters available for file names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

For how to set file names, refer to the following.

➟5.2.11 ■5 (1) [Basic] tab

(5) Drives for saving operation log files

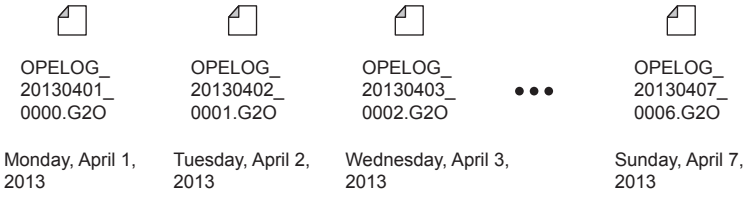
Drive A, B, E, F, G, or X (current drive) can be selected to save operation log files.
For how to set the destination for saving, refer to the following.

➟5.2.11 ■5 (1) [Basic] tab

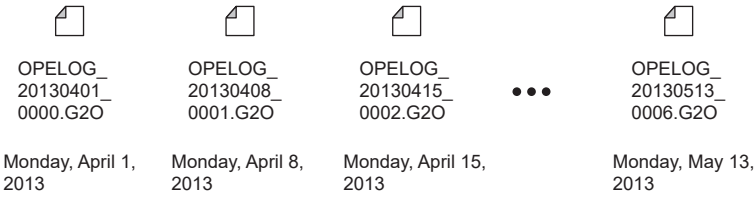
(6) Time intervals at which operation logs are saved

You can select the time intervals, in days or weeks, at which operation logs are saved.
Saved operations log files are stored for a certain period of time and then deleted automatically.

• Saving in days (every day)



• Saving in weeks (every week)



(7) Size setting of operation log files to be saved

The total size of all operation log files that can be saved in data storage can be specified.
When the size exceeds the specified one, the oldest operation log file is automatically deleted.

(8) Specifications for recording labels and tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When operations are logged, label and tag names are also recorded.
The following shows the labels and tags to be recorded.

• Global label
• OMRON NJ/NX tag

• AB native tag

Even if you change the label or tag set for an object or others, you can check the label or tag name as of the recording.
Note that the size of the log file becomes large if the recorded label or tag name is long.
When the station No. switching function, the offset function, or other functions are used, the label or tag name recorded in the operation log contains the relevant information.
Example) When the global label name is LABEL_B, the station number is 2-3, and the offset device value is 500
The global label name is recorded as [2-3::LABEL_B(+500)].

■2 How to use the operation log

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

(1) Checking operation logs

Operation logs can be checked by the following three methods.

Method	Details
Using the GOT utility	Operation logs can be checked and the files can be managed by the [Operation Log Information] utility. For the operations of the utility, refer to the following manual. ➟GOT2000 Series User's Manual (Utility)
Using the resource file viewer of the personal computer	Operation logs can be checked by using the resource file viewer of the personal computer. The operation log file (*.G2O) obtained from the GOT or the converted operation log file (CSV or Unicode text file) is checked. For the resource file viewer, refer to the following. ➟11.16 Viewing an operation log file (Resource File Viewer) For how to convert the operation log file (*.G2O), refer to the following. ➟(3) CSV file conversion or Unicode text file conversion of operation log file
Using the text editor or other tools of the personal computer	Operation logs can be checked by using the text editor or other tools of the personal computer. To enable this, convert the operation log file into a CSV or Unicode text file.

(2) Operating operation log files

(a) Operating with utilities

The following operations of utilities are available.

Item	Description
Creates a folder	Creates a folder where operation log files are stored. Folders are created by date or time period and operation log files are so managed.
Deletes a folder	Deletes a folder that stores operation log files.
Copies a file	Copies an operation log file. Perform this operation to back up an operation log file.
Deletes a file	Deletes an operation log file.
Changes a file name	Renames an operation log file.
Moves a file	Moves an operation log file to another folder. Perform this operation to back up an operation log file.
Converses a file (G2O) into a CSV file or a Unicode text file	Converts an operation log file (*.G2O) to Unicode or CSV.
Search	Searches for an operation log in an operation log file by date of creation or time.
Latest display of the list	Updates the operation log list.

For the operations of the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(3) CSV file conversion or Unicode text file conversion of operation log file

The following shows how to convert an operation log file (*.G2O) into a CSV file or a Unicode text file.

(a) Converting with GT Designer3

Step 1 Save an operation log file (*.G2O) to the personal computer by either of the following methods.

• Transferring with GT Designer3

Select [Communication] → [Read from GOT...] from the menu to transfer a file to the personal computer.

➟4.3.2 ■3 Reading the data from the GOT

• Transferring with a data storage

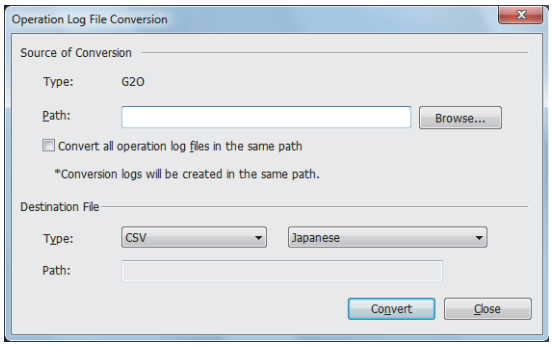
Save an operation log file to a data storage and read it using the personal computer.

➟GOT2000 Series User's Manual (Utility)

Step 2 Select [Tools] → [Resource Data Conversion] → [Operation Log File...] from the menu to display the [Operation Log File Conversion] dialog.

Refer to the following to enter the required items.

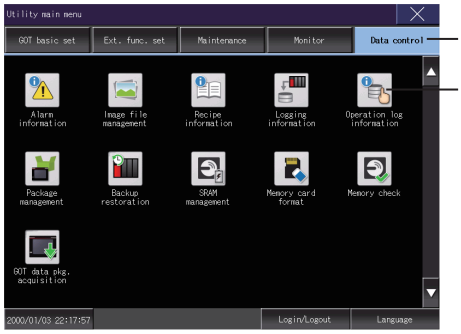
➟5.2.11 ■6 [Operation Log File Conversion] dialog



(b) Converting in the utility

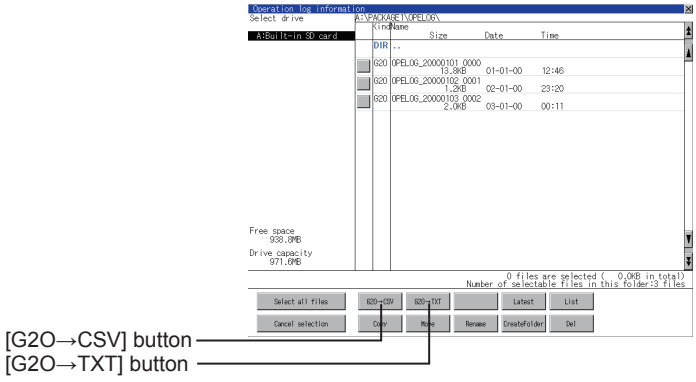
Step 1 Start the GOT and touch the [Program/Data management] tab.

Step 2 Touch the [Operation Log Information] to display the [Operation Log Information] screen.



Step 3 Select a file to convert, and touch either of the following buttons.

- [G2O→CSV] button
  Converts an operation log file (.G2O) into a CSV file.
- [G2O→TXT] button
  Converts an operation log file (.G2O) into a Unicode text file.



Step 4 A file which is converted is saved in the same location as an operation log file (*.G2O).

(c) Converting with the Trigger File Conversion device

To convert an operation log file (*.G2O) in which events are being collected into a CSV file, turn on the Trigger File Conversion device with a bit switch or others.

Set the Trigger File Conversion device on the [File Conversion] tab in [Operation Log].

➟5.2.11 ■5 (3) [File Conversion] tab

Check the file conversion status using the Notify Operation Log Status device.

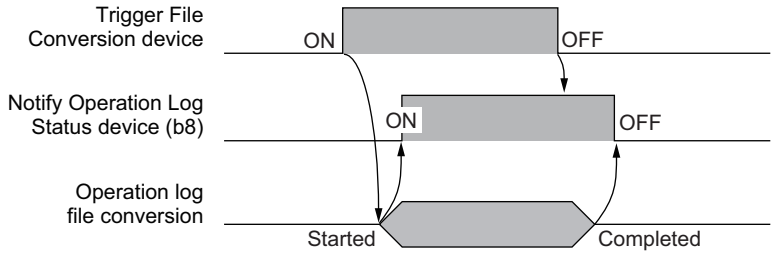
➟(4) Checking the operation log status

(4) Checking the operation log status

Check the operation log status by using the Notify Operation Log Status device.
Set the Notify Operation Log Status device on the [Basic] tab for [Operation Log] in the [Environmental Setting] window.

➟5.2.11 ■5 (1) [Basic] tab

The following shows the details of the Notify Operation Log Status device.

Bit number	Description
b0	Turns on when operation events cannot be collected. Turns off when collecting operation events is enabled.
b1 to b7	Use prohibited
b8	Turns on when an operation log file conversion is started by using the Trigger File Conversion device. Turns off when the conversion is completed and the Trigger File Conversion device turns off. 
b9	Turns on when an automatic operation log file conversion is started. Turns off when the conversion is completed.
b10 to b15	Use prohibited

Set the Trigger File Conversion device and the automatic operation log file conversion on the [File Conversion] tab for [Operation Log] in the [Environmental Setting] window.

➟5.2.11 ■5 (3) [File Conversion] tab

(5) Outputting operation log data to a report screen

You can output operation log data to a report screen.
For the report function, refer to the following.

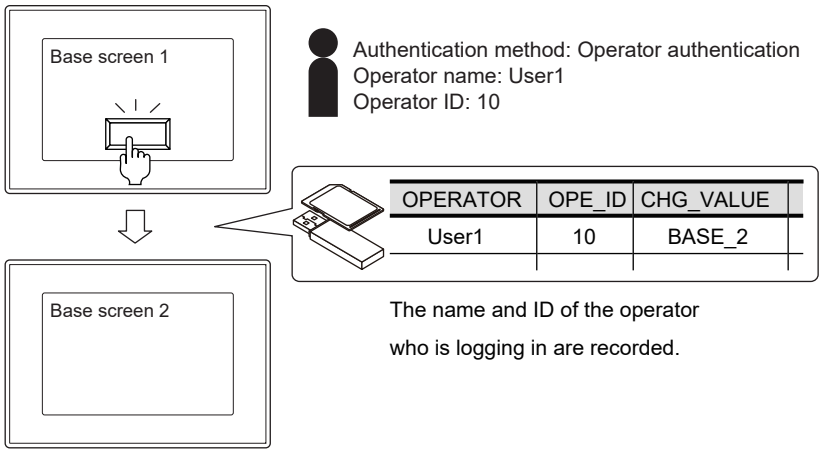
➟10.11 Outputting the Collected Data as a Report (Report Function)

■3 Recording the operator name as the character string stored in the device

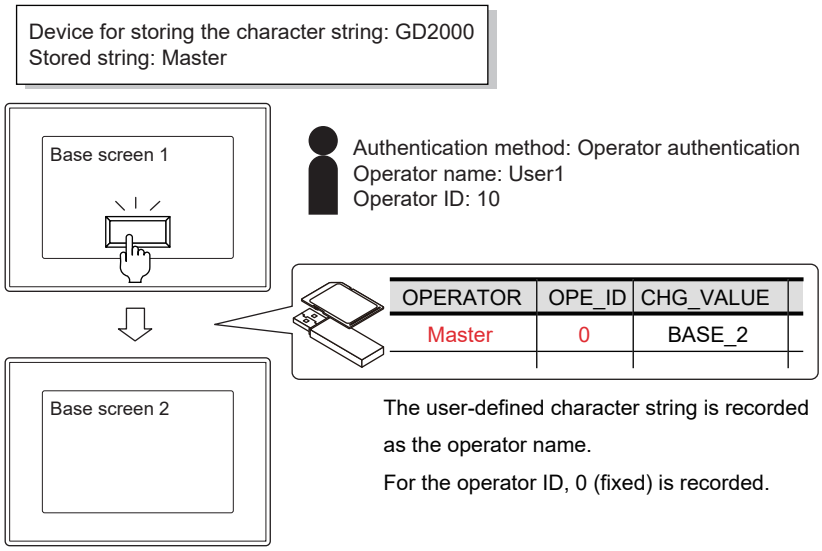
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
The operator name, substituted by the user-defined character string stored in the specified device, is recorded in the operation log.
The character string specified using this function is prioritized over the operator name to be recorded when the screen security authentication method is operator authentication or level authentication.

Example 1) This function is disabled while the operator authentication method is selected for screen security.



Example 2) This function is enabled while the operator authentication is selected for screen security.



(1) Operation logs in which the operator name is substituted by a character string

This function is available for operation logs in which the operator name (output item: OPERATOR) is recorded.

➟5.2.11 ■1 (2) Output items of operation logs

Note that this function is not available for operation logs when:

- A login attempt for the operator authentication fails.
- An operator switching for the operator authentication fails.
- An operator account for the operator authentication is locked.
- The operator management information is changed.

The operator name is not substituted by a character string for the operations performed on a VNC client or GOT Mobile function client.

(2) Substituting the operator name with a character string

Select [Record [Contents]-[Operator Name] with the strings stored in the device (up to 16 characters)] on the [Log Target] tab in [Operation Log], and set [Device (8 points)].

➟5.2.11 ■5 [Operation Log...]

Store a character string in eight consecutive word devices starting from a specified device.
Store the character string in the ASCII code (0x20 to 0x7E) in order from the lower to the upper bit of each device.
Store Null (0x00) at the end of the character code.

(3) Timing at which the substituting operator name is recorded in the operation log

After a character string is stored in the device, the substituting operator name is recorded in the operation log.

■4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

(1) Log target when recording an operation log per object

Do not select [Object] in the [Log Target] tab of the operation log setting.
Doing so sets all the objects as the target of the operation log function.
To record an operation log per object, select [Operation Log Information] in each object setting.

(2) Target function for an operation log

Do not set the function which is not set in GT Designer3 as the target of the operation log.
Doing so may record an operation log even though the function does not operate.

(3) System language when converting an operation log file (*.G2O)

When [System Language Switching Interlock] is set for [File Conversion Language] in the operation log setting, an operation log file is not converted in the language specified in the system language switching device.
A file is converted in the system language set in the utility.

(4) Converting an operation log file (*.G2O) in the utility

When converting an operation log file (*.G2O) into a CSV file or a Unicode text file in the utility, execute a conversion by each file.
Even if multiple files are selected at once, they cannot be converted.

(5) Operation log file size

The file size of an operation log cannot be calculated in advance.
To use a data storage in other functions as well, limiting the capacity used for an operation log file by setting [Specify the total log file size] in GT Designer3 is recommended.

(6) Converting an operation log file (*.G2O) in a language other than Japanese and English

Before converting an operation log file (*.G2O) in a language other than Japanese and English to a CSV file, turn on the Character Code for CSV Conversion signal (GS522.b2).
If this signal (GS522.b2) is not turned on, the characters are not displayed correctly.
For the details of the Character Code for CSV Conversion signal (GS522.b2), refer to the following.

➥12.1.3 GOT special register (GS)

(7) Substituting the operator name

If you perform another operation before storing a character code in the device, the substituting operator name is not recorded in the operation log.
Make sure that a character code is stored in the device in advance.
While the GOT is being started or restarted, if an operation log is recorded at any of the following timing, the operator name may be left blank.

- Obtaining the authority
- Releasing the authority
- Failing to obtain the authority

For details on substituting the operator name with a character string, refer to the following.

➥5.2.11 ■3 Recording the operator name as the character string stored in the device

(8) To maintain file access performance

You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

(9) CSV file conversion or Unicode text file conversion of operation log file in GT21

When any communication driver other than the following is used, [??] is displayed in the device name after the file conversion.

- [Serial(MELSEC)]
- [MELSEC-FX]
- [Ethernet(MITSUBISHI ELECTRIC), Gateway]

• [Ethernet(FX), Gateway]
• [CC-Link(G4)]
• [MODBUS/RTU Master]
• [MODBUS/TCP Master, Gateway]

In GT Simulator3, [??] is displayed in the device name after the file conversion regardless of the communication driver type.

(10)Recording of the operation log at a communication error in GT21

If a communication error occurs at writing data to the device using an object, the operation log is not recorded.

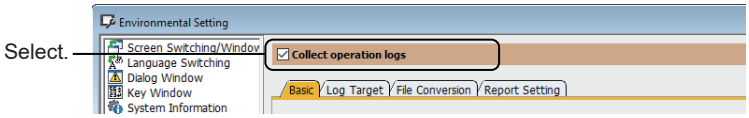
(11)Recording hard copy operation logs

Hard copy start and abort operations are not recorded in operation logs.

■5 [Operation Log...]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
In [Operation Log...], configure the setting for saving the operation history of the GOT.
Select [Common] → [GOT Environmental Setting] → [Operation Log...] from the menu to display this window.
After displaying the window, select [Collect operation logs].

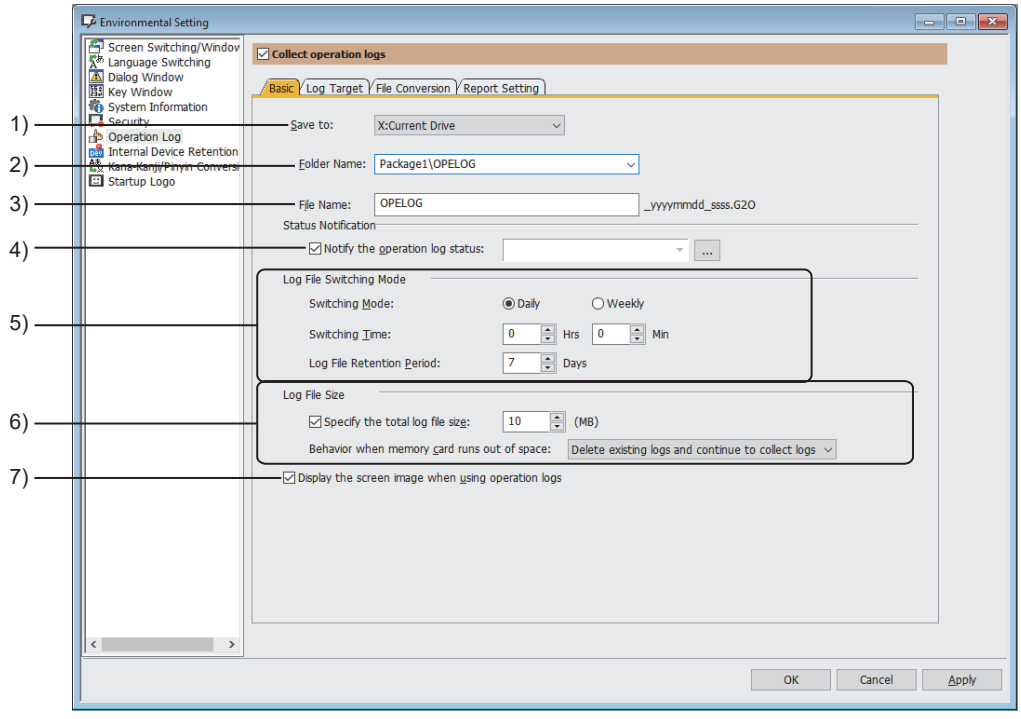


➟5.2.11 ■5 (1) [Basic] tab
5.2.11 ■5 (2) [Log Target] tab
5.2.11 ■5 (3) [File Conversion] tab
5.2.11 ■5 (4) [Report Setting] tab

(1) [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.



1) **[Save To]**

Select the destination to save an operation log file (.G2O).
The following shows the items to be selected.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

2) **[Folder Name]**

Set the name of the folder to which the operation log file (.G2O) is saved.
For the character type and the number of characters available for folder names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

3) **[File Name]**

Set the file name of the operation log file (.G2O).
The log collection start date (YYYYMMDD) for the file and the version are added automatically to the set file name.
For the character type and the number of characters available for file names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

4) **[Notify the operation log status]**

Set devices for notifying the collecting status of the operation log.
The word device is available.
For the details of the Notify Operation Log Status device, refer to the following.

➟5.2.11 ■2 (4) Checking the operation log status

5) **[Log file switching timing]**

Set the switching mode, time, and storage period for the save destination file of the operation log.

Item	Description
[Switching Mode]	Select the switching mode for the save destination file of the operation log. The following shows the items to be selected. • [Daily]: Switches the save destination file once a day. • [Weekly]: Switches the save destination file once a week. After selecting this item, select the day to switch.
[Switching Time]	Set the time to switch the save destination file. Set the time by minutes.
[Log File Retention Period]	Set the storage period of the operation log file (.G2O). The following shows the setting range. • When [Daily] is selected for [Switching Mode]: [7] days to [100] days • When [Weekly] is selected for [Switching Mode]: [4] weeks to [53] weeks

6) **[Log file size]**

Set the upper limit capacity of all the operation log files (.G2O) in the save destination folder and the operation when the capacity is insufficient.

Item	Description
[Specify the total log file size]	Set the upper limit capacity of all the operation log files (.G2O) in the save destination folder. When the capacity of all the operation log files exceeds the set capacity, the oldest operation log file is deleted. The setting range is [10] MB to [1024] MB.
[Behavior when memory card runs out of space]	Select the operation if the capacity is insufficient when a file is saved. The following shows the items to be selected. • [Delete existing logs and continue to collect logs] • [Delete existing logs and collect no further logs]

7) **[Display the screen image when using operation logs]**

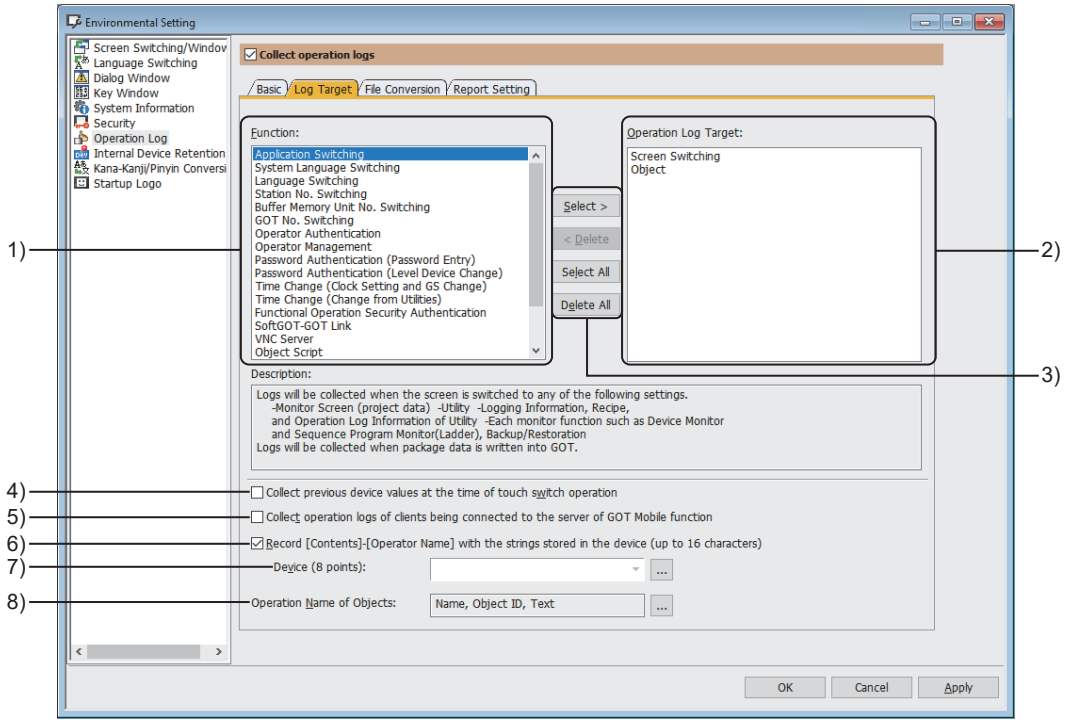
Not available to GT21 and GS21.
Displays the screen image of the operation log selected in the operation log information screen.
For the screen image, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(2) [Log Target] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.



1) **[Function]**
Lists the items which can be set as the target of the operation log.
The items in this list are not recorded in the operation log file.
For the details of each function, refer to the following.

➟5.2.11 ■1 (1) Target operations for recording operation logs

2) **[Operation Log Target]**
Lists the items which are set as the target of the operation log.
The items in this list are recorded in the operation log file.

3) **Buttons**
The following buttons are used for selecting or deleting items.

Item	Description
[Select] button	Moves the item selected in [Function] to [Operation Log Target].
[Delete] button	Moves the item selected in [Operation Log Target] to [Function].
[Select All] button	Moves all the items in [Function] to [Operation Log Target].
[Delete All] button	Moves all the items in [Operation Log Target] to [Function].

4) **[Collect previous device values at the time of touch switch operation]**
Logs the previous device value with each touch switch operation.

5) **[Collect operation logs of clients being connected to the server of GOT Mobile function]**
Not available to GT23, GT21, and GS21.
Logs operations performed on the client in the GOT Mobile function.
The operation log is saved in the GOT.

6) **[Record [Contents]-[Operator Name] with the strings stored in the device (up to 16 characters)]**
The operator name, substituted by the user-defined character string stored in the specified device, is recorded in the operation log.
For the operator ID, 0 is recorded.

➟5.2.11 ■3 Recording the operator name as the character string stored in the device

7) **[Device (8 points)]**
Specify the first device of consecutive word devices to which a character string is stored.

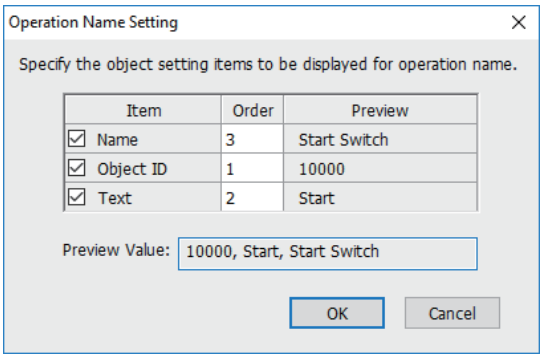
Eight consecutive devices starting from a specified device are used.

8) **[Operation Name of Objects]**

Not available to GT21 and GS21.

Set the items to be recorded as OPNAME for an object.

Click the [...] button to display the [Operation Name Setting] dialog.



- **[Item]**

  Select an item to be recorded as OPNAME for an object.
  The following shows selectable items.
  · [Name]
  Records the name specified in the setting dialog of an object.
  · [Object ID]
  Records the ID number of an object.
  · [Text]
  Records the text displayed on a touch switch.
  When [Text Type] is set to [Text], only the centered text will be recorded.
  This setting is applied to a touch switch only.

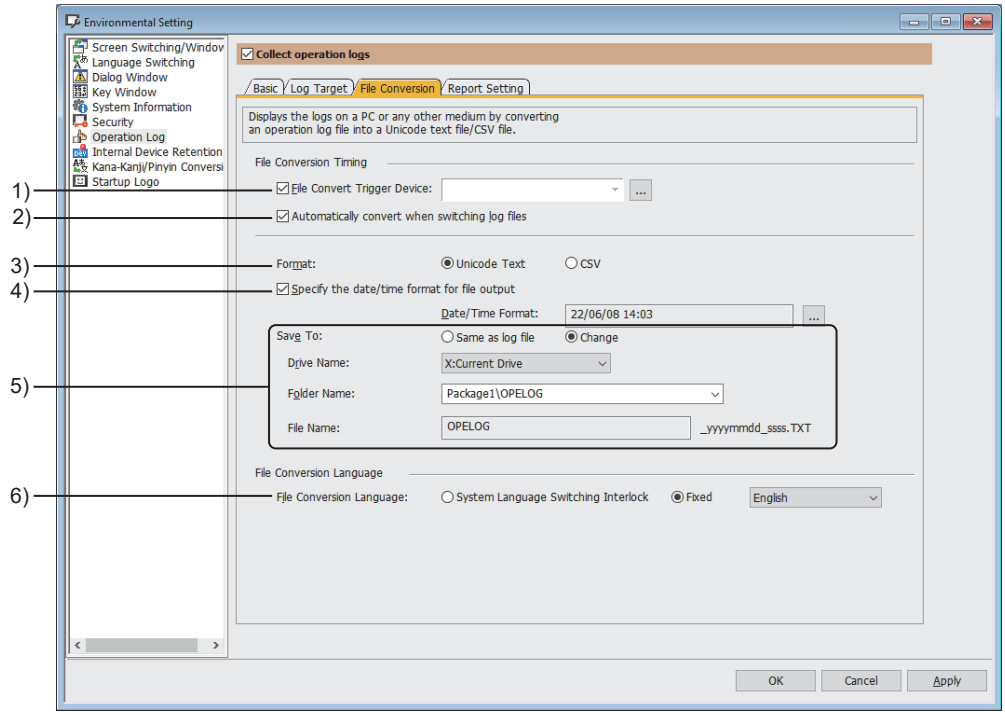
- **[Order]**

  Set the order in which the selected items are recorded as OPNAME for an object.
  The setting range is [1] to [3].

(3) [File Conversion] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.



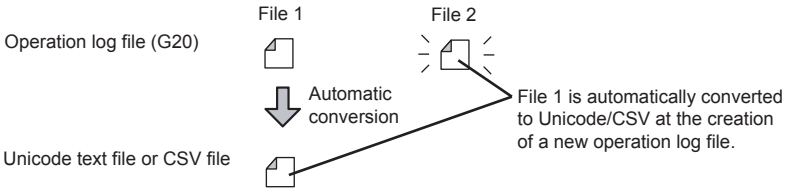
1) **[File Convert Trigger Device]**

Set a trigger device to convert an operation log file (.G2O) in which events are being collected into a CSV or Unicode text file.

The bit device is available.

2) **[Automatically convert when switching log files]**

Converts a file automatically when recording an operation log file (.G2O) is completed.



3) **[Format]**

Select the file format after the conversion.
The following shows the items to be selected.

- [Unicode Text]
- [CSV]

4) **[Specify the date/time format for file output]**

Specify the date and time format for a conversion destination file.
Click the [...] button to specify the date and time format in the [Date/Time Setting] dialog.

➟6.3.2 Date/time format settings

5) **[Save To]**

Select the save destination folder for a converted file.
The following shows the items to be selected.

- [Same as log file]:
  Saves a file in the same folder as that of an operation log file (.G2O).
- [Change]:
  Set the destination to save a file.
  After selecting this item, set [Drive Name] and [Folder Name].

Item	Description
[Drive Name]	Set a drive to save a converted file. The following shows the items to be selected. • [A:Standard SD Card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] • [X:Current Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Folder Name]	Set the folder name of the destination to save a file. For the character type and the number of characters available for folder names, refer to the following. • 12.4 Restrictions for Folder Names and File Names used in GOT
[File Name]	The file name after the conversion is displayed.

6) **[File Conversion Language]**

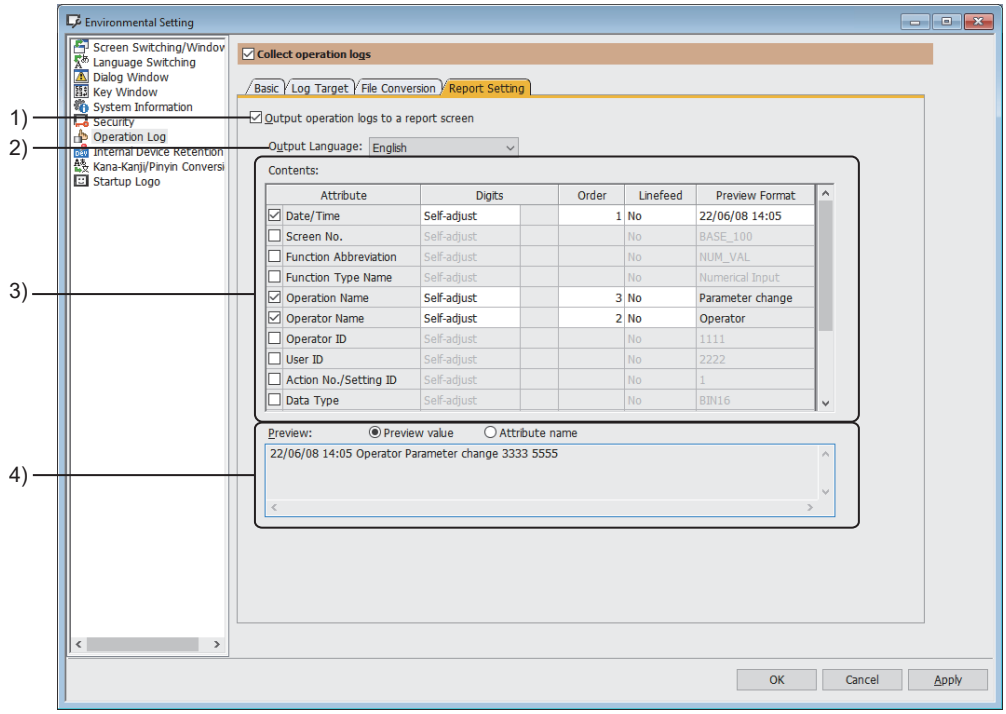
Select the language of the file after conversion.
The following shows the items to be selected.

- [System Language Switching Interlock]
  Converts the file in the same language as the system language.
- [Fixed]
  Converts the file in the selected language.
  The selectable languages differ depending on the file format of the file after conversion and the GOT model.

GOT	The file format of the file after conversion	
	Unicode text	CSV
GT27 GT25 GT23 GT SoftGOT2000 GS25	[Japanese] [English] [Chinese(Simplified)] [Chinese(Traditional)] [Korean]	[Japanese] [English]
GT21 GS21	[Japanese] [English] [Chinese(Simplified)]	

(4) [Report Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Output operation logs to a report screen]**
Outputs operation log lines to a report.
For setting an operation log line, refer to the following.
➟10.11.3 ■5 Settings to output operation log lines

2) **[Output Language]**
Select a language in which a report is output.
The following shows selectable items.
- [Japanese]
- [English]

3) **[Contents]**
Set items to be output.

Item	Description
[Attribute]	Select attributes to be output. The following shows selectable items. • [Date/Time] • [Screen No.] • [Function Abbreviation] • [Function Type Name] • [Operation Name] • [Operator Name] • [Operator ID] • [User ID] • [Action No./Setting ID] • [Data Type] • [Device Name] • [Changed Value] • [Changed Value (Operation)] • [Original Value] • [Original Value (Display)]

Item	Description
[Digits]	Specify the number of digits of text to be output. The following shows selectable items. • [Self-adjust] Adjusts the number of digits of text automatically. • [Fixed] Specify the number of digits of text. The setting range is [1] digit to [124] digits.
[Order]	Set the order in which attributes are output.
[Linefeed]	Set whether to insert a line feed after an attribute value. If the number of digits of attribute values to be output exceeds the maximum number of digits per line, insert line feeds to output the values in multiple lines. The maximum number of digits per line is specified with [Page Columns] in the [Report Setting] dialog. The following shows selectable items. • [Yes] • [No]
[Preview Format]	Displays the format in which an attribute value will appear in [Preview]. When [Date/Time] is selected, the date and time format is settable. Click the [...] button to specify the date and time format in the [Date/Time Setting] dialog. For the details, refer to the following. ➟6.3.2 Date/time format settings

4) **[Preview]**

Displays a preview of the operation log data to be output to a report.

Select a preview format.

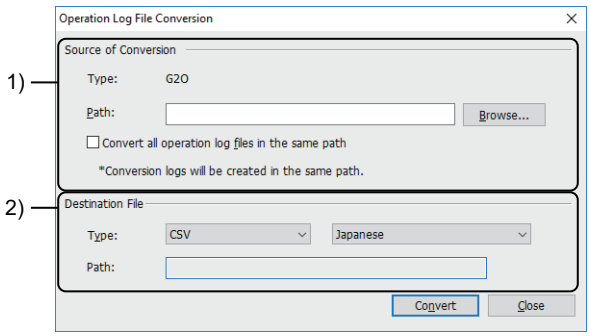
The following shows selectable items.

- [Preview value]
  Displays the values of the selected attributes in [Preview].
- [Attribute name]
  Displays the selected attributes in [Preview].

■6 [Operation Log File Conversion] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.



1) **[Source of Conversion]**
Set the destination to save the conversion source file and the target file.

Item	Description
[Type]	The conversion source file type. [G2O] is displayed.
[Path]	Set the destination path to save the conversion source file.
[Convert all operation log files in the same path]	Select this item to set all the operation log files (.G2O) in the conversion source folder as the target of the conversion.

2) **[Destination File]**
Set the file format of the converted file and the destination to save the file.

Item	Description
[Type]	Set the file format and the language of the converted file. The settable language depends on the selected file format. The following shows the items to be selected. • [CSV] Converts an operation log file (.G2O) into a CSV file. [Japanese] or [English] can be selected for the language. • [Unicode] Converts an operation log file (.G2O) into a Unicode text file. For GT27, GT25, GT23, GT SoftGOT2000, or GS25, [Japanese], [English], [Chinese(Simplified)], [Chinese(Traditional)], or [Korean] can be selected for the language. For GT21 and GS21, [Japanese], [English], or [Chinese(Simplified)] can be selected.
[Convert]	Set the destination path to save the converted file.

■7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Set the relevant settings other than the specific settings for the operation log as required.
The following shows the functions that are available by the relevant settings.

(1) Internal device

➡12.1.3 GOT special register (GS)

Function	Setting item
Changing the character code to Unicode when a binary file is converted to CSV format	GS522.b2
Disabling all buttons except the [List] and [Latest] buttons on the [Operation Log Information] screen of the utility	GS522.b3
Changing the date format used for the operation log information of the utility	GS632.b0, GS632.b1

5.2.12 Configuring the settings for retaining GOT internal device data at power failure ([Internal Device Retention])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2103-P.

➟■1 Specifications of the internal device retention
■2 How to use the internal device retention function
■3 [Internal Device Retention]

The GOT internal device values are saved to the built-in memory (SRAM) of the GOT.
The GOT retains the device values monitored before power-off of the GOT, and monitors the retained values again upon power-on of the GOT.
GT SoftGOT2000 saves device values at the specified intervals or when the software exits.
For information on how to set the timing for saving device values, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

■1 Specifications of the internal device retention

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2103-P.

(1) Devices used for the internal device retention

The following shows the devices used for the internal device retention and device range.

Device	Range
GOT bit register (GB)	• For GT27, GT25, GT23, GT SoftGOT2000, and GS25 GB64 to GB65535 • For GT21 GB64 to GB2047
GOT data register (GD)	• For GT27, GT25, GT23, GT SoftGOT2000, and GS25 GD0 to GD65535 • For GT21 GD0 to GD2047

■2 How to use the internal device retention function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2103-P.

(1) How to set the internal device retention function

Configure the settings on GT Designer3 in the following procedure.

Step 1 Select [Common] → [GOT Environmental Setting] → [Internal Device Retention] from the menu to display the [Environmental Setting] window ([Internal Device Retention]).

➟5.2.12 ■3 [Internal Device Retention]

Step 2 Specify the start device of consecutive devices and the number of devices for saving their data to the SRAM, and click the [OK] button.

Step 3 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

In GT SoftGOT2000, the timing for saving device values is settable.

➟GT SoftGOT2000 Version1 Operating Manual

(2) Specifications of the SRAM

GT27, GT25, GT23, GT SoftGOT2000, and GS25 use the SRAM user area for saving device values.
For the specifications of the SRAM user area, refer to the following.

➟12.12 Specifications of the SRAM user area

GT21 uses the system area of the SRAM for saving device values.
The data capacity to be stored in the system area is unnecessary to be considered.

(3) Cases where device values in the SRAM are deleted or backed up

The device values saved in the SRAM will be deleted in the following cases.

- Project data is written to the GOT when [Initialize SRAM user area when writing project data/OS] is selected in the [Communicate with GOT] dialog (for GT27, GT25, GT23, and GS25).
- The SRAM is initialized by using [SRAM management] of the utility (for GT27, GT25, GT23, and GS25).
- The SRAM is initialized by using [Clear data] of the utility (for GT21).
- Any setting in the [Environmental Setting] window ([Internal Device Retention]) is changed, and then the project data is written to the GOT.
- Project data having a different project ID is written to the GOT.
- The battery is removed or runs out.

For GT27, GT25, GT23, and GS25, backup or restore the data in the SRAM by using the [SRAM management] of the utility.

For the details of the backup/restoration, refer to the following.

➟GOT2000 Series User's Manual (Utility)

For the setting to delete the device values in the SRAM on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

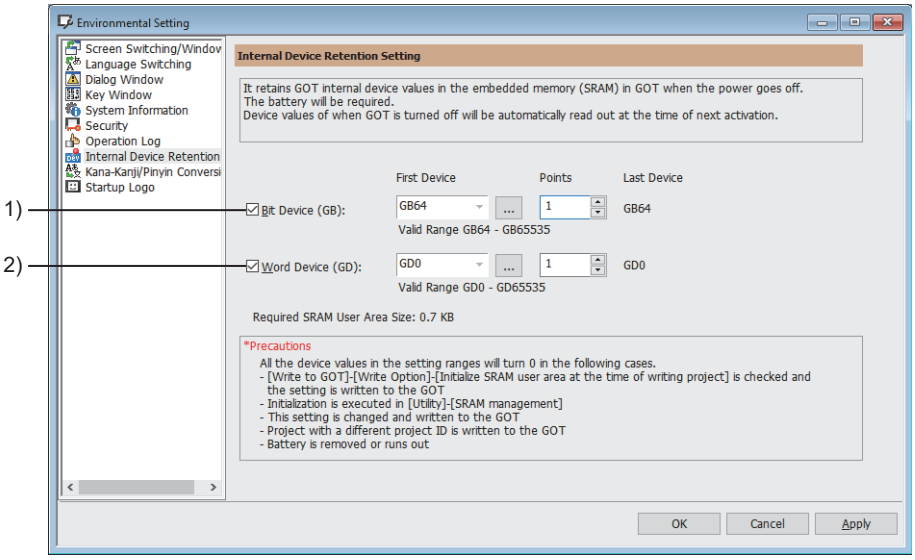
■3 [Internal Device Retention]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2103-P.

Set the ranges of devices to save their data to the SRAM in [Internal Device Retention].

To display the following window, select [Common] → [GOT Environmental Setting] → [Internal Device Retention] from the menu.



1) **[Bit Device (GB)]**

Saves the values of GOT bit registers (GB) to the SRAM.

Item	Description
[First Device]	Specify the start device of GOT bit registers. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 [GB64] to [GB65535] • For GT21 [GB64] to [GB2047]
[Points]	Specify the number of GOT bit registers. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 [1] to [65472] • For GT21 [1] to [1984]

2) **[Word Device (GD)]**

Saves the values of GOT data registers (GD) to the SRAM.

Item	Description
[First Device]	Specify the start device of GOT data registers. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 [GD0] to [GD65535] • For GT21 [GD0] to [GD2047]
[Points]	Specify the number of GOT data registers. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 [1] to [65536] • For GT21 [1] to [2048]

5.2.13 Configuring the settings to convert a text into kanji or Simplified Chinese characters in the GOT ([Kana-Kanji/Pinyin Conversion])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

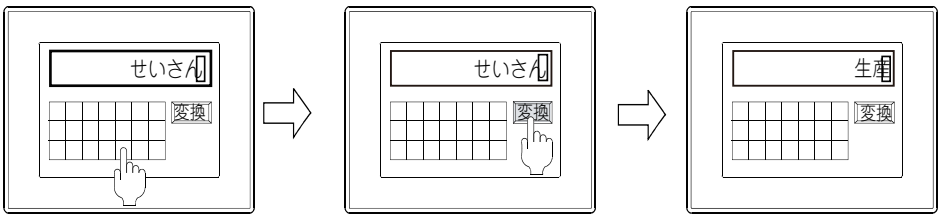
➡■1 Specifications of Kana-Kanji/Pinyin conversion
■2 How to use Kana-Kanji/Pinyin conversion
■3 Precautions
■4 [Kana-Kanji/Pinyin Conversion]
■5 Relevant settings

A text entered with a text input object can be converted into kanji or Simplified Chinese characters.
The following shows the conversion methods.

- Kana-Kanji conversion: Hiragana to kanji
- Pinyin conversion: Pinyin (lowercase alphabetic characters) to Simplified Chinese

Use a touch switch for which key codes for Kana-Kanji/Pinyin conversion are set or a keyboard for Kana-Kanji/Pinyin conversion to convert a text.

Example) Converting hiragana characters into kanji characters



Input the hiragana characters by ASCII input. | Touch the [Conversion] switch. | The hiragana characters are converted into the kanji characters.

■1 Specifications of Kana-Kanji/Pinyin conversion

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

(1) Conditions that enable KANA-KANJI conversion

The KANA-KANJI conversion will be enabled by using a text input object that satisfy all the following conditions.

- Selecting [Kana-Kanji/Pinyin Conversion] in the [Extended] tab in the [Text Input] dialog
- Selecting [Kana-Kanji] for [Conversion Method] in [Kana-Kanji/Pinyin Conversion] in the [Environmental Setting] dialog
- Setting the character code and system language
  The following shows the combinations of character codes and system languages that are available for Kana-Kanji conversion.

Value in Character Code Control (GS456)*1	GOT system language	[Character Code] in the [Device/Style] tab in the [Text Input] dialog*2
0	Japanese	[System Language Link] [Unicode] [S-JIS]
1	• Japanese • English • Chinese (Simplified) • Chinese (Traditional) • Korean	

*1 It changes the character code used for text input.

➡12.1.3 ■5 (36) Character Code Control (GS456)

*2 When the character code other than [System Language Link], [Unicode], or [S-JIS] is set, KANA-KANJI conversion is enabled. However, the GOT cannot display the converted characters correctly.

(2) Conditions that enable Kana-Kanji/Pinyin conversion

Kana-Kanji/Pinyin conversion is enabled by text input that satisfies all the following conditions.

- Selecting [Kana-Kanji/Pinyin Conversion] in the [Extended] tab in the [Text Input] dialog
- Selecting [Pinyin Simplified Characters] for [Conversion Method] in [GOT Environmental Setting] → [Kana-Kanji/Pinyin Conversion]
- Setting the character code and system language

  The following shows the combinations of character codes and system languages that are available for Pinyin conversion.

Value in Character Code Control (GS456)*1	GOT system language	[Character Code] in the [Device/Style] tab in the [Text Input] dialog*2
0	Chinese (Simplified)	[System Language Link] [Unicode] [GB]
3	• Japanese • English • Chinese (Simplified) • Chinese (Traditional) • Korean	

*1 It changes the character code used for text input.

➟12.1.3 ■5 (36) Character Code Control (GS456)

*2 When the character code other than [System Language Link], [Unicode], or [GB] is set, Pinyin conversion is enabled. However, the GOT cannot display the converted characters correctly.

(3) Input mode

Hiragana-input is supported.

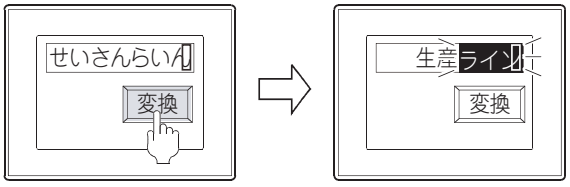
Input texts on objects by using the touch switch (key code switch).

(4) Conversion method

A range of phrase can be converted.

Characters are converted when the input characters match the dictionary data completely.

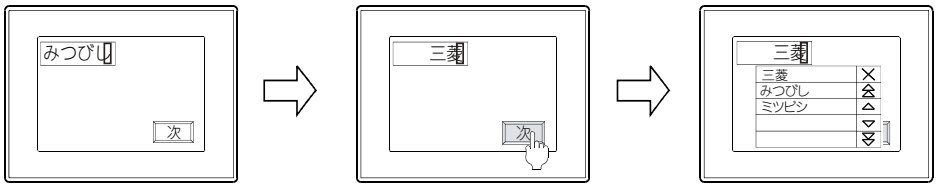
Example) Entering [せいさんらいん] and converting it using Kana-Kanji conversion



Touch the 変換 switch.

Convert "せいさん" and "らいん" separately.

When the Conversion switch is touched once, one conversion option is displayed. When the switch is touched again, the option selection window appears and shows more options.



When the Conversion switch is touched once, one conversion option is displayed.

When the switch is touched again, the option selection window is displayed.

(5) Number of characters that can be input and converted at once

Up to 40 two-byte characters (80 bytes) can be input.

Up to 20 two-byte characters (40 bytes) can be converted.

(6) Supported Kanji

- Kana-Kanji conversion

  Kanji characters classified in the JIS Level-1 kanji set and JIS Level-2 Kanji set are supported.
- Pinyin conversion

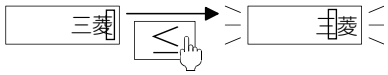
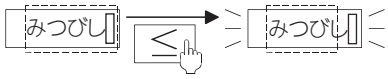
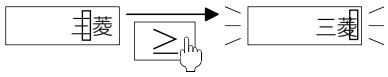
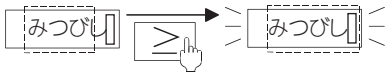
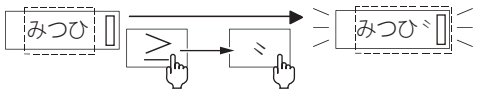
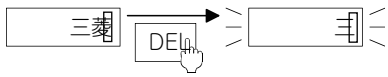
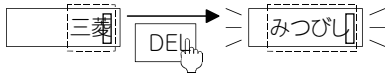
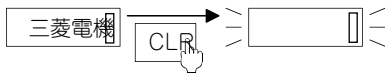
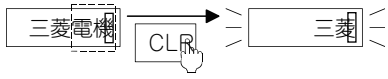
  GB2312 Chinese characters are supported.

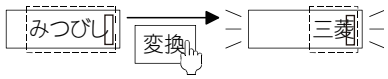
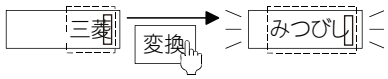
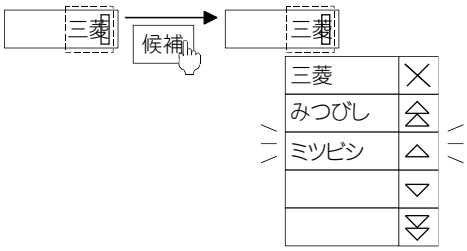
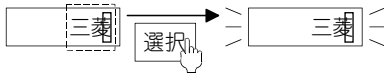
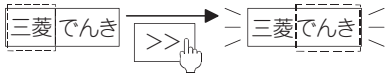
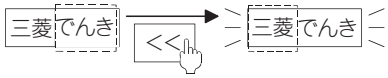
(7) Learning conversion results

The GOT learns Kana-Kanji conversion results and Pinyin conversion results.
No setting is required for the GOT to learn conversion results.
The GOT holds the learning result until the GOT is powered off or reset.
Up to 20 two-byte characters (40 bytes) can be learned.
Up to 1000 words can be learned.

(8) Operation switch

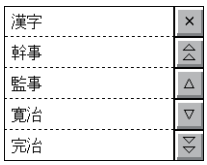
The touch switch used for Kana-Kanji/Pinyin conversion operates when key codes are assigned.
When creating a key window by the user, use the following key codes.

Item	Key code	Application and operation
Hiragana characters	Shift JIS code	Use for inputting hiragana characters.
Cursor key (Left)	0091h	Use for moving a cursor. • While characters are input, a cursor is moved to the left for one character.  • While characters are converted, the selected phrase is shortened by one character by pressing this switch. 
Cursor key (Right)	0090h	Use for moving a cursor. • While characters are input, a cursor is moved to the right for one character.  • While characters are converted, the selected phrase is extended by one character by pressing this switch.  While characters are converted, touch this key and then enter a sonant mark or p-sound mark to input the mark as one character. 
[DEL] key	0008h	Use for deleting characters. • While characters are input, the right-most input character is deleted.  • While characters are converted, the conversion result on the selected strings is undone and returned to its original characters. 
[CLR] key	0088h	Use for clearing characters. • While characters are input, all the input characters are cleared.  • While characters are converted, only the characters being converted are cleared. 

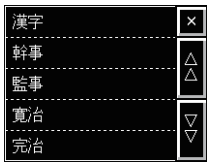
Item	Key code	Application and operation
[Kanji/Simplified Character Conversion] key	0084h	Use for converting characters. • While characters are input, the characters are converted.  • While characters are converted, the conversion result on the selected strings is undone and returned to its original characters. 
[Option] key ([The former candidate] or [The next candidate])	0085h or 0086h	Use for displaying the option selections. • When this key is touched first, the next option selection is displayed. • When this key is touched again, the option selection window is displayed. 
[>>] key	0087h	Use for selecting the next phrase during the conversion. • When a single phrase is converted, the input characters are determined.  • When a range of phrase is converted, the next phrase is selected. 
[<<] key	0089h	Use for selecting the previous phrase during the conversion. • While a single phrase is converted, the original characters are displayed. • When a range of phrase is converted, the previous phrase is selected. 
[Enter] key	000Dh	Use for writing characters to the device. • While characters are input and converted, the displayed characters are determined. • After the conversion the characters are input to the device.

(9) Option selection window

The option selection window displays multiple conversion options in a list at the conversion.
The background color and the scroll button can be selected.
The background color can be selected from [White] or [Black].
The scroll button can be selected from [Page + Line Scroll] or [Page Scroll].



Background color: [White]
Scroll: [Page + Line Scroll]



Background color: [Black]
Scroll: [Page Scroll]

■2 How to use Kana-Kanji/Pinyin conversion

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
The following settings are required to use Kana-Kanji/Pinyin conversion.

- Key window settings

  ➟(1) Setting a key window
- Text input object settings

  ➟(2) Setting an object

(1) Setting a key window

Perform one of the following operations to set a key window.

- Using a key window for text (key window that supports Kana-Kanji/Pinyin conversion)
  Not available to GT21 and GS21.
  When GS467.b1 is on, the key window displayed at a touch of an text input object is switched to a key window that supports Kana-Kanji/Pinyin conversion.
  Set a bit switch or other objects and turn on GS467.b1.

  ➟5.2.4 ■1 (5) Key window for text (key window that supports Kana-Kanji/Pinyin conversion) (GT27, GT25, GT SoftGOT2000, and GS25)
- Using a user-created key window
  Create a key window for Kana-Kanji/Pinyin conversion.
  KANA key and conversion keys registered in the library can be used.

  ➟2.5.1 ■2 Creating a window screen
  5.2.4 Setting key windows ([Key Window])
  8.1.2 ■1 Using the data in the library

Use either of the following methods when using the option selection window as well.

- Setting by the project
  Select [Common] → [GOT Environmental Setting] → [Kana-Kanji/Pinyin Conversion] from the menu to display the [Kana-Kanji/Pinyin Conversion] window, and select [Option Selection Window].

  ➟5.2.13 ■4 [Kana-Kanji/Pinyin Conversion]
- Setting by screen
  Select [Screen] → [Screen Property] from the menu to display the setting dialog, and select [Use the option selection window] in the [Option Selection Window] tab.

  ➟2.7.1 Property of base screens
  2.7.2 Properties of window screens

(2) Setting an object

Configure the settings to enable Kana-Kanji/Pinyin conversion for a text input object placed on the screen.

➟8.5.5 ■2 [Extended] tab

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

(1) Number of input digits for the text input

Do not exceed the number of input digits set in the text input.
Otherwise, determining the characters and writing to a device cannot be executed.

(2) Input by the USB keyboard

When using Kana-Kanji conversion or Pinyin conversion, data entry to a text input object using a USB keyboard is not available.
Use the key window displayed on the GOT screen.

(3) System application (extended function) setting

Kana-Kanji/Pinyin conversion does not work if the system application (extended function) for [Kana-Kanji/Pinyin conversion] is not installed on the GOT.
For how to add a system application to be installed on the GOT, refer to the following.

➟4.2 Setting a System Application to be Written to the GOT

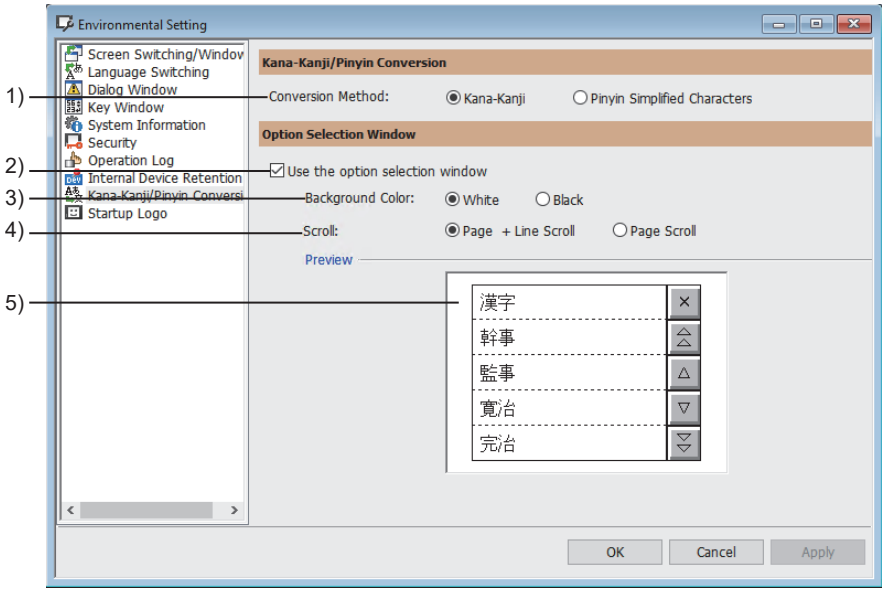
(4) Precautions for Pinyin conversion

The four tones are not supported.
Uppercase alphabetic characters cannot be converted into Simplified Chinese characters.

■4 [Kana-Kanji/Pinyin Conversion]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Set how to display the option selection window in [Kana-Kanji/Pinyin Conversion].
Select [Common] → [GOT Environmental Setting] → [Kana-Kanji/Pinyin Conversion] from the menu to display the window.



1) **[Conversion Method]**
Select a conversion method.
- [Kana-Kanji]
- [Pinyin Simplified Characters]

2) **[Use the option selection window]**
Select this item to display the option selection window at Kana-Kanji conversion or Pinyin conversion.

3) **[Background Color]]**
Select the background color of the option selection window.

4) **[Scroll]**
Select the key to be displayed in the option selection window.
- [Page + Line Scroll]: Displays the key to scroll the screen by page and line.
- [Page Scroll]: Displays the key to scroll the screen by page.

5) **[Preview]**
Displays the preview of the option selection window which the settings of [Background Color] and [Scroll] are reflected.

■5 Relevant settings

(1) GOT Internal Device

➟12.1.3 GOT special register (GS)

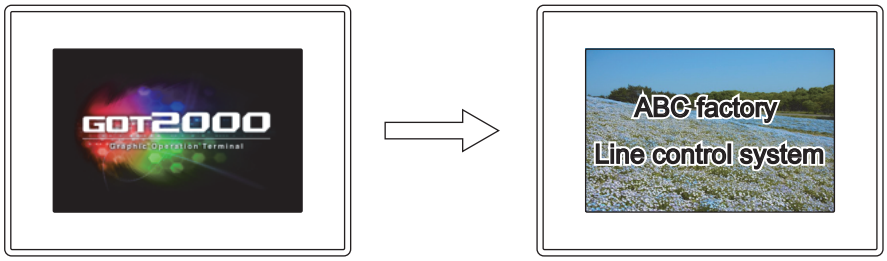
Function	Setting item
Switching a key window for text input to a key window that supports Kana-Kanji conversion or Pinyin conversion	Not available to GT21 and GS21. GS467.b1

5.2.14 Setting a screen to be displayed on the GOT at startup ([Startup Logo])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the startup logo
■2 How to use the startup logo
■3 Precautions
■4 [Startup Logo]

Images in BMP or JPEG format can be displayed as the startup logo at GOT startup.



The set images in BMP or JPEG format is displayed at GOT startup.

■1 Specifications of the startup logo

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Available number of startup logos

A startup logo can be set for each project.

(2) Applicable image file

BMP files and JPEG files are applicable.

When an image file whose format is incompatible with the GOT is set, the pre-installed startup logo is displayed.

(a) BMP file

Item	Description
Format	24-bit BMP
Number of colors	BMP files in 65536 or less colors can be displayed. The colors which cannot be displayed on the GOT are subtracted.
Resolution	Images whose resolutions are lower than that of the GOT can be used. When the resolution is higher than that of the GOT, the GOT displays only the part that lies within the screen by using the center of the image as the reference.

(b) JPEG file

Item	Description
Format	Base line JPEG compatible with RGB full-color (Progressive JPEG and lossless JPEG are unavailable.)
Number of colors	JPEG files in 65536 or less colors can be displayed. The colors which cannot be displayed on the GOT are subtracted.
Resolution	Images whose resolutions are lower than that of the GOT can be used. When the resolution is higher than that of the GOT, the GOT displays only the part that lies within the screen by using the center of the image as the reference.

■2 How to use the startup logo

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Outline procedure of setting

Step 1 Select [Common] → [GOT Setup] → [Basic Setting] → [Display Setting/Language Setting] from the menu to display the [GOT Setup] window, and set the display time of the startup logo in [Title Display Time].

➟5.2.14 ■4 [Startup Logo]

You can also set the display time in the utility.

➟GOT2000 Series User's Manual (Utility)

Step 2 Install the package data on the GOT.

For GT SoftGOT2000, the installation is not required.

Step 3 The set image file is displayed as the startup logo at GOT startup.

For GT SoftGOT2000, when the saved project is opened, the set image file is displayed as the startup logo.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

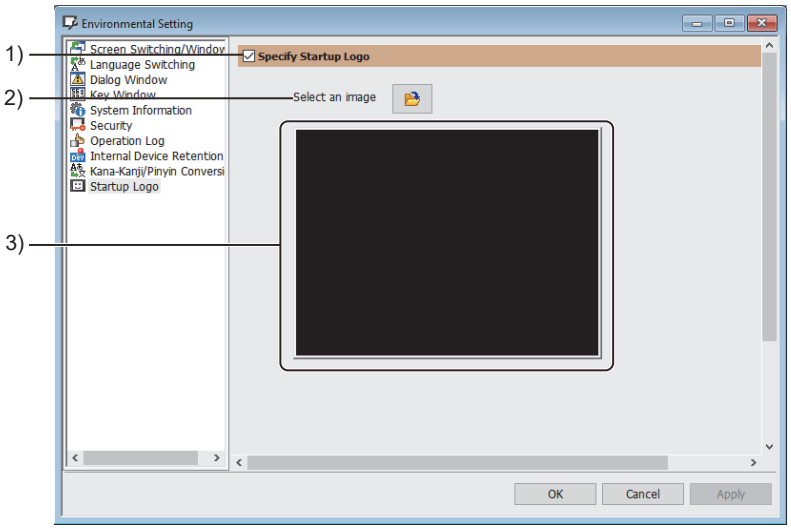
(1) Precautions for utilizing a project

When you utilize a project where the GOT installation orientation is set to [Vertical], set the startup logo again. Otherwise, the utilized startup logo is rotated and appears in the destination project.

■4 [Startup Logo]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Startup Logo], set an image file to be displayed at GOT startup.
Select [Common] → [GOT Environmental Setting] → [Startup Logo] from the menu to display this window.



1) **[Specify Startup Logo]**
Select this item to set an image file used as the startup logo.

2) **[Select an image] button**
Displays the [Open] dialog.
Select a BMP file or JPEG file to be used as the startup logo.
For the details of available image files, refer to the following.

➟5.2.14 ■1 Specifications of the startup logo

3) **Preview**
Displays the preview of the image file set as the startup logo.

5.3 Setting the Utility Function ([GOT Setup])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡5.3.1 Configuring the settings of the display of the GOT ([Display Setting/Language Setting])
5.3.2 Setting the identification information to the GOT ([GOT ID No.])
5.3.3 Configuring the settings for the touch operation on the GOT ([Operation Setting/Utility Call Key])
5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])
5.3.5 Setting the GOT time setting method ([Time Setting])
5.3.6 Setting the FA transparent function ([Transparent Mode Setting])
5.3.7 Configuring the settings of the GOT internal device monitor ([GOT Internal Device Monitor])
5.3.8 Configuring the settings of the SoftGOT-GOT link function ([SoftGOT-GOT Link])
5.3.9 Configuring the settings of the VNC server function ([VNC Server])
5.3.10 Configuring the settings of the sequence program monitor ([Sequence Program Monitor])
5.3.11 Configuring the settings of the backup/restoration function ([Backup/Restore])
5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])
5.3.13 Configuring the settings of the system launcher function ([System Launcher])
5.3.14 Configuring the settings of the iQSS utility function ([iQSS Utility])
5.3.15 Configuring the network drive settings ([Network Drive])

Use [GOT Setup] to configure the utility settings with GT Designer3 in advance.
With the GOT setup, the GOT operations and the utility functions, such as the display method of screen, the manage method of the clock, and the buzzer sound length, can be set.
The settings are reflected to the GOT after the package data is written into the GOT.
The settings can be reconfigured in the utility.
For the operations and settings of the utility, refer to the following manual.

➡GOT2000 Series User's Manual (Utility)

When the GOT setup is enabled, settings changed in the utility are reflected to the project as well.
(Otherwise, the changed settings are not reflected to the project.)
When the project is read from the GOT to GT Designer3 after the settings are changed in the utility, the setting contents in the [GOT Setup] are changed as well.

5.3.1 Configuring the settings of the display of the GOT ([Display Setting/Language Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications
■2 [Display Setting/Language Setting]

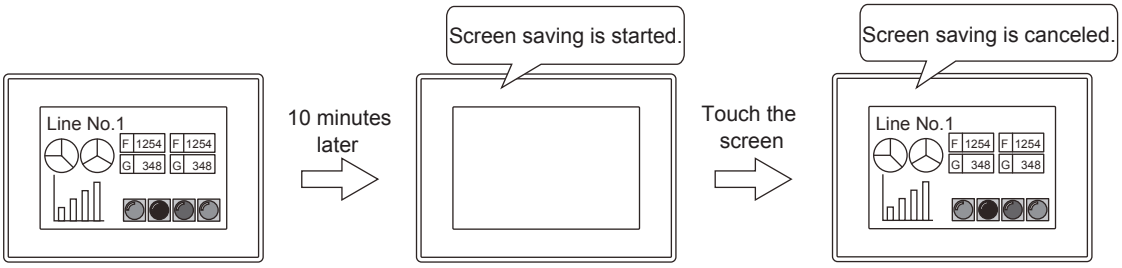
In [Display Setting/Language Setting], configure settings for the GOT display and the system language.

■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Screen saver

The screen saver function is designed to turn off the screen display if the screen is not touched within a specified time.
The screen saver mode can be canceled by the screen touch operation, the human sensor, and the system information.
Example) When the time to the screen saver is set to 10 minutes



For how to control the screen saver function with the system information, refer to the following.

➟5.2.5 ■2 (6) Control screens

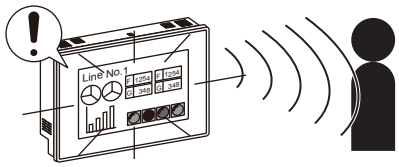
Point

Backlight during screen saving

The GOT backlight turns off during screen saving.

(2) Human sensor

Available to GT27-X and GT27-S.
The human sensor is a sensor that detects the human approach.
Use the human sensor to release the screen saver mode.
By approaching the GOT, the screen saver mode can be canceled.



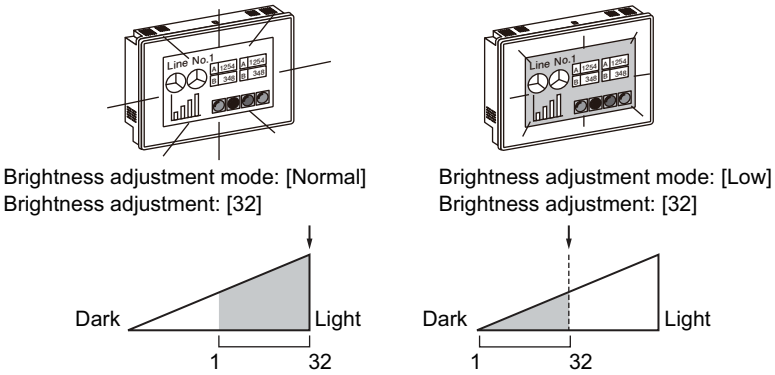
Cancels the screen saver mode
when by detecting the human approach

The human sensor operation can be controlled with the system information as well.
For how to control the human sensor with the system information, refer to the following.

➟5.2.5 ■2 (6) Control screens

(3) Brightness adjustment mode

You can change the brightness adjustment mode of the backlight by selecting [Normal] or [Low].
To reduce the luminous intensity of the GOT screen, select [Low] instead of [Normal] for [Brightness Adjustment Mode].



To use the [Low] mode, install the BootOS version E or later on the GOT. (Not applicable to GT21 and GS21)
For how to install the BootOS, refer to the following.

➟4.3.2 ■1 Writing data to one GOT

Point

Restrictions in [Low] mode

(1) Backlight failure detection

When the brightness adjustment mode is set to [Low] mode, the GOT cannot detect the backlight failure.
To detect the backlight failure, set the brightness adjustment mode to [Standard].

(2) Screen display

In [Low] mode, the screen may flicker, or the screen display may turn off.
If you do not use the GOT in a dark place, set the brightness adjustment mode to [Normal].

(a) **Temporarily switching the brightness adjustment mode to the [Normal] mode in the utility screen**

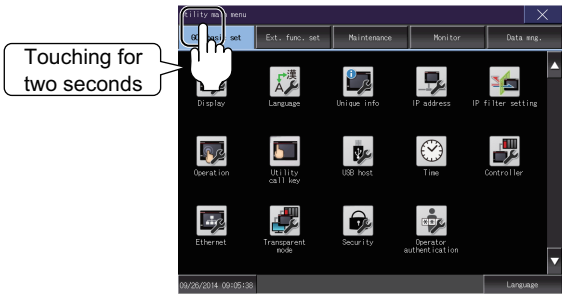
Not available to GT21 and GS21.

In the [Low] mode, touching the upper-left corner of the utility main menu screen for two seconds enters the [Normal] mode temporarily.

The brightness adjustment mode returns to the original mode at the following timing.

- When the screen is switched to a monitor screen
- When the setting of [Brightness adjust] or [Brightness adjustment] is changed in the utility

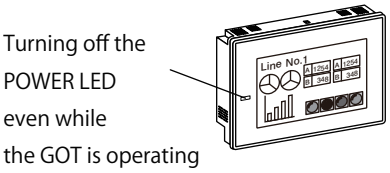
(The screen is displayed using the set value of [Brightness adjust] and [Brightness adjustment].)



(4) POWER LED shutoff

Available to GT27, GT25, GT2105-Q, and GS25.

Even while the GOT is operating, the POWER LED can be off.



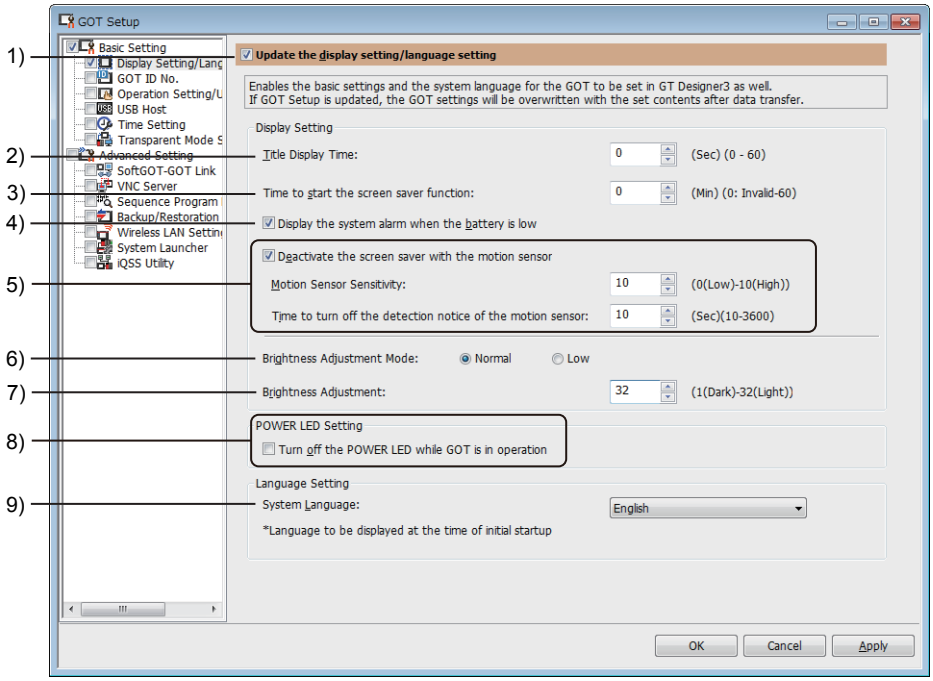
When you select [Turn off the POWER LED while GOT is in operation] in the POWER LED setting, the power LED turns on for approximately 10 seconds when the GOT starts up to check the operation.

■2 [Display Setting/Language Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Display Setting/Language Setting], configure settings for the GOT display and the system language.

Select [Common] → [GOT Setup] → [Basic Setting] → [Display Setting/Language Setting] from the menu to display this window.



1) **[Update the display setting/language setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set [Display Setting/Language Setting] items.
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Title Display Time]**
Set the title display time at the GOT startup.
The setting range is [0] to [60] second(s).
Regardless the set time, the title is always displayed at GOT startup.
(However, when [0] is set, the title is not displayed on GT21 and GS21.)
Therefore, the title display time may be longer than the set time.

3) **[Time to start the screen saver function]**
Set the time to the screen saver.
The setting range is [0] (Invalid) minutes to [60] minutes.

4) **[Display the system alarm when the battery is low]**
Not available to GT21 and GS21.
Select this item to display the system alarm when the battery voltage is low.
If the SRAM power-failure backup function is used, system alarm 500 will be displayed even if this item is deselected.

5) **[Deactivate the screen saver with the motion sensor]**
Available to GT27-X and GT27-S.
Cancels the screen saver mode when the human sensor detects the human motion.
After selecting this item, set the sensor detection level and the time to turn off the Human Sensor Detection signal.

Item	Description
[Motion Sensor Sensitivity]	Set the human sensor detection level. The setting range is [0] to [10].
[Time to turn off the detection notice of the motion sensor]	Set the time from when the human sensor stops detecting the human motion to when the Human Sensor Detection signal turns off. The setting range is [10] to [3600] second(s).

6) **[Brightness Adjustment Mode]**
Select the brightness adjustment mode of the backlight.
- [Normal]
- [Low]

7) **[Brightness Adjustment]**
Set the intensity of the backlight.
The setting range is [1] to [32].
For GT23 with 16-level intensity adjustment, set this item with an even number.

8) **[POWER LED Setting]**
Available to GT27, GT25, GT2105-Q, and GS25.

Item	Description
[Turn off the POWER LED while GOT is in operation]	Turns off the POWER LED while the GOT is operating.

9) **[System Language]**
Select the language to be used for the utility and the system message.
The following shows the items to be selected.
- [Japanese]
- [English]
- [Chinese (Simplified)]
- [Chinese (Traditional)] (Not available to GT21 and GS21)
- [Korean] (Not available to GT21 and GS21)

5.3.2 Setting the identification information to the GOT ([GOT ID No.])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications
■2 How to use the identification information
■3 Precautions
■4 [GOT ID No.]
■5 [GOT Setting List] dialog
■6 [GOT Setting] dialog

In [GOT ID No.], set the items, such as the GOT ID number, GOT name, and Ethernet interface.

■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) GOT identification information

Set the identification information for each GOT.
Up to 500 pieces of GOT identification information can be stored for a project.

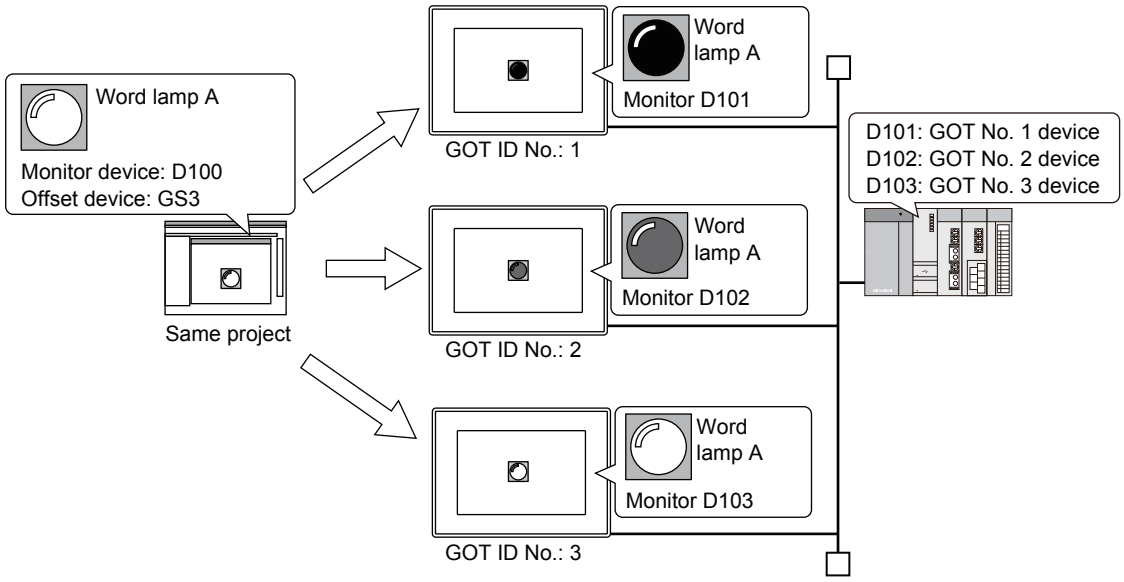
Item	Overview
GOT ID No.	ID number to identify the GOT
GOT name	Name to identify the GOT. Use as the identification information when obtaining the GOT list by the network.
GOT detailed description	Detailed description for the GOT. Describe the supplemental information of the GOT.
Ethernet interface setting at the GOT side	The communication interface setting at the GOT side for using the Ethernet connection.

■2 How to use the identification information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Performing various operations in each GOT in one project

The GOT ID No. is stored in the GOT special register (GS3).
Using the GOT special register (GS3) allows object operations and script controls to have difference even when the same project is written to multiple GOTs.
Example) Writing the same project to three GOTs that have different GOT ID No.

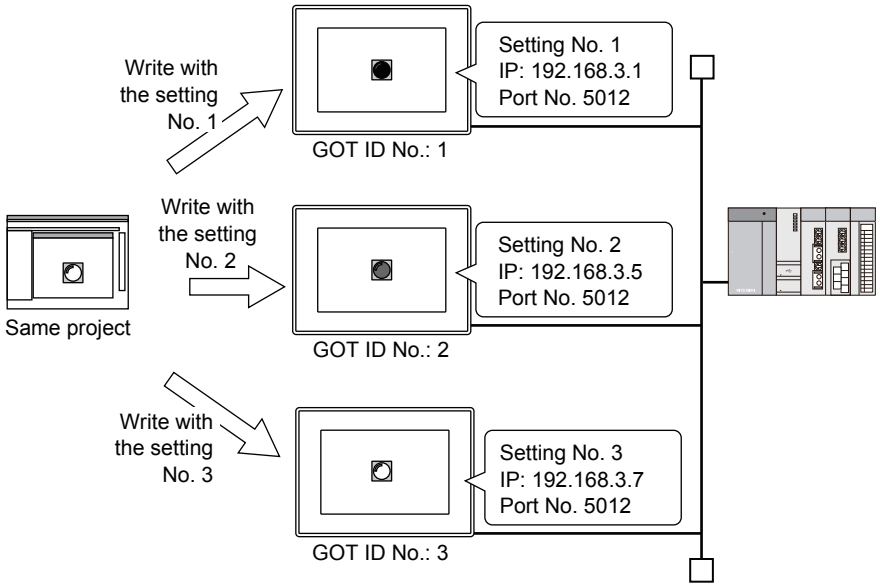


(2) Switching the destination GOT for writing the package data

The Ethernet setting can be stored for each GOT ID No.

This enables the Ethernet interface setting to be switched when the destination GOT for writing the package data is switched.

Use this function to switch the communication setting in a system where multiple GOTs which use the same project exist. If the communication setting switching is unnecessary, preparing multiple settings is unnecessary.



■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Ethernet interface settings which are not included in the GOT identification information

The following settings are not included the GOT identification information.

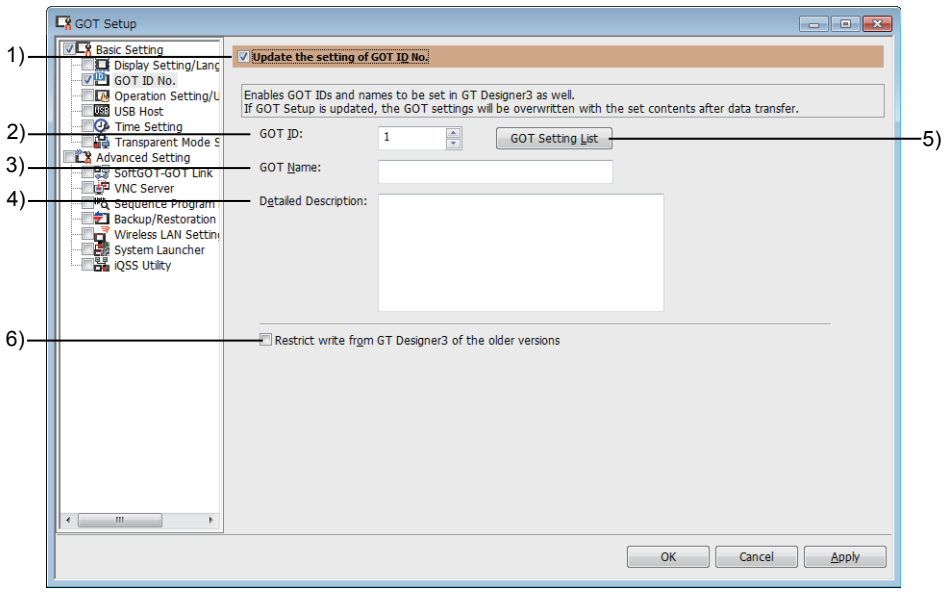
- Number of retry
- Startup time
- Communication timeout time
- Send delay time

These settings cannot be changed by the GOT ID No. switching.

■4 [GOT ID No.]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [GOT ID No.], set the GOT ID and the GOT name.
Select [Common] → [GOT Setup] → [Basic Setting] → [GOT ID No.] from the menu to display this window.



1) **[Update the setting of GOT ID No.]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [GOT ID No.].

2) **[GOT ID]**
Set an ID number to identify the GOT.
The setting range is [1] to [32767].

3) **[GOT Name]**
Set a name to identify the GOT.
Up to 32 characters can be set.

4) **[Detailed Description]**
Set a description about the GOT.
Up to 512 characters can be set.
The line feed cannot be inserted into the description.

5) **[GOT Setting List] button**
Displays the [GOT Setting List] dialog.
In the [GOT Setting List] dialog, you can set the GOT information which have been previously registered by selecting from a list.

➟5.3.2 ■5 [GOT Setting List] dialog

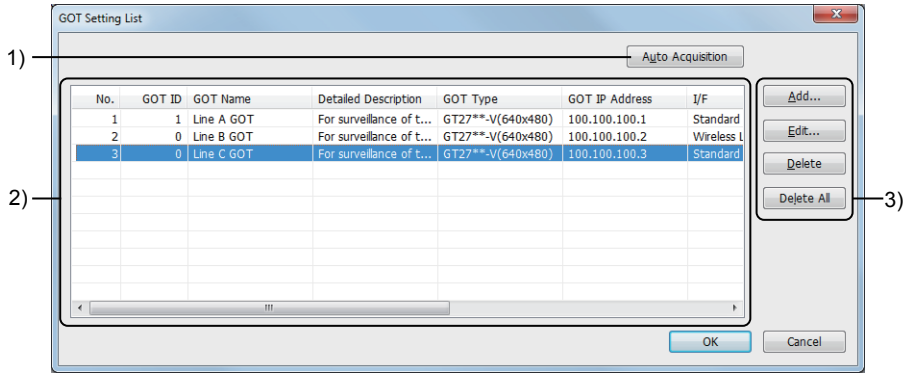
6) **[Restrict write from GT Designer3 of the older versions]**
Disables the writing of package data, whose version is earlier than the version of the existing package data in the GOT.
When this item is enabled in the package data being executed on the GOT, the write restriction is applied to all drives of the GOT.
For precautions on writing package data to the GOT, refer to the following.

➟4.7 Precautions

■5 [GOT Setting List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [GOT Setting List] dialog, the GOT identification information is displayed in a list.
Add, edit, and delete the GOT identification information by using the buttons on the dialog.
Select one from the GOT identification information list and click the [OK] button. The selected information is set to the [GOT ID No] window.



1) **[Auto Acquisition] button**
Acquires the GOT identification information automatically by Ethernet from the GOT on the same network as the personal computer.
You cannot acquire the GOT identification information of GT21 and GS21.

2) **GOT identification information list**
A list of the GOT identification information saved in the project.
Add, edit, and delete the GOT identification information by using the buttons on the window.

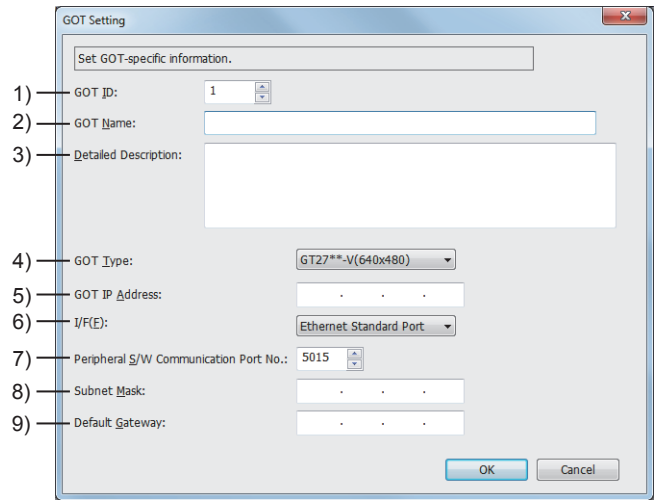
3) **Buttons**
Buttons for adding, editing, and deleting the GOT identification information.

Item	Description
[Add] button	Adds new GOT individual information to the list. Enter the GOT individual information in the [GOT Setting] dialog. ➟5.3.2 ■6 [GOT Setting] dialog
[Edit] button	Edits the GOT identification information that is being selected in the GOT identification information list. Enter the GOT individual information in the [GOT Setting] dialog. ➟5.3.2 ■6 [GOT Setting] dialog
[Delete] button	Deletes the GOT identification information that is being selected in the GOT setting list.
[Delete All] button	Deletes all GOT identification information registered to the project.

■6 [GOT Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [GOT Setting] dialog, edit the GOT identification information to be registered to the project.
Up to 256 GOT identification information settings can be stored.



1) **[GOT ID]**
Set an ID number to identify the GOT.
The setting range is [0] to [32767].
If 0 is set, the GOT ID is not used.

2) **[GOT Name]**
Set a name to identify the GOT.
Up to 32 characters can be set.

3) **[Detailed Description]**
Set a description about the GOT.
Up to 512 characters can be set.
The line feed cannot be inserted into the description.

4) **[GOT Type]**
Set the GOT type.
The following shows the setting range.
- [GT27**-X(1024x768)]
- [GT27**-S(800x600)]
- [GT27**-V(640x480)]
- [GT2705-V(640x480)]
- [GT25**-WX(1280x800)]
- [GT25**-W(800x480)]
- [GT25**-S(800x600)]
- [GT25**-V(640x480)]
- [GT2505-V(640x480)]
- [GT23**-V(640x480)]
- [GT2107-W(800x480)]
- [GT2105-Q (320x240)]
- [GT2104-R(480x272)]
- [GT2104-P(384x128)]
- [GT2103-P(320x128)]
- [GS25**-WX(1280x800)]
- [GS21**-W-N(800x480)]
- [GS21**-W(800x480)]

For the correspondence between the GOT types and GOT models, refer to the following.
➟1.1.2 Supported models

5) **[GOT IP Address]**

Set the IP address of the GOT.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

6) **[I/F]**
Set the interface for the GOT IP address.
The following shows the setting range.

Item	Applicable GOT
[Ethernet Standard Port]	GT27, GT25-S, GT25-V, GT25HS-V, GT23, GT21, GS21
[Ethernet Extended Port]	GT27, GT25-S, GT25-V (excluding GT2505-V)
[Ethernet Standard Port 1]	GT25-W, GS25
[Ethernet Standard Port 2]	
[Wireless LAN]	GT27, GT25 (excluding GT2505-V and GT25HS-V), GS25

7) **[Peripheral S/W Communication Port No.]**
Set the port No. used for the communication with GT Designer3.
The setting range is [1024] to [65534].
Do not set the port number used for the other settings.
Duplication of the port number disables communication.

8) **[Subnet Mask]**
Set the subnet mask for the GOT.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

9) **[Default Gateway]**
Set the default gateway.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

5.3.3 Configuring the settings for the touch operation on the GOT ([Operation Setting/Utility Call Key])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications
■2 [Operation Setting/Utility Call Key]

In [Operation Setting/Utility Call Key], configure settings for the GOT operations and the utility call key.

■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Buzzer sound

A buzzer that sounds when the touch panel is touched.
Set no sound, the short sound, or the long sound as the buzzer sound.
In addition, the pitch of the buzzer can be changed. (Not available to GT21 and GS21)

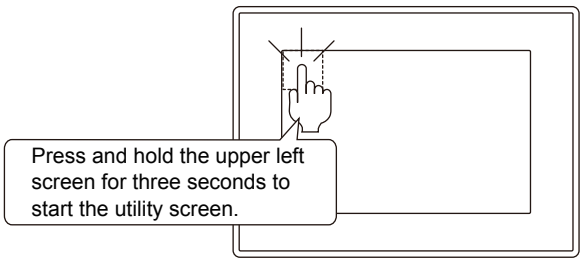
(2) Key sensitivity

The touch detection speed of the touch panel (sensitivity) and the pressing pressure that is required to detect the touch operation (pressing pressure) can be changed in this setting.

(3) Utility call key

A key that calls the utility screen from the monitor screen.
Arrange the utility call key one of the four corners.
The utility key is not displayed on the screen.
To activate the utility call key, press the utility call key for a certain period.
Change the depression length for the utility call key activation in this setting.

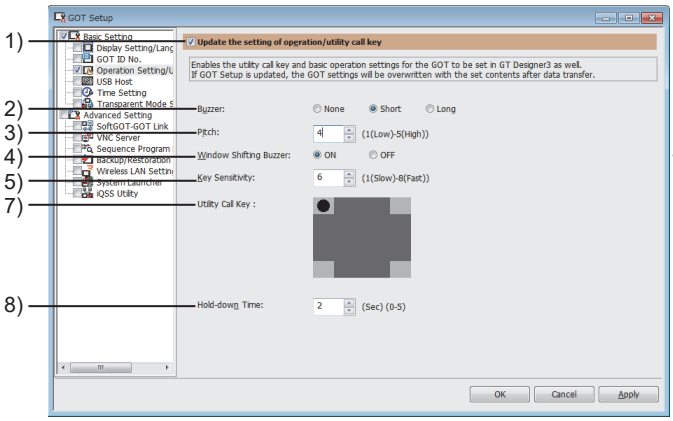
• Utility call key: Arranged on the upper left
• Depression length: Three seconds



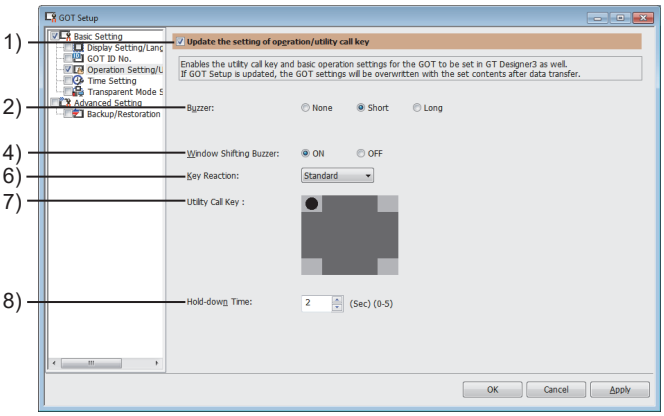
■2 [Operation Setting/Utility Call Key]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Operation Setting/Utility Call Key], configure settings for the GOT operations and the utility call key.
Select [Common] → [GOT Setup] → [Basic Setting] → [Operation Setting/Utility Call Key] from the menu to display this window.



For GT27, GT25, GT23, GT SoftGOT2000, and GS25



For GT21 and GS21

1) **[Update the setting of operation/utility call key]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to configure the settings in [Operation Setting/Utility Call Key].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Buzzer]**
Select the buzzer sound for the touch operations of objects and buttons.
The following shows the items to be selected.
- [None]
- [Short]
- [Long]

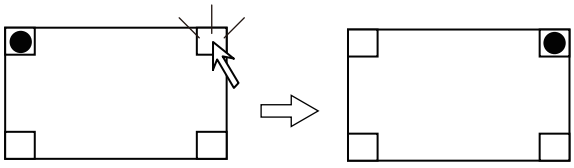
3) **[Pitch]**
Available to GT27, GT25, and GS25.
Set the pitch of the buzzer sound for the touch operations of objects and buttons.
The setting range is [1] (low tone) to [5] (high tone).

4) **[Window Shifting Buzzer]**
Select whether to sound or not the buzzer when moving the window screen.
The setting range is [ON] or [OFF].

5) **[Key Sensitivity]**
Set the speed for the utility call key to detect the touch operation of the touch panel.
The setting range is [1] (slow) to [8] (fast).

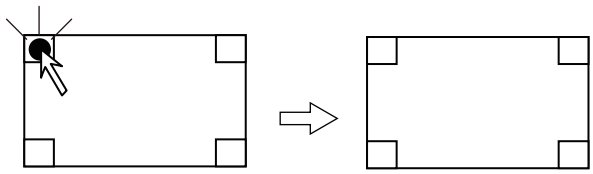
6) **[Key Reaction]**
Set the speed for the utility call key to detect the touch operation of the touch panel.
The setting range is [Standard] to [+120ms].

7) **[Utility Call Key]**
Select the position to arrange the key (utility call key) that calls the utility screen from the monitor screen.
The squares on the four corners indicate the positions where the utility call key can be arranged.
The black circle indicates the position of the utility call key.
Click one of the squares on the four corners to select the position of the utility call key.



Click any square of the corners to change the position of the black circle.

To disable the utility call key, click the black circle.



Click the black circle to deselect.

8) **[Hold-down Time]**

Set the depression length from you touch the utility call key to when the utility call key starts function.
The setting range is [0] to [5] second(s).

5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.

➟■1 Specifications
■2 How to use a USB mouse, USB keyboard, USB barcode reader, and RFID controller
■3 Precautions
■4 [USB Host]

In [USB Host], select USB devices to be connected to the GOT.

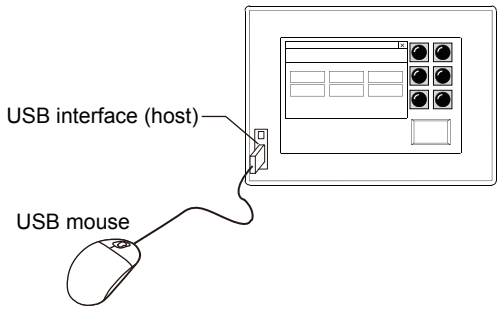
■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.

(1) Using a USB mouse

You can use a USB mouse by connecting to the USB interface (host) of the GOT directly.



(a) **Applicable USB mouse**

A two-button mouse is applicable.
A wheeled mouse and a mouse with more than two buttons can be used as a two-button mouse.
Wheels or special buttons on the mouse cannot be used.
Some GOT models do not support mice equipped with special function.

(b) **Operation target**

You can operate the objects, utility call key, window screens, and menu displayed on the GOT by using a USB mouse.
However, the following screens are not operable with a USB mouse.

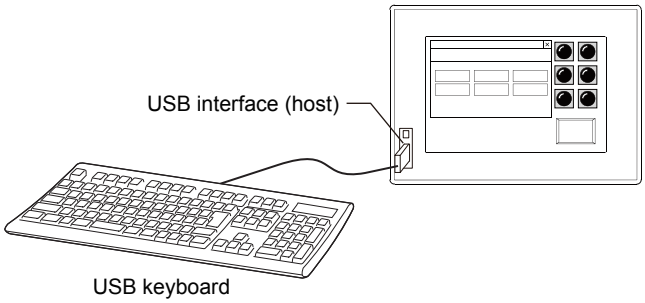
- Touch panel calibration screen of the utility
- Touch panel check screen
- Dedicated screens for some extended functions

For the dedicated screens operable with a USB mouse, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

(2) Using a USB keyboard

You can use a USB keyboard by connecting to the USB interface (host) of the GOT directly.



(a) Applicable USB keyboard

The following keyboards can be used.

- Japanese 106 keyboard
- English 101 keyboard

Forward-compatible keyboards, including Japanese 109 keyboard or English 104 keyboard, are also available. However, the keys which do not exist on Japanese 106 keyboard and English 101 keyboard are not available.
Some GOT models do not support keyboards equipped with special function such as the hub function.

(b) Characters that can be input from a USB keyboard

The GOT receives inputs from a USB keyboard as key codes.
The kana input with a USB keyboard is unavailable.
To enter hiragana or Pinyin characters and convert the entry into kanji or Simplified Chinese characters using Kana-Kanji/Pinyin conversion, use the key window displayed on the GOT screen.
The following shows the key code corresponding to each key on a USB keyboard.

Key on the USB keyboard	Key code on the GOT	Description
[Back Space]	0008h	Delete the character on the cursor.
[Enter] *1	000Dh	Write the entry to a specified device, display the cursor on the target object, move the cursor to a different object, or close the key window.
[Esc]	001Bh	Cancel the entry.
[-] (Hyphen)	002Dh	Reverse the sign of the value (for the numerical input only).
[.] (Period)	002Eh	Enter a decimal point (for the numerical input only).
[0] to [9]	0030h to 0039h	Enter a numeric character (for the numerical input only).
[A] to [F], [a] to [f]	0041h to 0046h	
[0] to [9]	0030h to 0039h	Enter an ASCII or ASCII-compatible character (use prohibited).
[A] to [Z]	0041h to 005Ah	
[a] to [z]	0061h to 007Ah	
Symbol keys	Character codes (ASCII)	
[→], [←], [↑], [↓]	0080h, 0081h, 0082h, 0083h	Moves the cursor
[Home]	0084h	Convert the entry into kanji or Simplified Chinese characters (use prohibited).
[Page Up]	0085h	Select the previous candidate.
[Page Down]	0086h	Select the next candidate.
[End]	0087h	Confirm the entry, or select the next group of hiragana characters to be converted to kanji characters.
[Delete]	0088h	Delete all the entered characters.
[Ctrl] + [→], [Ctrl] + [←] *2*3	0090h, 0091h	Moves cursor within object. Increase or decrease characters in a group of characters during conversion into kanji or Simplified Chinese characters.
[Ctrl] + [↑], [Ctrl] + [↓]	FFFAh, FFFBh	Increment, decrement

*1 The operation on the target object varies depending on the setting in the [Environmental Setting] window ([Key Windows]). For the details, refer to the following.

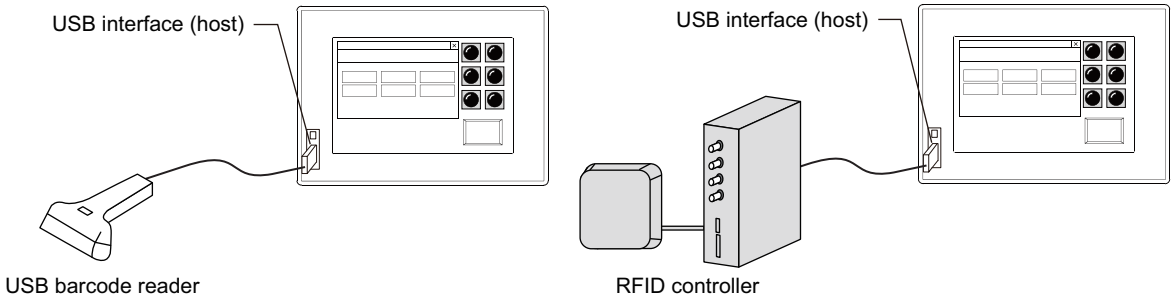
➟5.2.4 ■4 [Key Window]

*2 Only available when Kana-Kanji/Pinyin conversion is enabled in GT2107-W for GT21.

*3 Only available when Kana-Kanji/Pinyin conversion is enabled in GS21-W-N for GS21.

(3) Using a USB barcode reader or RFID controller

You can use a USB barcode reader or RFID controller by directly connecting it to the USB interface (host) of the GOT. A USB barcode reader or RFID controller acts as a USB keyboard and sends a key code to an input object, such as the text input or the numerical input, with the USB mouse/keyboard function.



The RFID function is not available for the device connected to the USB interface (host) of the GOT.
To use the RFID function, connect a device to the standard RS232 interface or the standard RS422/485 interface.

(a) Applicable USB barcode reader and RFID controller

USB barcode readers and RFID controllers must satisfy the following requirements.

- Equipped with a USB keyboard (HID) interface
- Compliant with USB standards

For the USB barcode readers and RFID controllers applicable to the USB mouse/keyboard function, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

(b) Key codes that can be input from a USB barcode reader or RFID controller

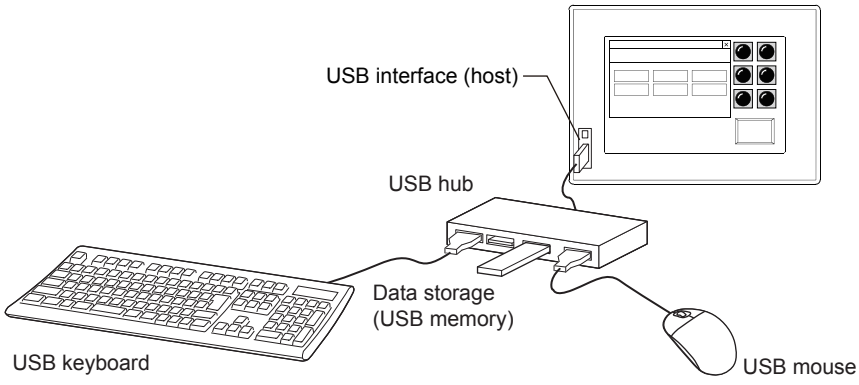
The GOT receives inputs from a USB barcode reader or RFID controller as key codes.
Key codes that can be input are common to those for a USB keyboard.

➟5.3.4 ■1 (2) (b) Characters that can be input from a USB keyboard

(4) Using multiple USB devices together

You can use a USB mouse, USB keyboard, USB barcode reader, RFID controller, and data storage simultaneously via a USB hub connected to the USB interface (host) of the GOT.
Up to eight USB devices are usable. (Only one USB hub is usable, and the hub is not counted as a USB device.)
Up to four USB devices other than data storages are usable.
The number of usable data storages depends on the GOT model.

➟1.2.8 Drive configuration of the target GOT for data transfer



(a) Applicable USB hub

A USB version 2.0 compatible USB hub is available.

■2 How to use a USB mouse, USB keyboard, USB barcode reader, and RFID controller

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.

(1) USB mouse

On the monitor screen and the utility screen, click the left button on the mouse to perform the touch operation.
Clicking the right button on the mouse is disabled.

On the remote personal computer operation screen, the USB mouse behaves in the same way as clicking on a personal computer screen.

(2) USB keyboard, USB barcode reader, and RFID controller

With a USB keyboard and USB barcode reader or RFID controller, you can input a key code to an object or a key window, move the cursor, delete text, and determine or cancel an input value.

- Numerical input, character string input
  You can input numeric values, character strings, and move the cursor.
- Writing data to a controller device
  You can write the read data to a controller device.
- Utility screen, system application screen
  You can operate the utility and each system application.
  In addition, you can input texts on the key window or dialogs.
- Security authentication screen
  You can input the operator ID and a password on the authentication screen.
- Dialog window
  You can operate each key on the dialog window.

The following keys and key codes are assigned to operation keys in the dialog window.

Operation key	Key on the USB keyboard	Key code of USB barcode reader and RFID controller
[OK] key, [Confirm] key, or [Yes] key	[Y] key, [y] key, or [Enter] key	59h (Y), 79h (y), or 0Dh (Enter)
[Cancel] key, [Stop] key or [No] key	[N] key, [n] key, or [Esc] key	4Eh (N), 6Eh (n), or 1Bh (Esc)
[Apply] key or [No to All] key	[A] key or [a] key	41h (A), or 61h (a)
[No to All] key	[S] key or [s] key	53h (S), or 73h (s)

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.

(1) Touch operation during clicking

Do not touch the GOT screen while you are clicking the USB mouse.
The GOT recognizes the operation as 2-point press.

(2) Canceling the screen saver mode with a USB mouse

Do not cancel the screen saver mode by clicking the mouse.
Because you can cancel the screen saver mode by moving the mouse cursor, you may click unintentional position.

(3) USB keyboard setting

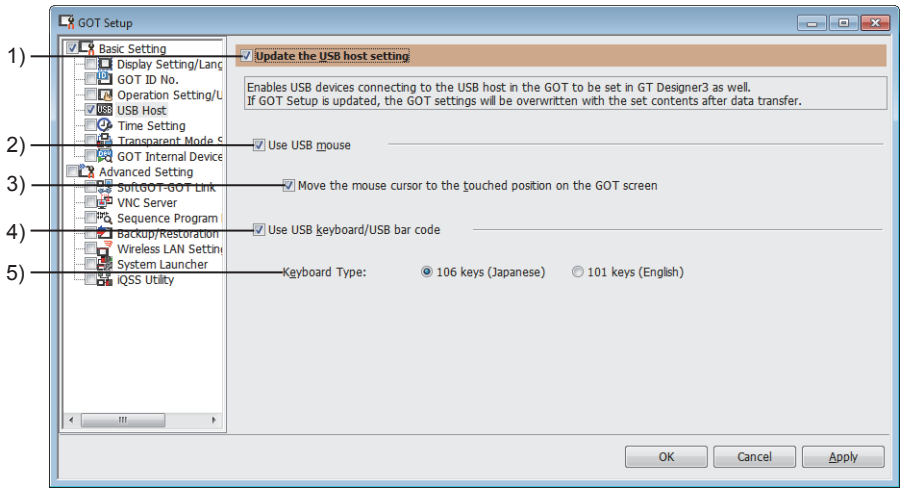
When setting [USB Host], set the USB keyboard type to be used in [Keyboard Type].
If a USB keyboard type that is not used is set, some characters cannot be input correctly.

➡5.3.4 ■4 [USB Host]

■4 [USB Host]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.
In [USB Host], set USB devices to be connected to the GOT.
Select [Common] → [GOT Setup] → [Basic Setting] → [USB Host] from the menu to display this window.



1) **[Update the USB host setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [USB Host].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Use USB mouse]**
Enables a USB mouse connected to the USB interface (host) of the GOT.

3) **[Move the mouse cursor to the touched position on the GOT screen]**
Select this item to move the mouse cursor to a position you touch.

4) **[Use USB keyboard/USB bar code]**
Enables a USB keyboard, USB barcode reader, or RFID controller connected to the USB interface (host) of the GOT.

5) **[Keyboard Type]**
Select the type of a USB keyboard to be used.
When using a USB barcode reader or RFID controller, select the Japanese 106 keyboard or the English 101 key board to input a key code.
The following shows the items to be selected.

- [106 keys (Japanese)]
  Uses the Japanese 106 keyboard.
  When a USB barcode reader or RFID controller is used, an input is recognized as a key code of the Japanese 106 keyboard.
- [101 keys (English)]
  Uses the English 101 keyboard.
  When a USB barcode reader or RFID controller is used, an input is recognized as a key code of the English 101 keyboard.

5.3.5 Setting the GOT time setting method ([Time Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications
■2 Precautions
■3 [Time Setting]

In [Time Setting], the setting method for the clock data between the GOT and the controller is set.

Point

GT SoftGOT2000 clock

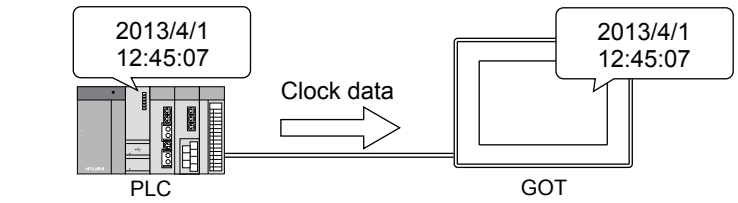
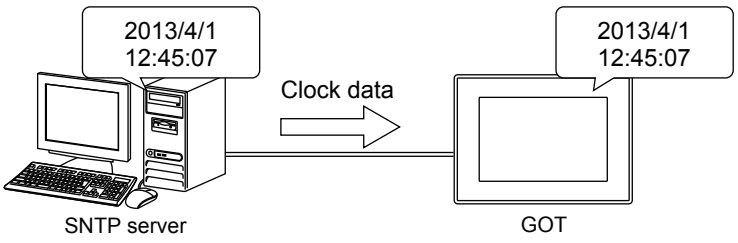
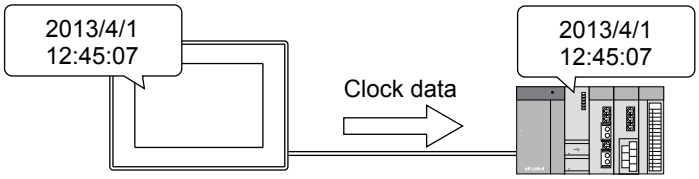
GT SoftGOT2000 uses the clock of the personal computer.
Therefore, the time on the personal computer is changed when the time setting function is performed.

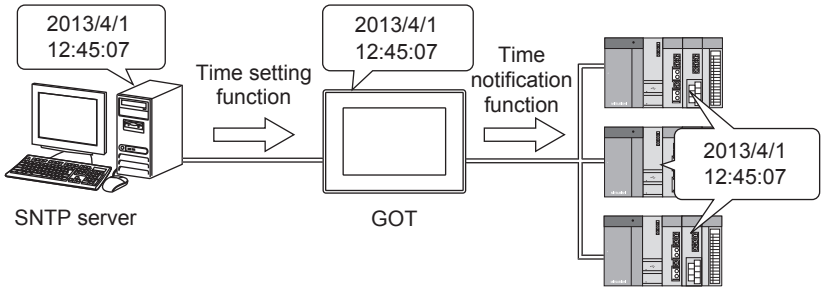
■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Clock synchronization method

The following shows the clock synchronization method on the GOT.

Clock synchronization method	Description	Supported models
Time setting function	Acquire the clock data of the controller or the SNTP server and change the clock data of the GOT. GT21, GT SoftGOT2000, and GS21 cannot acquire the clock data from the SNTP server.   When the GOT is powered on, set the clock data of the GOT to that of the controller or the SNTP server. Since the GOT does not have to hold the clock data while the GOT is powered off, no battery is required. (If the GOT needs to hold the clock data at startup, install a battery in the GOT.) To set the controller clock data of the controller, refer to the manual of the controller you use.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Time notification function	Not available to GT2103-P. Notify the clock data of the GOT to the controller to change that of the controller.  At the timing of the trigger, set the clock data of the controller to that of the GOT. Since the GOT must hold the clock data while the GOT is powered off, a battery is required. Set the clock data of the GOT in the utility.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Clock synchronization method	Description	Supported models
Using the time setting function and the time notification function together	Not available to GT2103-P. Acquire the clock data of the controller or the SNTP server by the time setting function. Then change the clock data of other controllers by the time notification function. GT21 and GT SoftGOT2000 cannot acquire the clock data from the SNTP server. 	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(2) Controllers available for the time setting function and the time notification function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOTs other than GT SoftGOT2000 perform the time setting function or the time notification function to the controllers equipped with a clock.
For controllers equipped with a clock, refer to the following.

➟GOT2000 Series Connection Manual for a controller used

For the controllers subjected to the time setting function and the time notification function by GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(3) SNTP server

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The operating environment for the SNTP server depends on the OS used.
The following shows the correspondence table.

Item	Description
Model	Personal computer that Windows runs on.
OS(English version)	• Microsoft Windows Server 2008 R2*1*2 • Microsoft Windows Server 2008*1*2 • Microsoft Windows Server 2003 x64 Edition*3*4 • Microsoft Windows Server 2003*3*4 • Microsoft Windows 2000 Server Service Pack2 or later*3 • Microsoft Windows 7 Ultimate (32 bit, 64 bit)*2*4*5 • Microsoft Windows 7 Enterprise (32 bit, 64 bit)*2*4*5 • Microsoft Windows 7 Professional (32 bit, 64 bit)*2*4*5 • Microsoft Windows Vista Ultimate (32 bit) Service Pack1 or later*2*4 • Microsoft Windows Vista Enterprise (32 bit) Service Pack1 or later*2*4 • Microsoft Windows Vista Business (32 bit) Service Pack1 or later*2*4 • Microsoft Windows XP Professional (32 bit) Service Pack2 or later*3*4 • Microsoft Windows 2000 Professional Service Pack2 or later*3
CPU	Use the CPU which the above OSs run on.
Memory	Use the memory which the above OSs run on.
Display	Use the hardware compatible with the above OSs.
Hard disk space	Reserve a free space which the above OSs run on. (If Windows Server 2008 R2, Windows Server 2008, Windows 7, or Windows Vista is used, 15GB or more)
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD drive • For execution: mouse, keyboard

*1 The OS does not support the Server Core installation.
Fully install the OS.
*2 The standard user or administrator account is required.

*3 For installation, the administrator authority is required.
*4 The following functions are not supported.
- Application start in Windows compatibility mode
- Fast user switching
- Changing your desktop themes (fonts)
- Remote desktop
- DPI setting other than the normal size

*5 Windows XP Mode is not supported.

(4) Local time

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the local time to enable the time setting among the countries or areas with a time difference.
Specify the local time with a time difference from the Greenwich mean time.
The summer time cannot be set.

➟5.3.5 ■3 (3) [Local Time] tab

Example) Time setting when Greenwich Mean Time is 2023/04/05 0:00

GOT location	Local time setting	Time
Country A	GMT-5:00	2023/04/04 19:00
Country B	GMT-1:00	2023/04/04 23:00
Country C	GMT+5:00	2023/04/05 05:00

(5) Changing the current time with the GOT special register (GS)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GOT always writes the clock data to the GOT special register (GS).
The clock data of the GOT can be changed with a numerical input and others by using the clock data stored in the GOT special register (GS) and the Time Change signal.

➟12.1.3 GOT special register (GS)

(a) Read device

The following devices are not available to GT SoftGOT2000.

Function	Setting item	Bit number	Description
Time Change signal	GS512	.b0	A trigger device to change the current time Changes the clock data of the GOT to the data of the change time (GS513 to GS516) when the bit is turned on.
Change time	GS513	.b8 to .b15	Two lower digits of year (data type: BCD)
		.b0 to .b7	Month (data type: BCD)
	GS514	.b8 to .b15	Date (data type: BCD)
		.b0 to .b7	Time (data type: BCD)
	GS515	.b8 to .b15	Minute (data type: BCD)
		.b0 to .b7	Second (data type: BCD)
	GS516	.b8 to .b15	Use prohibited
		.b0 to .b7	Day (0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday)

(b) Write device

Function	Setting item	Bit number	Description
Current time	GS650	.b8 to .b15	Two lower digits of year (data type: BCD)
		.b0 to .b7	Month (data type: BCD)
	GS651	.b8 to .b15	Date (data type: BCD)
		.b0 to .b7	Time (data type: BCD)
	GS652	.b8 to .b15	Minute (data type: BCD)
		.b0 to .b7	Second (data type: BCD)
	GS653	.b8 to .b15	Use prohibited
		.b0 to .b7	Day (0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday)

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Time setting function and time notification function for the same controller

When configuring the time setting function and time notification function for the same controller, the clock data may be delayed.
Set separate trigger types with different execution timings.

(2) Ethernet settings to acquire clock data from the SNTP server

To acquire clock data from the SNTP server, set an Ethernet interface of the GOT in the [I/F Communication Setting] dialog or other setting dialogs.
The clock data is acquired via Ethernet.
If no Ethernet interface is usable, the clock data cannot be acquired.

➟5.7.2 How to use the I/F communication setting

(3) Controller action after the time notification function is performed

After the time notification function is performed, the target controller acts differently depending on its system configuration (such as the multiple CPU system). For example, the target controller CPU may notify the obtained time data to another CPU.
For the controller action, refer to the manual of the controller used.

(4) Time setting function and time notification function for network-connected controllers

When the GOT and controllers are connected using any of the following connection types, only the controller of the host station or master station (specified control station) is targeted for the time setting function and the time notification function.

Connection type	Target of time setting function and time notification function
Ethernet connection	Host station
MELSECNET/H connection	Master station (specified control station) *1
MELSECNET/10 connection	
CC-Link IE TSN connection *2*3	
CC-Link IE Controller Network connection	
CC-Link IE Field Network connection	

*1 When this station is disconnected, the GOT cannot perform the time setting function or the time notification function on the station.
*2 After the time distribution from the master station, the time is set in the GOT.
For the time distribution from the master station, refer to the following.
➟MELSEC iQ-R CC-Link IE TSN User's Manual (Application)
*3 The time notification function is not supported.

(5) Personal computer time zone when using GT SoftGOT2000

Set the same time zone for the personal computer and controller.
Otherwise, a time difference occurs.

(6) Time setting function on GT SoftGOT2000

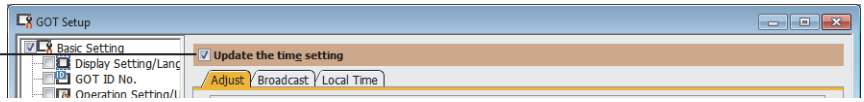
Under the following conditions, the time setting function cannot be used on GT SoftGOT2000.
If the function is used under the following conditions, a time difference occurs.

- The user who has started GT SoftGOT2000 does not have the authority to change the system time.
- The clock of the personal computer is synchronized with an Internet time server.
- Software that periodically adjusts the clock of the personal computer is used.

■3 [Time Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Time Setting], the setting method for the clock data of the GOT is set.
Select [Common] → [GOT Setup] → [Basic Setting] → [Time Setting] from the menu to display this window.



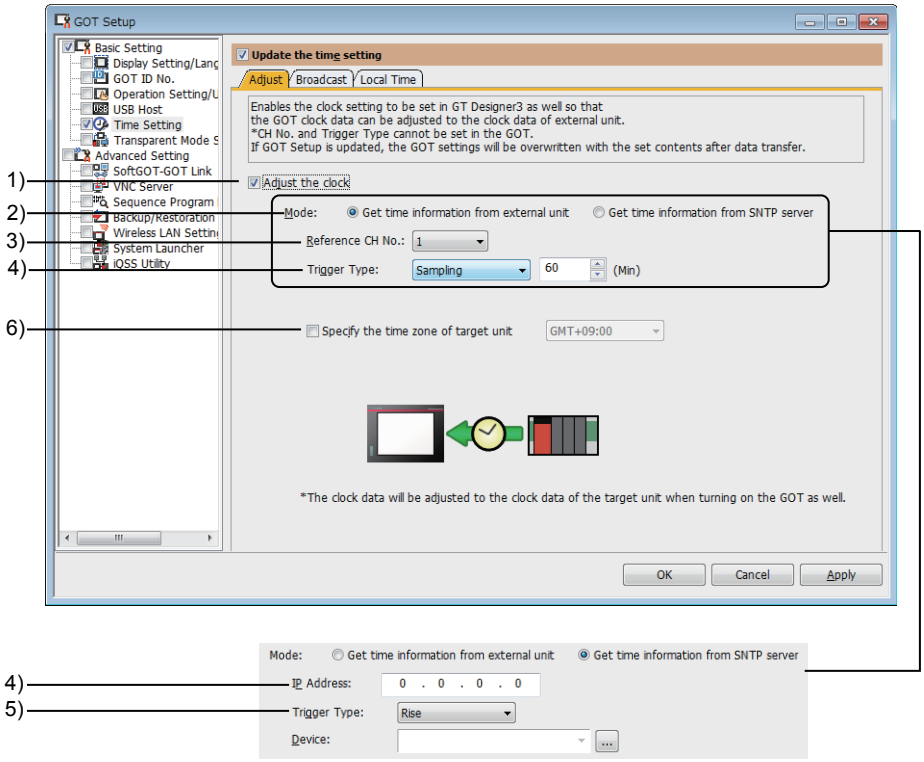
1) **[Update the time setting]**

Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [Time Setting].
When a project is read from the GOT, the setting changed in the utility is reflected.

➟5.3.5 ■3 (1) [Adjust] tab
5.3.5 ■3 (2) [Broadcast] tab
5.3.5 ■3 (3) [Local Time] tab

(1) [Adjust] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Adjust the clock]**

Select this item to use the time setting function.
After selecting this item, set how to acquire the clock data.

2) **[Mode]**

Not available to GT21, GT SoftGOT2000, and GS21.
Set the destination device of the clock data and how to acquire the clock data.

- [Get time information from external unit]
  Select this item to acquire the clock data from a controller, such as a PLC.
  After selecting this item, set [Reference CH No.] and [Trigger Type].
- [Get time information from SNTP server]
  Select this item to acquire the clock data from the SNTP server.
  After selecting this item, set [IP Address] and [Trigger Type] of the destination.

3) **[Reference CH No.]**

For GT27, GT25, GT23, and GS25, this item is settable when [Mode] is set to [Get time information from external unit].
Set the channel No. to connect the device from which the clock data is acquired.
The following shows the items to be selected.

- GT27, GT25, GT SoftGOT2000, GS25: [1] to [4]
- GT23, GT21, and GS21: [1] and [2]

4) **[IP Address]**

Not available to GT21, GT SoftGOT2000, and GS21.
This item is settable when [Mode] is set to [Get time information from SNTP server].
Set the IP address of the SNTP server from which the clock data is acquired.

The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

5) **[Trigger Type]**

Set the trigger to acquire the clock data.

- [Rise]

  Acquires the clock data at the rise of the trigger device.
  After selecting this item, set the trigger device.

- [Fall]

  Acquires the clock data at the fall of the trigger device.
  After selecting this item, set the trigger device.

- [Sampling]

  Set the cycle to acquire the clock data.
  The setting range is [1] to [1440] minutes.

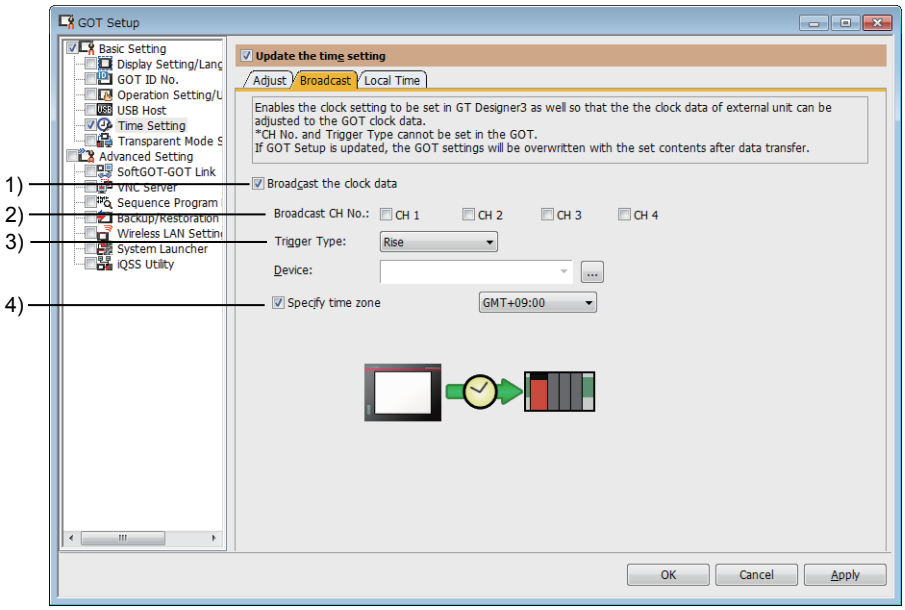
6) **[Specify the time zone of target unit]**

Not available to GT SoftGOT2000.
Select this item to set the time zone of the destination device of the clock data.
The setting range is [GMT-12:00] to [GMT+13:00], or [Custom].
When [Custom] is selected, the time difference with GMT can be set by 15 minutes.

(2) [Broadcast] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2103-P.



1) **[Broadcast the clock data]**
Select this item to use the time notification function.
After selecting this item, set how to notify the clock data.

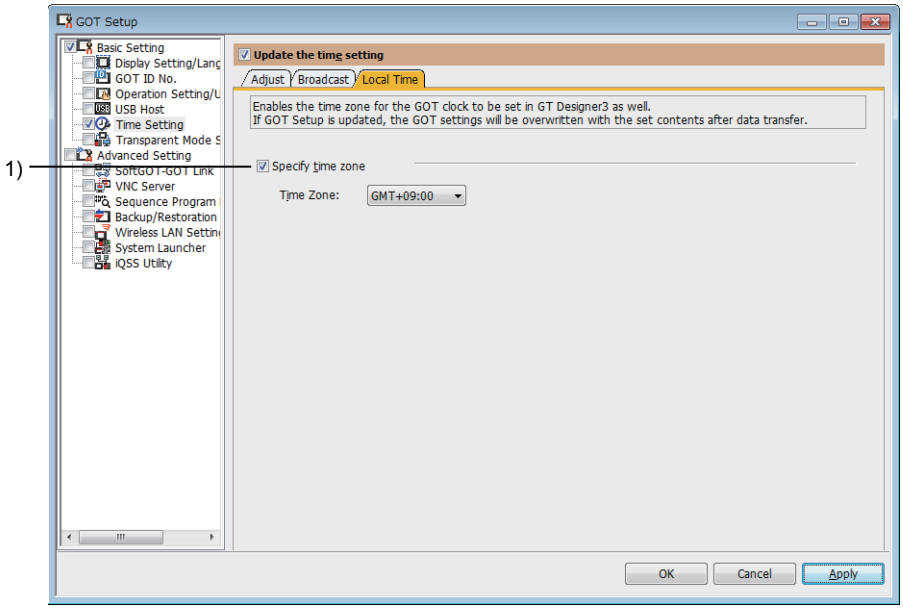
2) **[Broadcast CH No.]**
Set the channel No. to connect the destination device of the clock data.
The following shows the items to be selected.
- GT27, GT25, GT SoftGOT2000, GS25: [CH 1] to [CH 4]
- GT23, GT21: [CH1] and [CH2]

3) **[Trigger Type]**
Set the trigger to notify the clock data.
- [Rise]
  Notifies the clock data at the rise of the trigger device.
  After selecting this item, set the trigger device.
- [Fall]
  Notifies the clock data at the fall of the trigger device.
  After selecting this item, set the trigger device.
- [Sampling]
  Set the cycle to notify the clock data.
  The setting range is [1] to [1440] minutes.

4) **[Specify the time zone of target unit]**
Not available to GT21 and GT SoftGOT2000.
Select this item to set the time zone of the destination device of the clock data.
The setting range is [GMT-12:00] to [GMT+13:00], or [Custom].
When [Custom] is selected, the time difference with GMT can be set by 15 minutes.

(3) [Local Time] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Specify time zone]**
Select this item to set the time zone.
The setting range is [GMT-12:00] to [GMT+13:00], or [Custom].
When [Custom] is selected, the time difference with GMT can be set by 15 minutes.

5.3.6 Setting the FA transparent function ([Transparent Mode Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Transparent Mode Setting]

In [Transparent Mode Setting], set a channel number used for the FA transparent function when using the multi-channel function.

For the details of the FA transparent function, refer to the following.

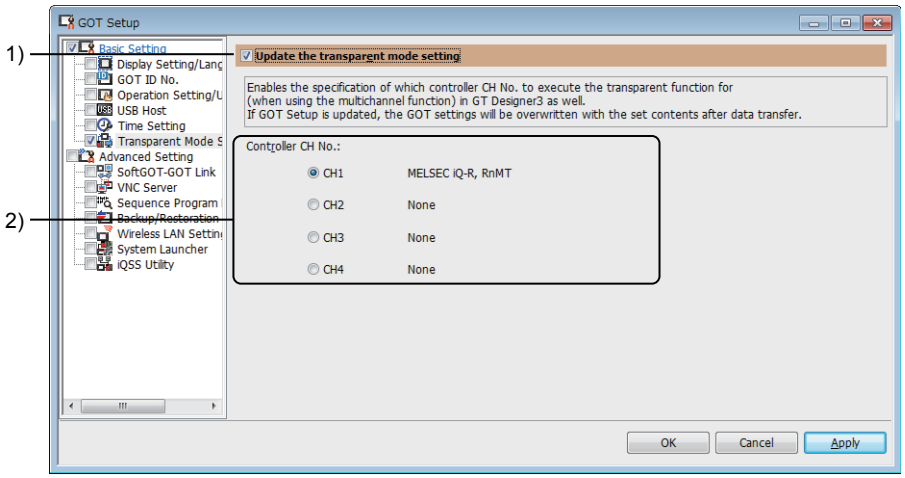
➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1

■1 [Transparent Mode Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Transparent Mode Setting], set a channel number used for the FA transparent function when using the multi-channel function.

Select [Common] → [GOT Setup] → [Basic Setting] → [Transparent Mode Setting] from the menu to display this window.



1) **[Update the transparent mode setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [Transparent Mode Setting].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Controller CH No.]**
Select a channel number used for the FA transparent function.
The following shows the items to be selected.
- [CH1] to [CH4] (GT27, GT25, and GS25)
- [CH1] and [CH2] (GT23, GT21, and GS21)

5.3.7 Configuring the settings of the GOT internal device monitor ([GOT Internal Device Monitor])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [GOT Internal Device Monitor]

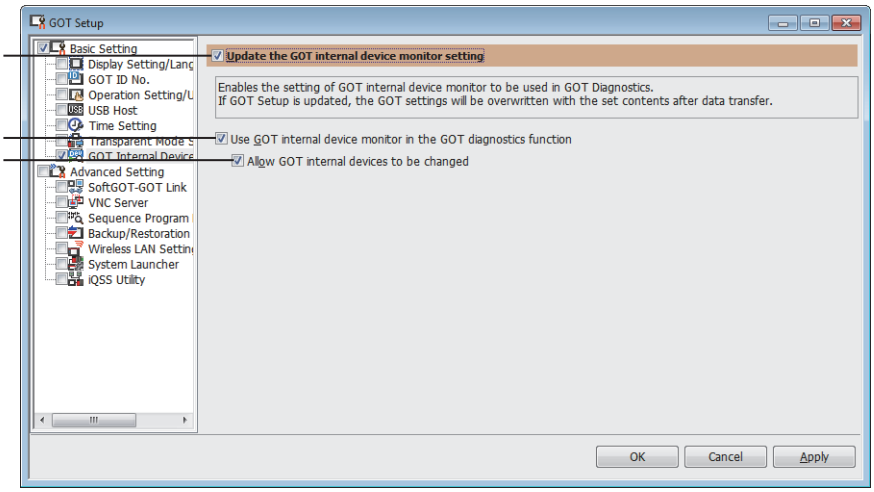
In [GOT Internal Device Monitor], configure the settings of the GOT internal device monitor.
For the details on the GOT internal device monitor of the GOT diagnostics function, refer to the following.

➟11.14 Checking the Causes and Corrective Actions for an Error in the GOT (GOT Diagnostics)

■1 [GOT Internal Device Monitor]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [GOT Internal Device Monitor], configure the settings of the GOT internal device monitor.
Select [Common] → [GOT Setup] → [Basic Setting] → [GOT Internal Device Monitor] from the menu to display the following window.



1) **[Update the GOT internal device monitor setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to enable the setting items in [GOT Internal Device Monitor].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Use GOT internal device monitor in the GOT diagnostics function]**
Allows GT Designer3 to monitor the GOT internal devices when the GOT diagnostics runs.

3) **[Allow GOT internal devices to be changed]**
Allows GT Designer3 to change the values of the GOT internal devices when the GOT diagnostics runs.

5.3.8 Configuring the settings of the SoftGOT-GOT link function ([SoftGOT-GOT Link])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [SoftGOT-GOT Link]

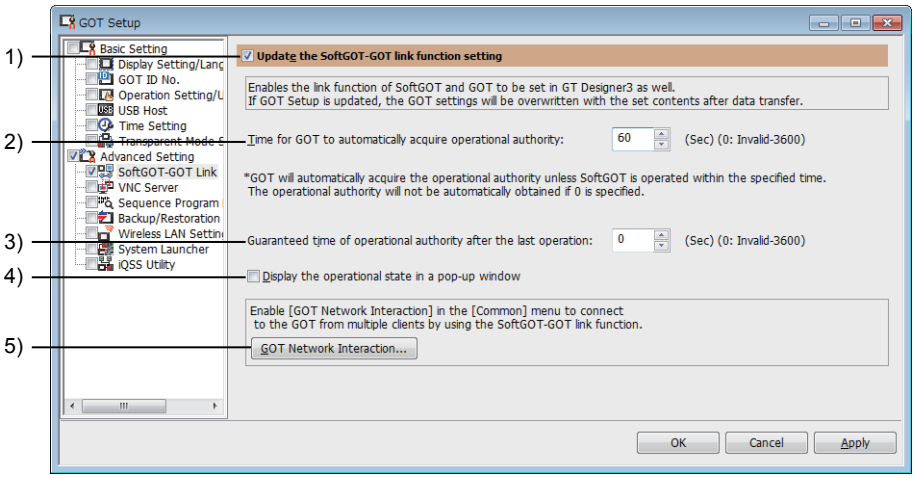
In [SoftGOT-GOT Link], configure the settings for the authorization of the SoftGOT-GOT link function and others.
For the details of the SoftGOT-GOT link function, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

■1 [SoftGOT-GOT Link]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [SoftGOT-GOT Link], configure the settings for the authorization of the SoftGOT-GOT link function and others.
Select [Common] → [GOT Setup] → [Advanced Setting] → [SoftGOT-GOT Link] from the menu to display this window.



1) **[Update the SoftGOT-GOT link function setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [SoftGOT-GOT Link].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Time for GOT to automatically acquire operational authority]**
Set the time from when GT SoftGOT2000 is operated after GT SoftGOT2000 obtains the authorization until when the GOT automatically obtains the authorization.
The setting range is [0] (Invalid) seconds to [3600] seconds.

3) **[Guaranteed time of operational authority after the last operation]**
Set the time to retain the authorization after GT SoftGOT2000 or the GOT obtains the authorization and then GT SoftGOT2000 or the GOT is operated.
The setting range is [0] (Invalid) seconds to [3600] seconds.
This setting is disabled when GS447.b1 is turned on.
When [Use GOT network interaction function] is selected in the [GOT Network Interaction] dialog, the authorization guarantee time set for the GOT network interaction function is prioritized.

4) **[Display the operational state in a pop-up window]**
The information of GT SoftGOT2000 or the GOT with the authorization is popped up on GT SoftGOT2000 or the GOT without the authorization.

5) **[GOT Network Interaction] button**
Displays the [GOT Network Interaction] dialog.

5.3.9 Configuring the settings of the VNC server function ([VNC Server])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

➟■1 [VNC Server]

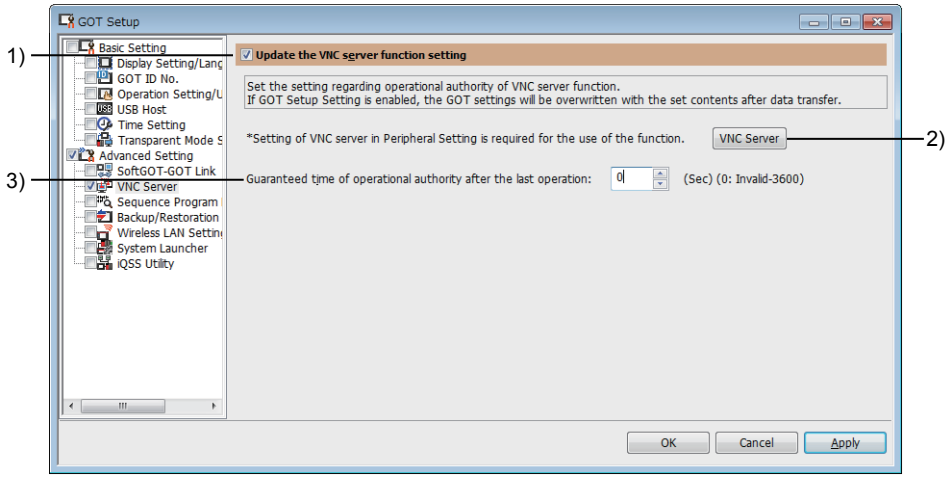
In [VNC Server], configure the settings for the authorization of the VNC server function.
For the details of the VNC server function, refer to the following.

➟10.5 Viewing the GOT from a Personal Computer (VNC Server Function)

■1 [VNC Server]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
In [VNC Server], configure the settings for the authorization of the VNC server function.
Select [Common] → [GOT Setup] → [Advanced Setting] → [VNC Server] from the menu to display this window.



1) **[Update the VNC server function setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [VNC Server].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[VNC Server] button**
Set how to connect the VNC server.
Click this button to display the [VNC Server] dialog.

➟10.5.4 [VNC Server] dialog

3) **[Guaranteed time of operational authority after the last operation]**
Set the time to retain the authorization after the VNC server (GOT) or the VNC client (personal computer) obtains the authorization and then the VNC server (GOT) or the VNC client (personal computer) is operated.
The setting range is [0] (Invalid) seconds to [3600] seconds.
This setting is disabled when GS1792.b8 is turned on.
When [Use GOT network interaction function] is selected in the [GOT Network Interaction] dialog, the authorization guarantee time set for the GOT network interaction function is prioritized.

5.3.10 Configuring the settings of the sequence program monitor ([Sequence Program Monitor])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Sequence Program Monitor]

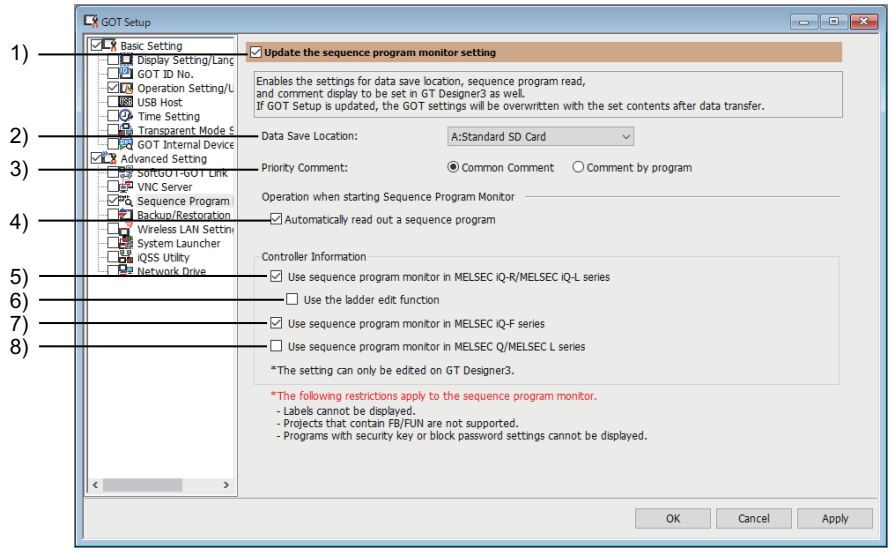
In [Sequence Program Monitor], configure the settings for reading sequence programs and displaying comments on the sequence program monitor.
For the details of the sequence program monitor, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

■1 [Sequence Program Monitor]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Sequence Program Monitor], configure the settings for reading sequence programs and displaying comments on the sequence program monitor.
Select [Common] → [GOT Setup] → [Advanced Setting] → [Sequence Program Monitor] from the menu to display this window.



1) **[Update the sequence program monitor setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [Sequence Program Monitor].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Data Save Location]**
Select a destination to save the data of the sequence program monitor.
The following shows the items to be selected.
- [A:Standard SD Card]
- [B:USB Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

3) **[Priority Comment]**
Select the priority comment when a common comment and each program comment are set for the same device in the sequence program.
The following shows the items to be selected.
- [Common Comment]
- [Comment by program]

4) **[Automatically read out a sequence program]**
Automatically reads a sequence program from the controller at the sequence program monitor startup.

5) **[Use sequence program monitor in MELSEC iQ-R/MELSEC iQ-L series]**
Enables the sequence program monitor (iQ-R/iQ-L ladder).

Select this item to incorporate a system application (extended function) of [Sequence Program Monitor (iQ-R/iQ-L Ladder)] into the package data.

6) **[Use the ladder edit function]**
Enables the ladder edit function in the sequence program monitor (iQ-R/iQ-L ladder).

7) **[Use sequence program monitor in MELSEC iQ-F series]**
Allows the use of the sequence program monitor (iQ-F ladder).
Select this item to incorporate a system application (extended function) of [Sequence Program Monitor (iQ-F Ladder)] into the package data.
The ladder edit function is also usable.

8) **[Use sequence program monitor in MELSEC Q/MELSEC L series]**
Allows the use of the sequence program monitor (Ladder).
Select this item to incorporate a system application (extended function) of [Sequence Program Monitor (Ladder)] into the package data.
The ladder edit function is also usable.

5.3.11 Configuring the settings of the backup/restoration function ([Backup/Restore])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Backup/Restoration]
■2 [Trigger Setting] dialog
■3 [Device List] dialog (trigger device, process notification device)
■4 Relevant settings

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
In [Backup/Restoration], configure the settings of the destination to save the backup data or the trigger backup setting.
For the details of the backup/restoration function, refer to the following.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

➟GOT2000 Series User's Manual (Monitor)

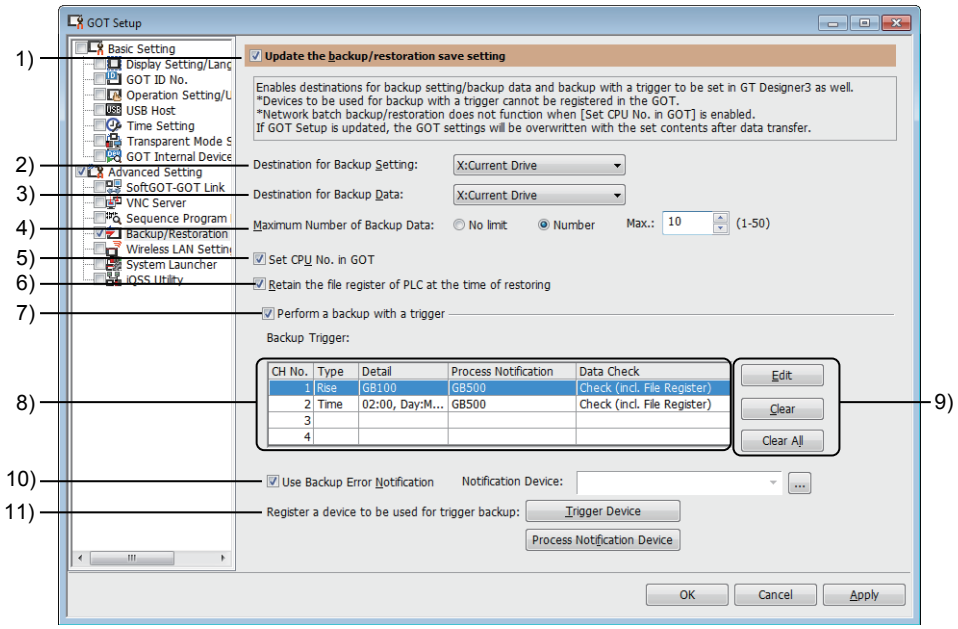
- For GT21 and GS21

➟GOT2000 Series User's Manual (Utility)
GOT SIMPLE series user's manuals

■1 [Backup/Restoration]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
In [Backup/Restoration], configure the settings of the destination to save the backup data or the trigger backup setting.
Select [Common] → [GOT Setup] → [Advanced Setting] → [Backup/Restoration] from the menu to display this window.



1) **[Update the backup/restore save setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Select this item to set each item in [Backup/Restoration].
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Destination for Backup Setting]**
Select a destination to save the backup setting.
The following shows the items to be selected.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

1.2.8Drive configuration of the target GOT for data transfer

3) **[Destination for Backup Data]**

Select a destination to save the backup data.

The following shows the items to be selected.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

1.2.8Drive configuration of the target GOT for data transfer

4) **[Maximum Number of Backup Data]**

Not available to GT21 and GS21.

Select the maximum number of saved backup data.

- [No limit]

  Saves the data to the drive selected in [Destination for Backup Data] as much as possible.
- [Number]

  Saves the data up to the set number of saved backup data.

  After selecting this item, set the maximum number of saved backup data.

  The setting range is [1] to [50].

5) **[Set CPU No. in GOT]**

Not available to GT21 and GS21.

Select this item to set the CPU No. of the PLC which executes a backup.

6) **[Retain the file register of PLC at the time of restoring]**

Not available to GT21 and GS21.

Retains the file registers of a PLC at restoration.

7) **[Perform a backup with a trigger]**

Not available to GT21 and GS21.

Select this item to execute a backup by a trigger you set.

After selecting this item, set the backup trigger from the list of backup triggers.

8) **List of backup trigger settings**

Not available to GT21 and GS21.

Displays the backup trigger settings in a list.

- [CH No.]: Channel number for which the backup trigger setting is used
- [Type]: Trigger type
- [Detail]: Details of the setting
- [Process Notification]: Backup process notification device
- [Data Check]: Indicates if the data check after the backup is performed or not.

9) **Operation button of backup trigger settings**

Not available to GT21 and GS21.

The following buttons edit the list of backup trigger settings.

Item	Description
[Edit] button	Displays the [Trigger Setting] dialog. 5.3.11 ■2 [Trigger Setting] dialog
[Clear] button	Deletes the selected backup trigger setting.
[Clear All] button	Deletes all the backup trigger settings.

10) **[Use Backup Error Notification]**

Not available to GT21 and GS21.

Stores the channel number of the backup trigger in the notification device if an error occurs during the backup.

After selecting this item, set [Notification Device].

A word device can be used for the notification device.

11) **[Register a device to be used for trigger backup]**

Not available to GT21 and GS21.

Register the devices used for the trigger backup.

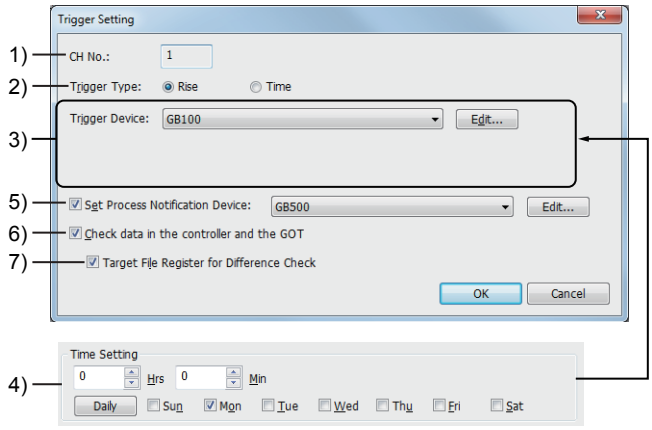
Up to 10 devices can be registered for each trigger device and process notification device.

Item	Description
[Trigger Device] button	Displays the device list (trigger device) dialog. Register bit devices used for the trigger device. ➟5.3.11 ■3 [Device List] dialog (trigger device, process notification device)
[Process Notification Device] button	Displays the device list (process notification device) dialog. Register bit devices used for the process notification device. ➟5.3.11 ■3 [Device List] dialog (trigger device, process notification device)

■2 [Trigger Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.



1) **[CH No.]**
Channel number for which the backup trigger setting is used.

2) **[Trigger Type]**
Select a trigger type to execute the backup.
The following shows the items to be selected.
- [Rise]
- [Time]

3) **[Trigger Device]**
Select a trigger device from the devices set in the [Device List (Trigger Device)] dialog.
This item is displayed when [Rise] is selected in [Trigger Type].

Item	Description
[Trigger Device] button	Displays the device list (trigger device) dialog. Register bit devices used for the trigger device. ➟5.3.11 ■3 [Device List] dialog (trigger device, process notification device)

4) **[Time Setting]**
Set the time and day to take the backup.
This item is displayed when [Time] is selected in [Trigger Type].

Item	Description
[Daily] button	Selects all the days.

5) **[Set Process Notification Device]**
Select a device to notify a backup is in process.
Select a process notification device from the devices set in the [Device List (Process Notification Device)] dialog.

Item	Description
[Edit] button	Displays the [Device List (Process Notification Device)] dialog. Register bit devices used for the process notification device. ➟5.3.11 ■3 [Device List] dialog (trigger device, process notification device)

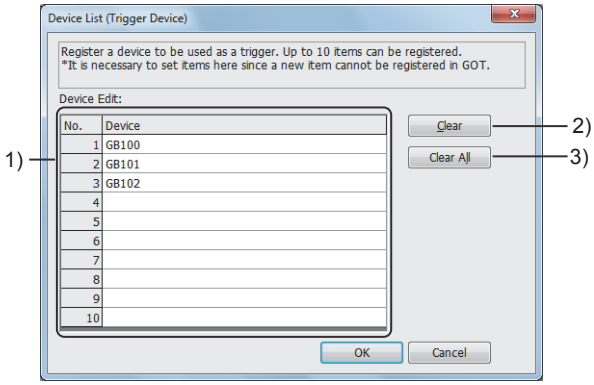
6) **[Check data in the controller and the GOT]**
Select this item to check the data in the controller and backup data in the GOT when a backup is executed.

7) **[Target File Register for Difference Check]**
Select this item to check if the file register is changed when a backup is executed.
If the file register is changed as a result of the check, a backup is executed.
This item can be selected when [Check data in the controller and the GOT] is selected.

■3 [Device List] dialog (trigger device, process notification device)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.



1) **Device list**
Lists the trigger devices or process notification devices.
Click the [Device] field to display the [...] button.
Set the trigger device or process notification device.
The bit device is available.

2) **[Clear] button**
Deletes the selected device.

3) **[Clear All] button**
Deletes all the devices.

■4 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the backup/restoration function as required.
The following shows the functions that are available by the relevant settings.

(1) GOT internal device

➟12.1.3 GOT special register (GS)

Function	Setting item
Executing the GOT data package acquisition when the trigger backup is complete	GS522.b6

5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

➟■1 Specifications
■2 How to use the wireless LAN (GOT operation mode: station)
■3 How to use the wireless LAN (GOT operation mode: access point)
■4 Precautions
■5 [Wireless LAN Setting]
■6 Relevant settings

In [Wireless LAN Setting], configure the wireless LAN function setting.
On a wireless LAN, the GOT operates as a station or wireless LAN access point to communicate with other devices such as a personal computer.

■1 Specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

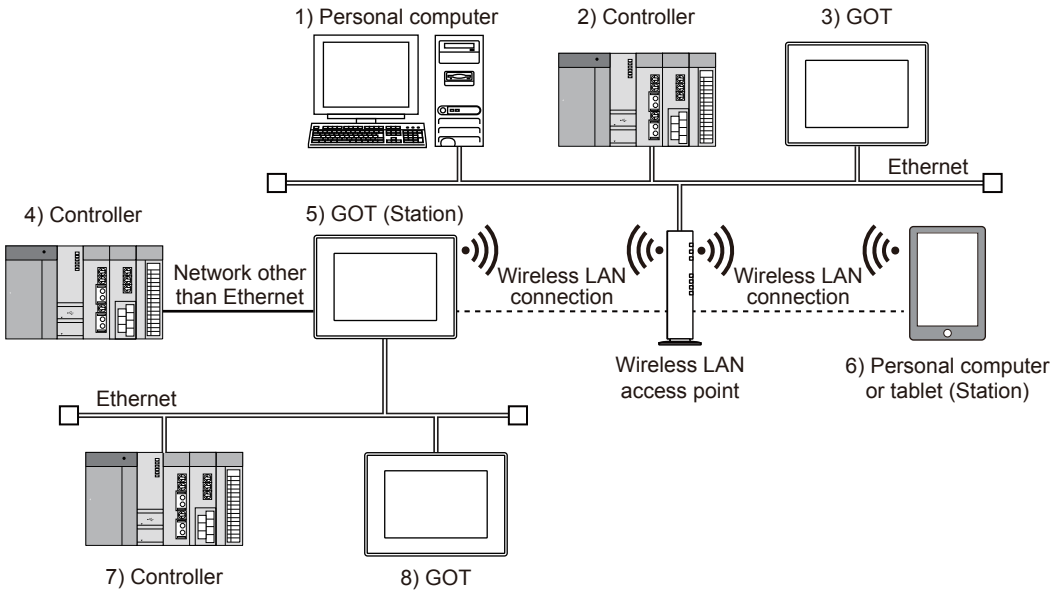
(1) Operation mode and system configuration

The following explains the operation mode of the wireless LAN function.
For the details of the system configuration of a wireless LAN connection, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputer, MODBUS/Fieldbus Products, Peripherals) for GT Works3 Version1

(a) **When [Operation Mode] is set to [Station]**

The GOT operates as a station to communicate with other devices via a wireless LAN access point.
The following shows the access range when the wireless LAN connection is used.



○ : Accessible, ×: Inaccessible, -: Outside the wireless LAN range

Access source	Access destination							
	1)	2)	3)	4)	5)	6)	7)	8)
1) Personal computer	-	-	-	○	○	-	×*1	×*1
2) Controller	-	-	-	×	×*1	-	×	×*1
3) GOT	-	-	-	×*1	○	-	×*1	×*1
4) Controller	○	×	×*1	-	-	○	-	-
5) GOT (Station)	○	×*1	○	-	-	○	-	-

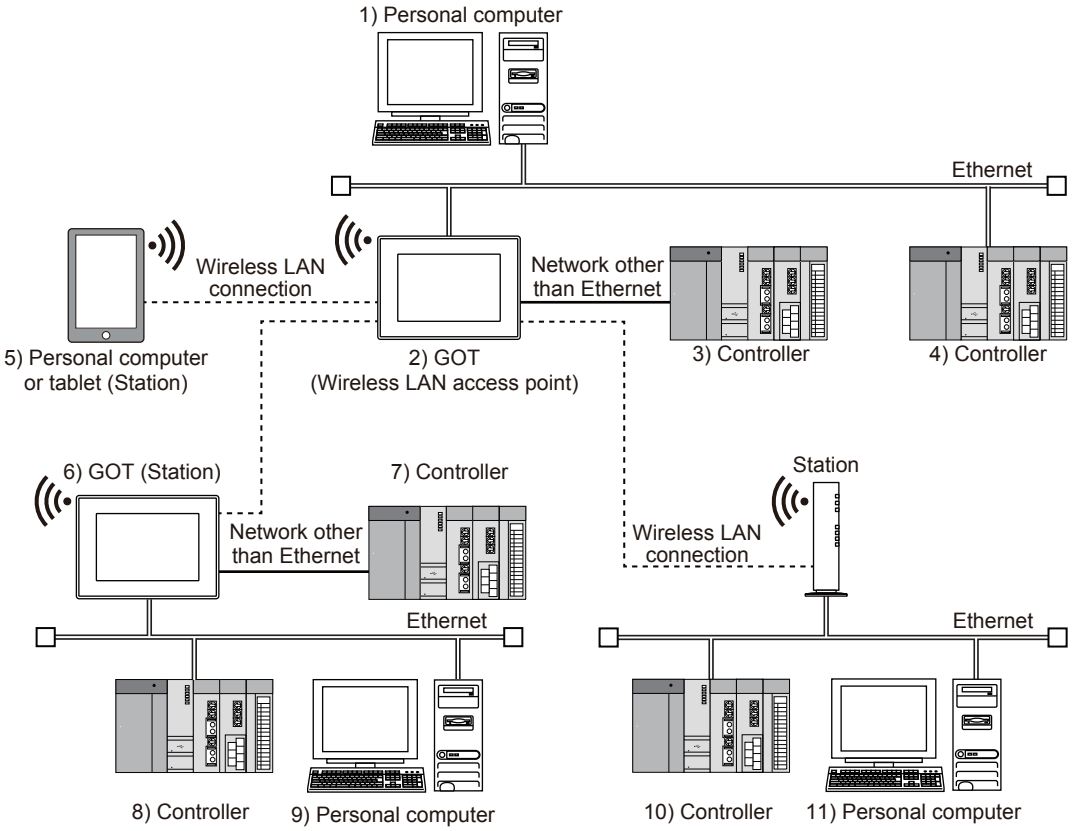
Access source	Access destination							
	1)	2)	3)	4)	5)	6)	7)	8)
6) Personal computer or tablet (Station)	-	-	-	○	○	-	×*1	×*1
7) Controller	×*1	×	×*1	-	-	×*1	-	-
8) GOT	×*1	×*1	×*1	-	-	×*1	-	-

*1 Communication is available using the server/client function

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

(b) **When [Operation Mode] is set to [Access Point]**

The GOT operates as a wireless LAN access point to communicate with other devices such as a tablet.
Up to five stations are connectable to one GOT (wireless LAN access point).
The following shows the access range when the wireless LAN connection is used.



○ : Accessible, ×: Inaccessible, -: Outside the wireless LAN range

Access source	Access destination										
	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)
1) Personal computer	-	-	-	-	×	×	×	×	×	×	×
2) GOT (Wireless LAN access point)	-	-	-	-	○	○	×*1	×*1	×	×	○
3) Controller	-	-	-	-	×	×	×	×	×	×	×
4) Controller	-	-	-	-	×	×	×	×	×	×	×
5) Personal computer or tablet (Station)	×	○	○	×*1	-	○	○	×	×	○	○
6) GOT (Station)	×	○	×*1	×*1	○	-	-	-	-	×	○
7) Controller	×	×	×	×	×	-	-	-	-	×	×
8) Controller	×	×	×	×	×	-	-	-	-	×	×
9) Personal computer	×	×	×	×	×	-	-	-	-	×	×
10) Controller	×	×	×	×	○	×	×	×	×	-	-
11) Personal computer	×	○	○	×*1	○	○	○	×*1	×	-	-

*1 Communication is available using the server/client function

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

(2) Required hardware, BootOS, and system application (extended function)

Operation mode	Required hardware, BootOS, and system application (extended function)	
[Station]	Hardware	• Wireless LAN communication unit (GT25-WLAN) • Wireless LAN access point (commercial product) For the wireless LAN access points validated for the wireless LAN connection, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)
	BootOS	Version C or later
	System application (extended function)	[Wireless LAN]
[Access Point]	Hardware	Wireless LAN communication unit (GT25-WLAN)
	BootOS	Version C or later
	System application (extended function)	[Wireless LAN]

For information on how to install the BootOS and system application (extended function) on the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

(3) Available GOT functions when the wireless LAN function is used

When the wireless LAN function is used, the following functions are available regardless of the operation mode.

Function		Reference
Time setting function (Acquiring time-of-day information from the SNTP server)		➟5.3.5 Setting the GOT time setting method ([Time Setting])
FA transparent function		➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1
Remote personal computer operation (Ethernet)		➟10.3 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Ethernet))
VNC Server function		➟10.5 Viewing the GOT from a Personal Computer (VNC Server Function)
Multimedia function (Sending a video file to a personal computer)		➟10.8 Recording or Playing Images Taken by a Video Camera on the GOT (Multimedia Function)
Gateway function	Server/Client function	➟10.13 Monitoring a Controller through a GOT (Server/Client Function)
	Mail send function	➟10.15 Sending a Mail from the GOT (Mail Send Function)
	FTP server function	➟10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)
	File transfer function (FTP transfer)	➟10.17 Transferring a File between the GOT and Peripheral Device (File Transfer Function (FTP Transfer))
SoftGOT-GOT link function		➟GT SoftGOT2000 Version1 Operating Manual
MES interface function		➟GOT2000 Series MES Interface Function Manual for GT Works3 Version1
Log viewer function*1		➟GOT2000 Series User's Manual (Monitor)
GOT Mobile function		➟10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

*1 No controllers are listed in the connection target list display area of the target selection screen.
Directly enter the IP address of an applicable controller in [IP address].

■2 How to use the wireless LAN (GOT operation mode: station)

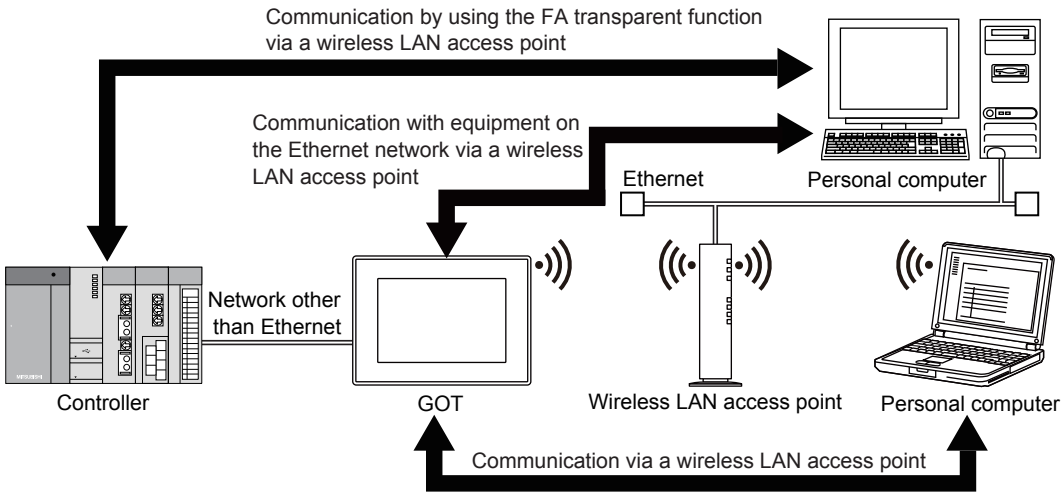
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

Set the GOT as a station to communicate with a personal computer via a wireless LAN access point.

When the FA transparent function is used, a communication between the PLC and the personal computer can also be used.

When the server/client function is used, a controller device can also be monitored via a gateway device.



(1) Setting procedure

Before configuring the settings, check the SSID, security authentication method, and WEP key or passphrase of the wireless LAN access point to be used.

For the check method, refer to the following.

➟Manual of the wireless LAN access point used

Configure the settings on GT Designer3 in the following procedure.

Step 1 Select [Common] → [GOT Setup] → [Advanced Setting] → [Wireless LAN Setting] from the menu to display the [GOT Setup] window ([Wireless LAN Setting]).

Step 2 Set the following items, and click the [OK] button.

- Select [Update the wireless LAN setting].
- Select [Station] for [Operation Mode].
- Set [Destination Access Point Setting].

➟5.3.12 ■5 [Wireless LAN Setting]

Step 3 Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the [GOT Ethernet Setting] window ([GOT IP Address Setting]).

Step 4 In the [Wireless LAN] tab, set the following items.

- Select [Update GOT wireless LAN I/F setting].
- Set [GOT IP Address].
- Set [Subnet Mask].
- Select [Enable wireless LAN I/F].

Step 5 Click the [Driver Setting] button to display the [Detail Setting] dialog.

Step 6 Set the following items, and click the [OK] button.

- Set [GOT Net No.].
- Set [GOT Station].

Step 7 In the [GOT Ethernet Setting] window, click the [OK] button.

Step 8 Select [Common] → [GOT Ethernet Setting] → [GOT Ethernet Common Setting] from the menu to display the [GOT Ethernet Setting] window ([GOT Ethernet Common Setting]).

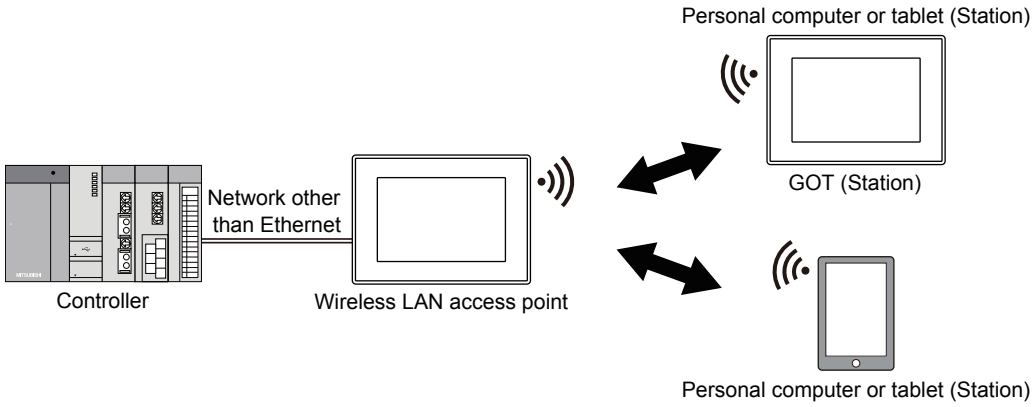
Step 9 Set the following items, and click the [OK] button.

- Set [Default Gateway].
- Set [Peripheral S/W Communication Port No.].
- Set [Transparent Port No.].

■3 How to use the wireless LAN (GOT operation mode: access point)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
Set the GOT as a wireless LAN access point to communicate with stations (such as a GOT, personal computer, and tablet) on a wireless LAN.
When the FA transparent function is used, a communication between the PLC and the personal computer can also be used.
When the server/client function is used, a controller device can also be monitored via a gateway device.



(1) Setting procedure

Configure the settings on GT Designer3 in the following procedure.

Step 1 Select [Common] → [GOT Setup] → [Advanced Setting] → [Wireless LAN Setting] from the menu to display the [GOT Setup] window ([Wireless LAN Setting]).

Step 2 Set the following items, and click the [OK] button.

- Select [Update the wireless LAN setting].
- Select [Access Point] for [Operation Mode].
- Set [Access Point Setting].

➟5.3.12 ■5 [Wireless LAN Setting]

Step 3 Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the [GOT Ethernet Setting] window ([GOT IP Address Setting]).

Step 4 In the [Wireless LAN] tab, set the following items.

- Select [Update GOT wireless LAN I/F setting].
- Set [GOT IP Address].
- Set [Subnet Mask].
- Select [Enable wireless LAN I/F].

Step 5 Click the [Driver Setting] button to display the [Detail Setting] dialog.

Step 6 Set the following items, and click the [OK] button.

- Set [GOT Net No.].
- Set [GOT Station].

Step 7 In the [GOT Ethernet Setting] window, click the [OK] button.

Step 8 Select [Common] → [GOT Ethernet Setting] → [GOT Ethernet Common Setting] from the menu to display the [GOT Ethernet Setting] window ([GOT Ethernet Common Setting]).

Step 9 Set the following items, and click the [OK] button.

- Set [Default Gateway].
- Set [Peripheral S/W Communication Port No.].
- Set [Transparent Port No.].

■4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

(1) Communication with a controller via a wireless LAN

The GOT cannot communicate with a controller such as a PLC by using a wireless LAN communication unit of the GOT. To monitor the devices of a controller through the wireless LAN communication unit, use the functions available when the wireless LAN function is used.
For available functions, refer to the following.

➟5.3.12 ■1 (3) Available GOT functions when the wireless LAN function is used

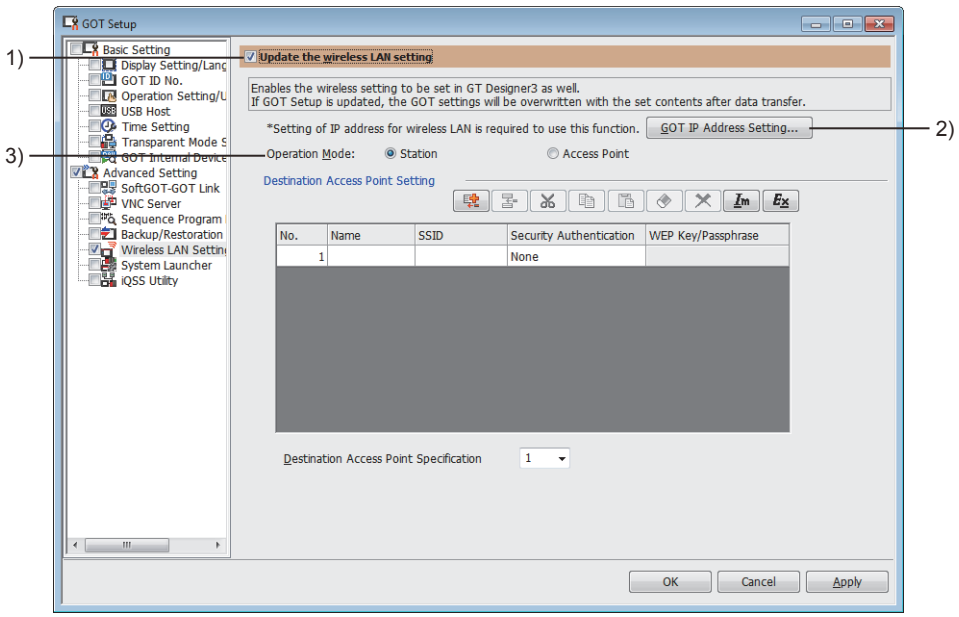
(2) Precautions when using a wireless LAN

A communication may be disconnected since the radio wave condition changes dynamically due to the wireless LAN's characteristic.
Consider the wireless environment, disconnection of a communication, and other causes when using a wireless LAN.

■5 [Wireless LAN Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
In [Wireless LAN Setting], set the operation mode and the wireless LAN access point for the wireless LAN function.
Select [Common] → [GOT Setup] → [Advanced Setting] → [Wireless LAN Setting] from the menu to display this window.



1) **[Update the wireless LAN setting]**
Overwrites the description set with GT Designer3 to the GOT when the package data is written.
Select this item to set each item in [Wireless LAN Setting].

2) **[GOT IP Address Setting] button**
Displays the [Wireless LAN] tab of the [GOT Ethernet Setting] window ([GOT IP Address Setting]).
Set an IP address for the wireless LAN interface.

➟5.4.1 ■3 (3) [Wireless LAN] tab

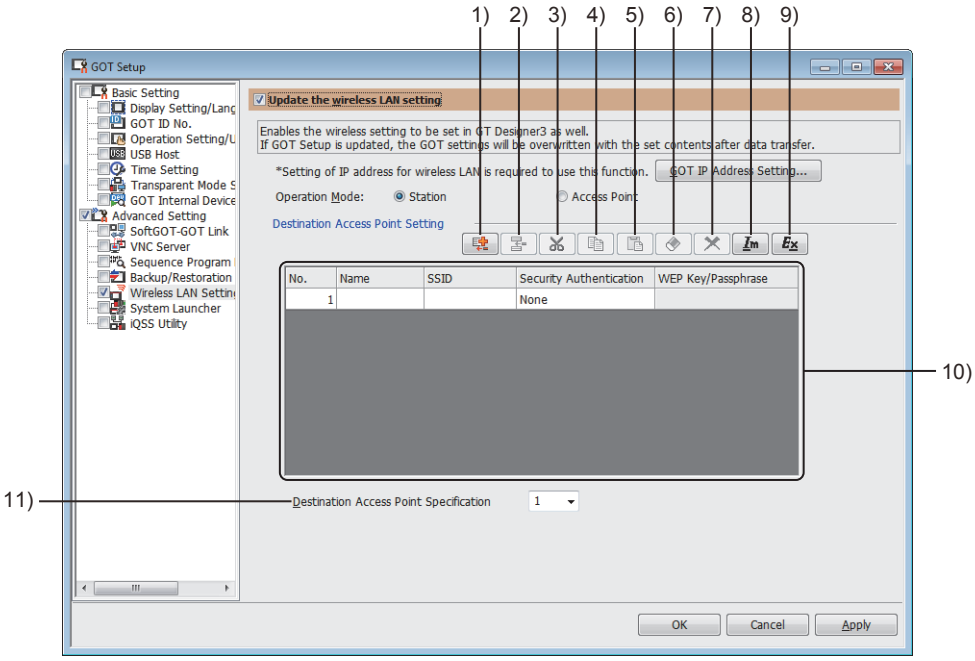
3) **[Operation Mode]**
Select the operation mode for the wireless LAN function.
The setting items differ according to the operation mode.

- [Station]
  Sets the GOT as a station.

  ➟(1) [Station]
- [Access Point]
  Sets the GOT as a wireless LAN access point.

➟(2) [Access Point]

(1) [Station]



1) **[New Row] button**
Creates a new access point setting in the access point list.

2) **[Insert Row] button**
Inserts a row in the access point list.

3) **[Cut] button**
Cuts the selected access point setting from the access point list.

4) **[Copy] button**
Copies the selected access point setting from the access point list.

5) **[Paste] button**
Pastes the copied access point setting to the access point list.

6) **[Clear] button**
Clears the selected cells.

7) **[Delete] button**
Deletes the selected access point setting from the access point list.

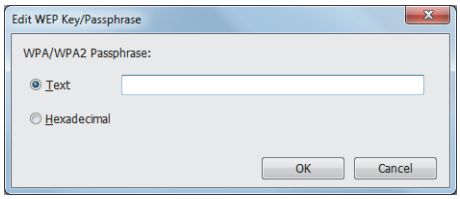
8) **[Import] button**
Imports the settings that were edited in a Unicode text file or CSV file to GT Designer3.

9) **[Export] button**
Saves the settings made in this dialog as a Unicode text file or CSV file.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

10) **Access point list**
The list of access point settings to be used for a wireless LAN connection.
Up to eight wireless LAN access points can be registered.

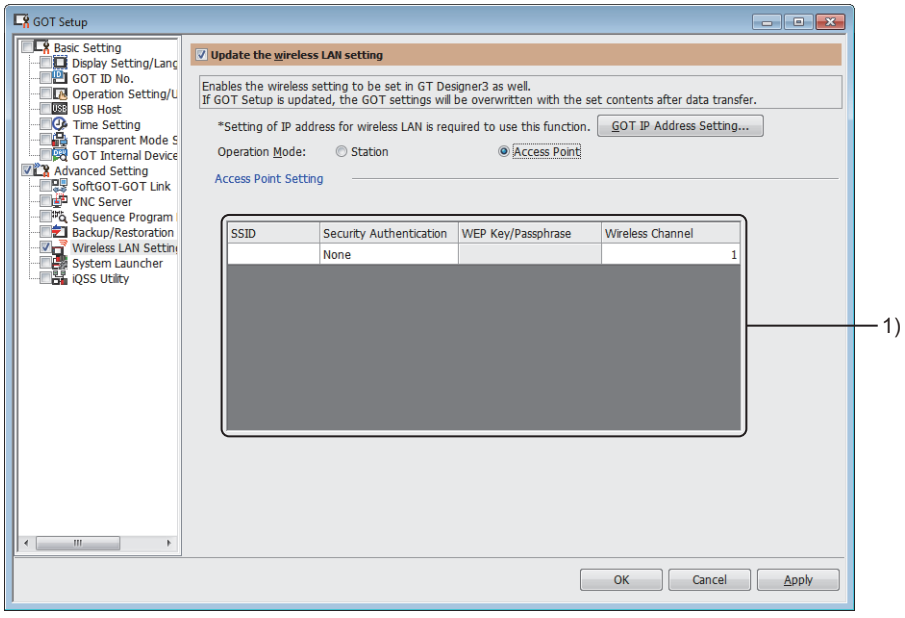
Item	Description
[No.]	No. of access point settings
[Name]	Set the name of the access point setting Up to 30 alphanumeric characters can be set.
[SSID]	Set the SSID of the wireless LAN access point. Up to 32 characters can be set. One-byte alphanumeric characters, one-byte spaces, and the following symbols are available for SSID. !"#$%&'()*+,-./:;<=>?@[\]^_`{|}~

Item	Description
[Security Authentication]	Select the security authentication method of the wireless LAN access point. The following shows the items to be selected. • [None] • [WEP64] • [WEP128] • [WPA-PSK (TKIP)] • [WPA-PSK (AES)] • [WPA2-PSK (TKIP)] • [WPA2-PSK (AES)]
[WEP Key/Passphrase]	Set the WEP key or passphrase of the wireless LAN access point. Click the [...] button and input the WEP key or the passphrase.  • **[Text]** Input the WEP key or the passphrase in the text. • **[Hexadecimal]** Input the WEP key or the passphrase in hexadecimal.

11) **[Destination Access Point Specification]**

Specify the access point No. to be used from the access point list.

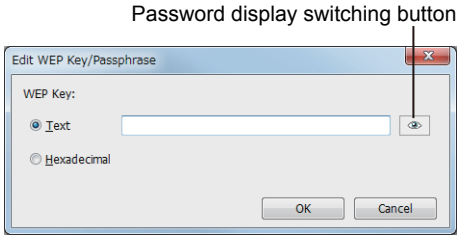
(2) [Access Point]



1) **Access point setting**

Configure the setting to make the GOT operate as a wireless LAN access point.

Item	Description
[SSID]	Set the SSID of the GOT (wireless LAN access point). Up to 32 characters can be set. One-byte alphanumeric characters, one-byte spaces, and the following symbols are available for SSID. !"#$%&'()*+,-./:;<=>?@[\]^_`{|}~
[Security Authentication]	Set the security authentication method of the GOT (wireless LAN access point). The following shows the items to be selected. • [None] • [WEP64] • [WEP128] • [WPA-PSK (TKIP)] • [WPA-PSK (AES)] • [WPA2-PSK (TKIP)] • [WPA2-PSK (AES)]

Item	Description
[WEP Key/Passphrase]	Set the WEP key or passphrase of the GOT (wireless LAN access point). Click the [...] button and input the WEP key or the passphrase.  • **[Text]** Input the WEP key or the passphrase in the text. • **[Hexadecimal]** Input the WEP key or the passphrase in hexadecimal. • **Password display switching button** Hides or displays the characters entered.
[Wireless Channel]	Set the wireless channel of the GOT (wireless LAN access point). The setting range is 1 to 11. The channel number must differ from the channel numbers of other wireless LAN access points near the GOT (wireless LAN access point).

■6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

Set the relevant settings other than the specific settings for the wireless LAN function as required.

The following shows the functions that are available by the relevant settings.

(1) GOT internal device

➟12.1.3 GOT special register (GS)

Function	Setting item
Disabling writing of the package data (containing system applications) through a wireless LAN	GS1840.b0
	GS1040.b0
Disabling writing of the package data (containing project data) through a wireless LAN	GS1840.b1
	GS1040.b1
Disabling the writing of the project data, resource data, or other data via a wireless LAN.	GS1840.b8
	GS1040.b8
Notifying that the GOT wireless LAN function is enabled	GS1060.b0
Notifying that the GOT (station) is connected to a wireless LAN access point	GS1060.b1
Notifying the GOT operation mode	GS1060.b2
Notifying the number of stations connected to the GOT (wireless LAN access point)	GS1072
Notifying the MAC address of the wireless LAN access point to which the GOT (station) is connected	GS1067 to GS1069

5.3.13 Configuring the settings of the system launcher function ([System Launcher])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

➟■1 [System Launcher]

In [System Launcher], configure the settings of the system launcher function.
For the details of the system launcher function and the system launcher (servo network) function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

Point

Installing system applications (extended functions)

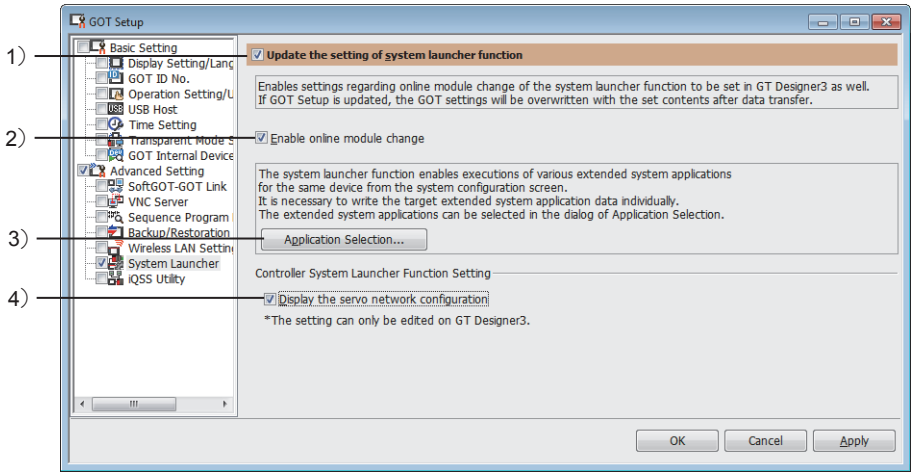
To invoke a monitor function from the system configuration screen, install the system applications (extended functions) required for the system launcher function and also for the monitor function to the GOT.
Otherwise, the monitor function cannot be invoked from the system configuration screen of the system launcher.
For how to add a system application (extended function) to package data, refer to the following.

➟4.2.2 How to use the application setting

■1 [System Launcher]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
In [System Launcher], configure the settings of the system launcher function.
Select [Common] → [GOT Setup] → [Advanced Setting] → [System Launcher] from the menu to display the following window.



1) **[Update the setting of system launcher function]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Enables the setting items in [System Launcher] to be set.
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Enable online module change]**
Enables the online module change for PLCs by operating the GOT.

3) **[Application Selection] button**
Not available to GT SoftGOT2000.
Displays the [Application Selection] dialog.
Select a system application to be added to package data.

➟4.2.2 How to use the application setting

4) **[Display the servo network configuration]**
Not available to GT23 and GT SoftGOT2000.
Enables the system launcher (servo network) function.

5.3.14 Configuring the settings of the iQSS utility function ([iQSS Utility])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [iQSS Utility]
■2 [CSP+ for iQSS Data Write] dialog
■3 Equipment compatible with the iQSS utility

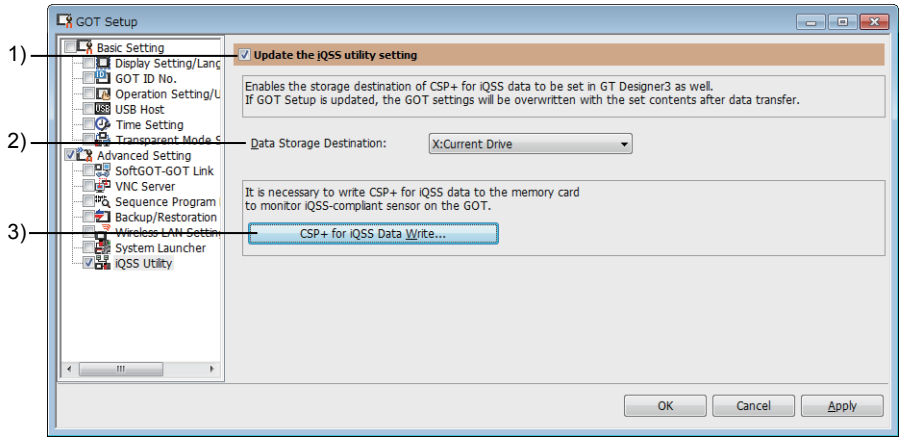
In [iQSS Utility], configure the settings of the storage location for iQSS data (CSP+).
For the details of the iQSS utility, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

■1 [iQSS Utility]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [iQSS Utility], specify iQSS data (CSP+) to be written to a data storage, and select a drive of the GOT as the storage location.
Select [Common] → [GOT Setup] → [Advanced Setting] → [iQSS Utility] from the menu to display the following window.



1) **[Update the iQSS utility setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
Enables the setting items in [iQSS Utility] to be set.
When a project is read from the GOT, the setting changed in the utility is reflected.

2) **[Data Storage Destination]**
Select a drive at which iQSS data (CSP+) is located.
- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

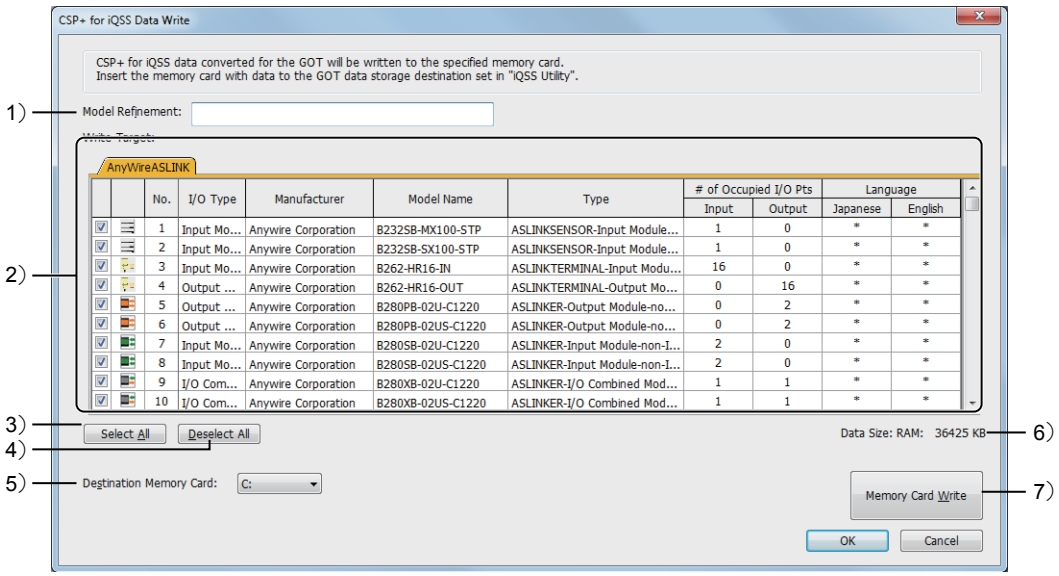
3) **[CSP+ for iQSS Data Write] button**
Displays the [CSP+ for iQSS Data Write] dialog to write iQSS data (CSP+) to a data storage installed on the personal computer.

➟■2 [CSP+ for iQSS Data Write] dialog

■2 [CSP+ for iQSS Data Write] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Write iQSS data (CSP+) to a data storage installed on the personal computer.
Select [Communication] → [CSP+ for iQSS Data Write] from the menu to display the following dialog.



1) **[Model Refinement]**
Narrows down iQSS data (CSP+) in [Write Target] by the entered model name.
Up to 48 one-byte characters are settable.
Numeric characters, A to Z, a to z, one-byte spaces, and the following symbols are usable.
!#$%&()+,-=@[\]^_`{}
The entered characters are case-insensitive.

2) **[Write Target]**
Lists iQSS data (CSP+) to be written to a data storage.
All pieces of iQSS data (CSP+) are arranged in tabs by network type.

Item	Description
Checkbox	Select the iQSS data (CSP+) to be written to a data storage.
[No.]	iQSS data (CSP+) number
[I/O Type]	Input/output type of the target equipment
[Manufacturer]	Manufacturer of the target equipment
[Model Name]	Model of the target equipment
[Type]	Type of the target equipment
[# of Occupied I/O]	• [Input] Number of inputs for the target equipment • [Output] Number of outputs for the target equipment
[Language]	• [Japanese] Indicates the presence or absence of the Japanese version of iQSS data (CSP+). Displays an asterisk (*) when this version of data exists. • [English] Indicates the presence or absence of the English version of iQSS data (CSP+). Displays an asterisk (*) when this version of data exists.

For equipment compatible with the iQSS utility, refer to the following.

➟5.3.14 ■3 Equipment compatible with the iQSS utility

3) **[Select All]**
Selects all pieces of iQSS data (CSP+) in [Write Target].

4) **[Deselect All]**
Deselects all pieces of iQSS data (CSP+) in [Write Target].

5) **[Destination Memory Card]**

Select a drive (data storage) to which iQSS data (CSP+) is written.
The selectable drives depend on the personal computer.

6) **[Data Size]**
Displays the space of the operation memory (RAM) that is required to store the iQSS data (CSP+) selected in [Write Target].
For the available space in the GOT user area, refer to the following.

➟12.10.1 Data transferred to the GOT and capacity of the destination drive

7) **[Memory Card Write] button**
Writes data listed in [Write Target] to a data storage.

■3 Equipment compatible with the iQSS utility

(1) Anywire Corporation

Model name	Type			
B232SB-MX100-STP	ASLINKSENSOR	Input Module	non-Isolated	Comb type Main-Module
B232SB-SX100-STP	ASLINKSENSOR	Input Module	non-Isolated	Comb type Sub-Module
B262-HR16-IN	ASLINKTERMINAL	Input Module	non-Isolated	Input Panel Switch
B262-HR16-OUT	ASLINKTERMINAL	Output Module	non-Isolated	Output LED Display
B280PB-02U-C1220	ASLINKER	Output Module	non-Isolated	Sink Type
B280PB-02US-C1220	ASLINKER	Output Module	non-Isolated	Source Type
B280SB-02U-C1220	ASLINKER	Input Module	non-Isolated	Sink Type
B280SB-02US-C1220	ASLINKER	Input Module	non-Isolated	Source Type
B280XB-02U-C1220	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B280XB-02US-C1220	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281PB-02U-2D220	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-2D720	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-2D820	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-7CC20	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-CC20	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-CD220	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-CD720	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02U-CD820	ASLINKER	Output Module	non-Isolated	Sink Type
B281PB-02US-2D220	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-2D720	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-2D820	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-7CC20	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-CC20	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-CD220	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-CD720	ASLINKER	Output Module	non-Isolated	Source Type
B281PB-02US-CD820	ASLINKER	Output Module	non-Isolated	Source Type
B281SB-02U-2D220	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-2D720	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-2D820	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-7CC20	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-CC20	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-CD220	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-CD720	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02U-CD820	ASLINKER	Input Module	non-Isolated	Sink Type
B281SB-02US-2D220	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-2D720	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-2D820	ASLINKER	Input Module	non-Isolated	Source Type

Model name	Type			
B281SB-02US-7CC20	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-CC20	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-CD220	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-CD720	ASLINKER	Input Module	non-Isolated	Source Type
B281SB-02US-CD820	ASLINKER	Input Module	non-Isolated	Source Type
B281XB-02U-2D220	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-2D620	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-2D720	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-2D820	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-7CC20	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-CC20	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-CD220	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-CD620	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-CD720	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02U-CD820	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B281XB-02US-2D220	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-2D620	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-2D720	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-2D820	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-7CC20	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-CC20	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-CD220	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-CD620	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-CD720	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B281XB-02US-CD820	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B283SB-01-1KC	ASLINKSENSOR	Input Module	non-Isolated	Separate Type(Receiver)
B283SB-01-1KP	ASLINKSENSOR	Output Module	non-Isolated	Separate Type(Light source)
B283SB-01-1KR	ASLINKSENSOR	Input Module	non-Isolated	Retroreflective type
B283SB-01-1KS	ASLINKSENSOR	Input Module	non-Isolated	Diffuse reflection type
B284SB-01-1KLP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Compound pressure(-100~100kPa)
B284SB-01-1KLP30A	ASLINKSENSOR	Input Module	non-Isolated	Compound pressure(-100~100kPa)
B284SB-01-1KNP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Negative pressure(-100~0kPa)
B284SB-01-1KNP30A	ASLINKSENSOR	Input Module	non-Isolated	Negative pressure(-100~0kPa)
B284SB-01-1KPLP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~100KPa)
B284SB-01-1KPLP30A	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~100KPa)
B284SB-01-1KPP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~1MPa)
B284SB-01-1KPP30A	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~1MPa)
B284SB-02-1KLP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Compound pressure(-100~100kPa)
B284SB-02-1KLP30A	ASLINKSENSOR	Input Module	non-Isolated	Compound pressure(-100~100kPa)
B284SB-02-1KNP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Negative pressure(-100~0kPa)
B284SB-02-1KNP30A	ASLINKSENSOR	Input Module	non-Isolated	Negative pressure(-100~0kPa)
B284SB-02-1KPLP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~100KPa)
B284SB-02-1KPLP30A	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~100KPa)
B284SB-02-1KPP30 *1	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~1MPa)
B284SB-02-1KPP30A	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~1MPa)
B284SB-J1-1KLP30	ASLINKSENSOR	Input Module	non-Isolated	Compound pressure(-100~100kPa)
B284SB-J1-1KNP30	ASLINKSENSOR	Input Module	non-Isolated	Negative pressure(-100~0kPa)

Model name	Type			
B284SB-J1-1KPLP30	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~100KPa)
B284SB-J1-1KPP30	ASLINKSENSOR	Input Module	non-Isolated	Positive pressure(0~1MPa)
B285SB-01-1K1	ASLINKSENSOR	Input Module	non-Isolated	Cylinder Switch
B289SB-01AF-CAM20	ASLINKAMP	Input Module	non-Isolated	Fiber Sensor Amplifier
B289SB-01AF-CAS	ASLINKAMP	Input Module	non-Isolated	Fiber Sensor Amplifier
B289SB-01AK-CAM20	ASLINKAMP	Input Module	non-Isolated	Proximity Sensor Amplifier
B289SB-01AK-CAS	ASLINKAMP	Input Module	non-Isolated	Proximity Sensor Amplifier
B289SB-01AP-CAM20	ASLINKAMP	Input Module	non-Isolated	Photoelectronic Sensor Amplifier
B289SB-01AP-CAS	ASLINKAMP	Input Module	non-Isolated	Photoelectronic Sensor Amplifier
B295SB-01-1K24	ASLINKSENSOR	Input Module	non-Isolated	Proximity Switch(M8 Screw type)
B295SB-01-1K25	ASLINKSENSOR	Input Module	non-Isolated	Proximity Switch(M12 Screw type)
B295SB-01-1K26	ASLINKSENSOR	Input Module	non-Isolated	Proximity Switch(M18 Screw type)
B295SB-01-1K27	ASLINKSENSOR	Input Module	non-Isolated	Proximity Switch(M30 Screw type)
B297SB-01-1K40	ASLINKSENSOR	Input Module	non-Isolated	Photointerrupter(Standard type)
B298PB-02U-M12	ASLINKER	Output Module	non-Isolated	Sink Type
B298PB-02US-M12	ASLINKER	Output Module	non-Isolated	Source Type
B298SB-02U-M12	ASLINKER	Input Module	non-Isolated	Sink Type
B298SB-02US-M12	ASLINKER	Input Module	non-Isolated	Source Type
B298XB-02U-M12	ASLINKER	I/O Combined Module	non-Isolated	Sink Type
B298XB-02US-M12	ASLINKER	I/O Combined Module	non-Isolated	Source Type
B2N87SB-02D-CC20	ASLINKER	Input Module	Non-Isolated	Sink Type
B2N87SB-02DS-CC20	ASLINKER	Input Module	Non-Isolated	Source Type
BA-F116(-12)	ASLINKAMP	Input Module	non-Isolated	Fiber Sensor Amplifier
BL2109PB-04PS-1K	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL227PB-T07P02V-P	POKAYOKETERMINAL	Output Module	Isolated	No Definition
BL227PB-T07P06M-P	POKAYOKETERMINAL	Output Module	Isolated	No Definition
BL227PB-T14P02V-P	POKAYOKETERMINAL	Output Module	Isolated	No Definition
BL227PB-T14P06M-P	POKAYOKETERMINAL	Output Module	Isolated	No Definition
BL227XB-K02VL-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K02VN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K02V-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K06ML-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K06MN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K06M-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K71MN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K71M-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K71VN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K71V-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K72MN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K72M-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K72N-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K72VN-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-K72V-P	POKAYOKETERMINAL	I/O Combined Module	Isolated	No Definition
BL227XB-T07P02V-C	POKAYOKETERMINAL	Input Module	Isolated	No Definition
BL227XB-T07P06M-C	POKAYOKETERMINAL	Input Module	Isolated	No Definition
BL227XB-T14P02V-C	POKAYOKETERMINAL	Input Module	Isolated	No Definition
BL227XB-T14P06M-C	POKAYOKETERMINAL	Input Module	Isolated	No Definition

Model name	Type			
BL264PB-16FS-T5	ASLINKTERMINAL	Output Module	Isolated	Source type
BL264PB-16F-T5	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL265PB-16F-2-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL265PB-16FS-2-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL265PB-32F-2-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL265PB-32FS-2-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL265SB-16F-2-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL265SB-16FS-2-20	ASLINKTERMINAL	Input Module	Isolated	Source Type
BL265SB-32F-2-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL265SB-32FS-2-20	ASLINKTERMINAL	Input Module	Isolated	Source Type
BL265XB-18F-E84-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL265XB-32F-2-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL265XB-32FS-2-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL287PB-02F-2D220	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-2D720	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-2D820	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-7CC20	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-CC20	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-CD220	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-CD720	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02F-CD820	ASLINKER	Output Module	Isolated	Sink Type
BL287PB-02FS-2D220	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-2D720	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-2D820	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-7CC20	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-CC20	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-CD220	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-CD720	ASLINKER	Output Module	Isolated	Source Type
BL287PB-02FS-CD820	ASLINKER	Output Module	Isolated	Source Type
BL287SB-02F-2D220	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-2D720	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-2D820	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-7CC20	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-CC20	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-CD220	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-CD720	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02F-CD820	ASLINKER	Input Module	Isolated	Sink Type
BL287SB-02FS-2D220	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-2D720	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-2D820	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-7CC20	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-CC20	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-CD220	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-CD720	ASLINKER	Input Module	Isolated	Source Type
BL287SB-02FS-CD820	ASLINKER	Input Module	Isolated	Source Type
BL287XB-02F-2D220	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-2D620	ASLINKER	I/O Combined Module	Isolated	Sink Type

Model name	Type			
BL287XB-02F-2D720	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-2D820	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-7CC20	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-CC20	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-CD220	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-CD620	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-CD720	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02F-CD820	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL287XB-02FS-2D220	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-2D620	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-2D720	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-2D820	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-7CC20	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-CC20	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-CD220	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-CD620	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-CD720	ASLINKER	I/O Combined Module	Isolated	Source Type
BL287XB-02FS-CD820	ASLINKER	I/O Combined Module	Isolated	Source Type
BL296PB-04F-4A-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-04F-4B-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-04FS-4A-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-04FS-4B-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08F	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-10-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-11	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-11-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-3	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-3-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-4-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-4A-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-4E-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08F-9-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08FS	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-10-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-11	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-11-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-3	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-3-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-4-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-4A-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-4E-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-9-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08FS-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-08F-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-08RS	ASLINKTERMINAL	Output Module	Isolated	G2R-1-SN DC24V

Model name	Type			
BL296PB-08RSN	ASLINKTERMINAL	Output Module	Isolated	DriverOnly
BL296PB-08RSS	ASLINKTERMINAL	Output Module	Isolated	G3R-ODX02SN DC5-24
BL296PB-08RSS1	ASLINKTERMINAL	Output Module	Isolated	G3R-OA202SZN DC5-24
BL296PB-08RSS2	ASLINKTERMINAL	Output Module	Isolated	G3R-OA202SLN DC5-24
BL296PB-08RSS3	ASLINKTERMINAL	Output Module	Isolated	G3RZ-201SLN DC24
BL296PB-08RSS4	ASLINKTERMINAL	Output Module	Isolated	G3R-OD201SN DC5-24
BL296PB-16F-11-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-16F-3-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-16F-4A-20	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296PB-16FS-11-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-16FS-3-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-16FS-4A-20	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-16FS-V50	ASLINKTERMINAL	Output Module	Isolated	Source Type
BL296PB-16F-V50	ASLINKTERMINAL	Output Module	Isolated	Sink Type
BL296SB-04F-4A-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-04F-4B-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-04F-4PA-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-04FS-4A-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-04FS-4B-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08F	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-10-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-11	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-11-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-3	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-3-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-4-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-4A-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-4E-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-4P-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-4PA-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08F-9-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-08FS	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-10-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-11	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-11-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-20	ASLINKTERMINAL	Input Module	Isolated	Source Type
BL296SB-08FS-3	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-3-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-4-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-4A-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-4E-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-9-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08FS-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-08F-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-16F-11-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-16F-3-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type

Model name	Type			
BL296SB-16F-4A-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-16F-4PA-20	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296SB-16FS-11-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-16FS-3-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-16FS-4A-20	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-16FS-V50	ASLINKTERMINAL	Input Module	Isolated	Source type
BL296SB-16F-V50	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL296XB-04F-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-04F-4B-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-04F-4PA-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-04FS-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-04FS-4B-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08F	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-10-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-11	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-11-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-3	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-3-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-4-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-4E-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-4P-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-4PA-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08F-9-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08FS	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-10-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-11	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-11-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-3	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-3-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-4-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-4E-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-9-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08FS-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-08F-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08P-4-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-08P-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-16F-11-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-16F-3-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-16F-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-16F-4PA-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL296XB-16FS-11-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-16FS-3-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-16FS-4A-20	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type

Model name	Type			
BL296XB-16FS-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Source Type
BL296XB-16F-V50	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type
BL2EMSB-08F-B	ASLINKTERMINAL	Input Module	Isolated	Sink Type
BL2L87PB-02F-CC20	ASLINKER	Output Module	Isolated	Sink Type
BL2L87SB-02F-CC20	ASLINKER	Input Module	Isolated	Sink Type
BL2L87XB-02F-CC20	ASLINKER	I/O Combined Module	Isolated	Sink Type
BL2LN87SB-02D-CC20	ASLINKER	Input Module	Isolated	Sink Type
BL2LN87SB-02DS-CC20	ASLINKER	Input Module	Isolated	Source Type
BM-C27-DM9-3012-5050	ASLINKSENSOR	Input Module	non-Isolated	Cylinder Sensor
BM-C27-DM9-50-5050	ASLINKSENSOR	Input Module	non-Isolated	Cylinder Sensor
BM-K1117G-M04-1K	ASLINKSENSOR	Input Module	non-Isolated	M4 amplifier relay type
BM-K1117G-M04-3012	ASLINKSENSOR	Input Module	non-Isolated	M4 amplifier relay M12CN type
BM-K1117G-M05-1K	ASLINKSENSOR	Input Module	non-Isolated	M5 amplifier relay type
BM-K1117G-M05-3012	ASLINKSENSOR	Input Module	non-Isolated	M5 amplifier relay M12CN type
BM-K1117G-S04-1K	ASLINKSENSOR	Input Module	non-Isolated	d4 amplifier relay type
BM-K1117G-S04-3012	ASLINKSENSOR	Input Module	non-Isolated	d4 amplifier relay M12CN type
BM-K1117G-S05-1K	ASLINKSENSOR	Input Module	non-Isolated	d5.4 amplifier relay type
BM-K1117G-S05-3012	ASLINKSENSOR	Input Module	non-Isolated	d5.4 amplifier relay M12CN type
BS-H0117-1KC	ASLINKSENSOR	Input Module	non-Isolated	Separate Type(Receiver)
BS-H0117-1KP	ASLINKSENSOR	Output Module	non-Isolated	Separate Type(Light source)
BS-H0117-30C12	ASLINKSENSOR	Input Module	non-Isolated	Separate Type(Receiver)
BS-H0117-30P12	ASLINKSENSOR	Output Module	non-Isolated	Separate Type(Light source)
BS-H0117G-1KC	ASLINKSENSOR	Input Module	non-Isolated	Separate Type(Receiver)
BS-H0117G-1KP	ASLINKSENSOR	Output Module	non-Isolated	Separate Type(Light source)
BS-H0217-1K	ASLINKSENSOR	Input Module	non-Isolated	Retroreflective type
BS-H0217-3012	ASLINKSENSOR	Input Module	non-Isolated	Retroreflective type
BS-H0217G-1K	ASLINKSENSOR	Input Module	non-Isolated	Retroreflective type
BS-H0317-1K	ASLINKSENSOR	Input Module	non-Isolated	Diffuse reflection type
BS-H0317-3012	ASLINKSENSOR	Input Module	non-Isolated	Diffuse reflection type
BS-H0317G-1K	ASLINKSENSOR	Input Module	non-Isolated	Diffuse reflection type
BS-K1117C-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	M12 chemical resistant type
BS-K1117C-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	M12 Chemical resistant type
BS-K1117C-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	M18 chemical resistant type
BS-K1117C-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 Chemical resistant type
BS-K1117C-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	M30 chemical resistant type
BS-K1117C-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 Chemical resistant type
BS-K1117-M08-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M8 shield type
BS-K1117-M08-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M8 shield type
BS-K1117-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M12 shield type
BS-K1117-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M12 shield type
BS-K1117-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M18 shield type
BS-K1117-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M18 shield type
BS-K1117-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M30 shield type
BS-K1117-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M30 shield type
BS-K1117M-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	M12 full stainless body type
BS-K1117M-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	M12 full stainless body type
BS-K1117M-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	M18 full stainless body type

Model name	Type			
BS-K1117M-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 full stainless body type
BS-K1117M-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	M30 full stainless body type
BS-K1117M-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 full stainless body type
BS-K1117S-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	M12 spattering resistance type
BS-K1117S-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	M12 spattering resistance type
BS-K1117S-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	M18 spattering resistance type
BS-K1117S-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 spattering resistance type
BS-K1117S-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	M30 spattering resistance type
BS-K1117S-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 spattering resistance type
BS-K1118-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M12 IP68 type
BS-K1118-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	M12 IP68 M12CN type
BS-K1118-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M18 IP68 type
BS-K1118-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 IP68 M12CN type
BS-K1118-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity Sensor M30 IP68 type
BS-K1118-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 IP68 M12CN type
BS-K1217-M08-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity M08 non-shield type
BS-K1217-M08-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity M08 non-shield type
BS-K1217-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity M12 non-shield type
BS-K1217-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity M12 non-shield type
BS-K1217-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity M18 non-shield type
BS-K1217-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity M18 non-shield type
BS-K1217-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	Proximity M30 non-shield type
BS-K1217-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	Proximity M30 non-shield type
BS-K1217-T42A-V1K	ASLINKSENSOR	Input Module	non-Isolated	Flat type
BS-K1217-T42A-V3012	ASLINKSENSOR	Input Module	non-Isolated	Flat M12CN type
BS-K4117-M12-1K	ASLINKSENSOR	Input Module	non-Isolated	M12 allmetal detect
BS-K4117-M12-3012	ASLINKSENSOR	Input Module	non-Isolated	M12 allmetal detect M12CN type
BS-K4117-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	M18 allmetal detect
BS-K4117-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 allmetal detect M12CN type
BS-K4117-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	M30 allmetal detect
BS-K4117-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 allmetal detect M12CN type
BS-K5217-M18-1K	ASLINKSENSOR	Input Module	non-Isolated	M18 Capacitive
BS-K5217-M18-3012	ASLINKSENSOR	Input Module	non-Isolated	M18 Capacitive M12CN type
BS-K5217-M30-1K	ASLINKSENSOR	Input Module	non-Isolated	M30 Capacitive
BS-K5217-M30-3012	ASLINKSENSOR	Input Module	non-Isolated	M30 Capacitive M12CN type
BS-L0117-1KC	ASLINKSENSOR	Input Module	non-Isolated	LaserSensor(Through-beam)
BS-L0117-1KP	ASLINKSENSOR	Output Module	non-Isolated	LaserSensor(Through-beam)
BS-L0217-1K	ASLINKSENSOR	Input Module	non-Isolated	LaserSensor(Retroreflectivetype)
LA-A12W	ASLINKAMP	Input Module	non-Isolated	Analog input
LA-A1AW	ASLINKAMP	Input Module	Isolated	Analog input
LA-DA12W	ASLINKAMP	Output Module	non-Isolated	Analog Output
LA-DA1AW	ASLINKAMP	Output Module	Isolated	Analog Output
LA-DV12W	ASLINKAMP	Output Module	non-Isolated	Analog Output
LA-DV1AW	ASLINKAMP	Output Module	Isolated	Analog Output
LA-F1011	ASLINKAMP	Input Module	Isolated	Fiber Sensor Amplifier
LAL-R10W	ASLINKAMP	Input Unit	Isolated	Temperature Input Unit
LB-A12W	ASLINKAMP	Input Module	non-Isolated	Analog input

Model name	Type			
LB-A1AW	ASLINKAMP	Input Module	Isolated	Analog input
LB-DA12W	ASLINKAMP	Output Module	non-Isolated	Analog Output
LB-DA1AW	ASLINKAMP	Output Module	Isolated	Analog Output
LB-DV12W	ASLINKAMP	Output Module	non-Isolated	Analog Output
LB-DV1AW	ASLINKAMP	Output Module	Isolated	Analog Output
LB-F1011	ASLINKAMP	Input Module	Isolated	Fiber Sensor Amplifier
LBL-R10W	ASLINKAMP	Input Unit	Isolated	Temperature Input Unit
LSL-H011-1KC	ASLINKSENSOR	Input Module	Isolated	Separate Type(Receiver)
LSL-H011-1KP	ASLINKSENSOR	Output Module	Isolated	Separate Type(Light source)
LSL-H021-1K	ASLINKSENSOR	Input Module	Isolated	Retroreflective type
LSL-H031-1K	ASLINKSENSOR	Input Module	Isolated	Diffuse reflection type

*1 To enable the alarm bit function, write the profile data of this model and the profile data of the model having "A" at the end of this model name.
Example: Write the profile data of [B284SB-01-1KLP30A] as well, to enable the alarm bit function of [B284SB-01-1KLP30]. Otherwise, the equipment is handled as a general-purpose slave module when the alarm bit function is enabled.

(2) NITTO KOHKI CO.

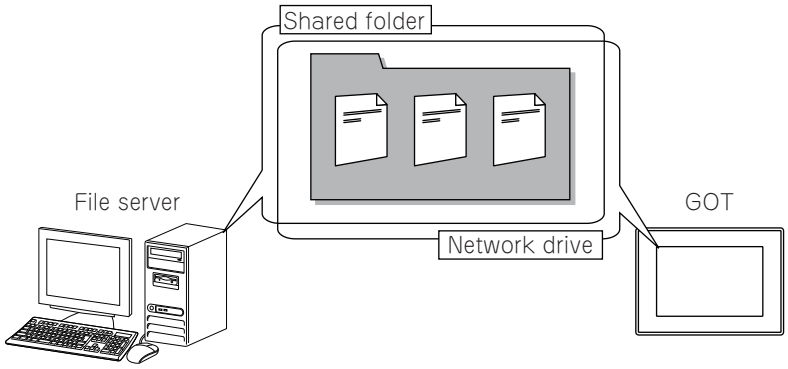
Model name	Type			
DELVO	ASLINKTERMINAL	I/O Combined Module	Isolated	Sink Type

5.3.15 Configuring the network drive settings ([Network Drive])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Network Drive], specify a shared folder on the file server (such as a personal computer) as the network drive.
The GOT is connected to the file server via Ethernet.
The file server must support the file sharing function (SMB or CIFS).
For recommended file servers, refer to the following.

➟5.3.15 ■1 (6) Validated file servers



■1 Network drive specifications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) System application (extended function)

To use the network drive, a system application (extended function) of [Network Drive] is required.
Configuring one of the following settings incorporates the application into the package data automatically.

- Selecting [Update the network drive setting] in [Network Drive] in the [GOT Setup] window.

  ➟5.3.15 ■6 [Network Drive]

- Selecting [N:Network Drive] for [Drive Name] in the setting dialog of a function using the network drive.

To use the network drive for GT SoftGOT2000, the application is not required.

(2) CoreOS version

To use the network drive, install CoreOS version L or later on the GOT.

(3) BootOS version

To use the network drive, install BootOS version AK or later on the GOT.

(4) Functions that can use the network drive

- Document display object

  ➟8.26 Placing a Document Display

- Logging function

  ➟9.2 Collecting Device Data ([Logging])

- Hard copy function

  ➟9.7 Capturing the GOT Screen and Outputting the Screen Image ([Hard Copy])

- File print function

  ➟GOT2000 Series User's Manual (Utility)

- Report function

  ➟10.11 Outputting the Collected Data as a Report (Report Function)

- File transfer function (FTP transfer)

  ➟10.17 Transferring a File between the GOT and Peripheral Device (File Transfer Function (FTP Transfer))

- File transfer function (GOT internal transfer)

  ➟10.18 Transferring a File between the Drives (File Transfer Function (GOT Internal Transfer))

- File manager

  ➟GOT2000 Series User's Manual (Utility)

(5) Port number when the network drive is used

Port No. 445 is used for the file server.

(6) Validated file servers

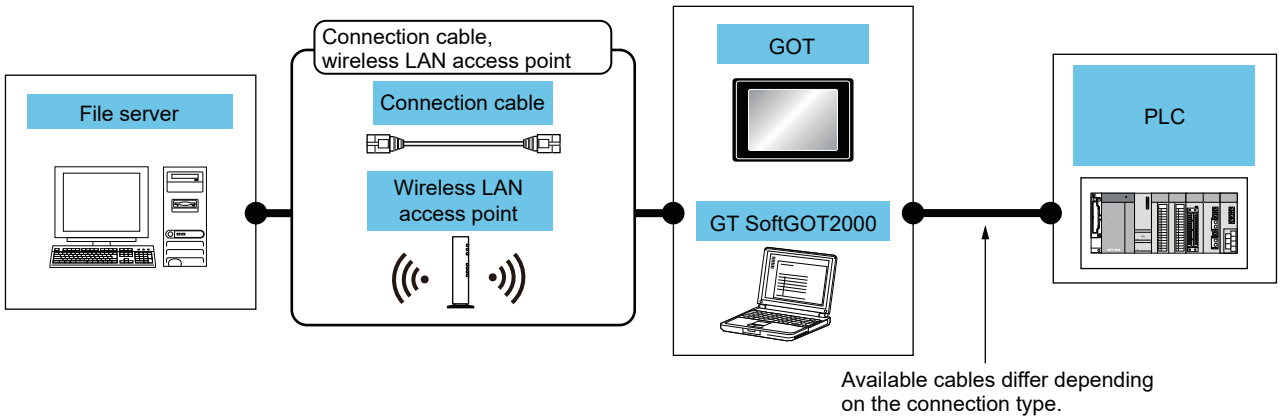
The following shows the file servers that have been validated by Mitsubishi Electric Corporation.

- Windows Server 2016 Essentials
- Windows 10 Enterprise
- Windows 11 Enterprise

■2 System configuration when using the network drive

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the system configuration when using the network drive.



File server	Connection cable*1*2, wireless LAN access point	Maximum segment length*3	GOT		PLC
			Option	GOT model	
Select by each user	• 10BASE-T Shielded twisted pair cable (STP) orunshielded twisted pair cable (UTP):Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP):Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GS25	For the system configuration between the GOT and the PLC, refer to each connection manual.
			GT25-J71E71-100	GT27 GT25*6	
			GT SoftGOT2000		
	-	-	GT25-WLAN	GT27*4 GT25*4*6 GS25*4	
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27*5 GT25*5*6 GS25*5	
	• Wireless LAN access point *7	-	GT SoftGOT2000		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or othersystem equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LANadapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is usable.
A cross cable is usable for directly connecting the GOT to a file server.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use.
When repeater hubs are used, the number of connectable hubs is as follows.
- 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)
- 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)

For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Not available to GT2505-V and GT25HS-V.

*7 The usable wireless LAN access point varies with the personal computer used.

■3 How to use the network drive

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To enable the network drive, configure the settings on GT Designer3 and a file server.
The following shows an example of using the folder sharing feature in Windows 11 to specify the selected folder as the network drive.

(1) Settings on GT Designer3

Step 1 Set the GOT Ethernet interface.

➟5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

Step 2 To use the GOT wireless LAN function, configure the wireless LAN connection setting.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

Step 3 Configure the network drive settings.

➟5.3.15 ■6 [Network Drive]

Step 4 Configure settings on the file server.

➟(3) Settings on the file server

Step 5 Connect the personal computer to the GOT, and write the project to the GOT.

➟4.3 Transferring the Data between the Personal Computer and the GOT

(2) Settings on GT SoftGOT2000

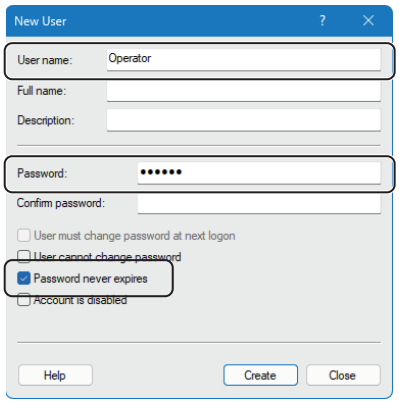
For information on how to use the network drive for GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(3) Settings on the file server

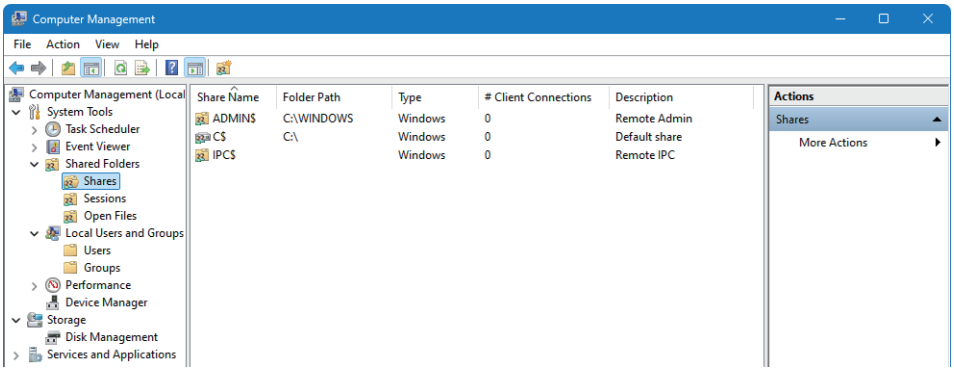
Configure the following settings with administrator privileges on Windows.

- Set a user who accesses the file server area from the GOT.
  In [Control Panel], select [System and Security] → [Windows Tools] → [Computer Management] → [Local Users and Groups]. Right-click [Users] and select [New User] from the context menu.
  In the [New User] dialog, set the following items.
  - [User name]
  - [Password]
  - [User must change password at next logon]: Deselected, [Password never expires]: Selected

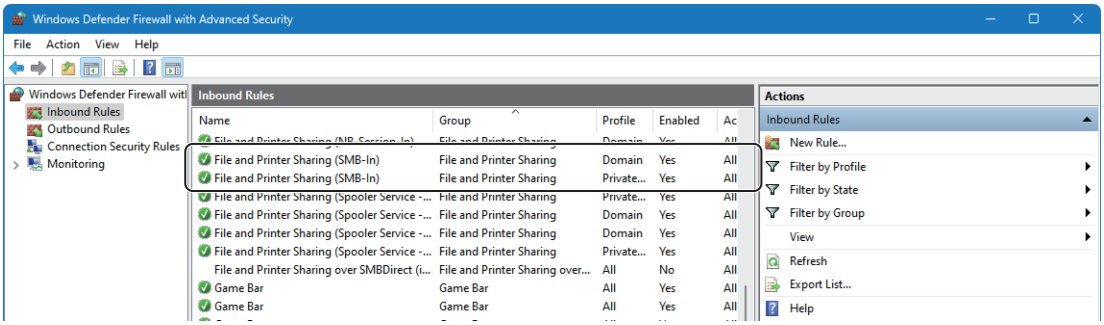


- Check or set the computer name.
  In [Control Panel], select [System and Security] → [System].
  For checking: Check the computer name on the [System] window.
  For setting: Select [Advanced system settings]. In the [Computer Name] tab in the [System Properties] dialog, click the [Change] button and set the computer name.
- Check the name of the folder to be shared or create a new shared folder.
  In [Control Panel], select [System and Security] → [Windows Tools] → [Computer Management] → [System Tools]

→ [Shared Folders] → [Shares].
For checking: Check the name of the folder to be shared from the list.
For creating: Right-click [Shares] and select [New] or [New Share] to open [Create A Shared Folder Wizard].
Configure the settings for the shared folder accordingly.



- Change the Windows Defender firewall setting.
  In [Control Panel], select [System and Security] → [Windows Defender Firewall] → [Advanced settings].
  Select [Inbound Rules] in the [Windows Defender Firewall with Advanced Security] window.
  Right-click each [File and Printer Sharing (SMB-In)] and select [Enable Rule] to enable the setting.



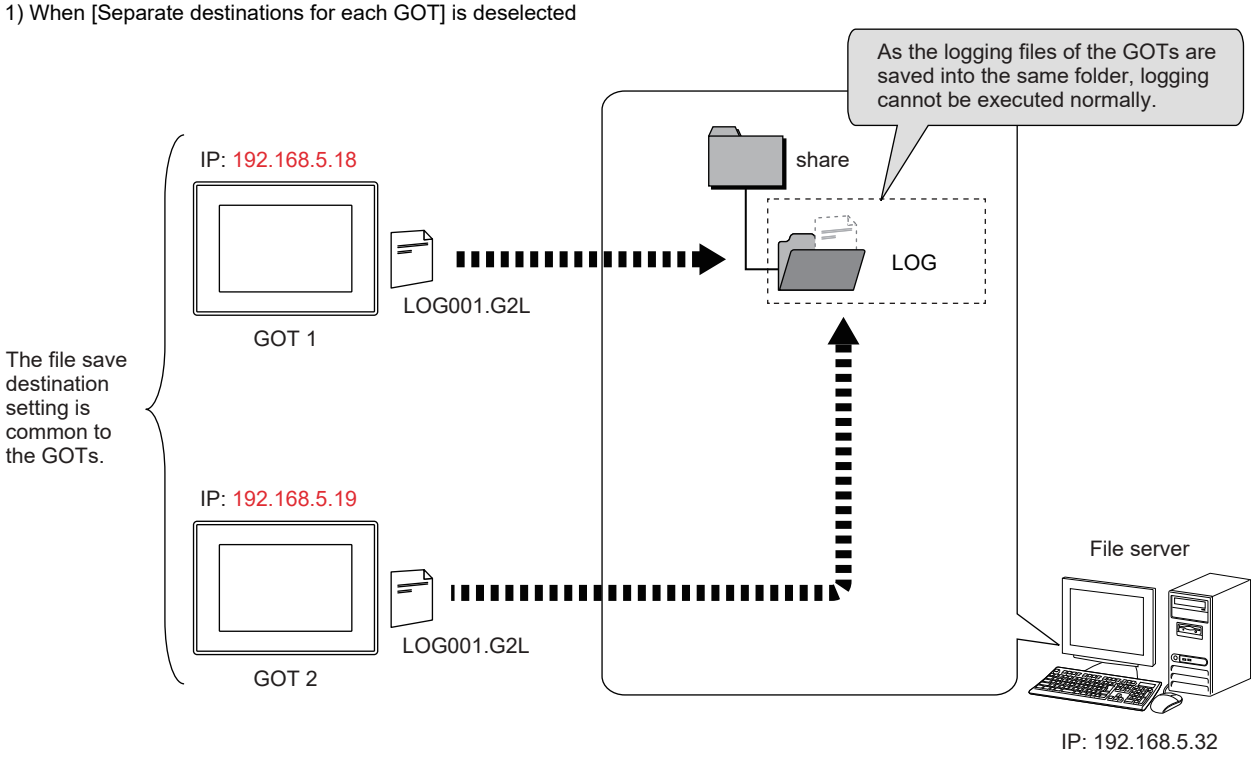
■4 Creating a folder for each GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

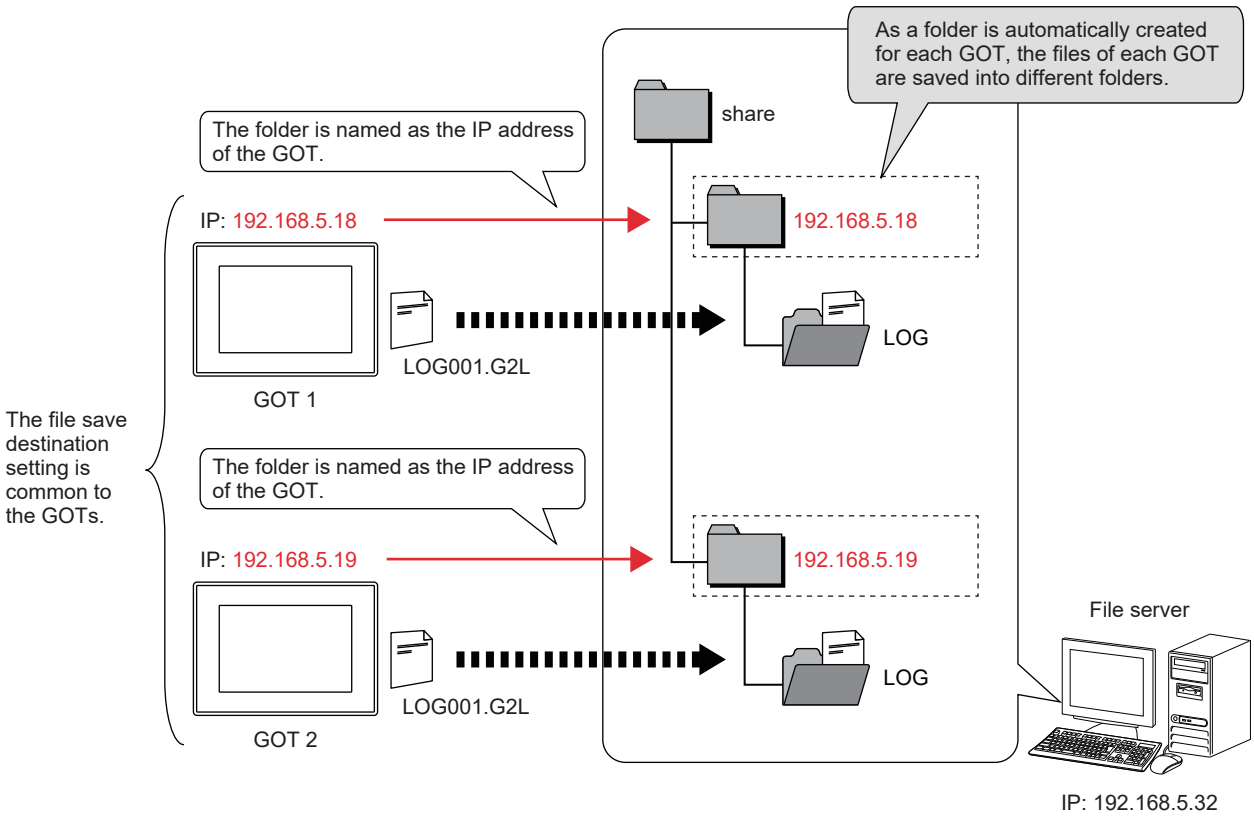
A folder is created for each GOT to save files.
Even when the file save destination setting is common to the GOTs, the files of each GOT will be saved into different folders.
Each folder is created automatically and named as the IP address of each GOT.
Select [Separate destinations for each GOT] in the setting dialog for a function using the network drive.

Example) Settings for GOT 1 and GOT 2
- Path to the network drive: \\192.168.5.32\share
- Save destination of logging files
  - · [Drive Name]: [N:Network Drive]
  - · [Folder Name]: LOG
  - · [File Name]: LOG001.G2L

1) When [Separate destinations for each GOT] is deselected



2) When [Separate destinations for each GOT] is selected



(1) Applicable functions

The following shows the applicable functions.
Select [Separate destinations for each GOT].

- Logging function

  ➟9.2.6 [Logging] dialog

- Hard copy function

  ➟9.7.6 [Hard Copy] dialog

- Report function

  ➟2.7.3 ■2 [Action] tab

(2) Folder name determination

Each folder is named as the IP address of the GOT's Ethernet interface connected to the file server.
If the GOT is not connected to the file server, no folder will be created.

(3) Changing the IP address of a GOT

When the IP address of a GOT is changed, files will be saved to the folder named as the new IP address.
If a folder named as the new IP address already exists, files will be saved to the folder.
Otherwise, a folder named as the new IP address will be created automatically.

■5 Precautions for the network drive

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Slow access speed

The GOT takes a longer time to start up, save a file, or display a graph via the network drive compared with via an SD card.

(2) When multiple GOTs use the network drive

If the GOTs have the same file save destination, select [Separate destinations for each GOT] in the setting of each applicable function as necessary to avoid overwriting files.

➟5.3.15 ■4 Creating a folder for each GOT

(3) Time zone setting

Set the same time zone for the file server and GOT.
Otherwise, a time difference will occur in the timestamps of folders and files between the file server and GOT.

➟5.3.5 ■3 (3) [Local Time] tab

(4) Time stamp of a copied file

If you copy a file from a location to the network drive, the time stamp of the copied file will be updated to the date and time of the copy operation.

(5) Setting a read-only folder

To set a read-only folder on the file server, set the folder permissions.
In the folder properties dialog, set [Permissions] on the [Security] tab.

(6) When the file server is under heavy load

When the file server is under heavy load, a timeout may occur.
Specify a longer time for [Timeout Time].

➟5.3.15 ■6 [Network Drive]

(7) When system alarm 391 occurs

This alarm occurs when the user name or password setting is inconsistent between the GOT and the file server.
As no automatic reconnection is performed in this case, correct the user name or password setting and then restart the GOT.

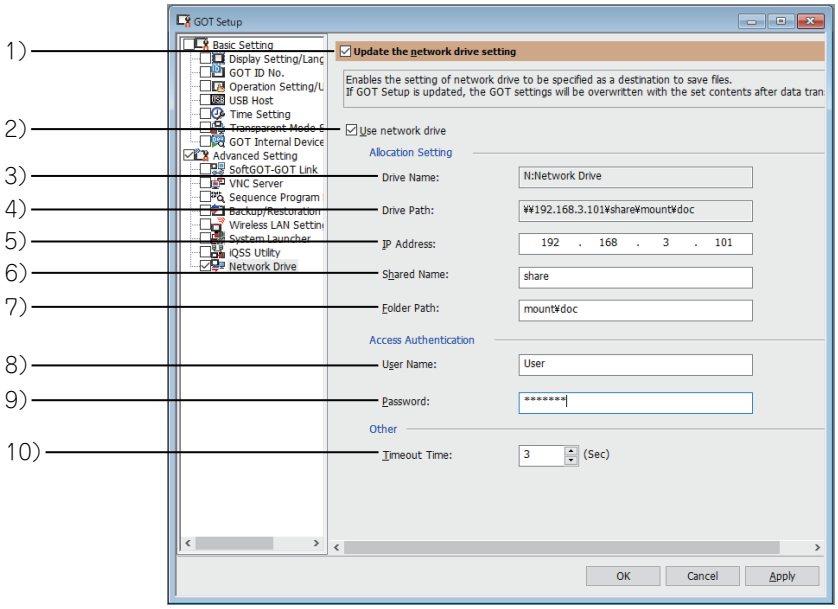
(8) User name and password change

The settings of the connected network drive cannot be changed directly on the GOT.
To change [User name] or [Password] of the connected network drive, both the file server's setting and the GOT's setting need to be changed.

■6 [Network Drive]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In [Network Drive], configure the settings to connect the GOT to a file server.
Select [Common] → [GOT Setup] → [Advanced Setting] → [Network Drive] from the menu to display the following window.

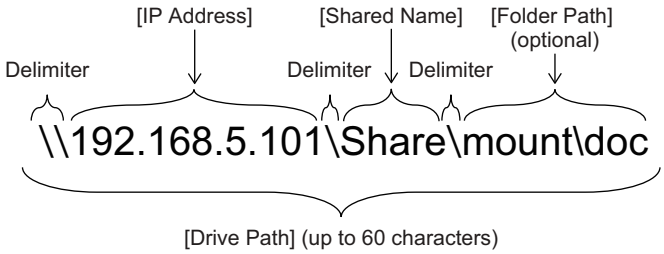


1) **[Update the network drive setting]**
Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written to the GOT.

2) **[Use network drive]**
Enables access to the network drive.

3) **[Drive Name]**
Displays the network drive name.
The name is fixed to [N:Network Drive].

4) **[Drive Path]**
Displays the path to the network drive.
The drive path consists of the specified IP address, shared name, and folder path.
Make sure that the number of characters (including delimiters) in the drive path is 60 or less.



5) **[IP Address]**
Specify the IP address of a file server to be connected.
The setting range is [0.0.0.0] to [255.255.255.255].

6) **[Shared Name]**
Enter the name of the shared folder (network drive) on the file server.
Make sure that the number of characters (including delimiters) in the drive path is 60 or less.
Two-byte and one-byte characters can be entered.

7) **[Folder Path]**
Set this item when specifying a folder under the shared folder as the network drive.
Make sure that the number of characters (including delimiters) in the drive path is 60 or less.
Two-byte and one-byte characters can be entered.
If this setting is unnecessary, leave it blank.

8) **[User Name]**

Set the name of a user that accesses the network drive.
Specify a local user.
A domain user is not supported.
Up to 32 characters can be entered.

9) **[Password]**
Set a password for the user to access the network drive.
Up to 32 one-byte alphanumeric characters can be entered.
If this setting is unnecessary, leave it blank.

10) **[Timeout Time]**
Set a communication timeout period.
The setting range is [3] seconds to [255] seconds.

■7 Relevant settings for the network drive

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the network drive as required.
The following shows the functions that are available by configuring the relevant settings.

(1) GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] window.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying the free space of the network drive. (Write device)	[Drive N empty capacity information(32bit)]
Notifying that the network drive is being accessed. (Write device: Extended Drive Information.b9)	[Extended Drive Information]
Notifying that the free space of the network drive is less than 1k byte. (Write device: Extended Drive Information.b10)	[Extended Drive Information]
Notifying that an error has occurred while the network drive is being accessed. (Write device: Extended Drive Information.b11)	[Extended Drive Information]

(2) GOT internal devices

➟12.1 GOT Internal Device

Function	Setting item
Notifying that data can be read from or written to the network drive.	GS251.b5

5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

➟5.4.1 Setting the GOT IP address
5.4.2 Configuring the settings common to Ethernet interfaces
5.4.3 Setting the IP filter

5.4.1 Setting the GOT IP address

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

➟■1 Ethernet interfaces
■2 Precautions
■3 [GOT IP Address Setting]

Set an IP address and a subnet mask for each Ethernet interface of the GOT.
For setting the default gateway, refer to the following.

➟5.4.2 Configuring the settings common to Ethernet interfaces

■1 Ethernet interfaces

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
The usable Ethernet interfaces vary by GOT model.

GOT	Ethernet interface
GT27, GT25-S, GT25-V (excluding GT2505-V)	• Ethernet standard port • Ethernet extended port • Wireless LAN interface
GT25-W, GS25	• Ethernet standard port 1 • Ethernet standard port 2 • Wireless LAN interface
GT2505-V, GT25HS-V, GT23, GT21, GS21	• Ethernet standard port

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

(1) IP address setting

The same network is inaccessible through multiple Ethernet interfaces and the wireless LAN interface.
Set an IP address for each interface to access a different network.

■3 [GOT IP Address Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
In [GOT IP Address Setting], set an IP address and a subnet mask for each Ethernet interface.
Select [Common] → [GOT Ethernet Setting] → [GOT IP Address Setting] from the menu to display the following window.

➟(1) [Standard Port] tab, [Port 1] tab
(2) [Extended Port] tab, [Port 2] tab
(3) [Wireless LAN] tab

The settings of the items in green cells are reflected from MELSOFT Navigator to the GOT project.
Set these items on MELSOFT Navigator.

(1) [Standard Port] tab, [Port 1] tab

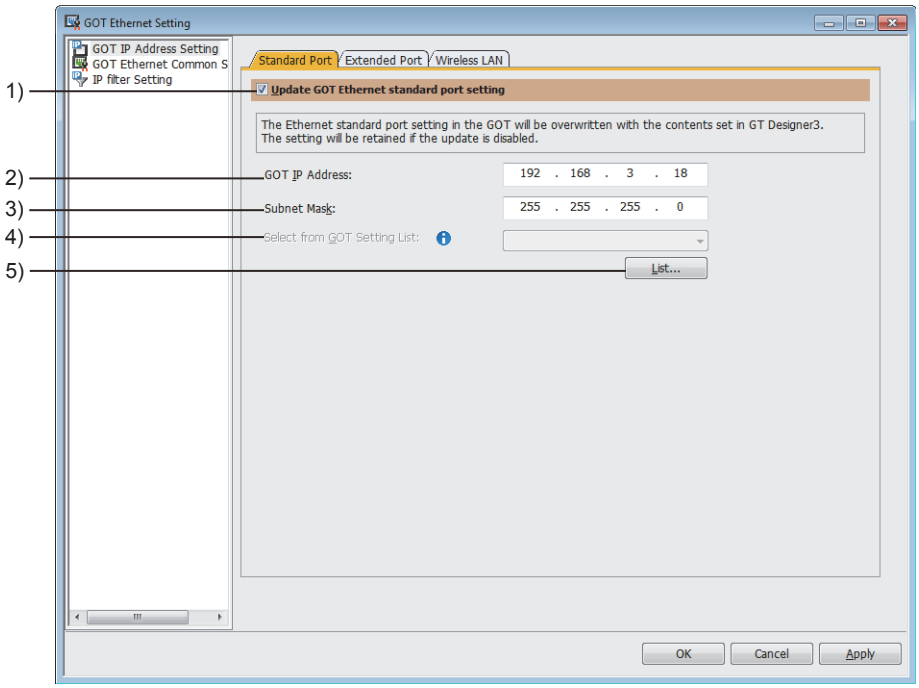
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

The tab name varies by GOT model.

- Models other than GT25-W and GS25: [Standard Port] tab
- GT25-W, GS25: [Port 1] tab

Set an IP address and a subnet mask for the Ethernet standard port or Ethernet standard port 1.



1) **[Update GOT Ethernet standard port setting] ([Update GOT Ethernet standard port 1 setting] for GT25-W and GS25)**
   Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
   Select this item to set each item on the [Standard Port] tab or the [Port 1] tab.
   When a project is read from the GOT, the setting changed in the utility is reflected.
2) **[GOT IP Address]**
   Set an IP address for the Ethernet standard port or Ethernet standard port 1.
   The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
3) **[Subnet Mask]**
   Set a subnet mask for the Ethernet standard port or Ethernet standard port 1.
   The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
4) **[Select from GOT Setting List]**
   Select the GOT Ethernet setting to be used among the settings registered in the [GOT Setting List] dialog.
5) **[List] button**
   Displays the [GOT Setting List] dialog.
   For the details of the settings, refer to the following.
   ➟5.3.2 ■5 [GOT Setting List] dialog

(2) [Extended Port] tab, [Port 2] tab

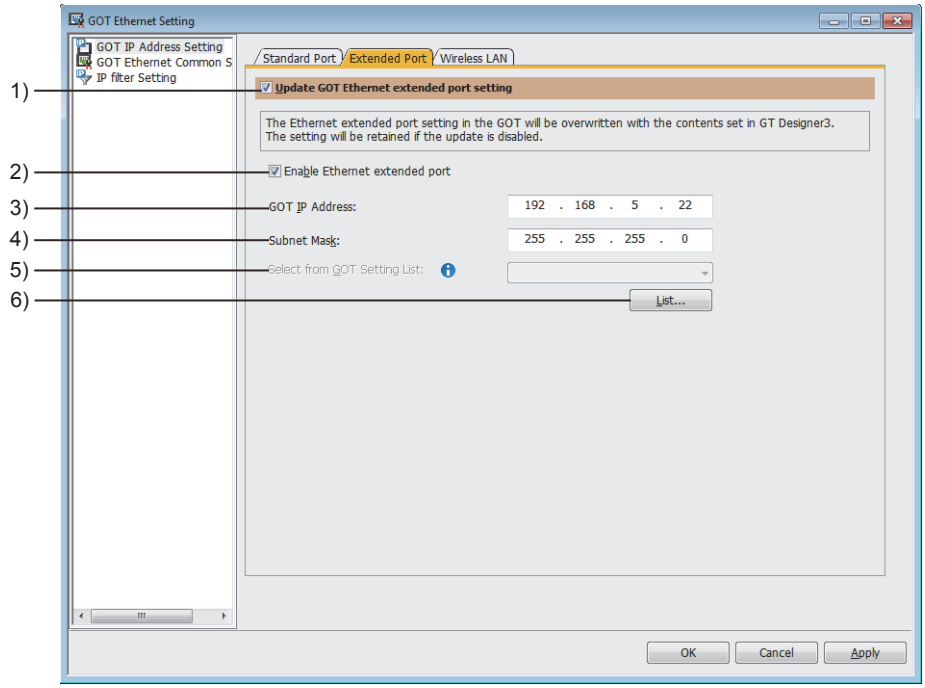
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

The tab name varies by GOT model.

- Models other than GT25-W and GS25: [Extended Port] tab
- GT25-W, GS25: [Port 2] tab

Set an IP address and a subnet mask for the Ethernet extended port or Ethernet standard port 2.



1) **[Update GOT Ethernet extended port setting] ([Update GOT Ethernet standard port 2 setting] for GT25-W and GS25)**
   Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.
   Select this item to set each item on the [Extended Port] tab or the [Port 2] tab.
   When a project is read from the GOT, the setting changed in the utility is reflected.
2) **[Enable Ethernet extended port] ([Enable Ethernet standard port 2] for GT25-W and GS25)**
   Enables the Ethernet extended port or Ethernet standard port 2.
   Select [Enable Ethernet extended port] and click the [OK] button to use the smallest-numbered available stage of [Extend I/F Setting] in the [I/F Communication Setting] dialog as the Ethernet extended port.
3) **[GOT IP Address]**
   Set an IP address for the Ethernet extended port or Ethernet standard port 2.
   The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
4) **[Subnet Mask]**
   Set a subnet mask for the Ethernet extended port or Ethernet standard port 2.
   The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
5) **[Select from GOT Setting List]**
   Select the GOT Ethernet setting to be used among the settings registered in the [GOT Setting List] dialog.
6) **[List] button**
   Displays the [GOT Setting List] dialog.
   For the details of the settings, refer to the following.

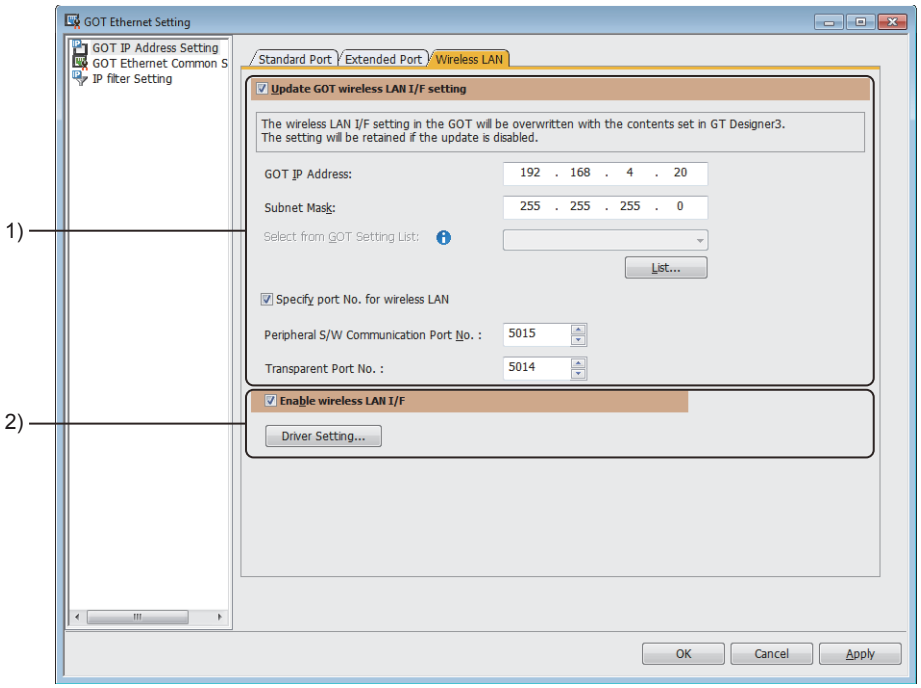
➟5.3.2 ■5 [GOT Setting List] dialog

(3) [Wireless LAN] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

Set the IP address and other items for the wireless LAN interface.



1) **[Update GOT wireless LAN I/F setting]**

Overwrites the setting data in the GOT with the ones set on GT Designer3 when package data is written.

Select this item to set the following items.

When a project is read from the GOT, the setting changed in the utility is reflected.

Item	Description
[GOT IP Address]	Set an IP address for the wireless LAN interface. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
[Subnet Mask]	Set a subnet mask for the wireless LAN interface. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
[Select from GOT Setting List]	Select the GOT Ethernet setting to be used among the settings registered in the [GOT Setting List] dialog.
[List] button	Displays the [GOT Setting List] dialog. For the details of the settings, refer to the following. ➥5.3.2 ■5 [GOT Setting List] dialog
[Specify port No. for wireless LAN]	Enables the port number setting (apart from the Ethernet common setting) for the wireless LAN interface.
[Peripheral S/W Communication Port No.]	Set a port number for the wireless LAN interface to communicate with GT Designer3. The setting range is [1024] to [65534]. Do not set the port number used for the other settings. Duplication of the port number disables communication.
[Transparent Port No.]	Set a port number for the wireless LAN interface to be used for the FA transparent function. The setting range is [1024] to [65534]. Do not set the port number used for the other settings. Duplication of the port number disables communication.

2) **[Enable wireless LAN I/F]**

Enables the wireless LAN interface.

Item	Description
[Driver Setting] button	Displays the [Detail Setting] dialog. ➥12.15.5 [Detail Setting] dialog

5.4.2 Configuring the settings common to Ethernet interfaces

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

➟■1 [GOT Ethernet Common Setting]

Set the default gateway and other common items for Ethernet interfaces.

■1 [GOT Ethernet Common Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

In [GOT Ethernet Common Setting], set the default gateway and other common items for Ethernet interfaces.

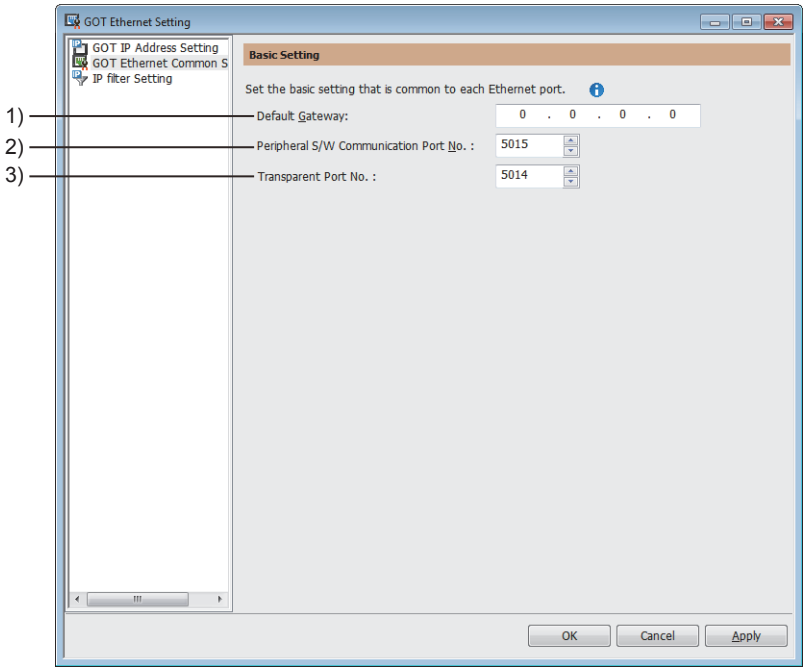
Select [Common] → [GOT Ethernet Setting] → [GOT Ethernet Common Setting] from the menu to display the following window.

You can set a port number common to Ethernet interfaces, and set another port number for the wireless LAN interface.

➟5.4.1 ■3 (3) [Wireless LAN] tab

The settings of the items in green cells are reflected from MELSOFT Navigator to the GOT project.

Set these items on MELSOFT Navigator.



1) **[Default Gateway]**
   Set the default gateway.
   The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

2) **[Peripheral S/W Communication Port No.]**
   Set the port No. used for the communication with GT Designer3.
   The setting range is [1024] to [65534].
   Do not set the port number used for the other settings.
   Duplication of the port number disables communication.

3) **[Transparent Port No.]**
   Use this port No. for the FA transparent function.
   The setting range is [1024] to [65534].
   Do not set the port number used for the other settings.
   Duplication of the port number disables communication.

5.4.3 Setting the IP filter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

➟■1 Filtering method
■2 Filtering list
■3 Precautions
■4 [IP Filter Setting]
■5 [IP Address to Exclude] dialog

The IP filter allows or blocks access via an Ethernet network from IP addresses in the filtering list.
To use the IP filter, install version H or later of CoreOS on the GOT.

➟4.5.3 Installing the BootOS or the CoreOS to the GOT

For how to check the CoreOS version, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■1 Filtering method

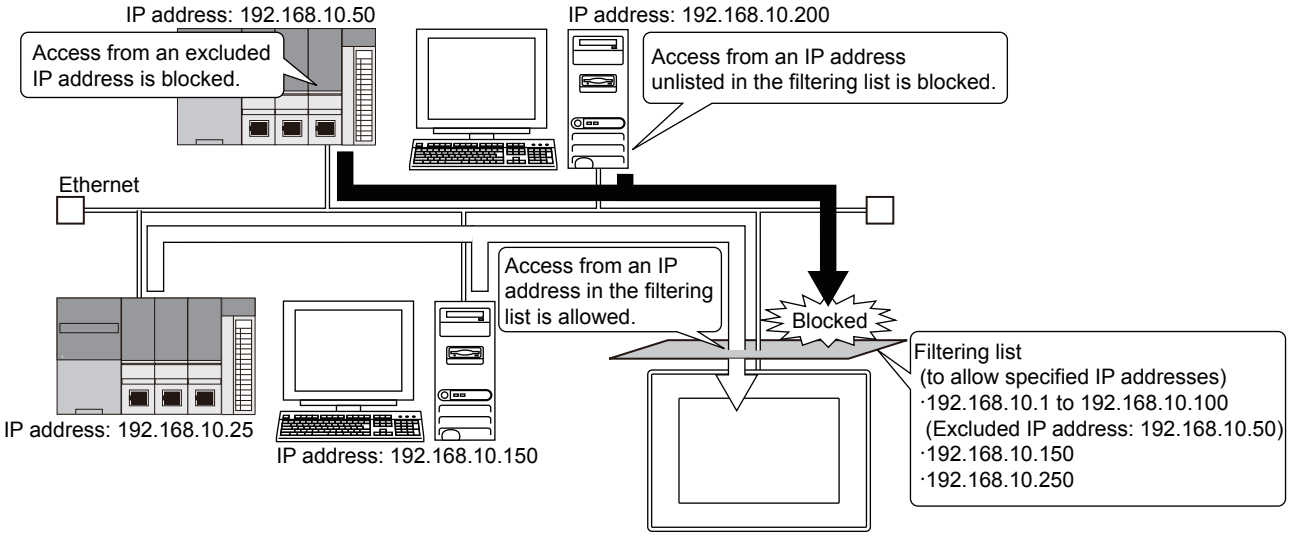
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
The GOT filters access from IP addresses in the filtering list by the following filtering methods.
The filtering method is settable in [IP Filter Setting] on GT Designer3 or the GOT utility.

➟5.4.3 ■4 [IP Filter Setting]
GOT2000 Series User's Manual (Utility)

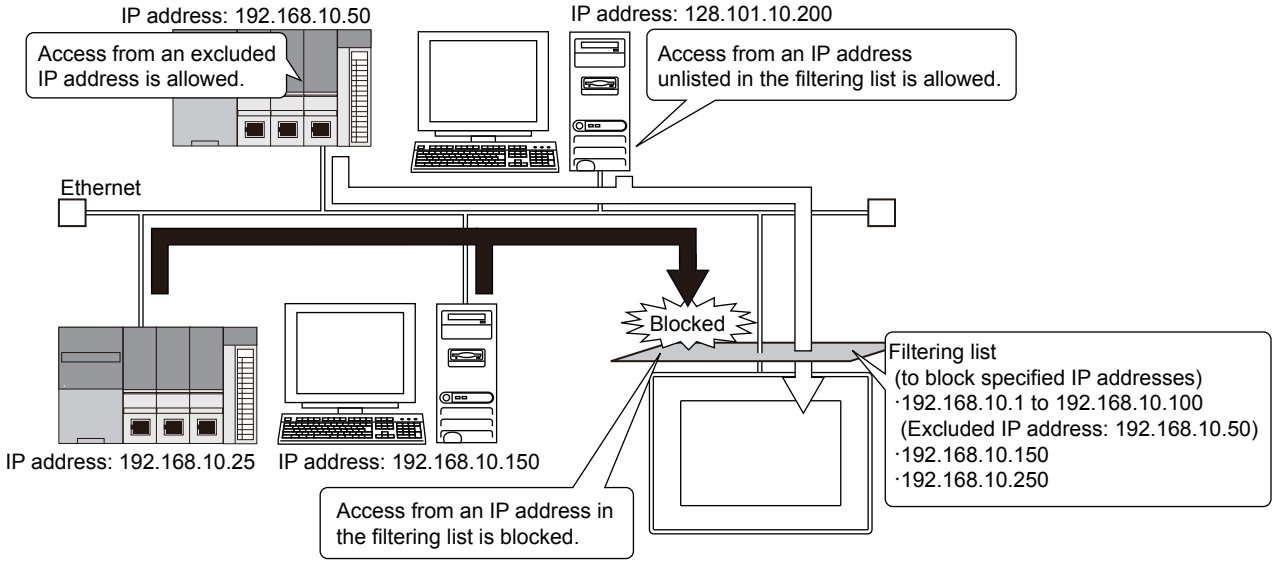
(1) Allowing specified IP addresses

The GOT allows access from IP addresses in the filtering list.
The GOT blocks access from IP addresses unlisted in the filtering list.
Excluded IP addresses are settable in the filtering list.
The GOT blocks access from the excluded IP addresses.



(2) Blocking specified IP addresses

The GOT blocks access from IP addresses in the filtering list.
The GOT allows access from IP addresses unlisted in the filtering list.
Excluded IP addresses are settable in the filtering list.
The GOT allows access from the excluded IP addresses.



■2 Filtering list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
The filtering list contains IP addresses to be filtered.
The filtering list is settable in [IP Filter Setting] on GT Designer3 or the GOT utility.

➟5.4.3 ■4 [IP Filter Setting]
GOT2000 Series User's Manual (Utility)

(1) Maximum number of IP address ranges

- For GT27, GT25, GT23, and GS25
  Up to 32 IP address ranges are registrable.
- For GT21 and GS21
  Up to 4 IP address ranges are registrable.

(2) Specifying the IP address range

You can set the range of IP addresses to be registered in the filtering list.
To set the range of IP addresses, the start IP address and the end IP address must belong to the same subnet.
To set the range of IP addresses belonging to different subnets, group IP addresses by subnet for registration.
The following shows an example where the fourth octet of IP addresses indicates a subnet.
Example 1) Possible settings

- First setting: Start IP address 192.168.3.5, end IP address 192.168.3.255
- Second setting: Start IP address 192.168.4.1, end IP address 192.168.4.20

Example 2) Impossible settings

- First setting: Start IP address 192.168.3.100, end IP address 192.168.3.20
- Second setting: None

(3) Maximum number of excluded IP addresses

- For GT27, GT25, GT23, and GS25
  Up to 32 excluded IP addresses are registrable.
- For GT21 and GS21
  Up to 16 excluded IP addresses are registrable.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

(1) Taking security measures except the IP filter

Using only the IP filter cannot prevent unauthorized access perfectly.
Take additional security measures system-wide, such as setting up a firewall for the network.

(2) Overlap of IP address ranges

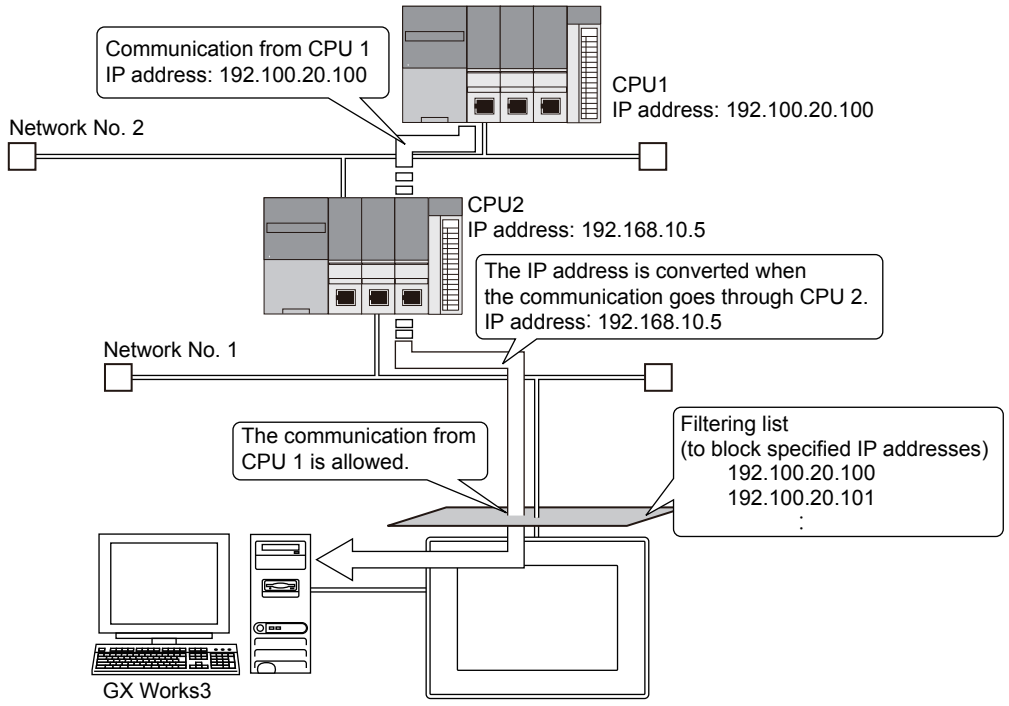
When the IP address ranges overlap in the filtering list, the GOT prioritizes the range that has been set earlier.
If an excluded IP address overlaps with an IP address in the already-specified IP address range, the excluded IP address becomes invalid.
Example) Filtering method: Blocking specified IP addresses

- First setting: 192.168.3.10 to 192.168.3.100, excluded: 192.168.3.90
- Second setting: 192.168.3.80 to 192.168.3.240, excluded: 192.168.3.85

IP address 192.168.3.85 is blocked.

(3) Filtering in communication via network equipment

A source IP address may be converted depending on the network route, such as via a router having the IP address conversion function or via a PLC CPU by using the FA transparent function.
When a controller communicates with the GOT via network equipment whose IP address is unlisted in the filtering list, even if the controller IP address is in the filtering list, the IP filter is not applied.
For network configurations in which a source IP address may be changed, set the filtering list in consideration of routed system equipment.
Example) When CPU 1 accesses GX Works3 via CPU 2 on a different network and then via the GOT using the FA transparent function



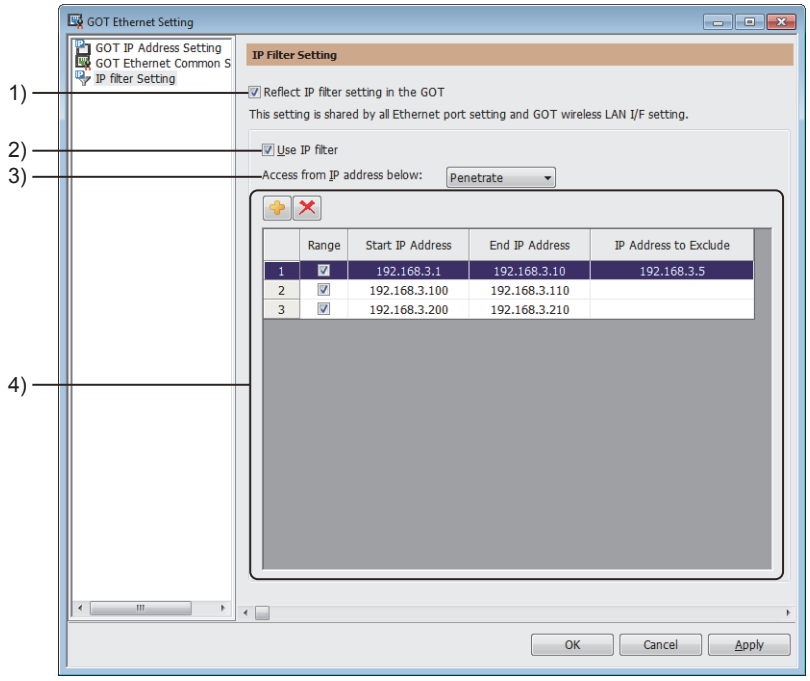
■4 [IP Filter Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

In [IP Filter Setting], set the filtering method and the filtering list.

Select [Common] → [GOT Ethernet Setting] → [IP filter Setting] from the menu to display the following window.

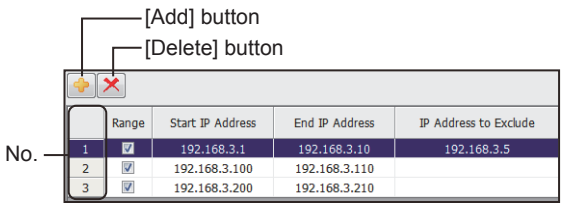


1) **[Reflect IP filter setting in the GOT]**
   Reflects the IP filter setting to the GOT.

2) **[Use IP filter]**
   Enables the IP filter.

3) **[Access from IP address below]**
   Select a filtering method applied to the filtering list.
   - [Penetrate]
     Allows access from IP addresses ranging from [Start IP Address] to [End IP Address] in the filtering list.
     Blocks access from IP addresses set in [IP Address to Exclude].
   - [Shut off]
     Blocks access from IP addresses ranging from [Start IP Address] to [End IP Address] in the filtering list.
     Allows access from IP addresses set in [IP Address to Exclude].

4) **Filtering list**
   Lists IP address ranges to which the IP filter is applied.



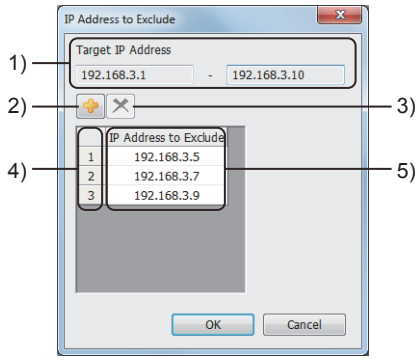
Item	Description
[Add] button	Adds an IP filter setting in the bottom of the list.
[Delete] button	Deletes a selected IP filter setting.

Item	Description
No.	IP filter setting No. Clicking an IP filter setting No. selects the row. To select multiple rows, perform one of the following operations. Hold down the [Ctrl] key and click a setting No. To deselect a selected row, perform the same operation. Select the first row in the range, hold down the [Shift] key, and click a setting No. to select the last row in the range.
[Range]	Enables the registration of IP addresses by specifying a range. To register IP addresses one by one, clear this item.
[Start IP Address]	Set the start IP address of the IP address range.
[End IP Address]	This item is settable only when [Range] is selected. Set the end IP address of the IP address range.
[IP Address to Exclude]	Set IP addresses excluded from being filtered. Click the [...] button to display the [IP Address to Exclude] dialog. ➟5.4.3 ■5 [IP Address to Exclude] dialog

■5 [IP Address to Exclude] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.



1) **[Target IP Address]**
Displays the IP address range to which the IP filter is applied.

2) **[Add] button**
Adds an excluded IP address in the bottom of the list.

3) **[Delete] button**
Deletes a selected excluded IP address.

4) **No.**
Excluded IP address setting No.
Clicking an excluded IP address setting No. selects the row.
To select multiple rows, perform one of the following operations.
Hold down the [Ctrl] key and click a setting No. To deselect a selected row, perform the same operation.
Select the first row in the range, hold down the [Shift] key, and click a setting No. to select the last row in the range.

5) **[IP Address to Exclude]**
Lists the IP addresses excluded from being filtered.

5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟5.5.1 Setting channels
5.5.2 Setting the routing information
5.5.3 Configuring the setting of the MELSEC redundant function
5.5.4 Configuring the settings for switching the target station No. for monitoring
5.5.5 Configuring the settings for switching the buffer memory unit No. of the monitoring target

5.5.1 Setting channels

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of channels
■2 How to set channels
■3 Precautions
■4 [Controller Setting]
■5 [GOT (Extend Computer)] dialog
■6 [Controller Type List] window

Set the channel used for the connection between the GOT and controllers.

■1 Specifications of channels

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Applicable channels

The following shows the channels that are available for each GOT model.

GOT model	Applicable channel No.
GT27, GT25, GT SoftGOT2000, GS25	CH1 to CH4
GT23, GT21, GS21	CH1 to CH2

CH2 to CH4 can be used only when the multi-channel function is used.
GT SoftGOT2000 can monitor multiple channels by using the following connections.

- Ethernet connection
- OPC UA client connection
- Microcomputer connection (serial)

For the details of the multi-channel function, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1
GT SoftGOT2000 Version1 Operating Manual

(2) Applicable communication interfaces

The following shows the communication interfaces that are available for each GOT model.

GOT model	Supported communication interface
GT27, GT25-S, GT25-V (excluding GT2505-V)	[Standard I/F(RS422/485)], [Standard I/F(RS232)], [Ethernet: Multi], [Extend I/F(1st)], [Extend I/F(2nd)], and [Extend I/F(3rd)]
GT25-W, GT2505-V, GT25HS-V, GS25	[Standard I/F(RS422/485)], [Standard I/F(RS232)], and [Ethernet: Multi]
GT23, GT2107-W, GT2104-R, GS21	[Standard I/F(RS422/485)], [Standard I/F(RS232)], and [Ethernet: Multi]
GT2105-Q	[Standard I/F(RS422/485)] and [Standard I/F(RS232)]
GT2104-P, GT2103-P	[Standard I/F(RS422/485/232(Side))], [Standard I/F(RS232(Back))], and [Ethernet: Multi]
GT SoftGOT2000	For the communication interface of GT SoftGOT2000, refer to the following. ➟GT SoftGOT2000 Version1 Operating Manual

For the details of the applicable communication interfaces, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

For the system configuration of each controller and connection type, refer to the following.

➟GOT2000 Series Connection Manual for a controller used

■2 How to set channels

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

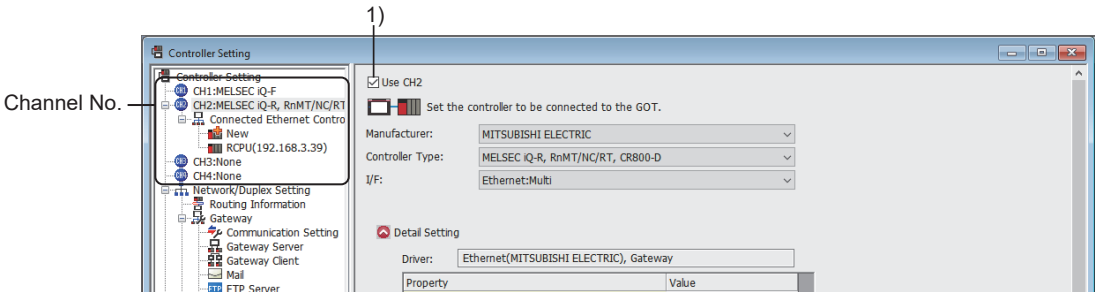
(1) Setting with GT Designer3

Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears.

Select a channel No. to be used from the controller setting tree.

For the setting of channel No. 2 to 4, select a channel and the item shown as 1) below.



Step 3 Configure the communication settings for each channel.

➟5.5.1 ■4 [Controller Setting]

(2) Setting the channels with the parameter reflection function of MELSOFT Navigator

The system configuration of MELSOFT Navigator can be reflected to the project of GT Designer3 using the parameter function of MELSOFT Navigator.

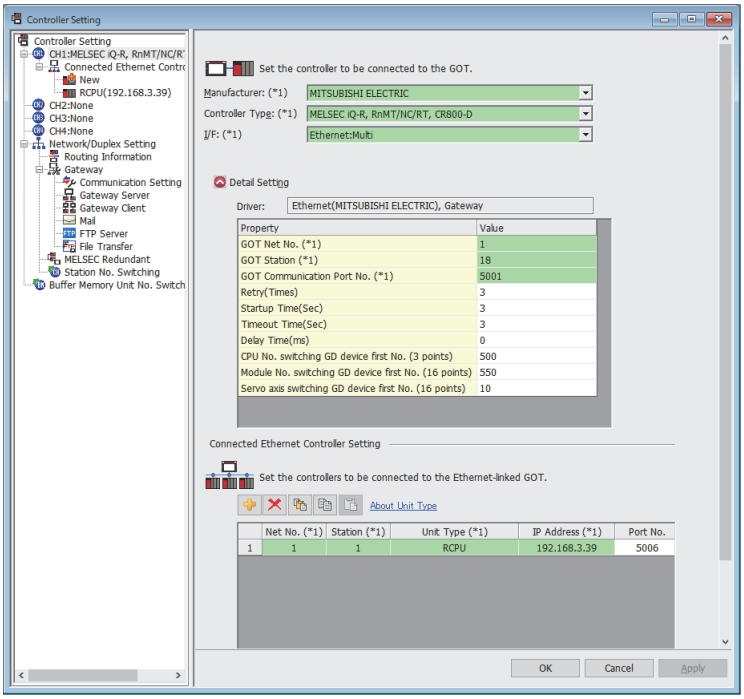
For details of the parameter functions of MELSOFT Navigator, refer to the following.

➟Help of MELSOFT Navigator

(a) Items to be reflected from MELSOFT Navigator

The settings of the items in green cells are reflected from MELSOFT Navigator to the GOT project.

Set these items on MELSOFT Navigator.



(b) Connection with the devices which iQ Works does not support

Set [Set with GT Designer3] for the channel used for the connection with the devices which iQ Works does not support

in [Input Detailed Configuration Information] of MELSOFT Navigator.
After the setting, set the communication interface in [Controller Setting] of GT Designer3.

(c) **Permitting the editing of the items reflected from MELSOFT Navigator with GT Designer3**

By performing the following setting, the items reflected from MELSOFT Navigator can be edited with GT Designer3.

Step 1 Select [Tools] → [Option] from the menu to display the [Option] dialog.

Step 2 Display the [iQ Works] tab.

Step 3 Select [Enable an editing of parameters set in MELSOFT Navigator].

If the items reflected from MELSOFT Navigator are edited, it makes the system configurations of the projects between GT Designer3 and MELSOFT Navigator mismatched.
Because of this mismatch, the interaction function with MELSOFT Navigator is disabled.
In this case, match the parameter setting of those projects using the parameter verification function before using the interaction function.

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Changing the channel after the device setting

Do not change the channel to an unused one in the controller setting after the device setting.
If the channel is changed to an unused one, the device of the unused channel must be set again.

(2) Setting the same channel number to access multiple networks

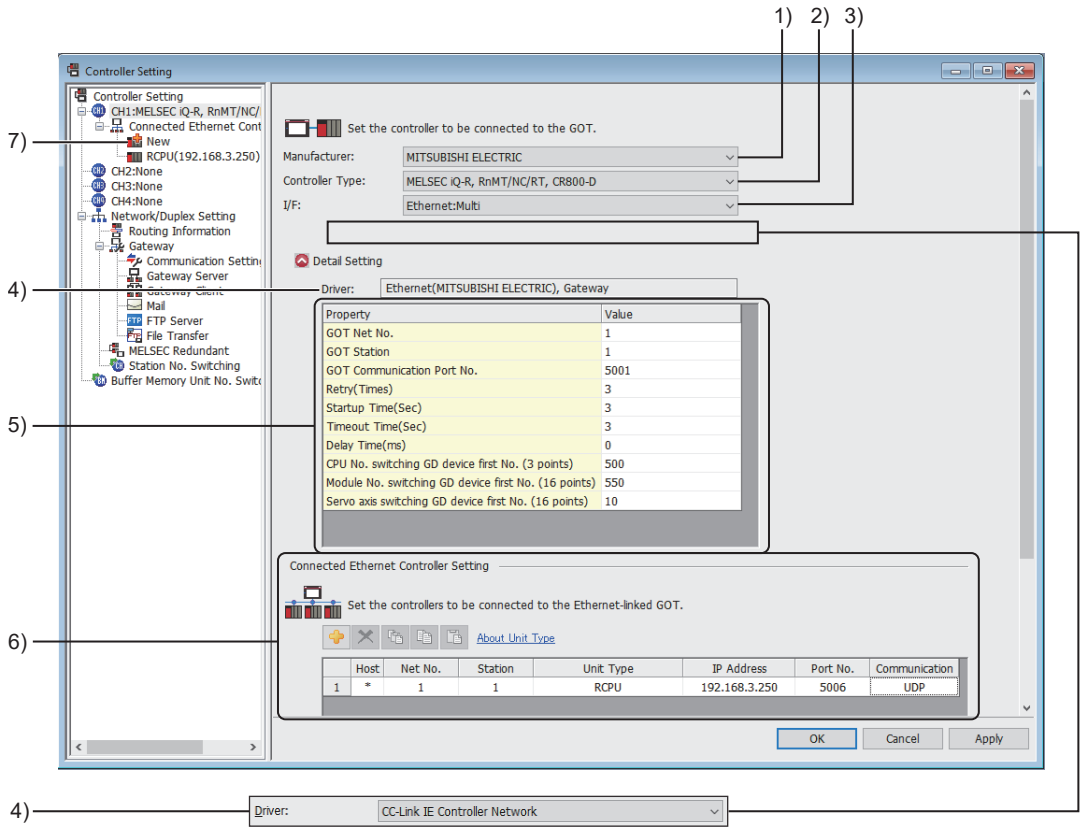
When you set the same channel number and communication driver to access two networks, if a communication timeout occurs in one network, the timeout also occurs in the other network.
To avoid a communication timeout from occurring in both networks, set a different channel number to access each network.

■4 [Controller Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The settings in this window depend on the conditions, such as the controller model, communication interface, and communication driver used.
For the details of the settings, refer to the following.

➟GOT2000 Series Connection Manual for a controller used



1) **[Manufacturer]**
Select the manufacturer of the controller connected to the GOT.

2) **[Controller Type]**
Select the model of the controller connected to the GOT.

➟12.2 Correspondence between the setting of [Controller Type] and the controller used

3) **[I/F]**
Select the communication interface of the GOT.
The selectable communication interfaces depend on the model of the GOT, controller, and connection type.
For the applicable communication interface for each GOT model, refer to the following.

➟5.5.1 ■1 Specifications of channels

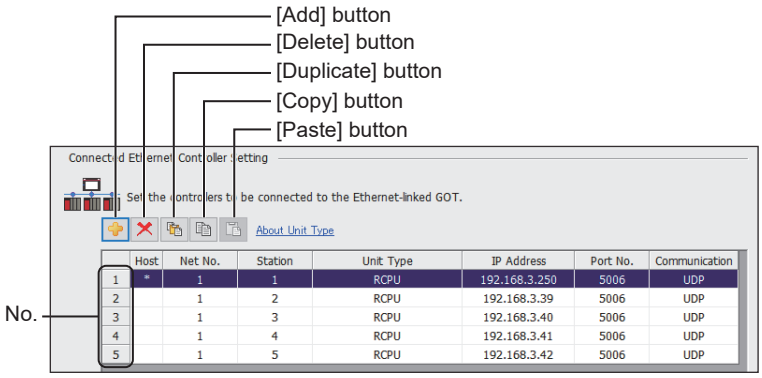
4) **[Driver]**
Not available to GT SoftGOT2000.
This item appears when communication drivers are selectable according to the settings of [Controller Type] and [I/F].
Select the communication driver to be written to the GOT.
Refer to the following to configure the setting.

➟GOT2000 Series Connection Manual for a controller used

5) **[Detail Setting]**
Set the connection details, such as the baud rate of the communication driver and the data length.
To display or hide the setting items, click the button at the left of [Detail Setting].
For the details, refer to the following.

➟12.15.5 [Detail Setting] dialog

6) **[Connected Ethernet Controller Setting]**
The list of the Ethernet setting on the controller registered in the project.
This list is displayed only for the Ethernet connection.
Each setting can be edited in the list.



Item	Description
[Add] button	Adds the Ethernet setting below the bottom row of the list.
[Delete] button	Deletes a selected Ethernet setting.
[Duplicate] button	Duplicates a selected Ethernet setting below the bottom row of the list.
[Copy] button	Copies a selected Ethernet setting.
[Paste] button	Pastes a copied Ethernet setting.
No.	Ethernet setting No. Clicking an Ethernet setting No. selects the row. To select multiple rows, perform one of the following operations. Hold down the [Ctrl] key and click a setting No. To deselect a selected row, perform the same operation. Select the first row in the range, hold down the [Shift] key, and click a setting No. to select the last row in the range. For GT21 and GS21, configure the Ethernet settings in the range from [1] to [4]. Ethernet settings of [5] and later are invalid for GT21 and GS21.
[Host]	Selects a host station. Asterisk (*) is displayed with the selected Ethernet setting. For GT21 and GS21, set the host station number in the range from [1] to [4].
[Net No.]	Set the network No. of the destination Ethernet module.
[Station]	Select the station number of the destination Ethernet module.

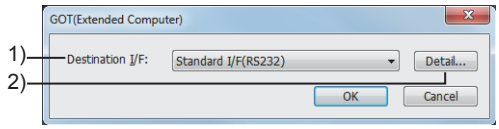
Item	Description
[Unit Type]	Select the type of the destination Ethernet module. ➡12.5 [Unit Type] in [Connected Ethernet Controller Setting]
[IP Address]	Set the IP address of the controller. The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
[Port No.]	Set the port No. of the destination Ethernet module.
[FETCH Port No.]	Set the FETCH port No. of the destination Ethernet module. This item is displayed only when [Ethernet(SIEMENS S7), Gateway] is selected for [Driver].
[WRITE Port No.]	Set the WRITE port No. of the destination Ethernet module. This item is displayed only when [Ethernet(SIEMENS S7), Gateway] is selected for [Driver].
[Connection No./Rack No.]	Set the connection No. or rack No. of the destination Ethernet module. This item is displayed only when [Ethernet(SIEMENS OP), Gateway] is selected for [Driver].
[Module Position/Slot No.]	Set the module position or slot No. of the destination Ethernet module. This item is displayed only when [Ethernet(SIEMENS OP), Gateway] is selected for [Driver].
[Communication]	Displays the communication protocol corresponding to the setting of [Port No.]. Select a communication protocol. The following shows the items to be selected. • [UDP] • [TCP]
[Connection]	Set the message communication type according to that of the connected controller. This item is displayed only when [Ethernet(AB Tag), Gateway] is selected for [Driver]. The following shows the items to be selected. • [UCMM] • [Class3]
[Slot No.]	Set the slot No. of the PLC to which the Ethernet module is installed. This item is displayed only when one of the following items is selected for [Driver]. • [[Ethernet(AB), Gateway] • [Ethernet(AB Tag), Gateway]

7) **[New]**
Double-click this item to add a new Ethernet setting row to the bottom of the list of [Connected Ethernet Controller Setting].

■5 [GOT (Extend Computer)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this dialog, set the interface for connecting multiple GOTs by the microcomputer connection (serial).
To display this dialog, select [Common] → [Peripheral Setting] → [GOT (Extended Computer)] from the menu.



1) **[Destination I/F]**
Select the interface for the connection to the GOT (Extended Computer).
The following shows the setting range.
For GT2107-W, GT2105-Q, GT2104-R, and GS21
- [Standard I/F(RS422/485)]
- [Standard I/F(RS232)]
- [Not connected]

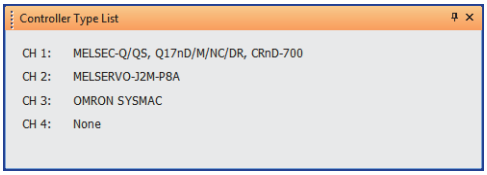
For GT2104-P and GT2103-P
- [Standard I/F(RS422/485/232)(Side)]
- [Standard I/F(RS232(Back))]
- [Not connected]

2) **[Detail Setting]**
Set the details for the connection to the GOT (Extended Computer).

■6 [Controller Type List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The window displayed to confirm the controllers of each channel.
Select [View] → [Docking Window] → [Controller Type List] from the menu to display the window.



5.5.2 Setting the routing information

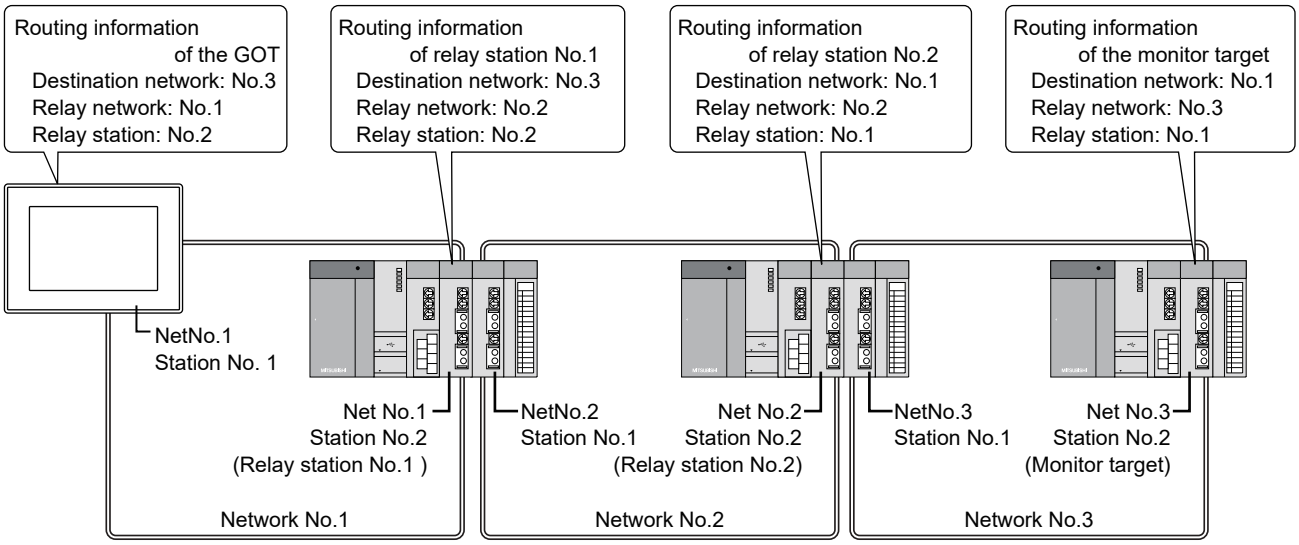
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the routing information
■2 How to set the routing information
■3 [Routing Information]

Use the routing information to specify the destination network and the network to be routed when monitoring the controller on a different network with either of the following connection types.

- Ethernet connection
- MELSECNET/H connection
- CC-Link IE TSN connection
- CC-Link IE Controller Network connection
- CC-Link IE Field Network connection
- SLMP connection

If the communication is performed within the host station, the routing information setting is not required.



■1 Specifications of the routing information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the details of the routing parameter, refer to the following.

Relay station device		Reference manual
RCPU		➟MELSEC iQ-R CPU Module User's Manual (Application)
Other than RCPU	Ethernet connection	➟MELSEC-Q/L Ethernet Interface Module User's Manual (Application)
	MELSECNET/H connection	➟Q Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)
	CC-Link IE Controller Network connection	➟MELSEC-Q CC-Link IE Controller Network Reference Manual
	CC-Link IE Field Network connection	➟MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual
SLMP server device		➟Manual of the SLMP-compatible device used

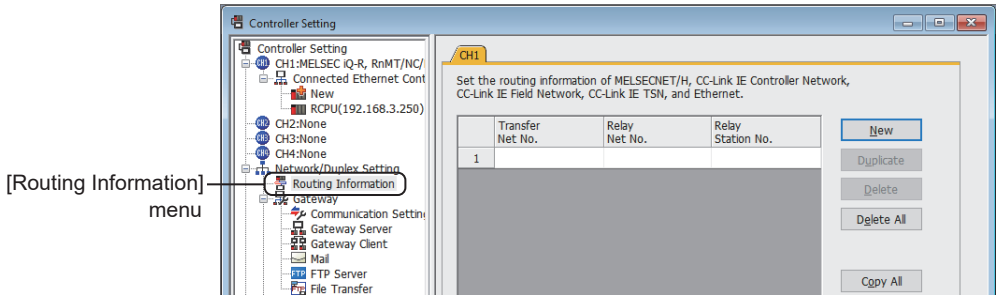
■2 How to set the routing information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Controller Setting] from the menu.

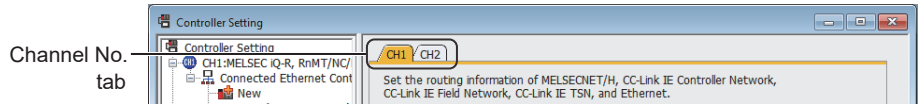
Step 2 The [Controller Setting] window appears.

Select the [Routing Information] menu from the controller setting tree.



Step 3 Configure the routing information setting for each channel.

Select the tab of the channel for which the routing information is set.

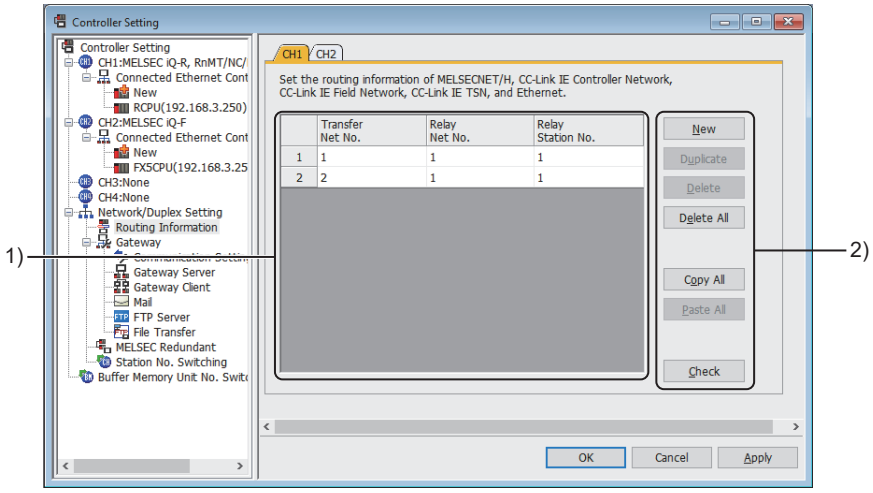


After selecting the tab, set the routing information.

➟5.5.2 ■3 [Routing Information]

■3 [Routing Information]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **List of routing information settings**

Lists the routing information settings registered in the project.
Each setting can be edited in the list.

Item	Description
[Transfer Net No.]	Set the network No. of the destination network. The setting range is [1] to [239].
[Relay Net No.]	Set the network No. of the relay network. The setting range is [1] to [239].
[Relay Station No.]	Set the station number of the relay station. The setting range is [0] to [120].*1

*1 When the communication driver is set to [Ethernet(SLMP), Gateway], the settable values are [0] to [120], and [125].

2) **Buttons for the routing information setting**

Use the following buttons to add, copy, and delete the routing information setting in the list.

Item	Description
[New]	Adds the routing information setting below the bottom row of the list.
[Duplicate]	Duplicates a selected routing information setting below the bottom row of the list.
[Delete]	Deletes a selected routing information setting.
[Delete All]	Deletes all the routing information settings.
[Copy All]	Copies all the routing information settings in the list of the selected tab. Use this button to utilize the settings for other channels.
[Paste All]	Pastes the copied settings to the list. The existing settings are overwritten.
[Check]	Checks if the routing information setting has any error. The following show the points to be checked. • Non-entered items • Setting range • Duplication of the destination network numbers

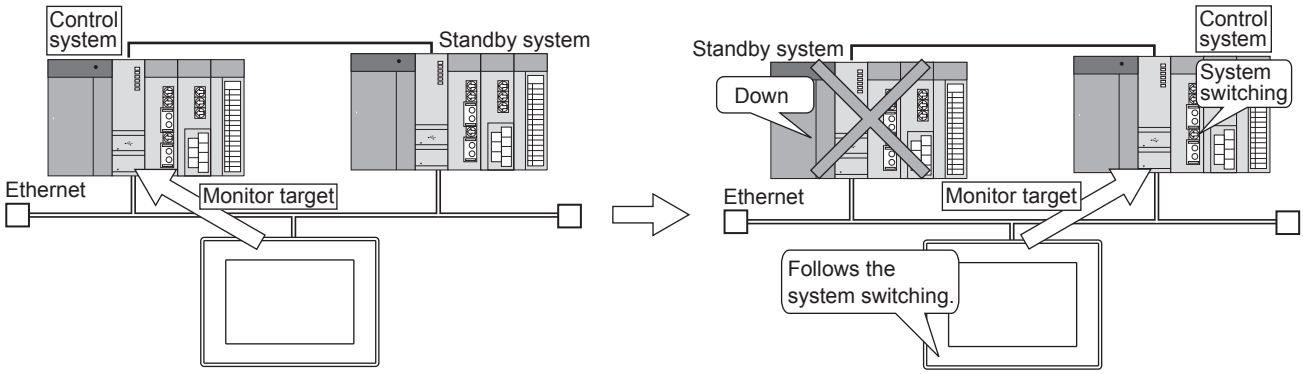
5.5.3 Configuring the setting of the MELSEC redundant function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 How to set the MELSEC redundant function
■2 Precautions
■3 [MELSEC Redundant]

You can monitor the redundant system on the GOT by specifying the control system and the standby system.
If the redundant system is the target station, specifying the control system as the target CPU enables consecutive monitoring even when the system is switched from the control system to the standby system.
For the details of the redundant system, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1



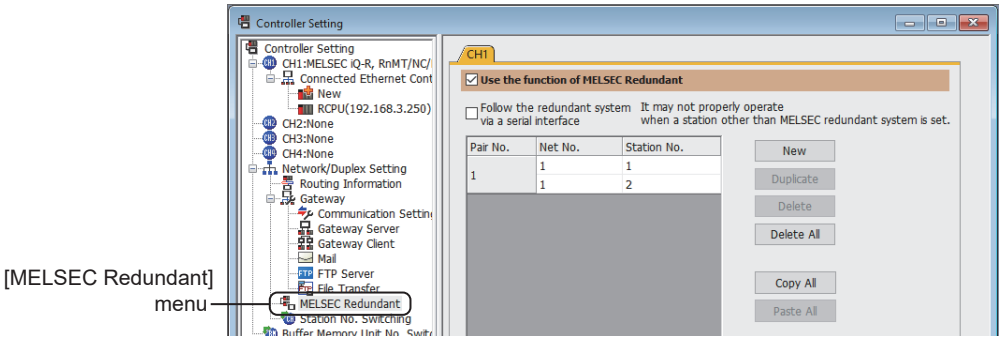
■1 How to set the MELSEC redundant function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears.

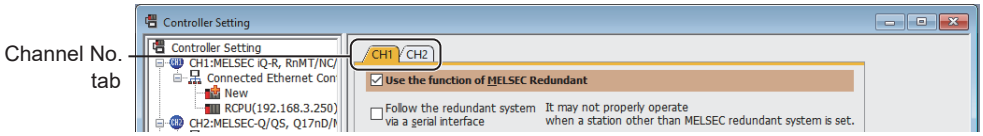
Select [MELSEC Redundant] from the setting tree.



Step 3 Configure the MELSEC redundant setting by channel.

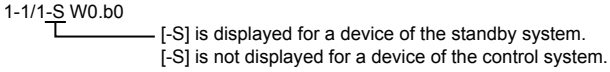
Select the target channel tab, and configure the MELSEC redundant setting.

➟5.5.3 ■3 [MELSEC Redundant]



(1) Display of the standby system device

The following shows the display example of a device of the standby system.



To delete [-S], use the [Network Batch Edit] dialog or other methods.

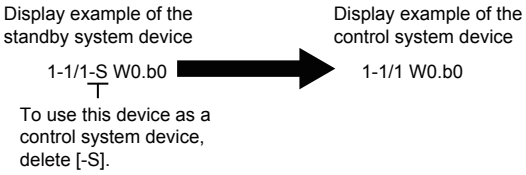
➟11.8.4 ■5 [Network Batch Edit] dialog

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Canceling the specification of a standby system device and the redundant setting

When you specify a device of the standby system, even if you clear [Use the function of MELSEC Redundant], the specified device is still marked with [-S] that identifies the standby system.
When you utilize such a device setting, change the device as shown below.

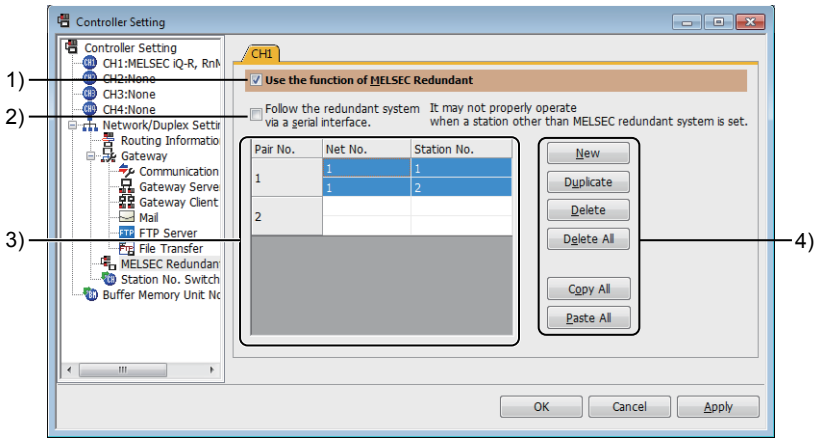


To delete [-S], use the [Network Batch Edit] dialog or other methods.

➟11.8.4 ■5 [Network Batch Edit] dialog

■3 [MELSEC Redundant]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Use the function of MELSEC Redundant]**
Enables the MELSEC redundant function.
Select this item to set each item in [MELSEC Redundant].

2) **[Follow the redundant system via a serial interface.]**
Automatically switches the monitoring target upon system switching if the redundant system is connected to the GOT by the serial connection.

3) **MELSEC redundant setting list**
Lists the MELSEC redundant settings registered in the project.
Each setting can be edited in the list.

Item	Description
[Pair No.] *1	Pair number of the MELSEC redundant setting The numbers are assigned automatically starting from 1.

Item	Description
[Net No.]	Set the network Nos. for each pair No. The upper row is for the setting of the first redundant CPU. The setting range is [1] to [239]. The lower row is for the setting of the second redundant CPU. The network No. of the second redundant CPU is the same as the one for the first CPU.
[Station No.]	Set the station numbers of the redundant CPUs for each pair No. The upper row is for the setting of the first redundant CPU. The setting range is [0] to [120]. The lower row is for the setting of the second redundant CPU. The setting range is [0] to [120].

*1 Setting [Pair No.] is not required to monitor the redundant system that is connected to the GOT by the CC-Link connection (intelligent device station).

4) Operation buttons for the MELSEC redundant setting list

Add, copy, and delete a MELSEC redundant setting in the list.

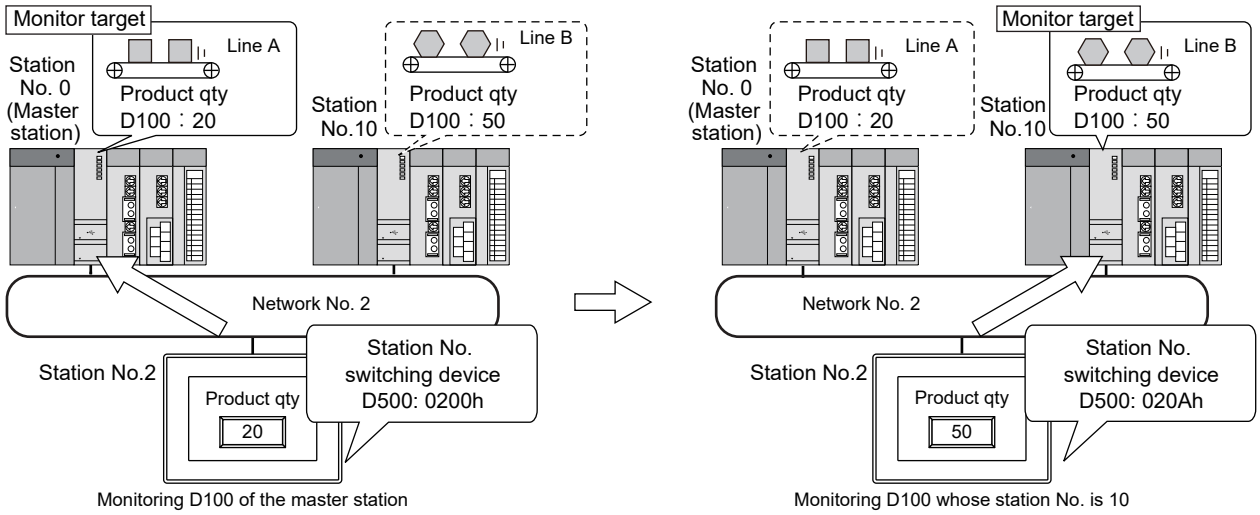
Item	Description
[New]	Adds the pair No. setting below the bottom row in the list.
[Duplicate]	Duplicates a selected pair No. setting below the bottom row in the list.
[Delete]	Deletes a selected pair No. setting.
[Delete All]	Deletes all the pair No. settings.
[Copy All]	Copies all the pair No. settings in the list of the selected tab. Use this button to utilize the settings for other channels.
[Paste All]	Pastes the copied settings to the list. The existing settings are overwritten.

5.5.4 Configuring the settings for switching the target station No. for monitoring

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of the station No. switching setting
■2 How to use the station No. switching setting
■3 [Station No. Switching]
■4 Relevant settings

The station numbers of the monitor target devices can be switched by using the station No. switching.
Multiple devices can be monitored through a single monitor screen in the system to which the devices executing the same control to the network are connected.
(You do not have to create the monitor screens as many as the number of devices.)
Since the number of objects to be set can be reduced, you can save the built-in memory of the GOT.



The station No. switching is available for the stations that can be monitored by the GOT.
For the stations that can be monitored by the GOT (accessible range), refer to the following.

➥GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1

■1 Specifications of the station No. switching setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Communication drivers supporting the station No. switching

The following lists the communication drivers that the station No. switching can be used.
If one controller can be connected to one GOT, the station No. switching cannot be used even though any of the following drivers.

Manufacturer Communication protocol	Communication driver	Communication type
MITSUBISHI ELECTRIC	[MELSECNET/H]	MELSECNET/H
	[CC-Link IE TSN]	CC-Link IE TSN
	[CC-Link IE Controller Network]	CC-Link IE Controller Network
	[CC-Link Ver.2(ID)]	CC-Link Ver.2(ID)
	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	Ethernet
	[Ethernet(FX), Gateway]	
	[Ethernet(FREQROL), Gateway]	
	[Ethernet(FREQROL(Batch monitor)), Gateway]	
	[Ethernet(MELSERVO), Gateway]	
	[FREQROL 500/700/800, SENSORLESS SERVO]	RS-485
	[FREQROL 800]	
	[FREQROL(Batch monitor)]	
IAI	[IAI ROBO CYLINDER]	RS-232 RS-422/485
AZBIL	[Azbil SDC/DMC]	RS-232 RS-485
	[Azbil DMC50]	
OMRON	[Ethernet(OMRON), Gateway]	Ethernet
	[OMRON THERMAC/INPANEL NEO]	RS-232 RS-422 RS-485
	[OMRON Digital Temperature Controller]	
KEYENCE	[Ethernet(KEYENCE), Gateway]	Ethernet
KOYO EI	[KOYO KOSTAC/DL]	RS-232 RS-422
JTEKT	[JTECT TOYOPUC-PC]	RS-232 RS-422
SHINKO	[SHINKO TECHNOS CONTROLLER]	RS-232 RS-485
CHINO	[CHINO MODBUS device]	RS-232 RS-422 RS-485
TOSHIBA	[Ethernet(TOSHIBA nv), Gateway]	Ethernet
PANASONIC	[Panasonic MINAS A4]	RS-232 RS-485
	[Panasonic MINAS A5]	
HITACHI	[Ethernet(HITACHI), Gateway]	Ethernet
FUJI	[Ethernet(FUJI), Gateway]	Ethernet
	[FUJI Temperature Controller/Digital Controller]	RS-232 RS-485
YASKAWA	[Ethernet(YASKAWA), Gateway]	Ethernet
	[Ethernet(YASKAWA MP3000), Gateway]	
YOKOGAWA	[Ethernet(YOKOGAWA), Gateway]	Ethernet
	[YOKOGAWA GREEN/UT100/UT2000/UT Advance]	RS-232 RS-485

Manufacturer Communication protocol	Communication driver	Communication type
RKC	[RKC SR Mini HG(MODBUS)]	RS-232 RS-422 RS-485
ALLEN-BRADLEY	[Ethernet(AB MicroLogix), Gateway]	Ethernet
	[Ethernet(AB), Gateway]	
GE	[GE (SNP-X)]	RS-232 RS-422
SIEMENS	[Ethernet(SIEMENS S7), Gateway]	Ethernet
MODBUS	[MODBUS/TCP Master, Gateway]	Ethernet
	[MODBUS/RTU Master]	RS-232 RS-422/485
SLMP	[Ethernet(SLMP), Gateway]	Ethernet

(2) Functions supporting the station No. switching

○: Supported , ×: Unsupported

Function name	Station No. switching	Remarks
Touch switch	○	Indirect devices are also the targets of the station No. switching.
Numerical Display	○	-
Numerical Input	○	-
Text Display	○	-
Text Input	○	-
Comment Display	○	-
Lamp	○	-
Parts Display	○	-
Parts Movement	○	-
Scatter Graph	○	The station No. switching is not supported when the memory storage is used.
Statistics Graph	○	-
Line Graph	○	-
Trend Graph	○	Logging devices are not the targets of the station No. switching.
Historical Data List Display	○	
Bar Graph	○	-
Graphical meter	○	-
Panelmeter	○	-
Level	○	-
Slider	○	-
Alarm Observation	×	-
Alarm Display	○	The station No. switching is not supported when the alarm popup display is used.
Recipe display (record list)	○	-
Recipe	×	-
Logging	×	-
Project script	×	-
Screen script	○	-
Script parts	○	-
Object script	○	-
Status observation (project)	×	-
Status observation (screen)	○	Trigger devices and offset devices are the targets of the station No. switching.

Function name	Station No. switching	Remarks
Operation Log	×	-
Document Display	○	-
Video/RGB Display	×	-
MES interface function	×	-
Time action	×	-
Trigger action (project)	×	-
Trigger action (screen)	○	-
Device Data Transfer	×	-
Language switching	×	-
System language switching	×	-
Screen switching	×	-
System information	×	-

(3) The channels compatible with the station No. switching

The station No. switching can be set for all the channels (CH1 to CH4).
For the setting procedure, refer to the following.

➟5.5.4 ■3 [Station No. Switching]

(4) Applicable range of the station No. switching

Select whether to use the station No. switching in the whole project or for each screen.
If you use the station No. switching in the whole project, set the station No. switching device to be used.
If you select whether to use the station No. switching or not for each screen, set the station No. switching device for each screen type.
After that, set whether to use the station No. switching or not for every screen.
For each setting procedure, refer to the following.

➟5.5.4 ■3 [Station No. Switching]
2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

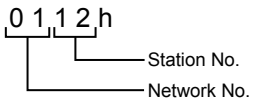
(5) Stored value of the station No. switching device

Use a word device whose data type is the unsigned BIN16 as the station No. switching device.
When the station No. switching is executed, the value to be stored in the station No. switching device differs depending on the system configuration of the monitor target.

(a) Data link system (MELSECNET/B, (II)), CC-Link system

Switching target	Storage value (hexadecimal)
Master station	0000h
Local station (1 to 64)	0001h to 0040h
Station No. set for each object (The monitor target which is the same as the one set if the station No. switching has not been set is used.)	00FEh
Host station (connection target)	00FFh

(b) Network system (MELSECNET/H, MELSECNET/10), Ethernet system, CC-Link IE TSN system, CC-Link IE Controller Network system, CC-Link IE Field Network system

Switching target	Storage value (hexadecimal)
Network No. (1 to 255) PLC station No. (1 to 255)	The following shows the relation between the switching targets and the storage values. • Upper 8 bits: Network No. • Lower 8bits: Station number Example) Network No.: 1, PLC station No.: 18 
Station No. set for each object (The monitor target which is the same as the one set if the station No. switching has not been set is used.)	00FEh

Switching target	Storage value (hexadecimal)
Host station (connection target)	00FFh

(6) Using an internal device (GD) as the station No. switching device

The GOT starts monitoring the module connected to the station No. 0 of the network No. 0 from right after the GOT is powered on until the value of the station No. switching device (GD) is set.
In this case, a system alarm due to the communication timeout may occur depending on the connection type.
To avoid the occurrence of the system alarm, create an initially-displayed screen with no object and set the station No. switching device (GD) and its value on the screen.

(7) Touch switches, trigger action function, and script function operating in the destination station

To execute the actions of touch switches, the trigger action function, and the script function by using the devices of the destination station after the station No. switching, select [Include touch switch action, trigger action (screen), and script (screen) for Station No. Switching].
If [Include touch switch action, trigger action (screen), and script (screen) for Station No. Switching] is not selected, each object operates as follows.

Object	Target device	Monitor target
Touch switch	The device to specify the display status of the ON/OFF figure	Device of the destination station after the station No. switching
	The device to specify a comment of the comment text	
	The device of the monitor target	The device whose station No. was set in GT Designer3
Trigger action (screen)	Trigger device	The device whose station No. has been switched
	Actions for when the condition is satisfied	The device whose station No. was set in GT Designer3
Script (screen)	Screen script, object script	The device whose station No. has been switched
	Script function (monitor device)	
	Script function (write device)	The device whose station No. was set in GT Designer3

(8) Redrawing the screen after the station No. switching

The screen objects are redrawn immediately after the station No. switching.
Thus, the display speed of the object may become slow temporarily.

(9) Switching the station No. during the input operation

When using the numerical input or text input, switch the station number after the completion of the input operation.
If the station No. is switched during the input operation, the data may not be written to the monitored device correctly. To write the station No. from the controller to the station No. switching device, use the Key Window Output signal (System signal 2-1.b11) after the completion of the input operation.
The Key Window Output signal is on while the key window is displayed.

(10) Station No. switching while a dialog window is displayed

The dialog window operates according to the value of the station No. switching device which is set when the dialog window is displayed.
If the value of station No. switching device is changed while the dialog window is displayed, the display and operation of the object on the dialog window are not changed.
(The devices of the objects are the same as the device before the station No. switching.)

(11) Station No. switching for each object

The functions for which the station No. switching cannot be executed operate with the device whose station number is set by each function.
If the objects which are not compatible with the station No. switching are placed on the same screen where the objects compatible with the station No. switching are placed, note that the different station numbers are monitored for each object.

■2 How to use the station No. switching setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) How to switch the station numbers

Switch the station numbers with either of the following methods.

- Station No. switching with the station No. switching device

  By storing the value which indicates the switching target in the station No. switching device, the station No. switching is executed.

  For the storage values of the station No. switching devices, refer to the following.

  ➟5.5.4 ■1 Specifications of the station No. switching setting

- Station No. switching with touch switches (Change Station No. Switch)

  Touching the touch switch for which the station No. switching is set executes the station No. switching.
  In this case, the setting of the station No. switching device is required.
  For the setting of touch switches, refer to the following.

  ➟8.2.8 [Change Station No. Switch] dialog

(2) Setting procedure

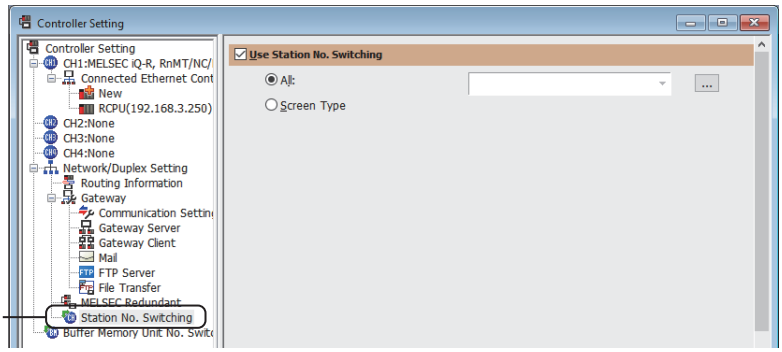
Step 1 When executing the station No. switching for each screen, select [Switch Station No.] in the property of the each screen for which the station No switching is executed.

➟2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

Step 2 Select [Common] → [Controller Setting] from the menu.

Step 3 The [Controller Setting] window appears.

Select the [Station No. Switching] menu from the controller setting tree.



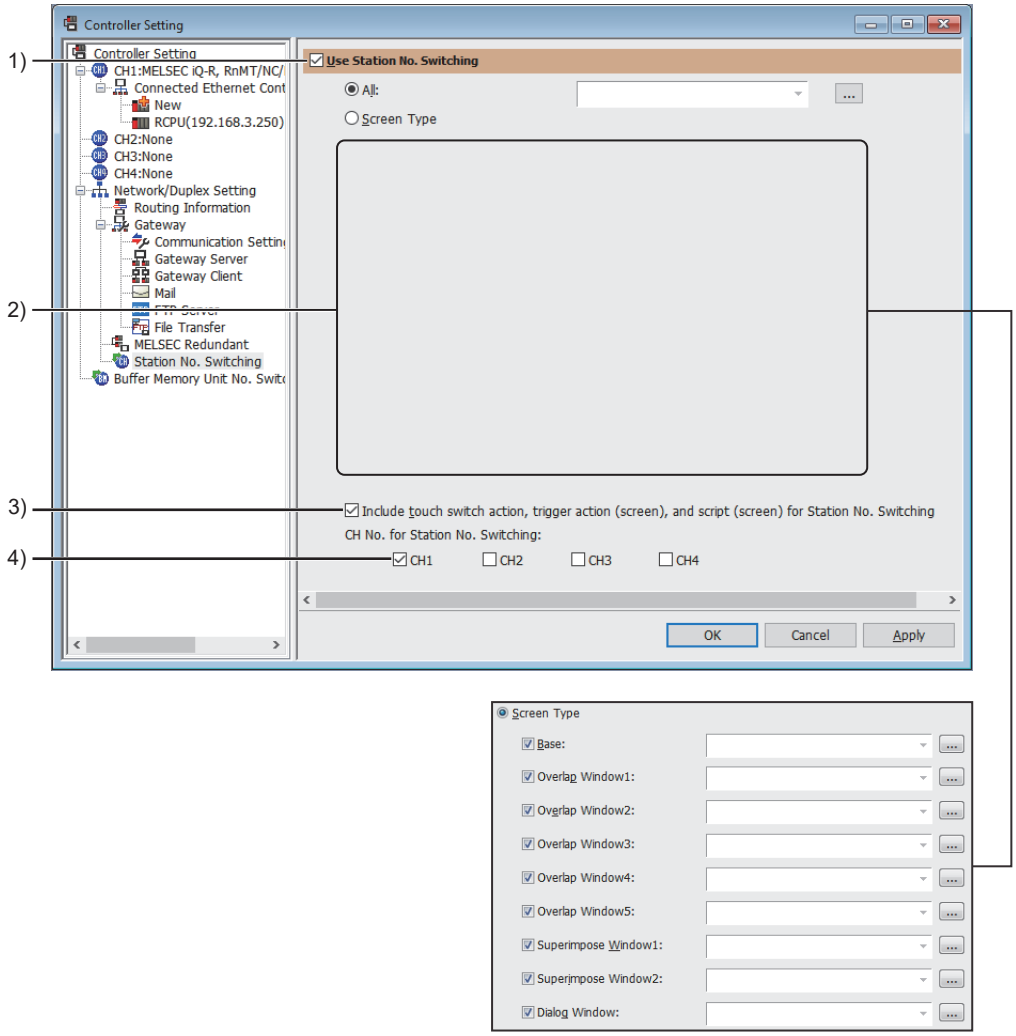
Step 4 Select [Use station No. Switching].

After selecting [Use station No. Switching], configure the settings of the station No. switching.

➟5.5.4 ■3 [Station No. Switching]

■3 [Station No. Switching]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[All]**
The station No. switching is executed to the whole project.
After selecting [All], set the station No. switching device.
Word devices whose data types are unsigned BIN 16 can be used as the station No. switching devices.

2) **[Screen Type]**
The station No. switching is applied for each screen type.
After the selection of [Screen Type], select the screen type to be switched the station No., and set the station No. switching device.
Word devices whose data types are unsigned BIN 16 can be used as the station No. switching devices.

3) **[Include touch switch action, trigger action (screen), and script (screen) for Station No. Switching]**
Sets the devices of touch switches, trigger actions (per screen), and screen scripts as the target of station No. switching.
For details, refer to the following.
➟5.5.4 ■1 (7) Touch switches, trigger action function, and script function operating in the destination station

4) **[CH No. for Station No. Switching]**
Selects the channel No. for which the station No. switching is executed.

■4 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the station No. switching function as required.
The following shows the functions that are available by the relevant settings.

(1) Property of screens

The property can be set for each screen.
Select the screen editor on which the key window is to be set and select [Screen] → [Display Properties] from the menu to display the [Screen Property] dialog.

➟2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

Function	Setting item
Setting whether to execute the station No. switching or not for each screen	Select [Switch Station No.] from in the [Basic] tab

5.5.5 Configuring the settings for switching the buffer memory unit No. of the monitoring target

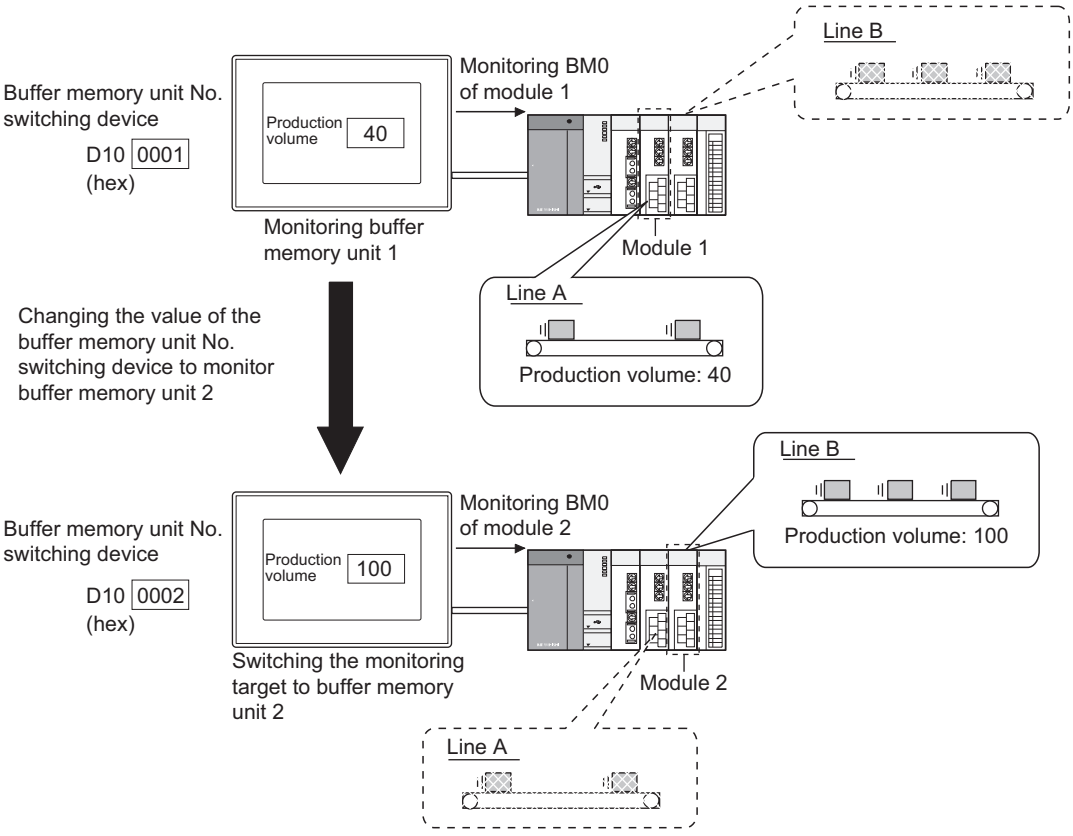
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the buffer memory unit No. switching
■2 How to use the buffer memory unit No. switching
■3 Precautions
■4 [Buffer Memory Unit No. Switching]
■5 Relevant settings

The GOT switches the buffer memory unit No. of the monitoring target by using the buffer memory unit No. switching device.
For systems in which multiple machines performing the same control are connected to a network, the number of monitor screens is unnecessary to match with that of machines. You can monitor the multiple machines on one monitor screen by switching the buffer memory unit No.
Since the number of objects to be set can be reduced, you can save the built-in memory space of the GOT.
You can perform the buffer memory unit No. switching to the buffer memory that can be monitored by the GOT.
For the buffer memory that can be monitored by the GOT (accessible range), refer to the following.

➟12.4Device Range and Settings of Each Controller

The GOT monitors the machine corresponding to the value stored in the buffer memory unit No. switching device.
Upon the buffer memory unit No. switching, the GOT redraws displayed figures and objects.



■1 Specifications of the buffer memory unit No. switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Controllers supporting the buffer memory unit No. switching

The following shows the controllers supporting the buffer memory unit No. switching.

Type	Controller
PLC, CNC, C Controller module, motion controller, robot controller, MELIPC	MELSEC MX Controller, MELSEC iQ-R series, MELSEC iQ-F, MELSEC-Q, MELSEC-QS, MELSEC-L, MELSEC-QnA, MELSEC-A, C Controller module, Motion CPU (MELSEC iQ-R series), Motion CPU (Q series), Motion CPU (A series), CNC C70, robot controller CRnQ-700, MELIPC

(2) Functions supporting the buffer memory unit No. switching

○ : Supported , ×: Unsupported

Function name	Buffer memory unit No. switching	Remarks
Touch switch	○	Indirect devices are also subject to the buffer memory unit No. switching. Screen switching devices and station No. switching devices are not subject to the buffer memory unit No. switching.
Numerical display	○	-
Numerical input	○	-
Text display	○	-
Text input	○	-
Comment display	○	-
Lamp	○	-
Parts display	○	-
Parts movement	○	-
Clock display	×	-
Scatter graph	○	The buffer memory unit No. switching cannot be executed when the memory storage is used.
Statistics graph	○	-
Line graph	○	-
Trend graph	○	Logging devices are not subject to the buffer memory unit No. switching.
Historical data list display	○	
Bar graph	○	-
Graphical meter	○	-
Panelmeter	○	-
Level display	○	-
Data list display	○	-
Slider	○	-
Alarm observation	×	-
Alarm display	○	The buffer memory unit No. switching cannot be executed in the alarm popup display.
Recipe display (record list)	○	-
Recipe	×	-
Logging	×	-
Project script	×	-
Screen script	○	-
Script parts	○	-
Object script	○	-
Status observation (project)	×	-
Status observation (screen)	○	-

Function name	Buffer memory unit No. switching	Remarks
Operation log	×	-
Document display	○	-
Video/RGB display	×	-
MES interface function	×	-
Time action	×	-
Trigger action (project)	×	-
Trigger action (screen)	○	Devices set on the destination screen are not subject to the buffer memory unit No. switching.
Device data transfer	×	-
Language switching	×	-
System language switching	×	-
Screen switching	×	-
System information	×	-

(3) Applicable range of the buffer memory unit No. switching

You can select whether to use the buffer memory unit No. switching in the whole project or for each screen.
To use the buffer memory unit No. switching in the whole project, set the buffer memory unit No. switching device to be shared.
To select whether to use the buffer memory unit No. switching for each screen, set the buffer memory unit No. switching device by screen type.
Additionally, set whether to use the buffer memory unit No. switching for every screen in the screen property.
For each setting procedure, refer to the following.

➟5.5.5 ■4 [Buffer Memory Unit No. Switching]
2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

(4) Data type of the buffer memory unit No. switching device

Use a word device whose data type is unsigned BIN16 as the buffer memory unit No. switching device.

(5) Judgment of communication status

When you attempt to switch the buffer memory unit No. to a nonexistent one, the switching is not executed and the buffer memory unit No. switching device stores -1.
This enables you to judge the communication status (normal or abnormal) of the buffer memory unit.
When you monitor a buffer memory that always stores a value other than -1, if the buffer memory stores -1, the communication status is abnormal.
When a value other than -1 is stored, the communication status is normal.
Example)
For G0 (basic parameter 1) of QD74MH8, the device value ranges from 0 to 3. If G0 stores -1, the communication status is abnormal.

■2 How to use the buffer memory unit No. switching

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) How to switch buffer memory unit numbers

The buffer memory unit No. switching is executed by storing a value, which indicates the switching destination, in the buffer memory unit No. switching device.
The buffer memory unit No. switching device stores a value whose data type is unsigned BIN16.

(2) Setting procedure

Step 1 To execute the buffer memory unit No. switching by screen, select [Switch buffer memory unit No.] in the property of each screen on which the buffer memory unit No. switching is executed.

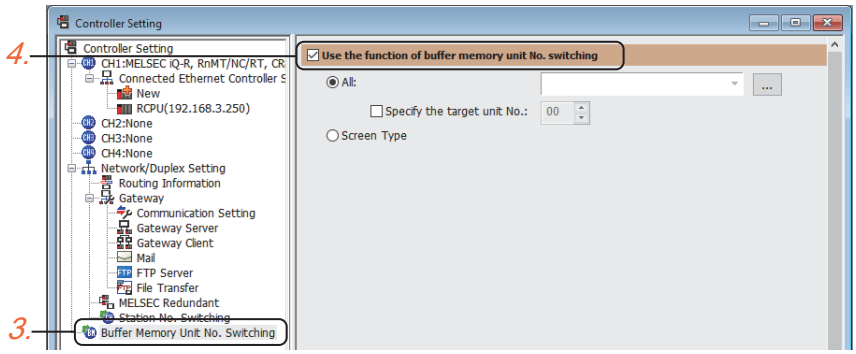
➟2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

Step 2 Select [Common] → [Controller Setting] from the menu.

Step 3 In the [Controller Setting] window, select the [Buffer Memory Unit No. Switching] menu from the controller setting tree.

Step 4 Select [Use the function of buffer memory unit No. switching].
Then, configure the settings for the buffer memory unit No. switching.

➟5.5.5 ■4 [Buffer Memory Unit No. Switching]



■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Buffer memory unit No. switching in dialog windows

For dialog windows, the GOT obtains the value stored in the buffer memory unit No. switching device when a dialog window is opened.
While a user-created dialog window is being displayed, even if the value of the buffer memory unit No. switching device is changed, the buffer memory unit No. switching is not executed.

(2) Operation when the buffer memory unit No. switching is disabled

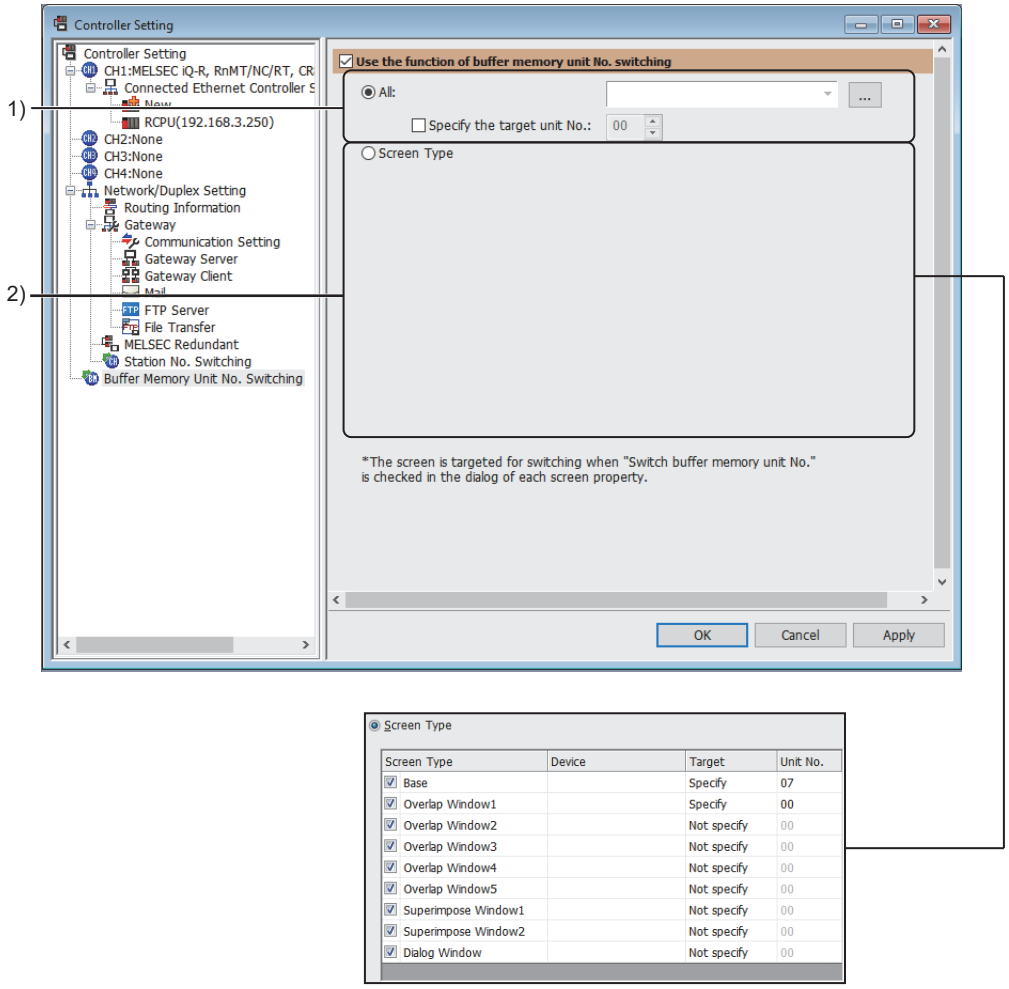
In the following cases, the GOT cannot execute the buffer memory unit No. switching and monitors the buffer memory unit No. set in the device setting of each object.

- The value of the buffer memory unit No. switching device is outside the range.
- The GOT cannot monitor the buffer memory unit to be switched to due to communication errors, such as a cable disconnection.
- The buffer memory unit No. to be switched to is outside a range of 0x00 to 0xFF.

After the GOT startup, if the GOT cannot monitor the buffer memory unit to be switched to due to communication errors, such as a cable disconnection, the GOT switches back to monitor the buffer memory unit last monitored.

■4 [Buffer Memory Unit No. Switching]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[All]**

Enables the buffer memory unit No. switching in the whole project.
Select this item, and then set the buffer memory unit No. switching device.
Word devices whose data types are unsigned BIN16 are usable.

Item	Description
[Specify the target unit No.]	Set the buffer memory unit No. to be switched.

2) **[Screen Type]**

Enables the buffer memory unit No. switching by screen type.
Select this item, select the type of screens in which the buffer memory unit No. switching is performed, and then set the buffer memory unit No. switching device and others.

Item	Description
[Screen Type]	Select a screen in which the buffer memory unit No. switching is performed.
[Device]	Set the buffer memory unit No. switching device. Word devices whose data types are unsigned BIN16 are usable.
[Target]	Set whether to specify the selected screen as the switching target. Select this item, and then set the buffer memory unit No. to be switched in [Unit No.].
[Unit No.]	Set the buffer memory unit No. to be switched.

■5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the buffer memory unit No. switching function as required.
The following shows the functions that are available by the relevant settings.

(1) Property of screens

The property can be set for each screen.
Select the screen editor on which the key window is to be set and select [Screen] → [Display Properties] from the menu to display the [Screen Property] dialog.

➟2.7.1 ■1 [Basic] tab
2.7.2 ■1 [Basic] tab

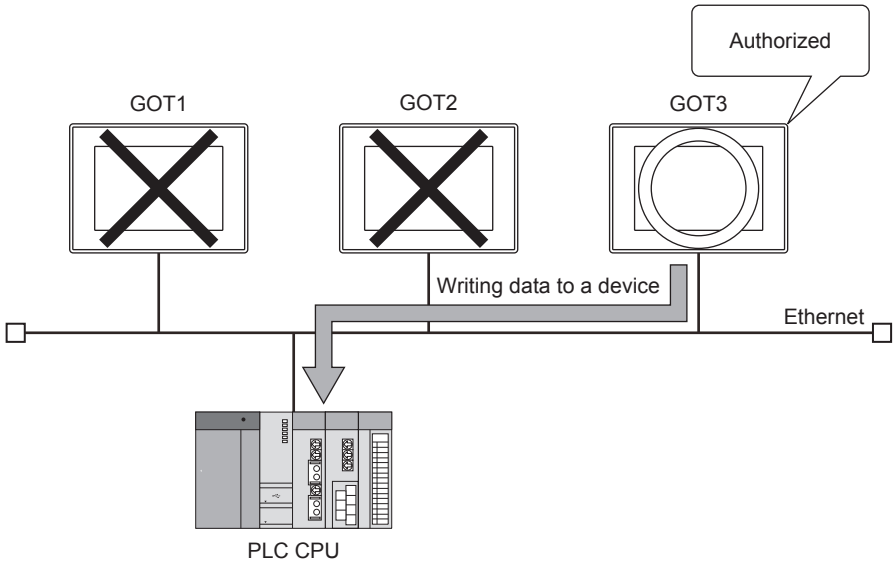
Function	Setting item
Setting whether to execute the buffer memory unit No. switching by screen	[Switch buffer memory unit No.] on the [Basic] tab

5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

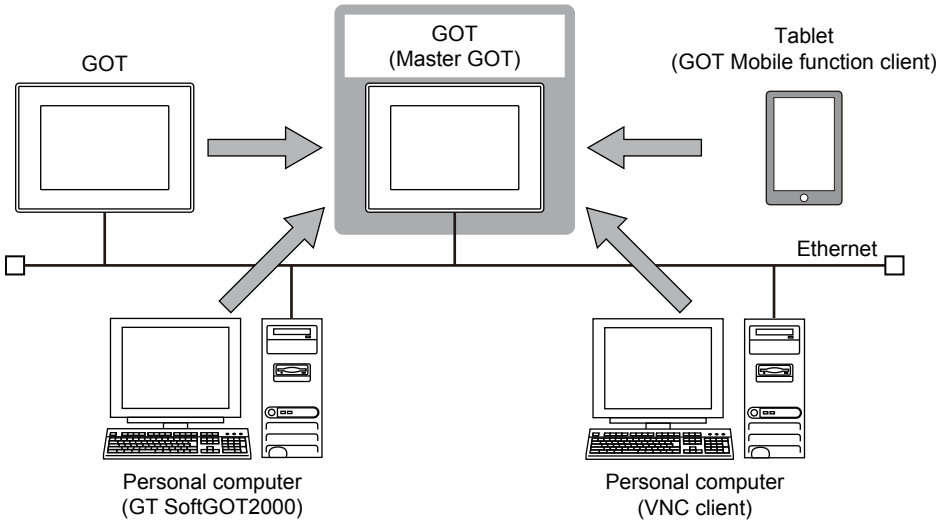
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟5.6.1 Specifications of the GOT network interaction function
5.6.2 How to use the GOT network interaction function
5.6.3 Precautions
5.6.4 [GOT Network Interaction] dialog

The GOT network interaction function controls the authorization (operational authority) among pieces of equipment on the same network to prevent simultaneous operations.



An authorization control group is formed consisting of such pieces of equipment. In the group, a GOT is specified as the master GOT to control the authorization.
The other pieces of equipment in the group communicate with the master GOT to obtain the authorization.



5.6.1 Specifications of the GOT network interaction function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Target equipment
■2 Authorization control scope
■3 Target screen
■4 Influences on other functions
■5 Required system application (extended function)

■1 Target equipment

The following equipment types are applicable to the authorization control when the GOT network interaction function is used.

- Master GOT: Equipment that controls authorization.
- Operator device: Equipment that requests for authorization and obtains it from the master GOT.

The recommended number of operator devices is as follows.

- When the master GOT is a GOT: Up to 7 operator devices per 1 master GOT
- When the master GOT is GT SoftGOT2000: Up to 15 operator devices per 1 master GOT

The following shows the applicable equipment types.

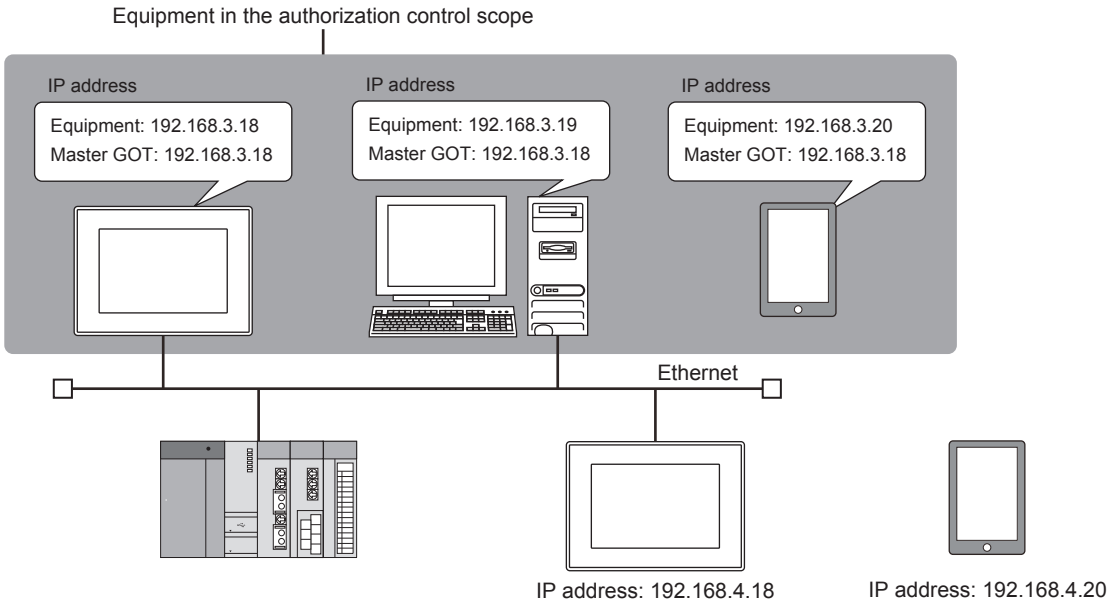
○ : Applicable, - : Not applicable

GOT	Operator device	Master GOT
GT27	○	○
GT25, GS25	○	○
GT23	○	-
GT SoftGOT2000	○	○
GT SoftGOT2000 (when the SoftGOT-GOT link function is used)	○	-
VNC client (VNC server function)	○	-
Client (GOT Mobile function)	○	-

■2 Authorization control scope

You can enable the authorization control for pieces of equipment when the following requirements are satisfied.

- The pieces of equipment are on the same subnet.
- The same master GOT is specified for the pieces of equipment.



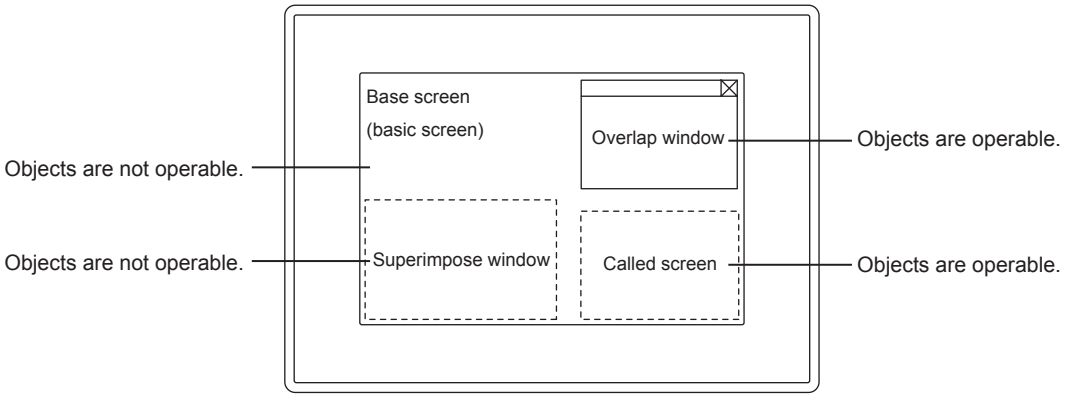
■3 Target screen

You can set whether the authorization is required to operate objects on a screen by screen basis.
The following shows the target screens for the authorization control.

- Base screen
- Window screen (when displayed as a superimpose window or overlap window)
- Mobile screen

When the authorization control is enabled in a screen, the applicable equipment needs the authorization to operate the objects on the screen.
If unauthorized equipment displays such a screen, the objects on the screen are not operable.
When the authorization control is disabled in a screen, the applicable equipment does not need the authorization to display the screen and operate the objects or the utility call key on the screen.
If the authorization control is enabled in some screens and disabled in others, the setting of each screen determines whether to activate the authorization control.
Example) Availability of operation on unauthorized equipment

- Base screen (Basic screen of the set overlay screen function): The authorization control is enabled.
- Superimpose window: The authorization control is enabled.
- Overlap window: The authorization control is disabled.
- Called screen (Screen called from the base screen): The authorization control is disabled.



■4 Influences on other functions

Enabling the GOT network interaction function influences other functions as follows.

Function	Influence
SoftGOT-GOT Link Function	The authorization control of the SoftGOT-GOT link function becomes disabled. The authorization control of the GOT network interaction function becomes enabled. Multiple GT SoftGOT2000 modules are connectable to one GOT. In this case, each GT SoftGOT2000 module must be run on different personal computers. If multiple modules of GT SoftGOT2000 are run on one personal computer, the modules cannot connect to the same GOT simultaneously. The popup display of the GOT network interaction function is applied to the GT SoftGOT2000 or GOT screen. ➟GT SoftGOT2000 Version1 Operating Manual
VNC Server Function	Even though the GOT network interaction function is enabled, the authorization control of the VNC server function remains active. To operate a screen in which the authorization control is enabled, the VNC server or VNC client requires the authorization from both the GOT network interaction function and the VNC server function. (When you perform operations on the VNC client, the VNC server obtains the authorization of the GOT network interaction function.) The popup display of the GOT network interaction function is applied to the VNC server or VNC client screen. ➟10.5 Viewing the GOT from a Personal Computer (VNC Server Function)
GOT Mobile function	To operate a screen in which the authorization control is enabled, the client requires the authorization from the GOT network interaction function. ➟10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

■5 Required system application (extended function)

Not available to GT SoftGOT2000.
To use the GOT network interaction function, a system application (extended function) of [GOT Network Interaction] is required.
Selecting [Use GOT network interaction function] in the [GOT Network Interaction] dialog incorporates the application into package data automatically.

➟5.6.4 [GOT Network Interaction] dialog

5.6.2 How to use the GOT network interaction function

➟■1 Setting on GT Designer3
■2 Settings in GT SoftGOT2000
■3 Operation on target equipment
■4 Authorization control and status notification with devices

■1 Setting on GT Designer3

Configure the following setting in all the projects of the GOTs that are under control of the GOT network interaction function.

Step 1 Select [Common] → [GOT Network Interaction] from the menu to display the [GOT Network Interaction] dialog.

➟5.6.4 [GOT Network Interaction] dialog

Step 2 Set the following items, and click the [OK] button.

- Select [Use GOT network interaction function].
- Set the IP address of the master GOT in [IP address].

Set the following items if necessary.

- [Port No.]
- [Guaranteed time of operational authority after the last operation]
- [Specify the home screen No.]

Step 3 To enable the authorization control for a screen, select [Target for exclusive control of operational authority] in the [Basic] tab in the [Screen Property] dialog.

➟2.7 Changing Screen Property

To collectively enable or disable the authorization control for all the base screens and window screens, configure the setting in the [GOT Network Interaction] dialog.
To collectively enable or disable the authorization control for all the mobile screens, configure the setting in [Exclusive Control of Operational Authority] in the [GOT Mobile Setting] window.

■2 Settings in GT SoftGOT2000

To use GT SoftGOT2000 as the master GOT, configure the following settings in GT SoftGOT2000.

Step 1 Select [Online] → [Communication Setup] from the menu.

Step 2 In the [GOT Network Interaction Function] tab in the [Communication Setup] dialog, configure the following settings.

- [Control authorization using GT SoftGOT2000 (this module)]: Select this item.
- [IP address]: Set the IP address of GT SoftGOT2000 (master GOT).
- [Port No.]: Set the port number of GT SoftGOT2000 (master GOT).

For details, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

■3 Operation on target equipment

On unauthorized equipment, when you switch a screen to another screen in which the authorization control is enabled, the equipment is automatically authorized if no equipment in the control group holds the authorization. The popup display appears on the applicable equipment.
On the popup display, you can check the authorization status, and manually grant or release the authorization.
For the details of operations and the differences by equipment, refer to the following.

➟(1) Obtaining the authorization
(2) Releasing the authorization
(3) Operation on the popup display

You can also use GOT internal devices to check the authorization status and control the authorization, such as prohibiting equipment from obtaining it.

➟5.6.2 ■4 Authorization control and status notification with devices

(1) Obtaining the authorization

On unauthorized eqiupment, when you switch a screen to another screen in which the authorization control is enabled, the equipment tries to obtain the authorization.
The screen is switched regardless of whether the equipment obtains the authorization.
To manually grant the authorization to equipment, touch the status icon on the popup display.
To grant the authorization of the VNC server function to the VNC server or VNC client, touch the message display area on the popup display.

➥(3) Operation on the popup display

When the set overlay screen function is used, the behavior of obtaining the authorization differs depending on the setting of the destination basic screen.

Setting of the destination basic screen	Automatic acquisition of the authorization
The authorization control is enabled.	The applicable equipment tries to obtain the authorization at screen switching. The automatic acquisition of the authorization can be disabled. ➥5.6.2 ■4 (1) Authorization control with devices
The authorization control is disabled.	The applicable equipment does not try to obtain the authorization at screen switching.

For the details of the set overlay screen function, refer to the following.

➥8.29 Placing Another Screen on a Screen

(2) Releasing the authorization

On the authorized equipment, when you switch a screen to another screen in which the authorization control is disabled, the equipment automatically releases the authorization. (Note that the authorization is not automatically released in some cases. For example, in the set overlay screen function, the destination screen contains a called screen in which the authorization control is enabled.)
When another equipment in the control group tries to obtain the authorization, even if the authorized equipment is displaying a screen in which the authorization control is enabled, the authorization is released from the authorized equipment.
However, if the authorization guarantee time is set, the authorization is not released until the set time elapses from the last operation.
To manually release the authorization, perform the operation on the popup display.

➥(3) Operation on the popup display

On the master GOT, you can also release the authorization from the authorized equipment by using the GOT internal devices.

➥5.6.2 ■4 (1) Authorization control with devices

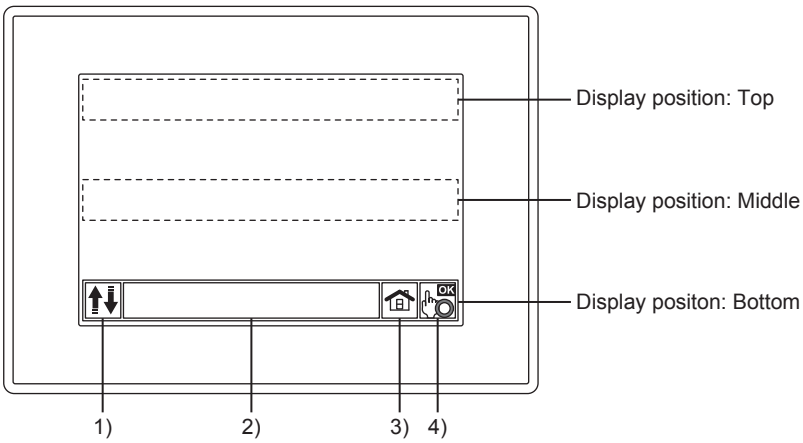
For the authorized GOT, the authorization is not released even if the GOT transitions to screen saver mode.

(3) Operation on the popup display

On the target equipment for the authorization control, you can check the authorization status and manually grant or release the authorization on the popup display.
The conditions for the popup display to appear differ depending on the target equipment.

Target equipment	Display condition
GT27, GT25, GT23, GS25 (other than the VNC server)	When a screen is switched to another screen in which the authorization control is enabled, the popup display appears.
GT SoftGOT2000	
GOT Mobile function client	
GOT (VNC server)	• When the authorization control of the VNC server function is enabled The popup display always appears on the screen. For the VNC client started with the exclusive password for monitoring, the popup display appears when a screen is switched to another screen in which the authorization control is enabled. • When the authorization control of the VNC server function is disabled The popup display appears when a screen is switched to another screen in which the authorization control is enabled.
VNC client	

The authorization is not required to perform operations on the popup display.
Example) Popup display on the GOT



1) **Display position switching button**
Switches the position of the popup display. (Top, middle, bottom)

2) **Message display area**
Displays information including the authorization status.
On the VNC server or VNC client, touching the message display area obtains the authorization of the VNC server function.
If you do so on the screen in which the authorization control is enabled, the authorization of the GOT network interaction function is obtained together.
The format of the IP address displayed in the message differs according to the equipment type.

Type	Format	Example
GT27, GT25, GT23, GS25	(IP address):g(GOT ID)	192.168.3.18:g1
GT SoftGOT2000	(IP address):s(Module No.)	192.168.3.19:s1
VNC client *1	(IP address):v1	192.168.3.20:v1
GOT Mobile function client	(IP address):m(Client No.)	192.168.3.21:m1

*1 The IP address of the VNC server is displayed.

3) **Home screen button**
Switches to the home screen.
The home screen differs depending on the target equipment.
- For equipment other than the GOT Mobile function client
  Base screen specified in [Specify the home screen No.] in the [GOT Network Interaction] dialog
- For the GOT Mobile function client
  Mobile screen specified in [Specify the home screen No.] of [Exclusive Control of Operational Authority] in the [GOT Mobile Setting] window

If no screen is set as the home screen, touching this button displays the lowest numbered screen.

4) **Status icon**
Indicates the status of the target equipment.
Touching a status icon obtains or releases the authorization.
(This action is not available if the GOT Mobile function client is authenticated by using a guest operator account.)
The type of the target equipment determines the icon to be displayed.

Equipment	When displaying a screen in which the authorization control is disabled	When displaying a screen in which the authorization control is enabled		
		Unauthorized	Authorized	In process of obtaining authorization
Equipment other than the VNC server and VNC client	-			
VNC server, VNC client (The authorization control of the VNC server function is disabled.)*1				
VNC server, VNC client (The authorization control of the VNC server function is enabled and the VNC server has the authorization.)				

Equipment	When displaying a screen in which the authorization control is disabled	When displaying a screen in which the authorization control is enabled		
		Unauthorized	Authorized	In process of obtaining authorization
VNC server, VNC client (The authorization control of the VNC server function is enabled and the VNC client has the authorization.)				

*1 For the VNC client started with the exclusive password for monitoring, the icon when the authorization control of the VNC server function is disabled appears.

■4 Authorization control and status notification with devices

In the GOT network interaction function, by using the devices for the authorization control and status notification, you can prohibit equipment from obtaining the authorization, check the authorization status, and perform other operations.
The type of the target equipment determines the devices to be used.

Target equipment	Devices for authorization control and status notification
GOT	GOT internal devices ➡12.1.3 GOT special register (GS)
GOT Mobile function client	Devices that are set in [Operational Authority Status Control Device] and [Operational Authority Status Notification Device] of [Exclusive Control of Operational Authority] in the [GOT Mobile Setting] window ➡10.19.6 [GOT Mobile Setting] window

(1) Authorization control with devices

The following shows how to control the operation of the GOT network interaction function with devices.

Target equipment	Control details	Operation	
		Equipment other than the GOT Mobile function client	GOT Mobile function client
All	Disabling the automatic acquisition of the authorization at the time to switch to a screen in which the authorization control is enabled	Turn on GS1795.b0.	Turn on b0 of [Operational Authority Status Control Device].
Master GOT	Prohibiting equipment except the master GOT in the control group from obtaining the authorization	Turn on GS1796.b0.	-
Master GOT	Disabling the authorization guarantee time	Turn on GS1796.b1.	-
Master GOT	Prohibiting equipment including the master GOT in the control group from obtaining the authorization	Turn on GS1796.b2.	-

To ignore the authorization guarantee time and forcibly release the authorization from the authorized equipment, perform the following operation on the master GOT: Turn on GS1796.b1 to disable the authorization guarantee time, and then turn on GS1796.b0 or GS1796.b2.

(2) Status notification with devices

The following shows how to check the authorization status of the GOT network interaction function with devices.

Target equipment	Notification details	Operation	
		Equipment other than the GOT Mobile function client	GOT Mobile function client
All	Notifying that the equipment obtains the authorization	GS1460.b0 turns on.	The b0 of [Operational Authority Status Notification Device] turns on.
All	Notifying that a screen requiring the authorization is being displayed	GS1460.b1 turns on.	The b1 of [Operational Authority Status Notification Device] turns on.
Equipment other than the GOT Mobile function client	Notifying the IP address of the master GOT when the equipment obtains the authorization	GS1461 and GS1462 store the data.	-
Equipment other than the GOT Mobile function client	Notifying the time (second) elapsed since the equipment obtained the authorization	GS1463 stores the data.	-
Equipment other than the GOT Mobile function client	Notifying the remaining authorization guarantee time (second)	GS1464 stores the data.	-
Master GOT	Notifying that any equipment in the control group obtains the authorization	GS1465.b0 turns on.	-
Master GOT	Notifying that equipment except the master GOT in the control group is prohibited from obtaining the authorization (GS1796.b0 is on.)	GS1465.b1 turns on.	-
Master GOT	Notifying that equipment including the master GOT in the control group is prohibited from obtaining the authorization (GS1796.b2 is on.)	GS1465.b2 turns on.	-
Master GOT	Notifying the IP address of the authorized equipment	GS1466 and GS1467 store the data.	-
Master GOT	Notifying the type of the authorized equipment	GS1468 stores the data. • 0: GOT • 1: GT SoftGOT2000 • 2: GOT Mobile function client	-
Master GOT	Notifying the identification information on the authorized equipment	GS1469 stores the data. • GOT: GOT ID number • GT SoftGOT2000: Module No. • GOT Mobile function client: Client number	-
Master GOT	Notifying the time (second) elapsed since the equipment obtained the authorization	GS1470 stores the data.	-

5.6.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for drawing

(1) Specifying the master GOT

Set the same master GOT IP address in the projects of the GOTs that are in the same authorization control group.
If you set different IP addresses, the exclusive authorization control is not available.

(2) Setting the home screen

When setting a screen as the home screen, make sure that the authorization control is disabled in the screen.
Otherwise, you cannot switch a screen to the home screen on unauthorized equipment.

■2 Precautions for use

(1) Master GOT startup timing

Start the master GOT earlier than other pieces of equipment in an authorization control group.
No equipment can obtain the authorization before the master GOT is started.

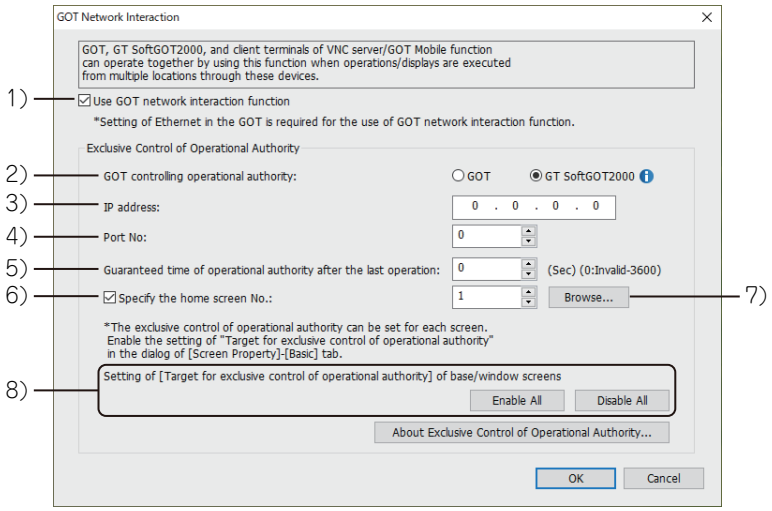
(2) Restrictions on the alarm popup display

While the popup display of the GOT network interaction function is being displayed, the alarm popup display is disabled.

5.6.4 [GOT Network Interaction] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [GOT Network Interaction] dialog, configure the settings for the GOT network interaction function.
Select [Common] → [GOT Network Interaction] from the menu to display this dialog.



1) **[Use GOT network interaction function]**
Enables the GOT network interaction function.

2) **[GOT type to control operational authority]**
Set the type of the master GOT.
When selecting [GT SoftGOT2000], configure the settings for the GOT network interaction function in GT SoftGOT2000.
For details, refer to the following.
➟GT SoftGOT2000 Version1 Operating Manual

3) **[IP address]**
Set the IP address of the master GOT.

4) **[Port No.]**
When selecting [GT SoftGOT2000] for [GOT type to control operational authority], specify the port number of the master GOT.
The setting range is [1024] to [65534].

When selecting [GOT] for [GOT type to control operational authority], the setting is fixed to [49159].

5) **[Guaranteed time of operational authority after the last operation]**

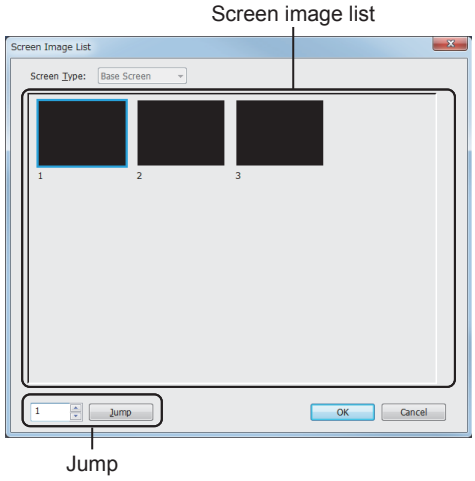
Set a period of time to hold the authorization after the authorized equipment is operated.
The setting range is [0] (Invalid) seconds to [3600] seconds.
This setting is disabled when GS1796.b1 is turned on.

6) **[Specify the home screen No.]**

Set a base screen as the home screen. On the popup display of the GOT network interaction function, touching the home screen button displays the set base screen.
Make sure that the authorization control is disabled in the set base screen.

7) **[Browse] button**

Displays the [Screen Image List] dialog.
You can check screen images and select a screen as the home screen.



- **[Screen Type]**
  Displays the screen type.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

8) **[Setting of [Target for exclusive control of operational authority] of base/window screens]**

Item	Description
[Enable All] button	Selects [Target for exclusive control of operational authority] for all the base screens and window screens.
[Disable All] button	Clears [Target for exclusive control of operational authority] for all the base screens and window screens.

5.7 Checking the Interface Settings of the GOT ([I/F Communication Setting])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟5.7.1 Specifications of the I/F communication setting
5.7.2 How to use the I/F communication setting
5.7.3 [I/F Communication Setting] dialog

In the [I/F Communication Setting] dialog, set the communication interface of the GOT.

5.7.1 Specifications of the I/F communication setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Communication interface configuration

The following shows the GOT communication interfaces that appear in the [I/F Communication Setting] dialog.
The usable interfaces vary by GOT model.
For the details of each communication interface, refer to the following.

➟GOT2000 Series User's Manual (Hardware)
GOT2000 Series Connection Manual for a controller used

(1) Communication interfaces of GT27, GT25-S, and GT25-V

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485]	[0], [1] to [4], [5] to [8]
	[I/F-2: RS232]	[0], [1] to [4], [5] to [8], [A]
	[I/F-3:USB]	[9]
Ethernet interface	[Ethernet]	[0], [1] to [4], [9], [A], [Multi]
Extension interface	[1st]	[0], [1] to [4], [5] to [8], [A], [-]
	[2nd]	[0], [1] to [4], [5] to [8], [A], [-]
	[3rd]	[0], [1] to [4], [5] to [8], [A], [-]

The wireless LAN interface setting does not appear in the [I/F Communication Setting] dialog.
For the wireless LAN interface setting, refer to the following.

➟5.4.1 Setting the GOT IP address

(2) Communication interfaces of GT25-W, GT2505-V, GT25HS-V, and GS25

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485]	[0], [1] to [4], [5] to [8]
	[I/F-2: RS232]	[0], [1] to [4], [5] to [8], [A]
	[I/F-3:USB]	[9]
Ethernet interface	[Ethernet]	[0], [1] to [4], [9], [A], [Multi]

For GT25HS-V, do not select any item other than the above.
Otherwise, the setting becomes invalid.
The wireless LAN interface setting does not appear in the [I/F Communication Setting] dialog.
For the wireless LAN interface setting, refer to the following.

➟5.4.1 Setting the GOT IP address

(3) Communication interfaces of GT23

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485]	[0], [1] to [2], [5] to [8]
	[I/F-2: RS232]	[0], [1] to [2], [5] to [8], [A]
	[I/F-3:USB]	[9]
Ethernet interface	[Ethernet]	[0], [1] to [2], [9], [A], [Multi]

(4) Communication interfaces of GT2107-W, GT2104-R, and GS21

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485]	[0], [1] to [2], [8], [9]
	[I/F-2: RS232]	[0], [1] to [2], [8], [9], [A]
	[I/F-3:USB]	[9]
Ethernet interface	[Ethernet]	[0], [1] to [2], [9], [A], [Multi]

(5) Communication interfaces of GT2105-Q

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485]	[0], [1] to [2], [8], [9]
	[I/F-2: RS232]	[0], [1] to [2], [8], [9], [A]
	[I/F-3:USB]	[9]

(6) Communication interfaces of GT21-P

Interface		Settable channel number
Standard interface	[I/F-1: RS422/485/232(Side)]	[0], [1] to [2], [8], [9]
	[I/F-2: RS232(Back)]	[0], [1] to [2], [8], [9], [A]
	[I/F-3:USB]	[9]
Ethernet interface	[Ethernet]	[0], [1] to [2], [9], [A], [Multi]

5.7.2 How to use the I/F communication setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting with GT Designer3

Step 1 Select [Common] → [I/F Communication Setting] from the menu.

Step 2 The [I/F Communication Setting] dialog appears.

Check and set the interface connection setting.

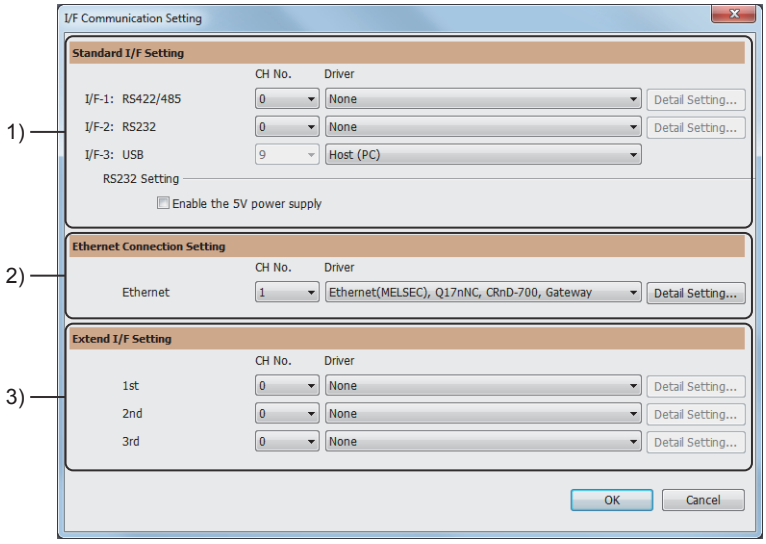
➟5.7.3 [I/F Communication Setting] dialog

■2 Using the parameter reflection function of MELSOFT Navigator

When setting [Controller Setting] in GT Designer3 using the parameter function of MELSOFT Navigator, all of I/F Communication Setting are grayout and cannot be edited.Set these items at [Controller Setting] or [Peripheral Unit Setting].

5.7.3 [I/F Communication Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Standard I/F Setting]**

Set the channel No. and communication driver for the communication interface that included as standard.

Item	Description
[I/F-1] to [I/F-3]	Displays the communication type of standard interfaces 1 to 3. For the details of each standard interface, refer to the following. ➟5.7.1 ■1 Communication interface configuration
[CH No.]	Set a channel number for each standard interface. The number of settable channels varies by GOT model. • 0: Does not use the standard interface. • 1 to 4: Used for the controllers of channel numbers 1 to 4 set in [Controller Setting]. • 5 to 8: Used for the barcode function, the RFID function, the remote personal computer operation function (Serial), and the GOT (Extended Computer). • 9: Used for the host station (personal computer). • A: Used for the report function (with a serial printer) and the hard copy function (with a serial printer).
[Driver]	Set a communication driver for each standard interface. The settable communication drivers vary by GOT model or connection type. For details, refer to the following. ➟GOT2000 Series Connection Manual for a controller used
[Detail Setting] button	Displays the [Detail Setting] dialog. Set the connection details, such as the number of retries and the communication timeout period. ➟12.15.5 [Detail Setting] dialog
[Enable the 5V power supply] [Enable the 5V power supply (for GT14-RS2T4-9P only)] (GT2505-V only)	Enables the 5 V power supply feed function through the standard interface ([I/F-2:RS232]). Not available to GT23, GT21, GT SoftGOT2000, and GS21.

2) **[Ethernet Connection Setting]**

Set a channel number and a communication driver for each Ethernet interface.

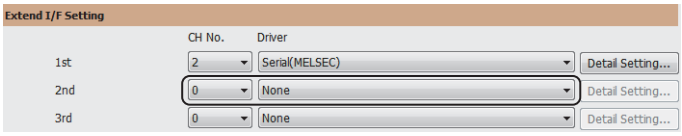
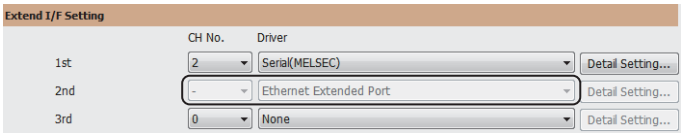
Not available to GT2105-Q.

Item	Description
[CH No.]	Set a channel number for each Ethernet interface. The number of settable channels varies by GOT model. • 0: Does not use the Ethernet interface. • 1 to 4: Used for the controllers of channel numbers 1 to 4 set in [Controller Setting]. • 9: Used for the Ethernet download. • A: Used for the remote personal computer operation function (Ethernet), the VNC server function, the gateway function, and the MES interface function. • Multi: Used for the multi-channel Ethernet connection.
[Driver]	Set a communication driver for each Ethernet interface. The settable communication drivers vary by GOT model or connection type. For details, refer to the following. ➟GOT2000 Series Connection Manual for a controller used
[Detail Setting] button	Displays the [Detail Setting] dialog. Set the connection details, such as the number of retries and the communication timeout period. ➟12.15.5 [Detail Setting] dialog

3) **[Extend I/F Setting]**

Not available to GT2505-V, GT25HS-V, GT23, GT21, and GS21.

Set a channel number and a communication driver for the 1st to 3rd stages of the extension interface.

Item	Description
[1st] to [3rd]	Displays the communication type of the extension interface (1st to 3rd stages).
[CH No.]	Set a channel number for each stage of the extension interface. The number of settable channels varies by GOT model. • 0: Does not use the extension interface. • 1 to 4: Used for the controllers of channel numbers 1 to 4 set in [Controller Setting]. • 5 to 8: Used for the barcode function, the RFID function, and the remote personal computer operation function (Serial). • A: Used for the report function (with a serial printer), the hard copy function (with a serial printer), the remote personal computer operation function (Ethernet), the video output function, the VNC server function, the gateway function, and the MES interface function. • -: Indicates an unused stage when [Enable Ethernet extended port] is selected in the [Extended Port] tab of the [GOT Ethernet Setting] window ([GOT IP Address Setting]).  When the first stage is used and the second and third stages are not used  For the second stage, [-] appears in [CH No.] and [Ethernet Extended Port] appears in [Driver]. ➟5.4.1 ■3 (2) [Extended Port] tab, [Port 2] tab
[Driver]	Set a communication driver for each stage of the extension interface. The settable communication drivers vary by GOT model or connection type. For details, refer to the following. ➟GOT2000 Series Connection Manual for a controller used
[Detail Setting] button	Displays the [Detail Setting] dialog. Set the connection details, such as the number of retries and the communication timeout period. ➟12.15.5 [Detail Setting] dialog

5.8 Comment Setting ([Comment])

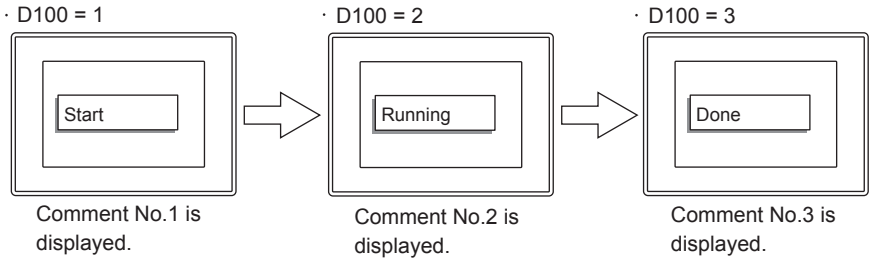
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡5.8.1 Specifications of comments
5.8.2 How to use comment
5.8.3 Precautions
5.8.4 Setting comments

Comments are the character strings registered to the project by a user.
Comments can be used for displaying the character strings with each object.
Comments are used for displaying the same character string with multiple objects or for displaying messages which are changed by the device value.
Comments supporting multiple languages can be displayed with the language switching device.
Example) Changing a message to be displayed on the comment display according to the device value of D100

Comment group No. 1

Comment No.	Column No.1
1	Start
2	Running
3	Done
⋮	⋮



5.8.1 Specifications of comments

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Number of comments

Item	Description
Max. No. of comment groups for a project	500
Max. No. of comments for a comment group	32767
Max. No. of comment columns for a comment group	30

■2 Number of characters

Item	Description
Comment group title	Up to 32 characters
Comment	Up to 1024 characters

■3 Applicable functions

- Touch switch
- Lamp
- Comment display
- Historical data list display
- Alarm display (user)
- Simple alarm display *1
- Alarm popup display
- Recipe display (record list) *1
- Graphical meter
- Document display
- Comment print *1
- Hyperlink object

*1 Windows fonts are not usable.

■4 Applicable font

(1) Font

- 12 dots (Standard, HQ Mincho, HQ Gothic)
- 16 dots (Standard, HQ Mincho, HQ Gothic)
- Windows font

(2) KANJI region

- Japan
- China(GB)-Mincho
- China(Big5)-Gothic

■5 Display attributes

The display attributes are settable for each comment.
The display attributes valid for displaying a comment vary with the object.

Object name	Text color	Invert	Blink	High quality font	Text style	Shade color
Touch switch	Selectable	Nonexistent	Nonexistent	Comment group setting	Selectable	Selectable
Lamp	Selectable	Nonexistent	Nonexistent	Selectable	Selectable	Selectable
Comment display	Selectable	Selectable	Selectable	Selectable	Selectable	Selectable
Historical data list display	Object setting	Nonexistent	Nonexistent	Object setting	Object setting	Object setting
Alarm display (user), simple alarm display	Object setting	Nonexistent	Nonexistent	Object setting	Object setting	Object setting
Alarm popup display	Varying with the condition	Nonexistent	Nonexistent	Object setting	Object setting	Object setting
Recipe display (record list)	Object setting	Nonexistent	Nonexistent	Object setting	Object setting	Object setting
Graphical meter	Selectable	Nonexistent	Nonexistent	Object setting	Object setting	Object setting
Document display	Nonexistent	Nonexistent	Nonexistent	Nonexistent	Nonexistent	Nonexistent
Comment print	Nonexistent	Nonexistent	Nonexistent	Nonexistent	Nonexistent	Nonexistent
Hyperlink object	Selectable	Nonexistent	Nonexistent	Nonexistent	Selectable	Selectable

The following explains the details of each display attribute shown in the above table.

(1) Selectable

You can select the display attribute in the object setting or the one in the comment group setting.
To use the display attribute in the object setting, select [Change Attribute of Comment Setting] in the object setting.
To use the display attribute in the comment group setting, deselect this item.

(2) Nonexistent

The relevant display attribute is nonexistent for the object.
Accordingly, the display attribute in the comment group setting is invalid.

(3) Comment group setting

The display attribute in the comment group setting is used.
Accordingly, the display attribute in the object setting is invalid.

(4) Object setting

The display attribute in the object setting is used.
Accordingly, the display attribute in the comment group setting is invalid.

(5) Varying with the condition

When [Comment Color (System Alarm: Fixed)] is selected for [Switching Type] in [Alarm Text Color Switching] in the object setting, the display attribute in the comment group setting is used.

➟9.1.4 ■4 [Alarm Popup Display] dialog

When any other item is selected for [Switching Type], the display attribute in the object setting is used.

■6 Available file format for importing, exporting

Unicode text files and CSV files can be used.

5.8.2 How to use comment

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Register comments to a comment group.
Create comment groups according to the usage of the comments and register the comments.
If you set multiple comment columns in a comment group, the comments prepared in multiple languages can be switched with language switching devices.
The device comments, which are created by GX Works2 or GX Developer, can be read and registered as a comment group.
For information on how to register comments to a comment group, refer to the following.

➟6.1.6 ■4 [Device Comment / Device Definition List] dialog

■1 Using comments

The following shows how to use comments.

Step 1 Create a comment group according to the usage of the comments.

➟5.8.4 ■2 Creating a new comment group

Step 2 Open the comment group and register comments.

➟5.8.4 ■1 Opening comment group
5.8.4 ■3 Creating a new row
5.8.4 ■4 Inserting a row
5.8.4 ■5 Inserting a column

Step 3 Set the comments for each object.

➟8.2 Placing a Touch Switch
8.3 Placing a Lamp
8.7 Placing a Comment Display
8.10 Placing a Historical Data List Display
8.11 Placing an Alarm Display
8.12 Placing a Simple Alarm Display

■2 Comment group

A comment group is a group of comments.
To register the comments, create a comment group in a project.
Multiple comment groups can be created in a project.
If multiple comment groups are created, the comment groups can be used according to the purpose.
Example) Specifying a comment group No. with a device and changing the comment type to be displayed

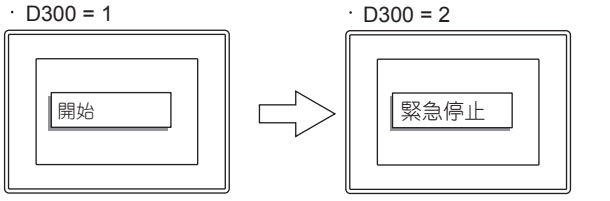
Comment group No.1: Comment for normal message

Comment No.	Column No.1	Column No.2
1	開始	Start
2	実行中	Running
3	完了	Done
⋮	⋮	⋮

Comment group No.2: Comment for error message

Comment No.	Column No.1	Column No.2
1	緊急停止	Emergency stop
2	通信エラー	Communication error
3	異物混入	Contamination
⋮	⋮	⋮

Comment group No.: Specified with D300



Comment for normal message (Comment group No.1) is displayed.

Comment for error message (Comment group No.2) is displayed.

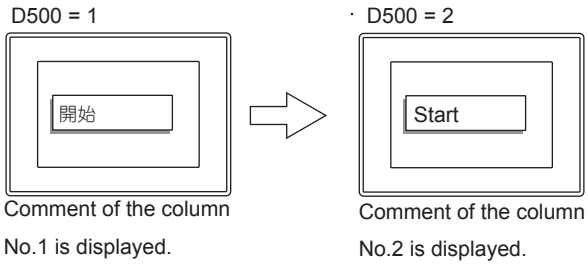
■3 Displaying multi-language comments (Language switching device)

If you set multiple comment columns in a comment group, the comments can be registered in multiple languages for one comment No.
The comments registered in multiple languages can be switched by switching the comment column to be displayed with the language switching devices.
Example) Switching comments with the language switching device

Comment group No. 1

Comment No.	Column No.1	Column No.2
1	開始	Start
2	実行中	Running
3	完了	Done
⋮	⋮	⋮

Comment No. to be displayed: 1
Language switching device: D500



(1) Comment group which does not operate with language switching devices

If a comment group which does not operate with a language switching device is required, configure the following settings in the language switching device settings.

- Select [Display] for [Alternative Display (when the language switching device value is out of the range (1-30) or comment column No. does not exist)].
- Set [1] for [Comment Column No.].

By the above settings, column No.1 is always displayed regardless of the value of the language switching device if the comment group has column No.1 only.

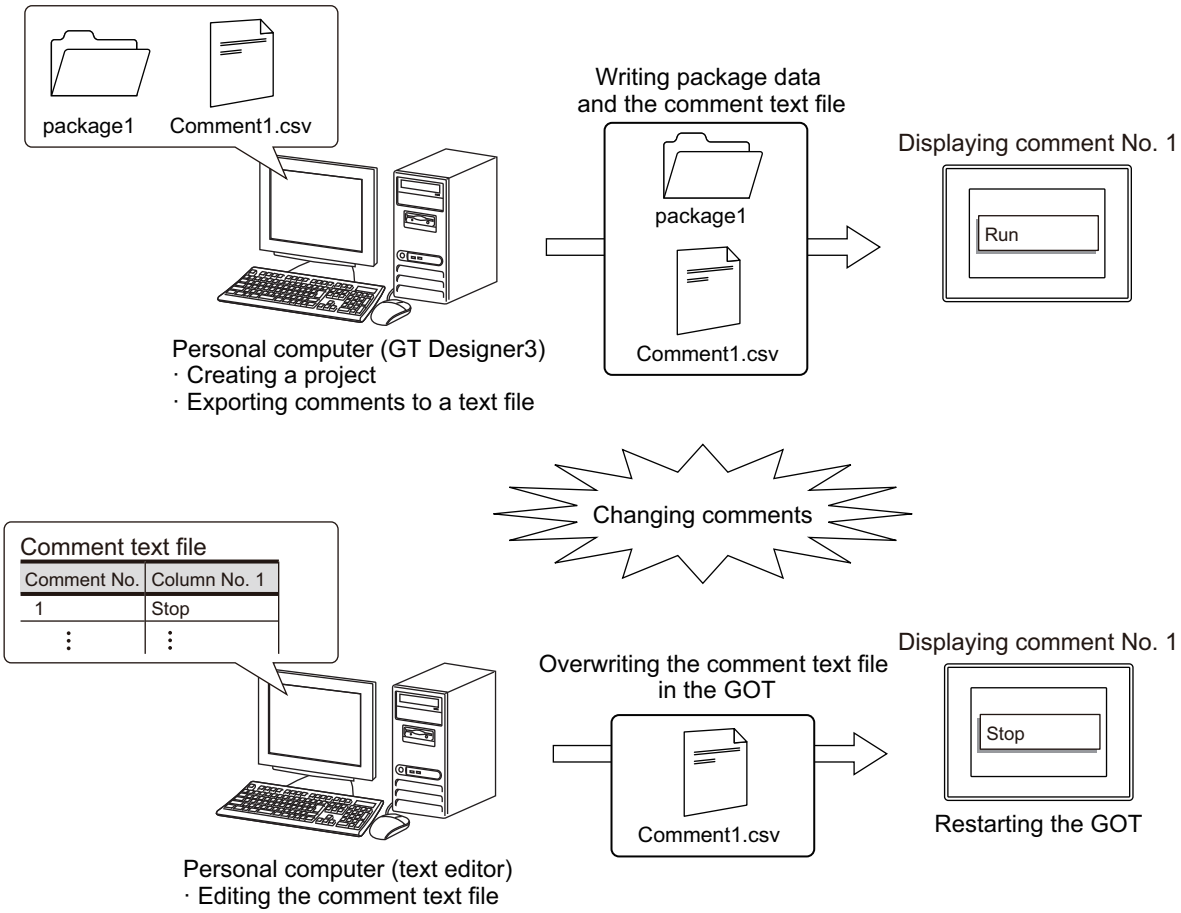
➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

■4 Displaying the comments of a text file

Not available to GT23, GT21, and GS21.

The GOT can display comments by reading a comment text file from the installed data storage.

After you change a comment, overwrite the comment text file in the data storage and restart the GOT to display the new comment.



To display the comments of a text file, configure the relevant settings in the project.

Configure the settings by comment group.

(1) Procedure for displaying the comments of a text file

Configure the following settings for a comment group from which comments are exported to a text file.

Step 1 In the [Comment Group Property] dialog, configure the settings as shown below.

- Select [Read comment data from the memory card].
- Click the [File Access] button to display the [File Access] dialog, and set the save destination and file name of a text file.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

Step 2 Export a target comment group to the text file.

In the [Save As] dialog, set [File name] and [Format] as shown below.

- [File name]: Set the file name specified in the [File Access] dialog.
- [Format]: Select [GT Designer3-GOT Common Format].

➟5.8.4 ■7 Exporting comments

Step 3 Save the text file to the folder specified in the [File Access] dialog.

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

If the text file is saved after package data has been written to the GOT, restart the GOT.

(2) Procedure for reflecting comment changes

Step 1 Edit a comment text file with a text editor, and overwrite the text file in the data storage with the edited one.

Step 2 Restart the GOT.

(3) Font restrictions

Windows fonts and HQ fonts are not usable to display the comments of a text file.
Even if a Windows font or HQ font is specified in the object setting dialog, the GOT displays the comments in a standard font.

Font specified in a text file	Font used on the GOT
12-dot HQ Gothic 12-dot HQ Mincho	12-dot Standard
16-dot HQ Gothic Windows fonts	16-dot Standard (Gothic)
16-dot HQ Mincho	16-dot Standard (Mincho)

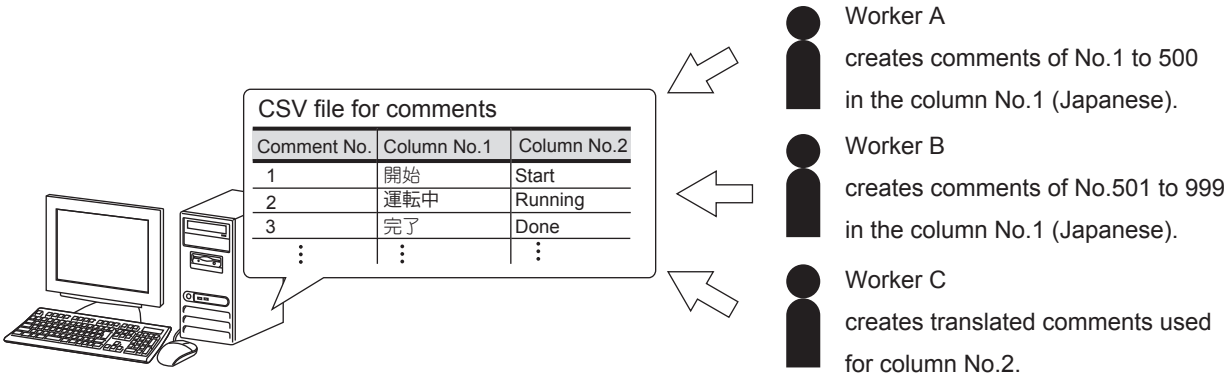
(4) Influence on the GOT startup time

When this function is used, the GOT reads a comment text file at startup, resulting in a longer startup time.
To minimize the increase of the startup time, enable this function only for the comment group in which comments may be changed.

■5 Importing or exporting comments

Comments can be imported or exported with a personal computer.
Available text files are Unicode text file and CSV file.
If you need to set a large amount of comments, working hours required to create the comments can be shortened by importing the text files for comments created by multiple persons.
To create a new text file for comments, using a text file exported from a comment group is recommended.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File



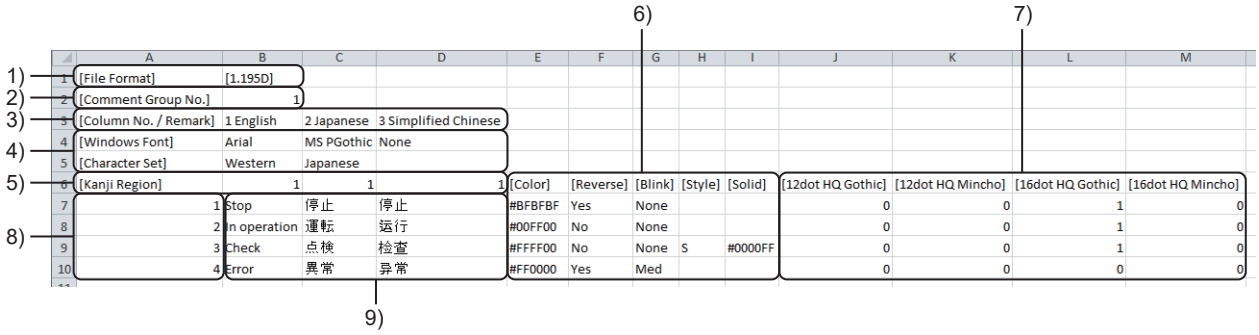
The format of the text files for comments is common for both Unicode text files and CSV files.
However, use the following delimiters for each file.

- Unicode text files: Tab (\t)
- CSV file: Comma (,)

The following three formats are supported.
Select a format for a comment text file according to the version of GT Designer3 to which the text file is imported.

Format	Description
[GT Designer3-GOT Common Format]	Compatible with GT Designer3 Version 1.195D or later. To display the comments of a text file, use this format. ➟(1) Format of the text file for comments
[Ver.1.165X - 1.190Y Compatible]	Compatible with GT Designer3 Version 1.165X to 1.190Y. ➟(2) Ver. 1.165X to 1.190Y-compatible format or Ver. 1.100E to 1.163V-compatible format
[Ver.1.100E - 1.163V Compatible]	Compatible with GT Designer3 Version 1.100E to 1.163V. ➟(2) Ver. 1.165X to 1.190Y-compatible format or Ver. 1.100E to 1.163V-compatible format

(1) Format of the text file for comments



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	[File Format]	[1.195D]											
2	[Comment Group No.]	1											
3	[Column No. / Remark]	1 English	2 Japanese	3 Simplified Chinese									
4	[Windows Font]	Arial	MS PGothic	None									
5	[Character Set]	Western	Japanese										
6	[Kanji Region]	1	1	1	[Color]	[Reverse]	[Blink]	[Style]	[Solid]	[12dot HQ Gothic]	[12dot HQ Mincho]	[16dot HQ Gothic]	[16dot HQ Mincho]
7	1	Stop	停止	停止	#BFBFBF	Yes	None			0	0	1	0
8	2	In operation	運転	运行	#00FF00	No	None			0	0	1	0
9	3	Check	点検	检查	#FFFF00	No	None	S	#0000FF	0	0	1	0
10	4	Error	異常	异常	#FF0000	Yes	Med			0	0	0	0

1) **Format version**
The format version is fixed at [1.195D].

2) **Comment group No.**
Set a comment group No.
The setting range is 1 to 500.

3) **Column No., remarks**
Set a column No. of a comment column and a remarks for the comment columns.
Separate the column No. and the remarks with a one-byte space.
The setting range of the column Nos. is 1 to 30.
Up to 32 characters can be set as remarks.

4) **Windows font and character set**
Displays the Windows fonts that are selected in the [Comment Group Property] dialog.
Displays the character sets that are specified for the selected Windows fonts.
For the setting details, refer to the following.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

Even if Windows fonts are set for the comments of a text file, the GOT displays the comments in standard fonts.

5) **KANJI region**
Set a KANJI region for each comment column.
The target comment column of the KANJI region is the comment column specified under these items.
The following shows the setting range of KANJI regions.

- 1: Japan
- 2: China(GB)-Mincho
- 3: China(Big5)-Gothic

6) **Character property**
Set character properties for each comment.
Input a property name to the first row, then input each setting in the subsequent rows.

Item	Description
Character color	Set the comment text color with a hexadecimal color code. The setting range is #000000 to #FFFFFF.
Reverse	Set whether to reverse the characters or not. The following shows the setting range. • Yes: Reversed • No: Not reversed
Blink	Set a blink style of characters. The following shows the setting range. • None: Not blinking • Low: Blinking at a low speed • Med: Blinking at a medium speed • High: Blinking at a high speed
Character effect	Set the text style. The following shows the setting range. • Blank: Standard • B: Bold • S: Shadow • R: Embossed
Shade Color	Set the color of the shade when the character effect is shadow or engrave. The setting range is the same as the character colors.

7) **HQ font**

Set whether to use a HQ font.

Input a property name to the first row, then input each setting in the subsequent rows.

The following shows the usable HQ fonts.

- 12-dot HQ Gothic
- 12-dot HQ Mincho
- 16-dot HQ Gothic
- 16-dot HQ Mincho

The following shows the setting range of each setting item.

- 0: Not used
- 1: Used

Even if HQ fonts are set for the comments of a text file, the GOT displays the comments in standard fonts.

8) **Comment number**

Set a comment number for the comment.

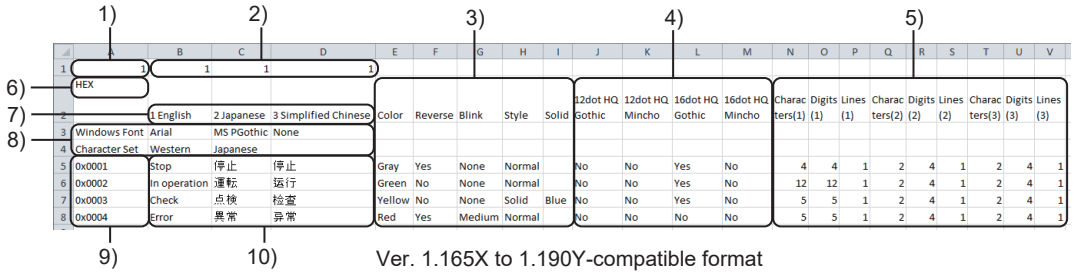
The setting range is 1 to 32767 (decimal) or 0x0001 to 0x7FFF (hexadecimal).

9) **Comment**

Input text for the comment.

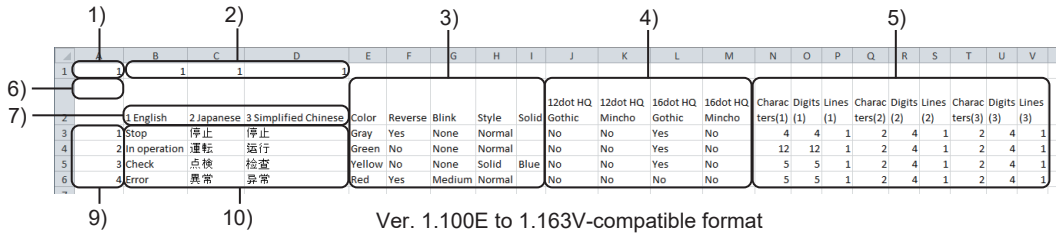
Up to 1024 characters can be set.

(2) Ver. 1.165X to 1.190Y-compatible format or Ver. 1.100E to 1.163V-compatible format



Ver. 1.165X to 1.190Y-compatible format

1	1		1	1	1																					
2	HEX																									
3		1 English	2 Japanese	3 Simplified Chinese	Color	Reverse	Blink	Style	Solid	12dot HQ Gothic	12dot HQ Mincho	16dot HQ Gothic	16dot HQ Mincho	Characters(1)	Digits (1)	Lines (1)	Characters(2)	Digits (2)	Lines (2)	Characters(3)	Digits (3)	Lines (3)				
4	Windows Font	Arial	MS PGothic	None																						
5	Character Set	Western	Japanese																							
6	0x0001	Stop	停止	停止	Gray	Yes	None	Normal		No	No	Yes	No	4	4	1	2	4	1	2	4	1				
7	0x0002	In operation	運転	运行	Green	No	None	Normal		No	No	Yes	No	12	12	1	2	4	1	2	4	1				
8	0x0003	Check	点検	检查	Yellow	No	None	Solid	Blue	No	No	Yes	No	5	5	1	2	4	1	2	4	1				
9	0x0004	Error	異常	异常	Red	Yes	Medium	Normal		No	No	No	No	5	5	1	2	4	1	2	4	1				



Ver. 1.100E to 1.163V-compatible format

1	1		1	1	1																					
2																										
3		1 English	2 Japanese	3 Simplified Chinese	Color	Reverse	Blink	Style	Solid	12dot HQ Gothic	12dot HQ Mincho	16dot HQ Gothic	16dot HQ Mincho	Characters(1)	Digits (1)	Lines (1)	Characters(2)	Digits (2)	Lines (2)	Characters(3)	Digits (3)	Lines (3)				
4	1	Stop	停止	停止	Gray	Yes	None	Normal		No	No	Yes	No	4	4	1	2	4	1	2	4	1				
5	2	In operation	運転	运行	Green	No	None	Normal		No	No	Yes	No	12	12	1	2	4	1	2	4	1				
6	3	Check	点検	检查	Yellow	No	None	Solid	Blue	No	No	Yes	No	5	5	1	2	4	1	2	4	1				
7	4	Error	異常	异常	Red	Yes	Medium	Normal		No	No	No	No	5	5	1	2	4	1	2	4	1				

1) **Comment group No.**

Set a comment group No.

The setting range is 1 to 500.

2) **KANJI region**

Set a KANJI region for each comment column.

The target comment column of the KANJI region is the comment column specified under these items.

The following shows the setting range of KANJI regions.

- 1: Japan
- 2: China(GB)-Mincho
- 3: China(Big5)-Gothic

3) **Character property**

Set character properties for each comment.

Input a property name to the first row, then input each setting in the subsequent rows.

Item	Description
Character color	Set the comment character color by either of the following methods. • Set a color name. The following shows the available color names. Black, blue, green, aqua, red, purple, yellow, white, dark white, gray, dark blue, dark green, dark aqua, dark red, dark purple, dark yellow • Set a hexadecimal color code. The setting range is #000000 to #FFFFFF.

Item	Description
Reverse	Set whether to reverse the characters or not. The following shows the setting range. • Yes • No
Blink	Set a blink style of characters. The following shows the setting range. • None • Low • Medium • High
Character effect	Set the text style. The following shows the setting range. • Normal • Bold • Solid • Raised
Shade Color	Set the color of the shade when the character effect is shadow or engrave. The setting range is the same as the character colors.

4) **HQ font**

Set whether to use a HQ font.

Input a property name to the first row, then input each setting in the subsequent rows.

The following shows the available characters and fonts.

- 12-dot HQ Gothic
- 12-dot HQ Mincho
- 16-dot HQ Gothic
- 16-dot HQ Mincho

The following shows the setting range of each setting item.

- Yes
- No

5) **Numbers of characters, digits, and rows**

The numbers of characters, digits, and rows of the comments are displayed.

These items are outputted when the comments are exported. However, inputting these items is not necessary for importing the comments.

The following shows the contents to be outputted.

- Number of characters

  The number of characters contained in the comment.

  A character is counted as one character, and a line feed is counted as two characters.
- Number of digits

  The number of digits is required to store comments.

  A one-byte character is counted as one character, and a two-byte character is counted as two characters. The number of the longest digits in all rows is displayed.

  Line feeds are not counted to the number of digits.
- Number of lines

  The number of lines of the comment.

Example. Description of the numbers of characters, digits, and rows in a CSV file

Column No.1	Column No.2
はい。↵ 実行しました。	Yes. ↵ Executed the task.

Number of characters (1)	Number of digits (1)	Number of columns (1)	Number of characters (2)	Number of digits (2)	Number of columns (2)
12	14	2	23	17	2

Numbers of characters,digits, and rows of thecolumn No.1

Numbers of characters, digits, and rows of the column No.2

6) **Comment No. notation**

Set the comment No. notation.

The following shows the setting range.

- Blank: Decimal

• HEX: Hexadecimal

7) **Column No., remarks**

Set a column No. of a comment column and a remarks for the comment columns.
Separate the column No. and the remarks with a one-byte space.
The setting range of the column Nos. is 1 to 30.
Up to 32 characters can be set as remarks.

8) **Windows font and character set**

Displays the Windows fonts that are selected in the [Comment Group Property] dialog.
Displays the character sets that are specified for the selected Windows fonts.
For the setting details, refer to the following.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

9) **Comment number**

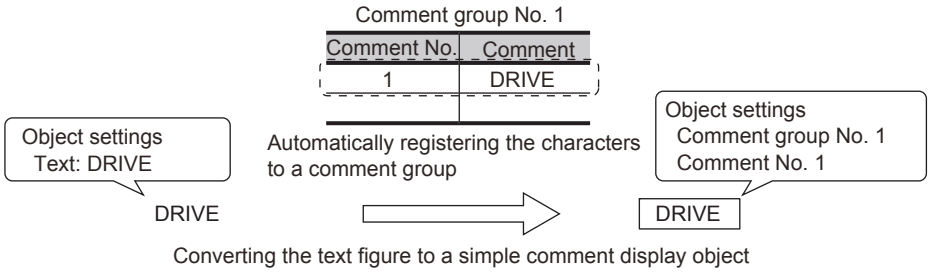
Set a comment number for the comment.
The setting range is 1 to 32767 (decimal) or 0x0001 to 0x7FFF (hexadecimal).

10) **Comment**

Input text for the comment.
Up to 1024 characters can be set.

■6 Comment registration using the characters of the text figure

In the text figure setting, you can register the characters entered in the [Text] field to a comment group, and convert the text figure to a simple comment display object.

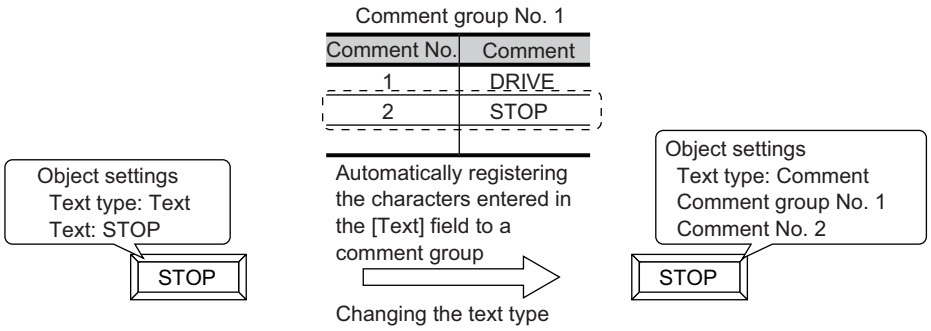


For the registration method, refer to the following.

➟5.8.4 ■12 (1) Registering the characters of a text figure to a comment group

■7 Comment registration using the text type [Text]

In the object setting, you can register the characters entered in the [Text] field to a comment group by changing the text type from [Text] to [Comment].



For the registration method, refer to the following.

➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group

5.8.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 HQ character of Chinese (Simplified, Traditional)

(1) Chinese (Simplified)

Characters in Chinese (Simplified) cannot be displayed in the 12-dot HQ Gothic or 16-dot HQ Gothic font.
If the 12-dot HQ Gothic or 16-dot HQ Gothic is selected at the comment registration, the characters are displayed in the 12-dot HQ Mincho or 16-dot HQ Mincho.

(2) Chinese (Traditional)

Characters in Chinese (Traditional) cannot be displayed in the 12-dot HQ Mincho or 16-dot HQ Mincho font.
If the 12-dot HQ Mincho or 16-dot HQ Mincho is selected at the comment registration, the characters are displayed in the 12-dot HQ Gothic or 16-dot HQ Gothic.

■2 Exporting multi-language comments

A comment group for which multiple languages including Chinese are used may not be saved in a CVS file properly.
Export a comment group including multiple languages in the Unicode text file format.

■3 Importing the exported comments to GT Designer3 whose display language is different

If you export comments to a file with a GT Designer3 module, the file cannot be imported to another GT Designer3 module that uses a different display language.

■4 Overwriting comments when importing a text file for comments

When a text file for comments is imported, comments in the file are used to overwrite the comment group in the import destination.
Before importing comments, check the comment group in the import destination and comments in the text file to be imported.
For details, refer to the following.

➟5.8.4 ■6 Importing comments

■5 Precautions for using Windows fonts

(1) Project data size

When comments in Windows fonts are registered to comment groups, the project data size becomes large.
To reduce the project data size, configure the following settings.

- Separate comment groups into two types: group with the Windows font setting and group without the Windows font setting.
- Set the same text size for the objects that display the same comment.
- Set the same text style for the objects that display the same comment.

(2) Comment exceeding the display range in length

A comment exceeding the display range in length may appear incorrectly.
Set the comment within the display range.

(3) Display for a comment group of more than 128 MB

If the data size of a comment group exceeds 128 MB, some comments in Windows fonts are not displayed properly.
Make sure that the data size of a comment group is 128 MB or less.

5.8.4 Setting comments

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Opening comment group
■2 Creating a new comment group
■3 Creating a new row
■4 Inserting a row
■5 Inserting a column
■6 Importing comments
■7 Exporting comments
■8 Comment searching
■9 Jumping to the specified comment
■10 Changing property
■11 Switching display or non-display of the property
■12 Registering characters to a comment group (Text figure, touch switch, and others)

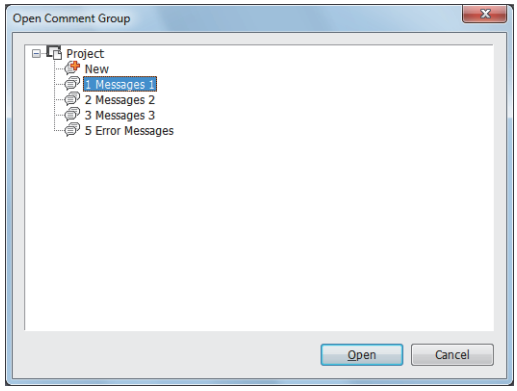
■1 Opening comment group

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows a procedure to open the existing comment groups in the [Open Comment Group] dialog.

Step 1 Select [Common] → [Comment] → [Open] from the menu to open the [Open Comment Group] dialog.

➟5.8.4 (1) [Open Comment Group] dialog



Step 2 Select the target comment group and click the [Open] button.

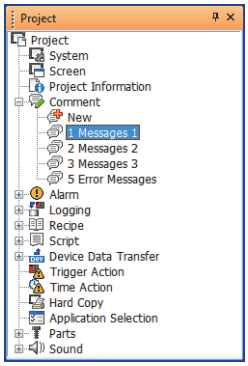
➟5.8.4 ■1 (2) [Comment List] window

Point

Operation from the project tree

The existing comment groups can be opened from the [Project] window.

Step 1. Open [Comment] in the project tree in the [Project] window.



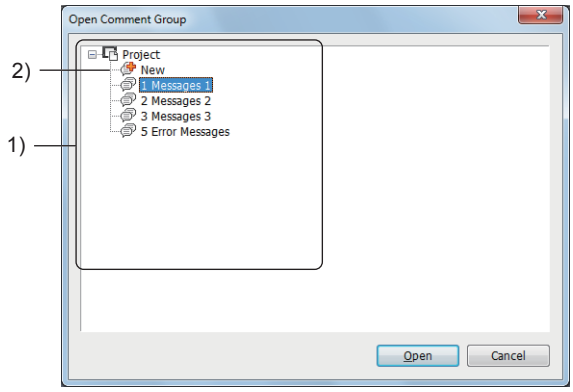
Step 2. A comment group is opened by either of the following operations.

• Double-clicking a comment group
• Right-clicking a comment group to select [Open]

(1) [Open Comment Group] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Open Comment Group] dialog lists all the comment groups registered in the project.
In this dialog, you can create new comment groups and edit the existing comment groups.
Select [Common] → [Comment] → [Open] from the menu to display the dialog.



1) **Comment group list**
The list of comment groups registered to the project.
Select a comment group and double-click or click the [Open] button to display the [Comment List] window.
To open the [Comment List] window of multiple comment groups with a single operation, click the [Open] button while selecting multiple comment groups (up to 10).
➟5.8.4 ■1 (2) [Comment List] window

2) **[New]**
Creates a new comment group.
After clicking the [New] button, create a new comment group in the displayed dialog.
➟5.8.4 ■2 (1) [Comment Group Property] dialog

Up to 10 [Comment List] window can be displayed simultaneously.
When the 11th window opens, the first-edited (oldest in the edit history) [Comment List] window closes automatically.

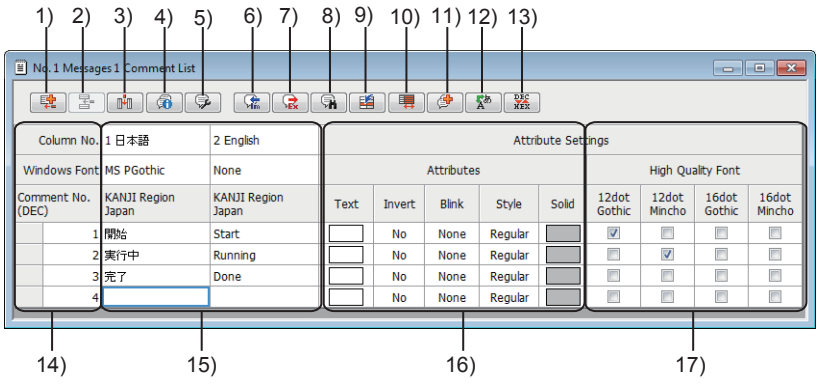
(2) [Comment List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Comment List] window displays the list of the comments registered to a comment group.

➟5.8.4 ■1 (3) Setting items in the [Comment List] window
5.8.4 ■1 (4) Items in the right-click menu
5.8.4 ■1 (5) Manipulations using a mouse and keyboard

(3) Setting items in the [Comment List] window



1) **[New] button**
Creates a new comment.
A new comment is added to below the bottom row of the comment list.

➟5.8.4 ■2 Creating a new comment group

2) **[Insert Row] button**

Inserts a row in the comment list.

If multiple rows are selected in the comment list, the same number of new rows are inserted above the selected ones.

When a row is inserted in the consecutive comment Nos., all rows after the inserted row are renumbered.

➟5.8.4 ■4 Inserting a row

3) **[Insert Column] button**

Inserts a column in the comment column.

If multiple columns are selected in the comment list, the same number of new columns are inserted to the left of the selected ones.

When a column is inserted to the consecutive column Nos., all columns on the right of the inserted column are renumbered.

➟5.8.4 ■5 Inserting a column

4) **[Comment Group Property] button**

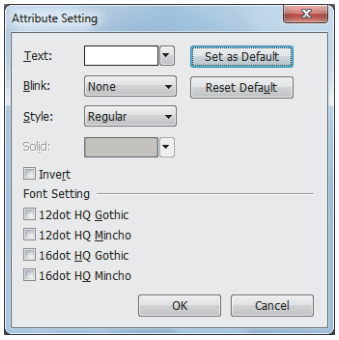
Check or change the detail of the comment group including the comment name and KANJI region.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

5) **[Attribute Setting] button**

Set the character property of comments.

➟5.8.4 ■10 Changing property



- **[Text]**
  Set the character color.
- **[Blink]**
  Set the blinking speed of characters.
  The following shows the items to be selected.
  - [None]
  - [Low]
  - [Medium]
  - [High]
- **[Style]**
  Select a character effect.
  The following shows the items to be selected.
  - [Standard]
  - [Bold]
  - [Solid]
  - [Raised]
- **[Solid]**
  Select the shade color of characters when [Solid] or [Raised] is selected for [Style].
- **[Invert]**
  Highlights characters.
  This item can be selected only when [Regular] is selected for [Style].
- **[Font Setting]**
  This item is displayed when [Read comment data from the memory card] is deselected in the [Comment Group Property] dialog.
  Select a font for comments.
  The following shows the items to be selected.
  - [12dot HQ Gothic]
  - [12dot HQ Mincho]
  - [16dot HQ Gothic]
  - [16dot HQ Mincho]

6) **[Import] button**

Imports comments from a Unicode text file or a CSV file.

After clicking the button, select a file to import in the displayed dialog.

➟5.8.4 ■6 Importing comments

7) **[Export] button**

Exports a comment group into a Unicode text file or a CSV file.

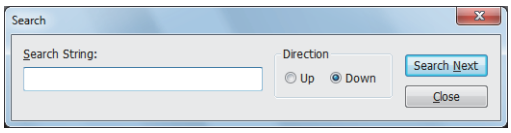
After clicking the button, select a file to export in the displayed dialog.

➟5.8.4 ■7 Exporting comments

8) **[Search] button**

Searches a comment.

➟5.8.4 ■8 Comment searching

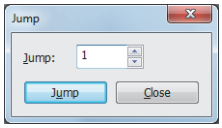


- **[Search String]**
  Input a character string to search information.
- **[Direction]**
  Select the search direction.
- **[Search Next] button**
  Searches the next option.
- **[Close] button**
  Closes the [Search] dialog.

9) **[Jump] button**

Jumps to the specified comment No.

➟5.8.4 ■9 Jumping to the specified comment



- **[Jump]**
  Set a target comment No.
- **[Jump] button**
  Displays the comment No. which is specified in [Jump].
- **[Close] button**
  Closes the [Jump] dialog.

10) **[Display/Hide Attribute] button**

Switches display or non-display of the character property setting field, HQ character setting field, and outline font setting field.

➟5.8.4 ■11 Switching display or non-display of the property

11) **[New Group] button**

Creates a new comment group.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

12) **[Language Switching] button**

Configures the language switching settings.

After clicking the button, configure the language switching settings in the [Environmental Setting] window.

➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

13) **[Comment No. Notation Switching] button**

Switches the comment No. notation of the comment No. field between decimal and hexadecimal.

14) **Comment No. field**

The field to display and change the comment Nos.

Comment Nos. are always displayed in ascending order.

Comment Nos. are assigned automatically when a new comment is created.

The comment Nos. can be changed by double-clicking a comment No cell.

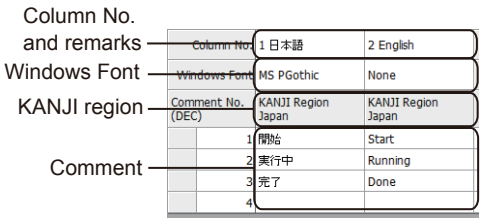
Clicking a cell left to a comment No. selects the row.

To select multiple rows, perform one of the following operations.

- Hold down the [Ctrl] key and click a target cell. To deselect a selected row, perform the same operation.
- Select the first row in the range, hold down the [Shift] key, and click a target cell to select the last row in the range.
- Click the first cell and drag to the last cell in the range.

15) **Comment field**

The field to display and edit text of comments.



Item	Description
Column No. and remarks	Column No. and remarks of a comment column Click a target cell to edit its contents.

Item	Description
Windows Font	This item is displayed when [Read comment data from the memory card] is deselected in the [Comment Group Property] dialog. Displays the Windows fonts that are selected in the [Comment Group Property] dialog. Click a Windows font cell to select the column. To select multiple columns, perform one of the following operations. • Click a Windows font cell to select the first column in the range, hold down the [Shift] key, and click another Windows font cell to select the last column in the range. • Click a Windows font cell and drag to the last cell in the range. To change the set Windows fonts, double-click a Windows font cell to display the [Comment Group Property] dialog. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
KANJI region	KANJI region of a comment column The KANJI region is changeable in the [Comment Group Property] dialog. ➟5.8.4 ■2 (1) [Comment Group Property] dialog Click a KANJI region cell to select the column. To select multiple columns, perform one of the following operations. • Click a KANJI region cell to select the first column in the range, hold down the [Shift] key, and click another KANJI region cell to select the last column in the range. • Click a KANJI region cell and drag to the last cell in the range.
Comment	Set the comment corresponding to a comment No. Double-click a target cell to edit its comment.

16) **Character property setting field**

The field to display and set the character property of comments.

Available character properties differ depending on the object types.

For the difference among the object types, refer to the following.

➟5.8.1 ■5 Display attributes

Item	Description
Character color	Set the character color. Select a color from the color palette.
Reverse	Select this item to highlight the characters. This item can be selected only when [Regular] is selected for [Style].
Blink	Set the blinking speed of characters. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
Character effect	Select a character effect. The following shows the items to be selected. • [Standard] • [Bold] • [Solid] • [Raised]
Shade Color	Select the shade color of characters when [Solid] or [Raised] is selected for [Style]. Select a color from the color palette.

17) **HQ character setting**

This item is displayed when [Read comment data from the memory card] is deselected in the [Comment Group Property] dialog.

Set whether to use HQ characters.

The fonts selected in this setting can be used for objects.

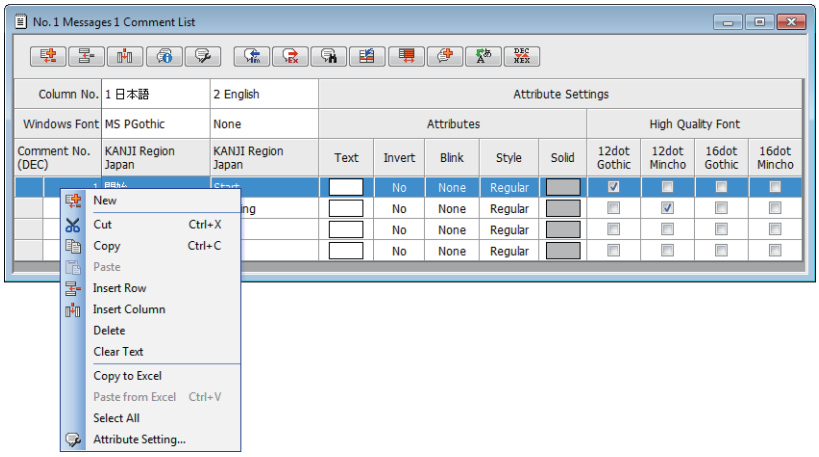
However, some objects cannot use some fonts even if the fonts are selected in this setting.

For the difference among the object types, refer to the following.

➟5.8.1 ■5 Display attributes

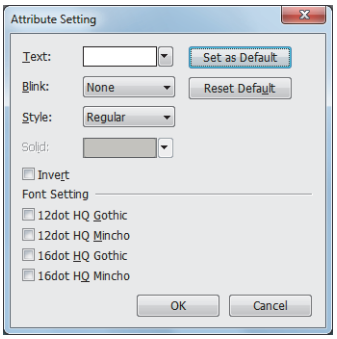
(4) Items in the right-click menu

The [Comment List] window can be edited with the right-click menu.



1) **[New Row]**
   Creates a new comment.
   A new comment is added to below the bottom row of the comment list.
2) **[Cut]**
   Cuts a selected row, column, or cell.
3) **[Copy]**
   Copies a selected row, column, or cell.
4) **[Paste]**
   Paste the cut or copied row, column, or cell.
5) **[Insert Row]**
   Inserts a row in the comment list.
   If multiple rows are selected in the comment list, the same number of new rows are inserted above the selected ones.
   When a row is inserted in the consecutive comment Nos., all rows after the inserted row are renumbered.
6) **[Insert Column]**
   Inserts a column in the comment list.
   If multiple columns are selected in the comment list, the same number of new columns are inserted to the left of the selected ones.
   When a column is inserted to the consecutive column Nos., all columns on the right of the inserted column are renumbered.
7) **[Delete]**
   Deletes a selected row, column, or cell.
8) **[Clear Text]**
   Deletes the character strings set in a selected row or column.
9) **[Copy to Excel]**
   Copies a selected row or column to an Excel sheet.
   Paste the selected row or column to an Excel sheet.
10) **[Paste from Excel]**
    Pastes a column or cell to the comment list.
    Cut or copy the column or cell in the source Excel worksheet in advance.
    If the number of columns to be pasted exceeds the number of columns in the comment list, new columns are added to the comment list.
11) **[Select All]**
    Selects all the comments in the comment list.
12) **[Property]**

Set the character property of comments.



- **[Text]**
  Set the character color.
- **[Blink]**
  Set the blinking speed of characters.
  The following shows the items to be selected.
  - [None]
  - [Low]
  - [Medium]
  - [High]
- **[Style]**
  Select a character effect.
  The following shows the items to be selected.
  - [Standard]
  - [Bold]
  - [Solid]
  - [Raised]
- **[Solid]**
  Select the shade color of characters when [Solid] or [Raised] is selected for [Style].
- **[Invert]**
  Highlights characters.
  This item can be set only when [Regular] is selected for [Style].
- **[Font Setting]**
  This item is displayed when [Read comment data from the memory card] is deselected in the [Comment Group Property] dialog.
  Select a font for comments.
  The following shows the items to be selected.
  - [12dot HQ Gothic]
  - [12dot HQ Mincho]
  - [16dot HQ Gothic]
  - [16dot HQ Mincho]

(5) Manipulations using a mouse and keyboard

The following shows how to manipulate the cells in the [Comment List] window with a mouse and keyboard.
You can select, copy, cut, or paste the cells in the comment No. field and the comment field.

Operation	Action
Arrow (Up/Down/Left/Right)	Move the cell pointer.
[Shift] + Arrow (Up/Down/Left/Right)	Extend the selection of cells. Select the first cell, hold down the [Shift] key and press an arrow key to extend the selection.
[Shift] + Click	Select a range of cells. Select the first cell in the range, hold down the [Shift] key and click the last cell in the range.
[Ctrl] + [C]	Copy the contents of a selected cell. When multiple cells are selected, the contents of all the selected cells are copied.
[Ctrl] + [X]	Cut the contents of a selected cell.
[Ctrl] + [V]	Paste the contents of the clipboard to a selected cell.

■2 Creating a new comment group

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to create a comment group.

Step 1 Open the [Comment Group Property] dialog by either of the following operations.

- Selecting [Common] → [Comment] →[Open] from the menu to open the [Open Comment Group] dialog and double-clicking the [New] button

  ➟5.8.4 ■1 (1) [Open Comment Group] dialog
- Double-clicking the [New] button under [Comment] in the project tree in the [Project] window

  ➟2.2.4 ■1 [Project] window
- Right-clicking [Comment] of the project tree and selecting [New Comment Group] from the menu

  ➟2.2.4 ■1 [Project] window

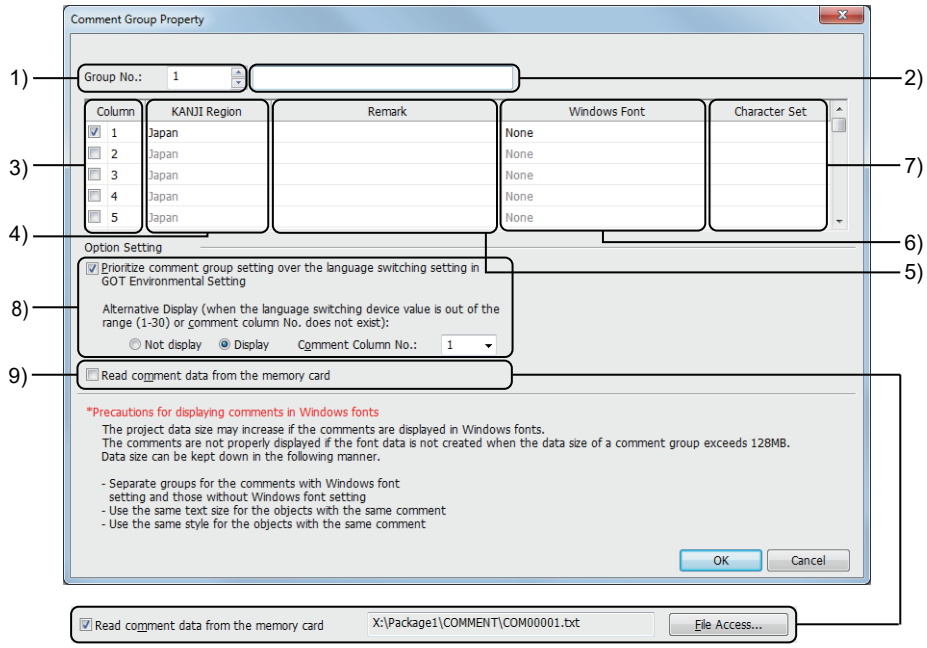
Step 2 Set the created comment group in the [Comment Group Property] dialog.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

(1) [Comment Group Property] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Create a new comment group in the [Comment Group Property] dialog.
Select [Common] → [Comment] → [New Comment Group] from the menu to display the dialog.



1) **[Group No.]**
Set a comment group No.

2) **Title**
Set a title of the comment group.
Up to 32 characters can be set.

3) **[Column No.]**
Set column Nos. to be used in the comment group.
Select column Nos. to be used.

4) **[KANJI Region]**
Set a KANJI region for each comment column.
The following shows the items to be selected.
- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

5) **[Remark]**
Set remarks for each comment column.
Up to 32 characters can be set.

6) **[Windows Font]**
This item is displayed when [Read comment data from the memory card] is deselected.
Select a Windows font for each comment column.

7) **[Character Set]**
This item is displayed when [Read comment data from the memory card] is deselected.
Select a character set for each selected Windows font.
The selectable character sets vary with the selected Windows font.

8) **[Prioritize language switching of GOT environmental setting]**
Set whether to prioritize the setting in this dialog over the settings of the language switching of the GOT environmental settings.

This item can be set only when the language switching device is set in the GOT environmental settings.

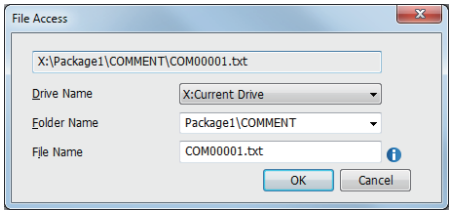
Item	Description
[Alternative Display (when the language switching device value is out of the range (1-30) or comment column No. does not exist)]	Set the display method of the comment columns for when the column No. of the comment column specified by the language switching device does not exist. The following shows the items to be selected. • [Not display] Comments are not displayed. • [Display] The comment of the specified column No. is displayed. After selecting this item, set a column No. of the column to be displayed. When [Read comment data from the memory card] is selected, the comment column number specified in [Language Switching] in the GOT environmental settings is applied.

9) **[Read comment data from the memory card]**

Not available to GT23, GT21, and GS21.

Displays comments by reading a comment text file from the data storage installed on the GOT.

Click the [File Access] button to display the [File Access] dialog.



Set the save destination and file name of a text file.

• **[Drive Name]**

Select a drive to which the text file is saved.
The following shows the items to be selected.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

1.2.8 Drive configuration of the target GOT for data transfer

• **[Folder Name]**

Specify the name of the folder to which the text file is saved.
For the restrictions on the folder name used in the GOT, refer to the following.

12.7 Restrictions for Folder Names and File Names used in GOT

• **[File Name]**

Specify the name of the text file to be saved.
The text file can be saved as a Unicode text (*.TXT) or CSV (*.CSV) file.
For the restrictions of the file name used in the GOT, refer to the following.

12.7 Restrictions for Folder Names and File Names used in GOT

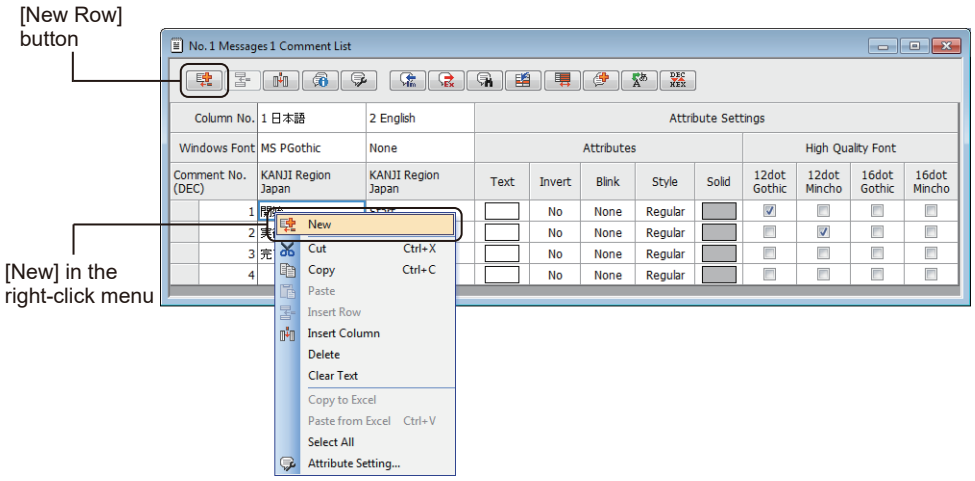
■3 Creating a new row

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Create a new comment row in the [Comment List] window or the project tree.
The number which is one plus the largest comment No. in the comment groups is assigned to the comment No. of a new comment.
The largest settable comment No. is 32767 (or 7FFF in hexadecimal).
If 32767 (or 7FFF in hexadecimal) is already used, the smallest unused number in the comment group is assigned to the new comment.

Step 1 Perform either of the following operations.

• In the [Comment List] window, click the [New Row] button or select [New] from the right-click menu.



• In the project tree, select a comment group and select [Add Comment Row] in the right-click menu.

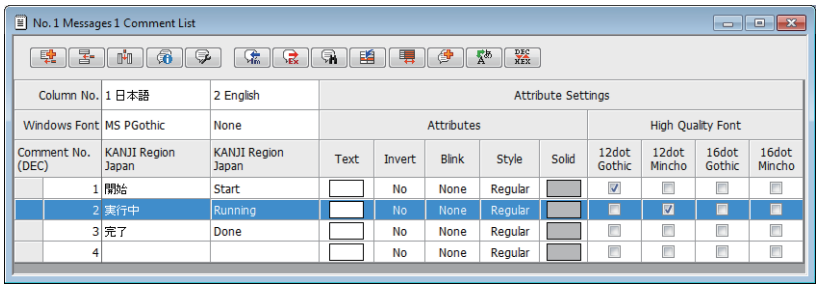
A new row is created in the comment list.

■4 Inserting a row

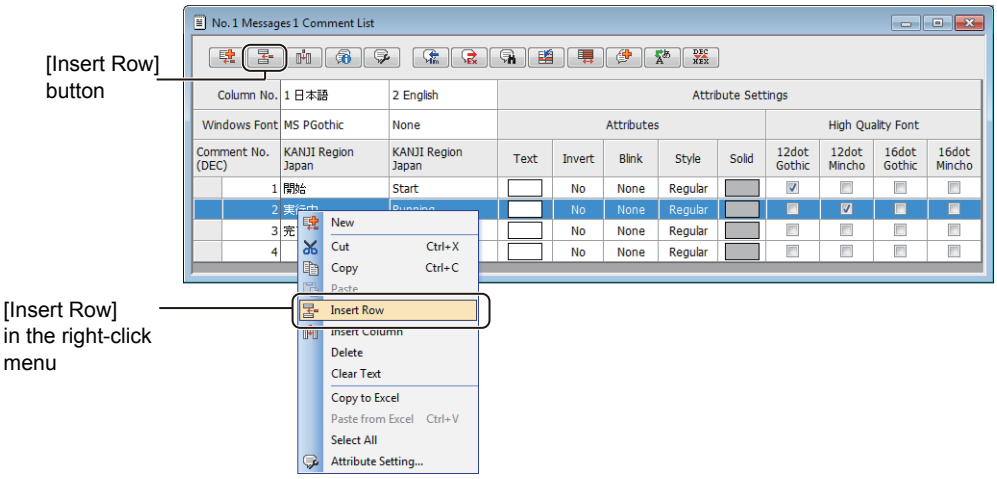
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Insert a row in the [Comment List] window.
If multiple rows are selected in the comment list, the same number of new rows are inserted above the selected ones.
When a row is inserted in the consecutive comment Nos., all rows after the inserted row are renumbered.

Step 1 Select a place to insert a row in the [Comment List] window.



Step 2 Click the [Insert Row] button, or select [Insert Row] from the right-click menu.



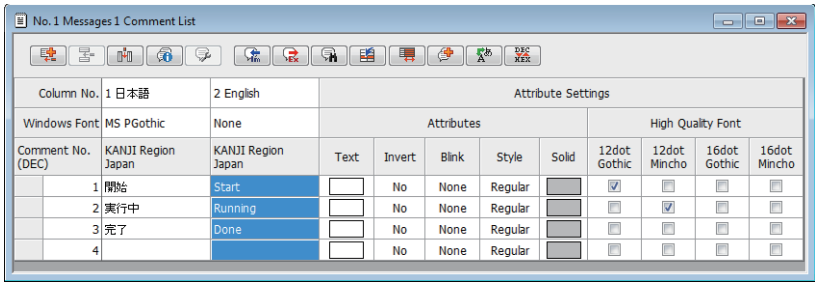
Step 3 A row is inserted above the selected row.

■5 Inserting a column

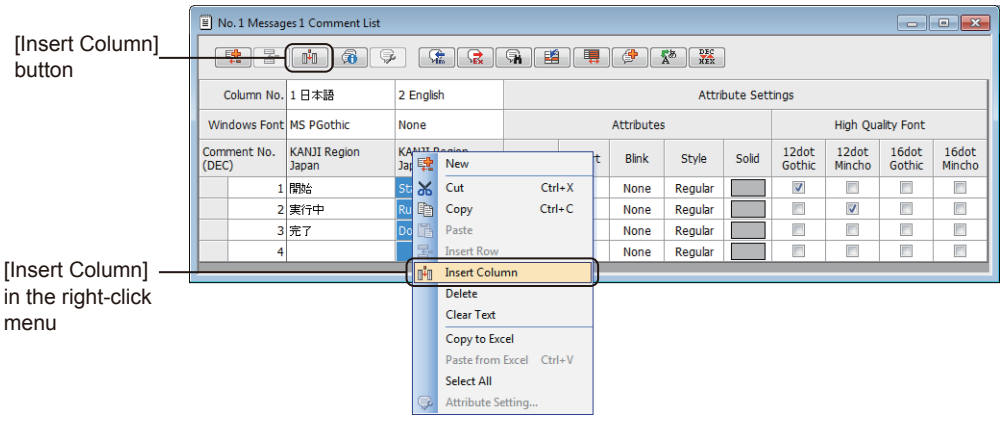
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Insert a column in the [Comment List] window.
If multiple columns are selected in the comment list, the same number of new columns are inserted to the left of the selected ones.
When a column is inserted to the consecutive column Nos., all columns on the right of the inserted column are renumbered.

Step 1 Select a place to insert a column in the [Comment List] window.



Step 2 Click the [Insert Column] button, or select [Insert Column] from the right-click menu.



Step 3 A column is inserted to the left side of the selected column.

■6 Importing comments

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

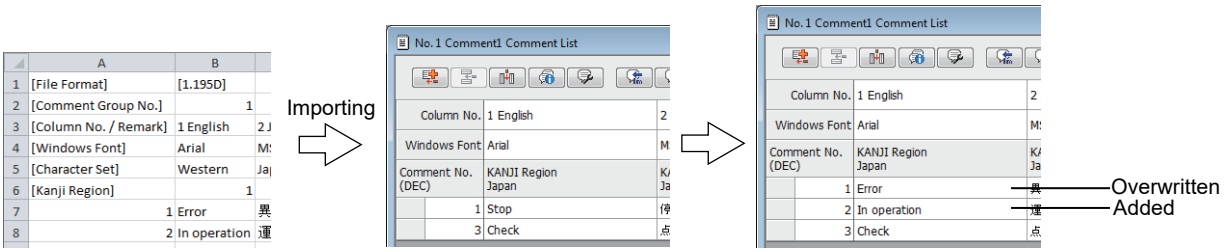
Comments in a comment group can be set in the dialog.
Also, comments can be registered or changed by importing a user-created comment text file.
For how to create a comment text file and its format, refer to the following.

➟5.8.2 ■5 Importing or exporting comments

(1) Adding or overwriting comments when importing comments from a file

The comment Nos. of the comments in the file to be imported and the comment Nos. of the registered comments are compared.

- If the comment Nos. are different each other, the comments in the file are added to the registered comments.
- If the comment Nos. are the same, the registered comments are overwritten with the comments in the file.

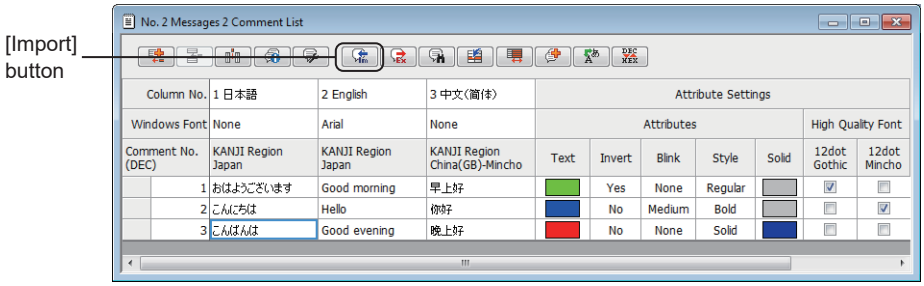


CSV file | GT Designer3 | GT Designer3

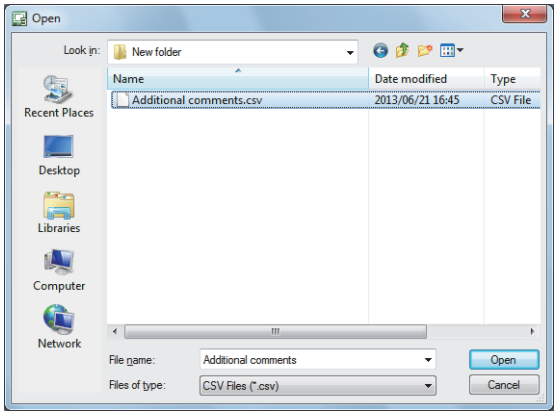
(2) Setting procedure

Import comments in the [Comment List] window.

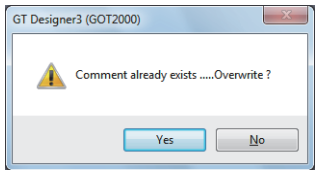
Step 1 Click the [Import] button, or select [Common] → [Comment] → [Import] from the menu.



Step 2 Select a file to be imported.



Step 3 The following dialog appears.
Click the [Yes] button to import the comments in a text file.



■7 Exporting comments

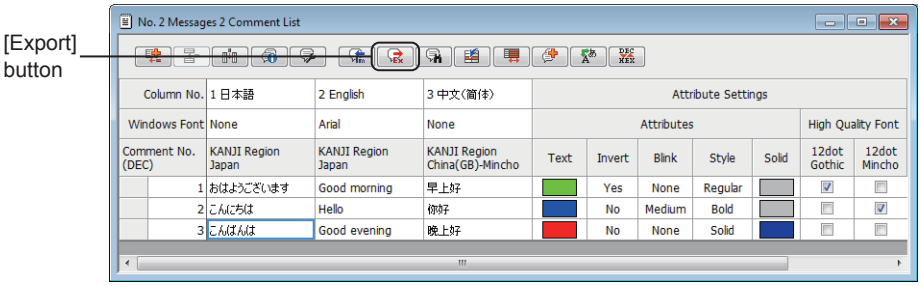
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The registered comments in a comment group can be exported as a Unicode text file (*.TXT) or a CSV file (*.CSV).
You can view or edit the exported file with the text editor, spreadsheet software, or other tools.
To export comments, open the [Comment List] window and export comments, or export comments in the project tree.
For the format of text files for comments, refer to the following.

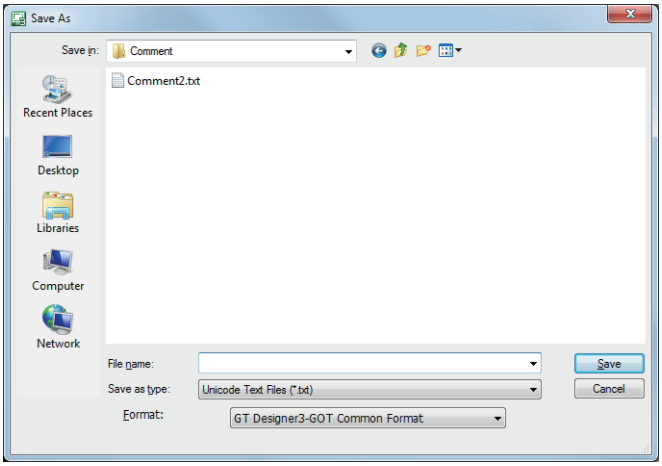
➟5.8.2 ■5 Importing or exporting comments

(1) Exporting comments from the [Comment List] window

Step 1 Click the [Export] button, or select [Common] → [Comment] → [Export] from the menu.



Step 2 Set [File name], [Save as type], and [Format] to save the file.

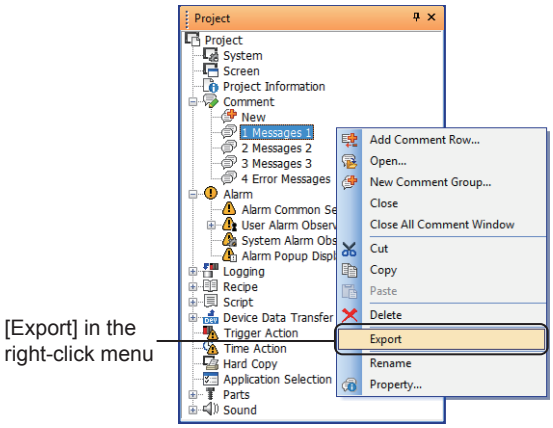


Step 3 The comment group is exported.

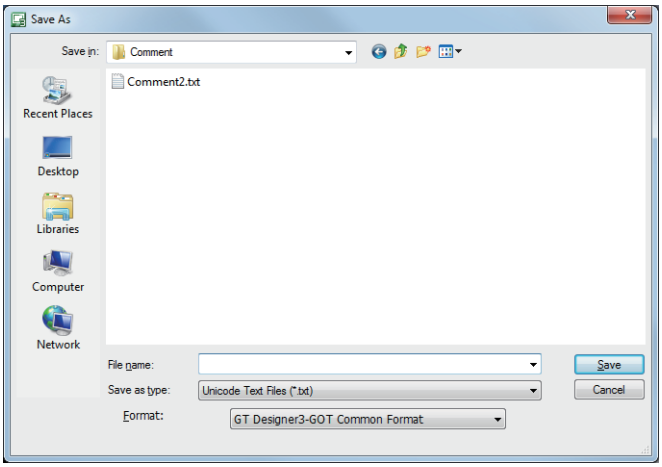
(2) Exporting from the project tree

Step 1 Select a comment group in the project tree and select [Export] in the right-click menu.

➟2.2.4 ■1 [Project] window



Step 2 Set [File name], [Save as type], and [Format] to save the file.



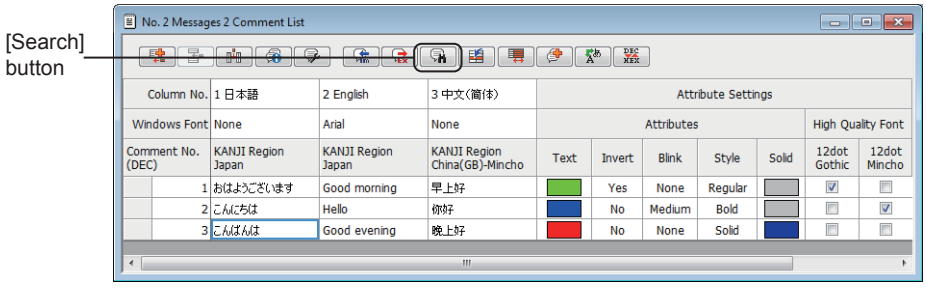
Step 3 The comment group is exported.

■8 Comment searching

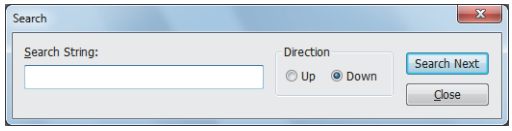
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Search a comment in the [Comment List] window.

Step 1 Click the [Search] button.



Step 2 Search a comment in the [Search] dialog.

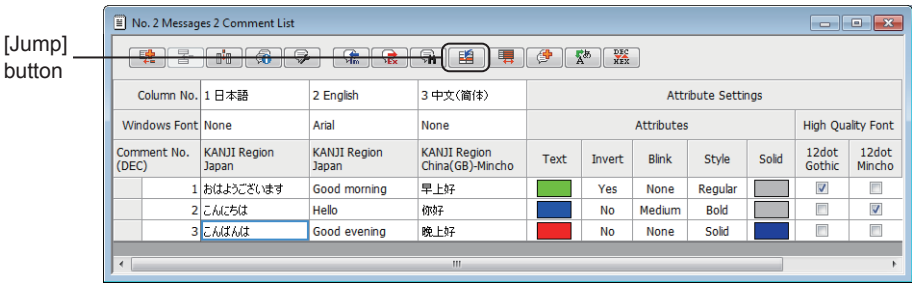


■9 Jumping to the specified comment

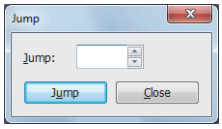
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Jump to the specified comment from the [Comment List] window.

Step 1 Click the [Jump] button.



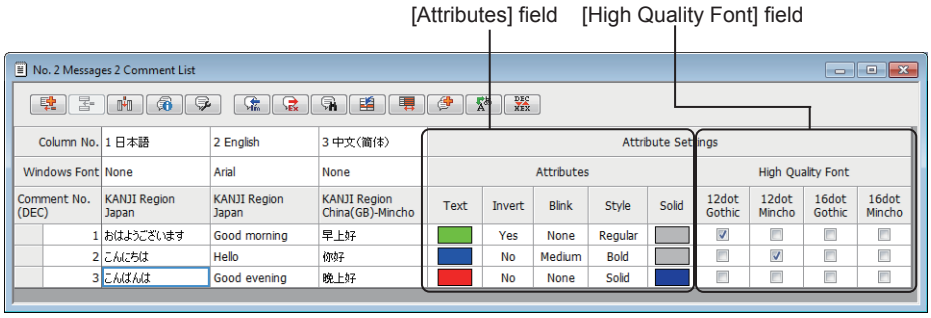
Step 2 Set a target to jump in the [Jump] dialog and click the [Jump] button.



■10 Changing property

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Change the character property of a comment in the [Comment List] window.
Edit the character property in the [Attributes] or [High Quality Font] field.



The following shows the methods of the batch editing for the character property of multiple comments.

- Changing the character property of an entire column in the [Comment List] window

  ➟5.8.4 ■10 (1) Changing the character property of an entire column in the [Comment List] window

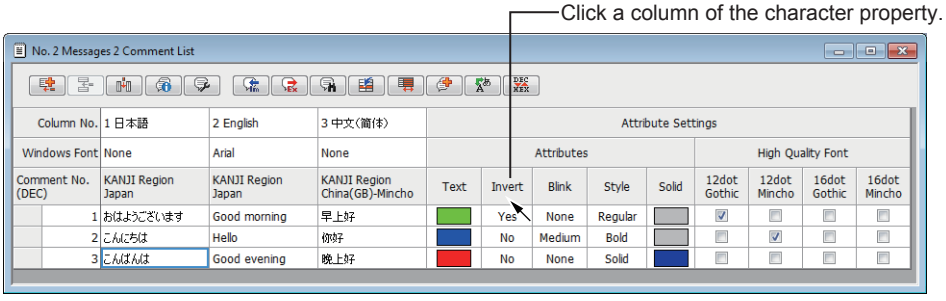
- Using the [Attribute Setting] dialog

  ➟5.8.4 ■10 (2) Using the [Attribute Setting] dialog

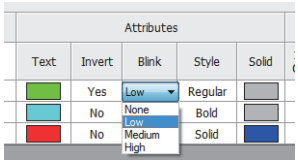
(1) Changing the character property of an entire column in the [Comment List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Click an entire column of the character property to be changed.



Step 2 Click an option of the property to edit the character property in batch.

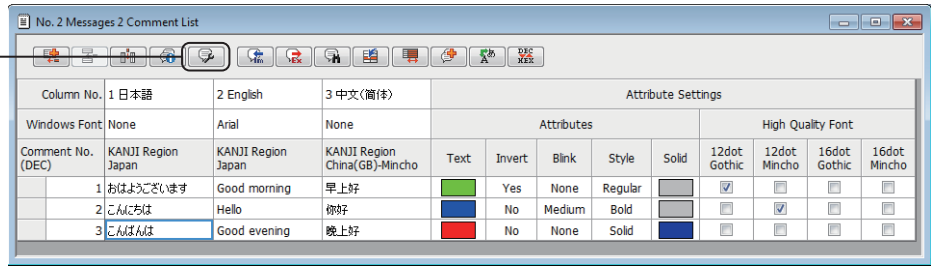


(2) Using the [Attribute Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select a comment to change the character property in the [Comment List] window and click the [Attribute Setting] button.

[Attribute Setting] button



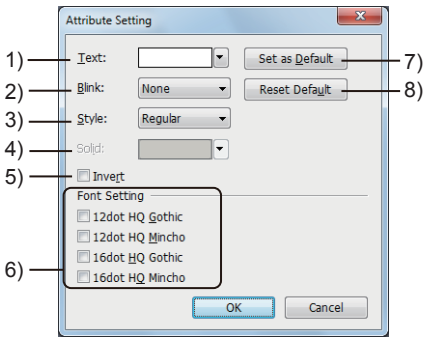
Step 2 Change the character property of the comment in the [Attribute Setting] dialog.

➡5.8.4 ■10 (3) [Attribute Setting] dialog

(3) [Attribute Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Change the character property and font of the comment in the [Attribute Setting] dialog.



1) **[Text]**
Set the character color.

2) **[Blink]**
Set the blinking speed of characters.
The following shows the items to be selected.
- [None]
- [Low]
- [Medium]
- [High]

3) **[Style]**
Select a character effect.
The following shows the items to be selected.
- [Standard]
- [Bold]
- [Solid]
- [Raised]

4) **[Solid]**
Select the shade color of characters when [Solid] or [Raised] is selected for [Style].

5) **[Invert]**

Highlights characters.
This item can be selected only when [Regular] is selected for [Style].

6) **[Font Setting]**
This item is displayed when [Read comment data from the memory card] is deselected in the [Comment Group Property] dialog.
Select a font for the comment.
The following shows the items to be selected.
- [12dot HQ Gothic]
- [12dot HQ Mincho]
- [16dot HQ Gothic]
- [16dot HQ Mincho]

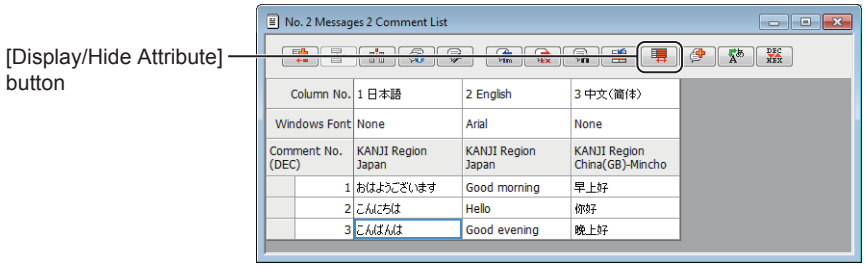
7) **[Set as Default] button**
Sets the input setting in this dialog as the default value.
➟11.10.6 Customizing the default value

8) **[Reset] button**
Resets the input setting in this dialog to the initial value.

■11 Switching display or non-display of the property

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Comment List] window, displaying or hiding the character property can be switched.
Switch display or non-display of the character property using the [Display/Hide Attribute] button.



■12 Registering characters to a comment group (Text figure, touch switch, and others)

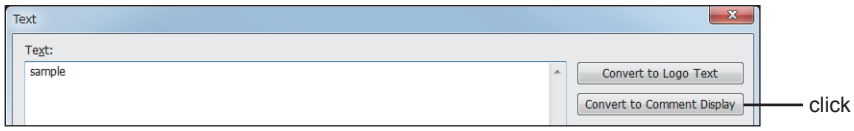
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Registering the characters of a text figure to a comment group
(2) Registering the characters in the [Text] field to a comment group

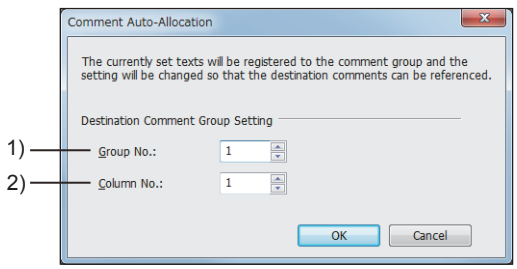
(1) Registering the characters of a text figure to a comment group

In the text figure setting, you can register the characters entered in the [Text] field to a comment group, and convert the text figure to a simple comment display object.

Step 1 Open the text figure setting dialog, and click the [Convert to Comment Display] button.



Step 2 In the [Comment Auto-Allocation] dialog, set [Group No.] and [Column No.] of the comment group.
You cannot register the characters to a comment group where identical characters already exit.



1) **[Group No.]**
Set the number of the comment group where the characters are to be registered.

2) **[Column No.]**
Set the column number of the comment group where the characters are to be registered.

Step 3 Click the [OK] button to register the characters to the comment group and covert the text figure to a simple comment display object.

In the [Simple Comment Display] dialog, click the [OK] button to execute the conversion, or the [Cancel] button to cancel the conversion. However, registering the characters to the comment group is not canceled.

(2) Registering the characters in the [Text] field to a comment group

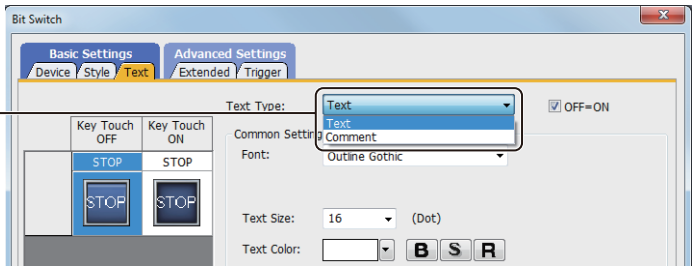
For the following objects, when entering characters in the [Text] field, you can register the characters to a comment group by changing the text type from [Text] to [Comment], and enable the registered comment to be referred.

- Touch switch
- Lamp

The following shows the registration procedure for a bit switch as an example.

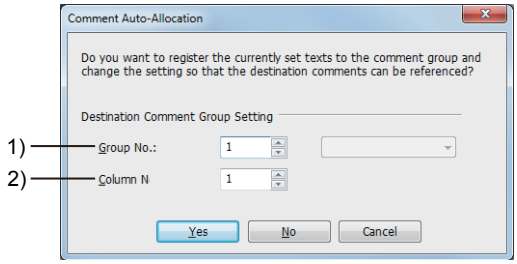
Step 1 Open the object setting dialog, and select the [Text] tab.

Step 2 Select [Text] in [Text Type].



Step 3 In the [Comment Auto-Allocation] dialog, set [Group No.] and [Column No.] of the comment group.

You cannot register the characters to a comment group where identical characters already exit.



1) **[Group No.]**
Set the number of the comment group where the characters are to be registered.

2) **[Column No.]**
Set the column number of the comment group where the characters are to be registered.

Step 4 To register the characters to the comment group, click [Yes] button.

To not to register the characters to the comment group, click [No] button.
To cancel converting the text type to [Comment], click [Cancel] button.

5.9 Registering Parts ([Parts])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟5.9.1 Outline of parts
5.9.2 Specifications of parts
5.9.3 How to use parts ([Parts])
5.9.4 Precautions
5.9.5 [Parts Image List] window
5.9.6 [Parts Setting] dialog

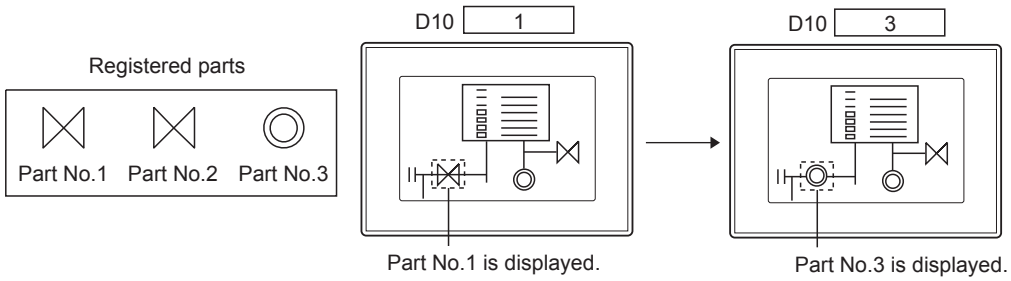
5.9.1 Outline of parts

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

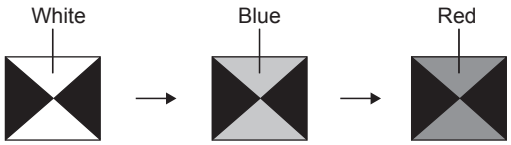
Groups of figures can be registered as parts.
Each of the registered parts can be set as a shape to each object.
The parts can also be placed directly on the screen as a figure.
Objects for which parts can be used depends on the figures registered as parts.

■1 Using parts for parts display and parts movement objects

If the parts are set to a parts display or parts movement object, the GOT can display multiple parts by switching the display or display movements of the parts.



If displaying a part as a mark, you can change the white-colored area of the part to other colors.



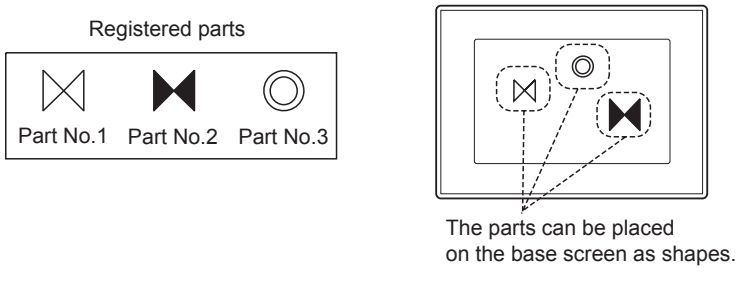
The display color of the white space can be changed.

Register a part to be displayed as a mark as follows.

- Do not use a BMP, JPEG, or PNG file as a part to be displayed as a mark.
  (The color of the figure cannot be switched.)
- Draw the area of the figure, whose color is to be changed, in white.

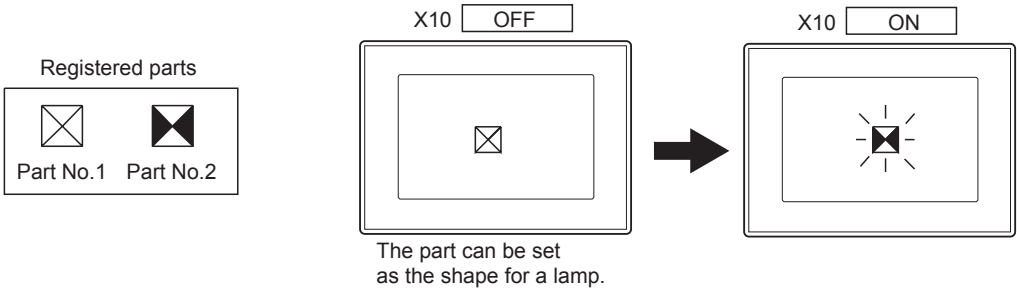
■2 Using a part as a figure

Parts can be placed on the screen as they are.



■3 Using a part as the shapes for objects

Parts can be set as the shapes for objects including switches or lamps.



The part can be set
as the shape for a lamp.

5.9.2 Specifications of parts

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Number of registerable parts per project

Up to 32767 parts can be registered per project.

■2 Figures placeable per part

Up to 10000 figures can be placed per part.
The volume of the data used for the part is the total volume of the data of the figures placed to the part.
The following figures can be placed to a part.

• Basic figure:

Line, freeform line, rectangle, polygon, circle, arc, sector, scale, piping, and paint

➟7.3 Drawing a Line
7.4 Drawing a Line Freeform
7.5 Drawing a Rectangle
7.6 Drawing a Polygon
7.7 Drawing a Circle
7.8 Drawing an Arc or a Sector
7.10 Drawing a Scale
7.11 Drawing a Piping
7.12 Painting Figures

• Character string: Text and logo text

➟7.1 Drawing a Text
7.2 Drawing a Logo Text

• Image: BMP file, JPEG file, and PNG file

➟7.13 Pasting an Image File

5.9.3 How to use parts ([Parts])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Registering parts
■2 Copying parts
■3 Deleting parts
■4 Editing parts
■5 Changing part numbers and names
■6 Using the image file stored in the data storage as a part

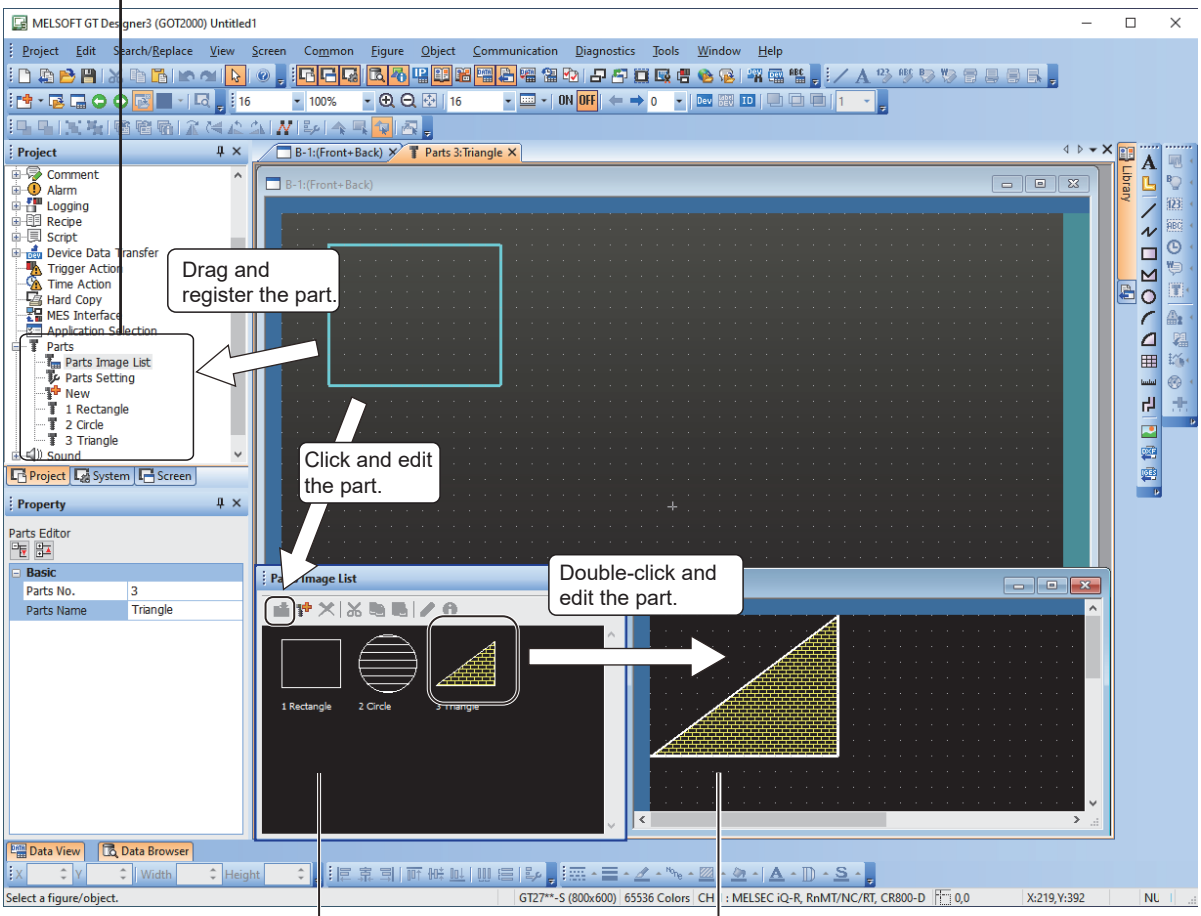
Select a part in the [Parts Image List] window or in the project tree to create, edit, or delete a part or change the property of a part.
For how to and display the [Parts Image List] window, refer to the following.

➟5.9.5 [Parts Image List] window

For how to display the project tree, refer to the following.

➟2.2.4 ■1 [Project] window

Project tree
· A shape can be registered as a part by dragging it from the screen editor and releasing it in the project tree.
· The parts image list window and the parts editor can be displayed.



Parts editor
· This editor is for the editing of parts. You can edit the registered parts.

[Parts Image List] window
· A shape can be registered as a part by clicking the [Register] icon.
· You can check the image of the registered shape.

■1 Registering parts

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Parts can be registered in either of the following two methods: You can register a figure on the screen editor or you can newly create a part to register it.

➟5.9.3 ■1 (1) Registering a figure on the screen editor
5.9.3 ■1 (2) Creating a new part

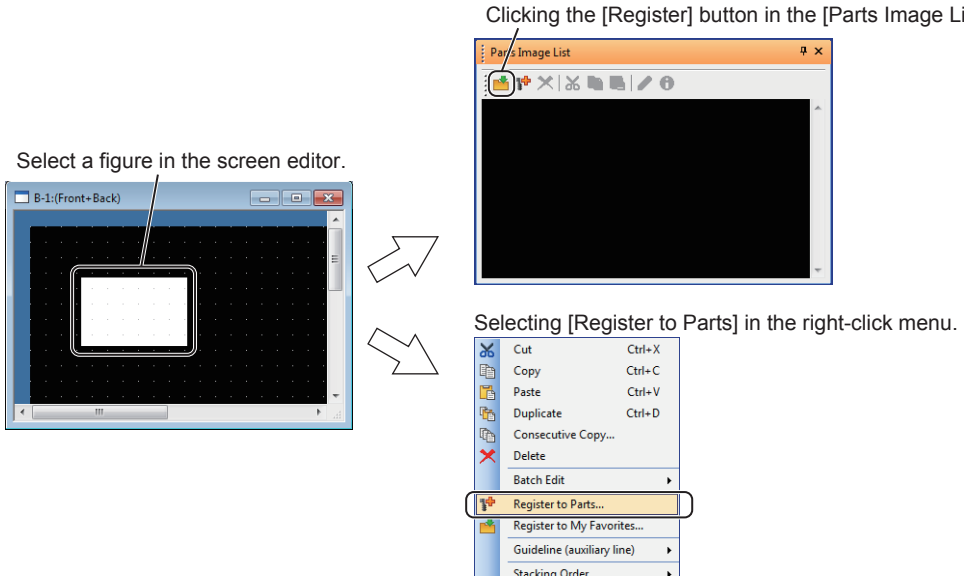
(1) Registering a figure on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Registering a figure as a part in the [Screen Image List] window

Step 1 To register a figure on the screen editor as a part, select the figure and perform either of the following operations.

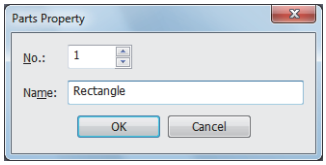
- Clicking the [Register] button in the [Parts Image List] window
- Selecting [Register to Parts] in the right-click menu.



Step 2 The [Parts Property] dialog appears.

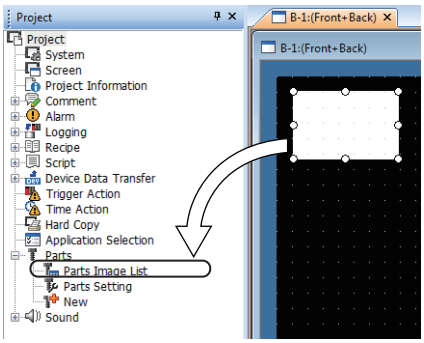
Set [Number] and [Name] then click the [OK] button.

The part is registered in the project data.

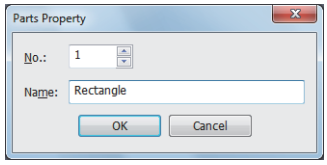


(b) Registering a figure as a part from the project tree

Step 1 Drag the figure to be registered as a part onto the project tree.



Step 2 The [Parts Property] dialog appears.
Set [Number] and [Name] then click the [OK] button.
The part is registered in the project data.



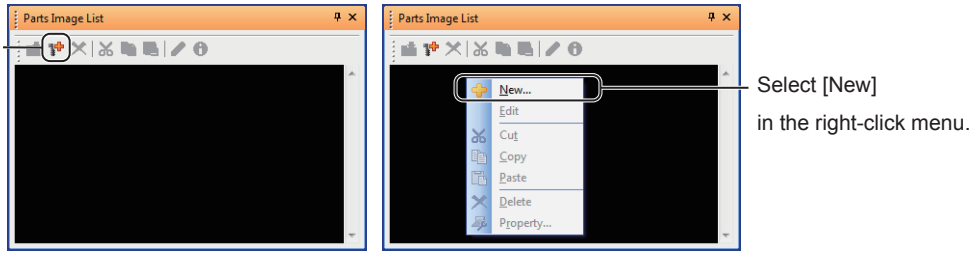
(2) Creating a new part

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Parts] →[New] from the menu or perform either of the following operations in the [Parts Image List] window.

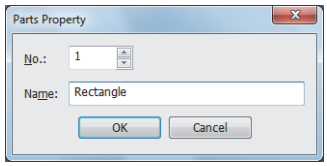
- Clicking the [New] button
- Selecting [New] in the right-click menu

Click the [New] button.

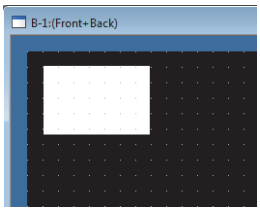


Select [New] in the right-click menu.

Step 2 The [Parts Property] dialog appears.
Set [Number] and [Name] then click the [OK] button.
The part is registered in the project data.



Step 3 Draw a figure to be registered as a part on the parts editor.
After drawing the figure, close the parts editor.



■2 Copying parts

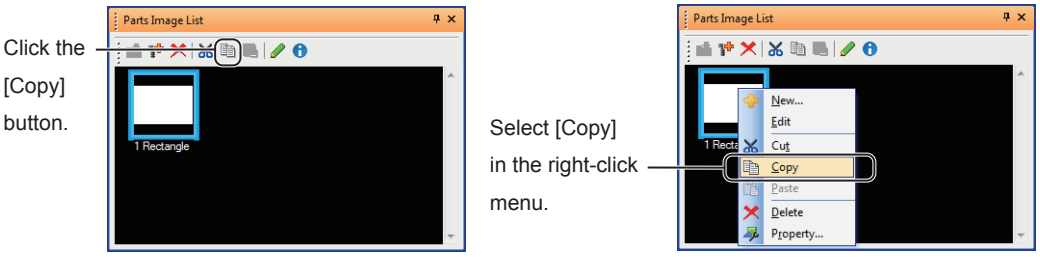
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Copying a part in the part image list

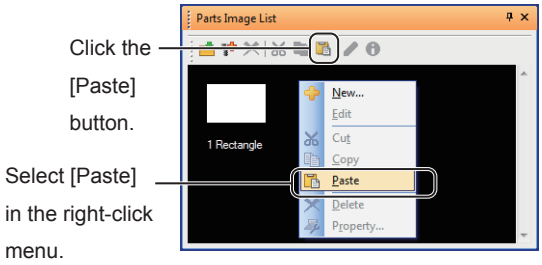
Step 1 Select a part to be copied in the [Parts Image List] window.

After selecting the part, perform either of the following operations.

- Clicking the [Copy] button
- Selecting [Copy] in the right-click menu



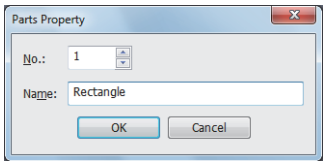
Step 2 Click the [Paste] button or right-click a part to select [Paste] from the menu.



Step 3 The [Parts Property] dialog appears.

Set [Number] and [Name] then click the [OK] button.

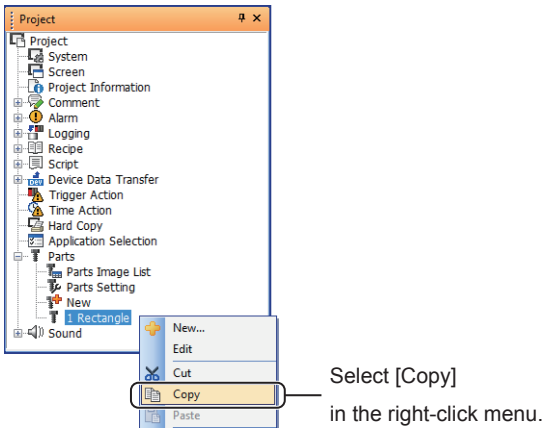
The part is registered in the project data.



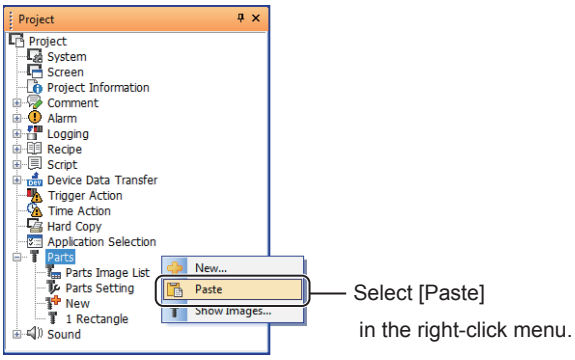
(2) Copying a part in the project tree

Step 1 Select a part to be copied in the project tree.

Right-click the selected part to select [Copy] from the menu.



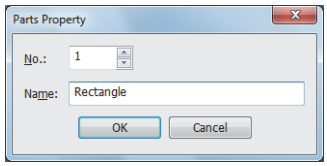
Step 2 Right-click [Parts] to select [Paste].



Step 3 The [Parts Property] dialog appears.

Set [Number] and [Name] then click the [OK] button.

The part is registered in the project data.



■3 Deleting parts

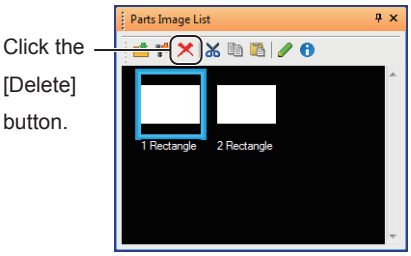
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

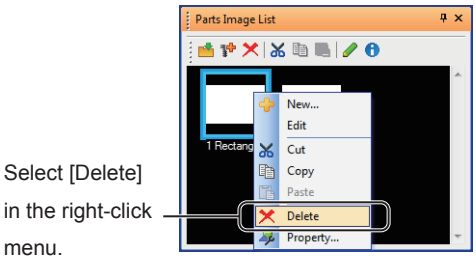
(1) Deleting a part in the part image list

Step 1 Select a part to be deleted in the [Parts Image List] window.

After selecting the part, perform either of the following operations.

- Clicking the [Delete] button
- Selecting [Delete] in the right-click menu





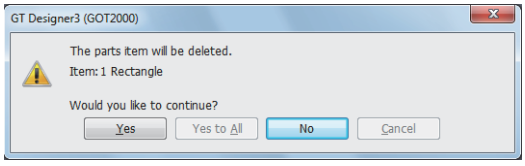
Step 2 The confirmation dialog is displayed.

Click the [Yes] button to delete the part displayed on the confirmation dialog.

Click the [Delete All] button to delete all the selected parts.

Click the [No] button to cancel the deletion of the part displayed on the confirmation dialog.

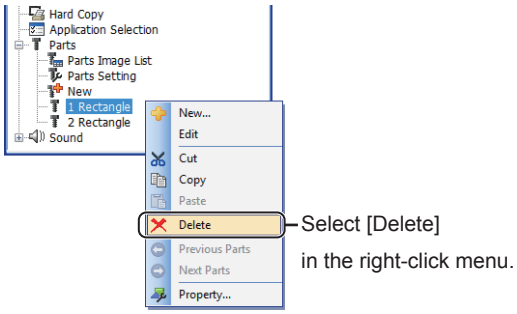
Click the [Cancel] button to cancel the deletion of all the selected parts.



(2) Deleting a part in the project tree

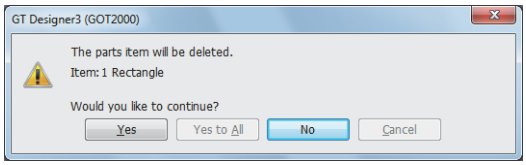
Step 1 Select a part to be deleted in the project tree.

Right-click the selected part to select [Delete] from the menu.



Step 2 The confirmation dialog is displayed.

Click the [Yes] button to delete the part displayed on the confirmation dialog.
Click the [Delete All] button to delete all the selected parts.
Click the [No] button to cancel the deletion of the part displayed on the confirmation dialog.
Click the [Cancel] button to cancel the deletion of all the selected parts.



■4 Editing parts

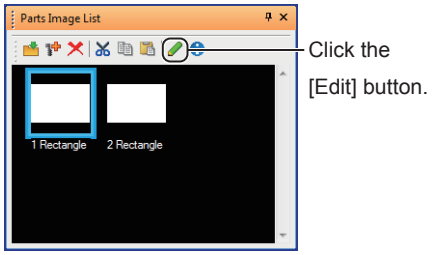
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

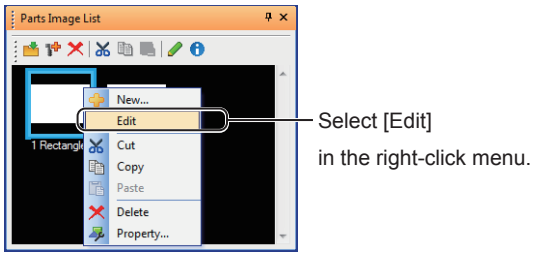
(1) Editing a part from the part-image list

Step 1 Select a part to be edited in the [Parts Image List] window.

After selecting the part, perform either of the following operations.

- Clicking the [Edit] button
- Selecting [Edit] in the right-click menu

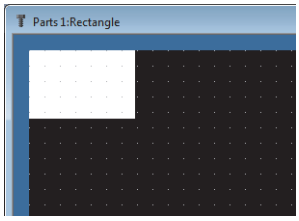




Step 2 The parts editor appears.

Edit the selected part.

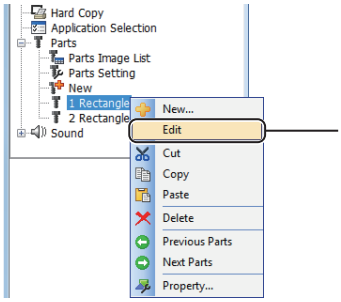
After editing the part, close the parts editor.



(2) Editing a part from the project tree

Step 1 Select a part to be edited in the project tree.

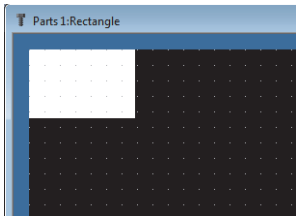
Right-click the selected part to select [Edit] from the menu.



Step 2 The parts editor appears.

Edit the selected part.

After editing the part, close the parts editor.



■5 Changing part numbers and names

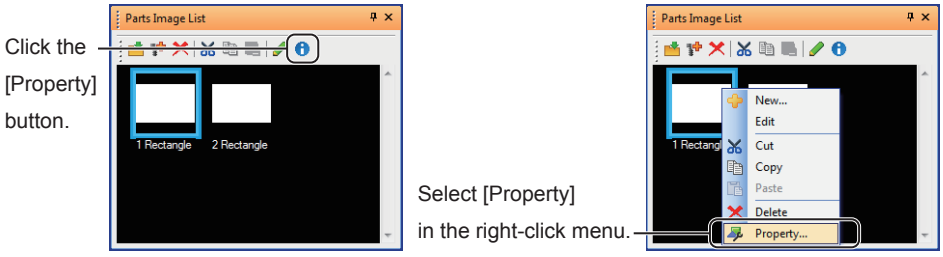
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Changing the number or name of a part in the part image list

Step 1 Select a part whose number or name is to be changed in the [Parts Image List] window.

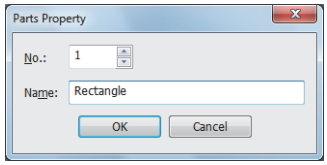
After selecting the part, perform either of the following operations.

- Clicking the [Property] button
- Selecting [Property] in the right-click menu



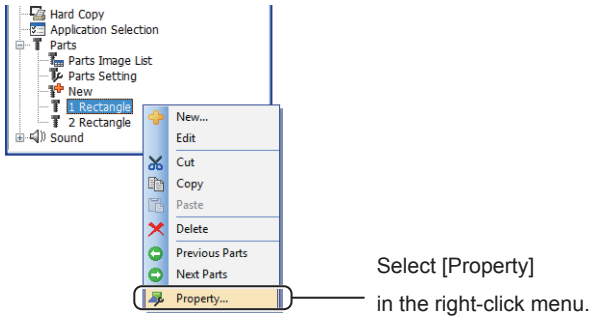
Step 2 The [Parts Property] dialog appears.

After changing [Number] or [Name], click the [OK] button to apply the change.

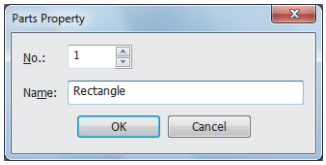


(2) Changing the number or name of a part in the project tree

Step 1 Select a part whose number or name is to be changed in the project tree.
Right-click the selected part to select [Property] from the menu.



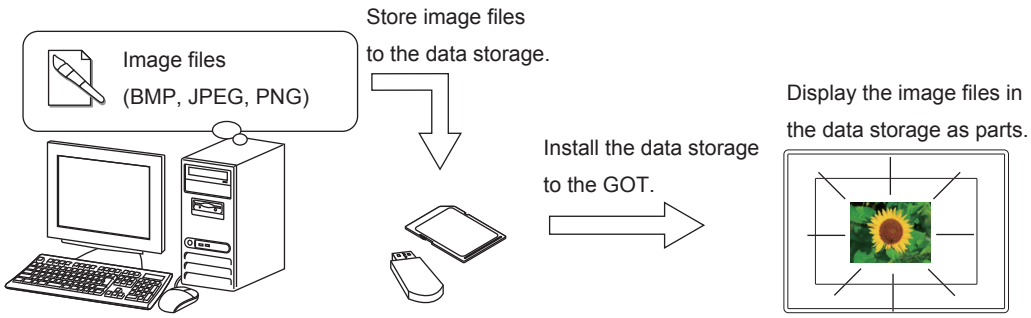
Step 2 The [Parts Property] dialog appears.
After changing [Number] or [Name], click the [OK] button to apply the change.



■6 Using the image file stored in the data storage as a part

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The image file stored in the data storage can be used for the parts display or parts movement.
Storing parts in the data storage reduces the size of the project data.

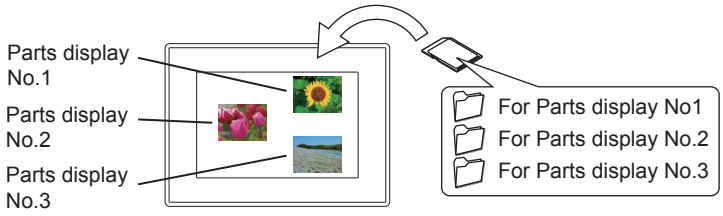


The following two methods are provided to use an image file in the data storage as a part.

➟5.9.3 ■6 (1) Specifying an image file from an object
5.9.3 ■6 (2) Specifying an image file in the project

(1) Specifying an image file from an object

Specify an image-file part stored in the data storage in the object setting of the parts display or parts movement.
Prepare one folder for each object to save image files separately per object.

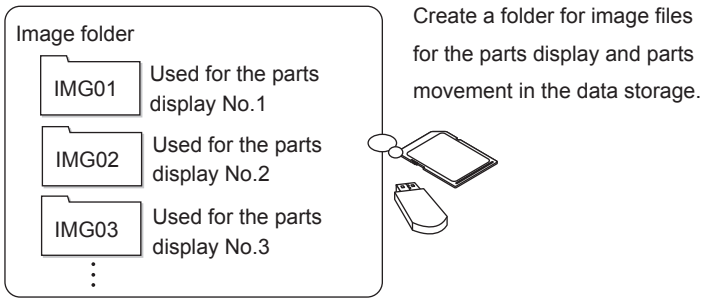


Item	Description
Folder name	Specified with the setting of the parts display or parts movement.
File name	Specified with the setting of the parts display or parts movement.
Available drive	Drive A, drive B, drive E, drive F, drive G, and drive X (current drive)
Setting range	Object units
Maximum number of parts	Max. 65536 parts

The following shows the procedure to register image files.

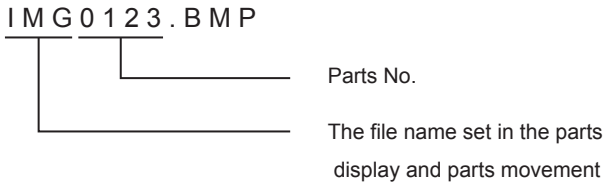
Step 1 Create a folder in the data storage to store image files.

Create a folder per object (parts display or parts movement).
The folder name must be the same as the name set for the parts display or parts movement.



Step 2 Store an image file to be used as a part to the created folder.

The file name must be the same as the name set for the parts display or parts movement.
Exsample) File name: IMG, parts No.: 0123, number of digits: 4



Parts No. is assigned according to [Digits] set for the parts display or parts movement.

- Five digits: 00001 to 65535
- Four digits: 0001 to 9999
- Three digits: 001 to 999
- Two digits: 01 to 99
- One digit: 1 to 9

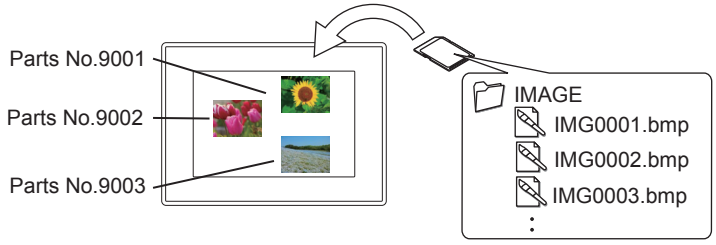
(2) Specifying an image file in the project

Not available to GT21 and GS21.

Use parts No. 9001 or later number as the numbers dedicated for image-file parts.

In this case, store image files in one folder.

The file name and the folder name are fixed.

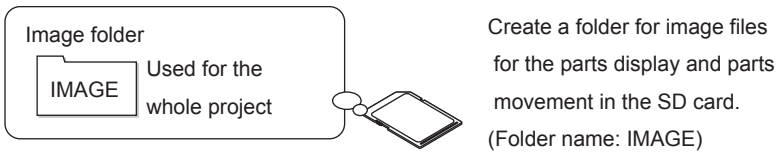


Item	Description
Folder name	IMAGE (fixed)
File name	IMG + 0 + rightmost three digits of the parts No,
Available drive	Drive A
Setting range	Project units
Maximum number of parts	Max. 999 parts

The following shows the procedure to register image files.

Step 1 Create a folder name it as IMAGE in the SD-card.

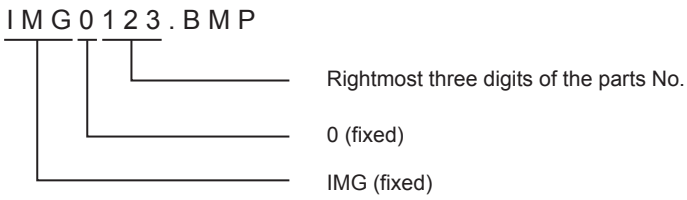
If any name other than IMAGE is used for the folder, the image file cannot be displayed with the parts display or parts movement.



Step 2 Store image files to be used as parts in the IMAGE folder in the SD-card.

Set each file name as follows.

Example) Parts No.: 9123



5.9.4 Precautions

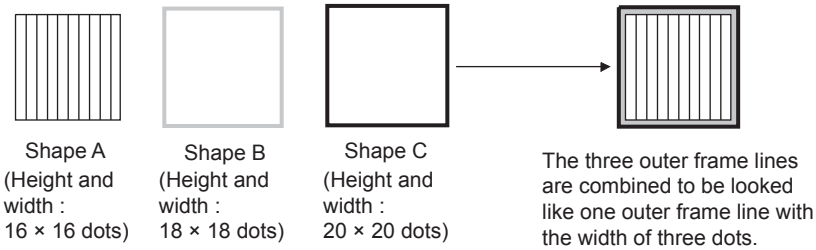
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Restriction for displaying figures

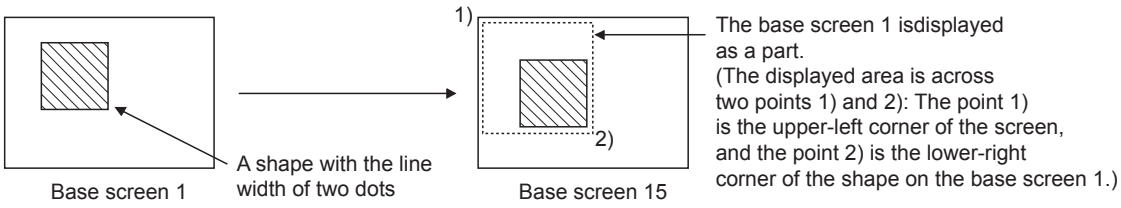
(1) Line width of outer frame

Draw the external frame of the figure with one dot of the line width to register as a part.
The outer frame line with the width of two or more dots may not be displayed correctly.
To display the outer frame line with the width of two or more dots, perform either of the following operations.

• Drawing the outer frame line in combination with figures that have one-dot line width



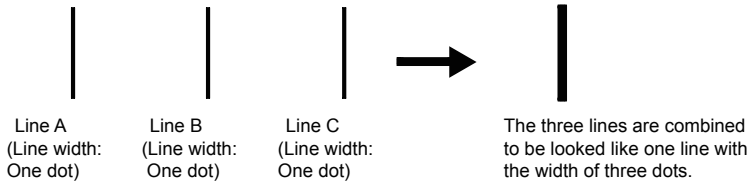
• Setting a figure with an outer frame of two or more dots on the unused base screen and displaying the base screen as a part in the parts display



(2) Line width of line (excluding slant lines)

A line (excluding slant lines) that has the width of two to seven dots and has been registered as a part may not be displayed correctly.
To display the line with the width of two or more dots, perform either of the following operations.

• Drawing a line by deforming a rectangle (color fill)
• Drawing a line in combination with lines that have one-dot line width



■2 Size of the image-file parts stored in the data storage

BMP JPEG, or PNG parts are displayed on the GOT in the same size as the ones of the image-file parts stored in the data storage.
The image file bigger than the display size of the GOT cannot be displayed.
Store image-file parts whose sizes are the same as or smaller than the display size of GOT in the data storage.

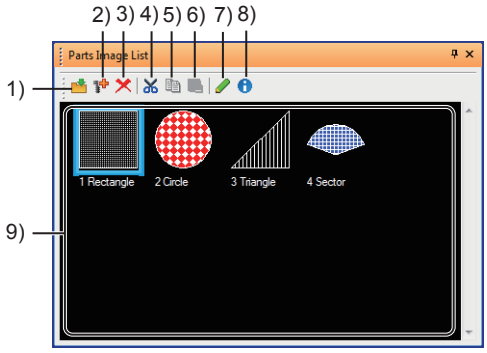
■3 Registering the figures on a screen editor as parts

Figures up to 2000 dots × 1600 dots can be registered as parts.
No figure whose vertical or horizontal size exceeds the above size can be registered.

5.9.5 [Parts Image List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the list of parts registered in GT Designer3. You can register, edit, or delete parts in the [Parts Image List] window.
Select [Common] → [Parts] → [Parts Image List] from the menu to display this dialog.

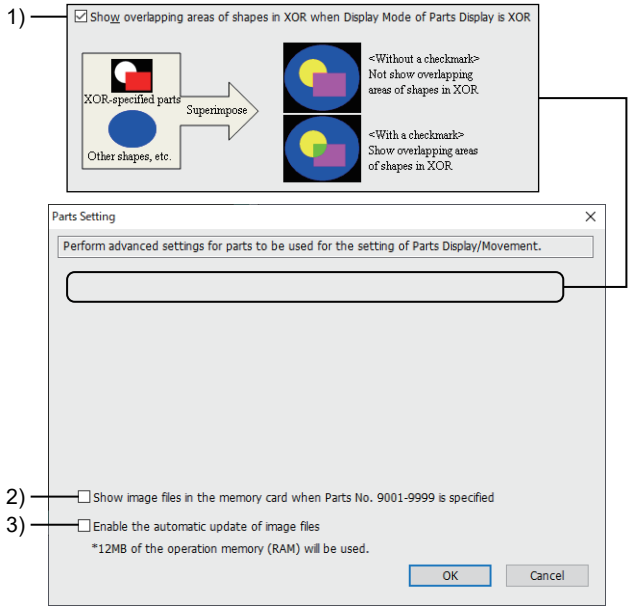


1) **[Register] button**
Registers a selected figure as a part.
2) **[New Register] button**
Registers a new part.
3) **[Delete] button**
Deletes a selected part.
4) **[Cut] button**
Cuts a selected part.
5) **[Copy] button**
Copies a selected part.
6) **[Paste] button**
Pastes a copied or cut part to a selected area.
7) **[Edit] button**
Edits a selected part on the parts editor.
8) **[Property] button**
Changes the number or name of a selected part.
9) **Parts image list**
Displays the list of the thumbnails, numbers, and names of the registered parts.

5.9.6 [Parts Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Sets the display of the parts in the parts display or parts movement.
Select [Common] → [Parts] → [Parts Setting] from the menu to display the [Parts Setting] dialog.



1) **[Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR]**

GOT Graphic Ver.1

When the display mode of the parts display or parts movement is set to [XOR], the XOR synthesis is performed to all the grouped figures together.

2) **[Show image files in the memory card when Parts No. 9001-9999 is specified]**
Displays the BMP, JPEG, or PNG parts stored in the parts display or parts movement as parts.

3) **[Enable the automatic update of image files]**
When an image file stored in drive V is displayed as a part for a parts display, the parts display is updated automatically when the image is updated.
For how to display an image file stored in drive V as a part for a parts display, refer to the following.

➟8.8.2 ■5 Switching the image on a parts display object automatically

6. BASIS OF SETTING AND EDITING

6.1 Device Settings . . . . . 6 - 2
6.2 Setting Trigger Types . . . . . 6 - 105
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6.1 Device Settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Devices that can be set in GT Designer3 projects

For the types and the ranges of the devices that can be set in GT Designer3 projects, refer to the following.

➡12.1 GOT Internal Device
12.4 Device Range and Settings of Each Controller

■2 Available devices of the target controllers for monitoring

(1) Range of devices that can be set

The range of the devices that can be set in GT Designer3 projects depends on the type of the controller.
For the devices that can be set in controllers of each type, refer to the following.

➡12.4 Device Range and Settings of Each Controller

For how to set the devices, refer to the following.

➡6.1.2 How to set devices

(2) Range of devices that can be set in controllers

The ranges of devices that can be set in GT Designer3 and those available for controllers may differ.
GT Designer3 does not automatically check if the devices set (specified by the names and numbers) in its project can be used by the controllers being connected.
To check if the devices can be used by the controllers being connected, follow the instructions shown below.

(a) Checking when setting the controllers

For the types and the ranges of the devices available for the controllers, refer to the following.

➡GOT2000 Series Connection Manual for a controller used

(b) Checking when drawing

For the types and the ranges of the devices that can be set in GT Designer3 projects, refer to the following.

➡12.4 Device Range and Settings of Each Controller

(c) Check with the system alarm.

When you attempt to monitor devices that cannot be used by the controller, by specifying the names or a range, a system alarm occurs.
(Alarm: G01-322 Specified device numbers are outside the available range. Check the available range.)

■3 Device setting with labels and tags

Labels and tags are usable in the device setting on GT Designer3.
By using labels and tags, you can create project data without paying attention to the actual devices.
Available labels and tags depend on the system configuration.

(1) System label

The labels can be used only for iQ Works projects.
System labels are intended for use in a large-scale system incorporating Mitsubishi Electric products.

➡6.1.3 How to set system labels

(2) Global label

The labels can be used for connection to the following controllers.

- MX-R
- MX-F
- RCPU*1
- Motion CPU (MELSEC iQ-R series)
- Motion module
- LHCPU

Among the global labels settable in GX Works3, MT Developer2, or Motion Control Setting Function, the GOT can monitor the ones that permit access from external devices.

*1 The GOT cannot monitor the global labels of R00CPU, R01CPU, and R02CPU that do not support the settings to permit access their labels from external devices.

For setting the global labels, refer to the following.

➡6.1.4 How to set global labels

(3) Label (GT Designer3)

The labels can be used only for GT Designer3 projects.
You can use labels (GT Designer3) by assigning devices that can be monitored by the GOT.
Labels (GT Designer3) are usable regardless of the scale of a system configuration.

➟6.1.5 How to set labels (GT Designer3)

(4) OMRON NJ/NX tag

You can use OMRON NJ/NX tags by importing a tag file created with OMRON programming software to GT Designer3.
These tags are intended for use in a system configuration including OMRON PLCs.

➟6.1.7 How to set OMRON NJ/NX tags

(5) RSLogix 5000 tag and AB native tag

You can use these tags by importing tag files created with ALLEN-BRADLEY programming software to GT Designer3.
The tags are intended for use in a system configuration including ALLEN-BRADLEY PLCs.

➟6.1.8 Using RSLogix 5000 tags
6.1.9 How to set AB native tags

(6) OPC UA tag

You can use OPC UA tags by importing the tag information of an OPC UA server to GT Designer3.
The tags are intended for use in a system configuration including OPC UA servers.

➟6.1.10 How to set OPC UA tags

■4 Using device comments and device definitions

By importing device comments and device definitions in GT Designer3, the device comments and device definitions are usable in the device setting.

➟6.1.6 Using device comments and device definitions

6.1.1 Formats of devices, labels, and tags

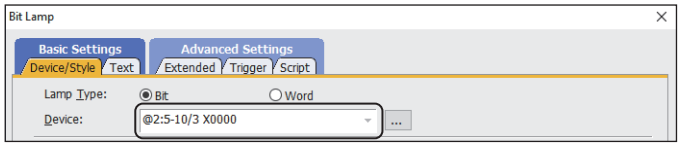
The following shows how to format devices, labels, and tags in setting dialogs and scripts.
The formats in setting dialogs and scripts are different.

➥■1 Formats in setting dialogs
■2 Formats in scripts
■3 Device setting for network connection

■1 Formats in setting dialogs

The following shows the formats in the setting dialogs of objects or others.

Example) Channel No. 2, network No. 5, station No. 10, CPU No. 3, and device X0000



Device, label, or tag	Format
Device	(Channel):(Network setting) (Device)
System label	(Label name)
Global label	• For setting the global labels imported from GX Works3 or MT Developer2 (Channel):(Network setting)::(Label name) • For setting the global labels imported from Motion Control Setting Function (Channel):(Network setting)::U (Module No.)-(Label name)
Label (GT Designer3)	$(Group name):(Label name)
OMRON NJ/NX tag	(Channel):(Network setting)::(Tag name)
AB native tag	(Channel):(Network setting)::(Tag name)
OPC UA tag	(Channel) &(Tag name)

The formats in [Device] include the following elements.

Element		Description
Channel	Format	@(Channel No.)
	Example	Example) Channel No. 2 @2
	Explanation	Channel for communicating with a controller. To specify channel No. 1, "@1:" can be omitted. If no network setting exists, the colon (:) after "(Channel)" is not required.
Network setting	Format	(Network No.)-(Station No.)/(CPU No.)-(Redundant system)
	Example	Example) Network No. 5, station No. 10, CPU No. 3, and standby system 5-10/3-S
	Explanation	Setting for specifying a network-connected controller. Enter the following elements as necessary. • Network No., station No. To specify the host station or all stations, "(Network No.)-(Station No.)" can be omitted. However, enter 0-0 to specify all stations for monitoring MODBUS salve equipment. If no network No. and station No. exist, "(Network No.)-(Station No.)" is not required. For the monitoring targets when "0" or "FF" is set to the network number and station number for network connection, refer to the following. ➥■3 Device setting for network connection • CPU No. To specify a CPU No., "(Network No.)-(Station No.)" cannot be omitted. If no CPU No. exists or you specify CPU No. 0, "/(CPU No.)" is not required. • Redundant system To monitor the standby system in a redundant system, enter S. To monitor the control system in a redundant system or monitor a non-redundant system, "-(Redundant system)" is not required.

Element	Description	
Module No.	Format	U (Module No.)
	Example	Example) Module No.: A1 UA1
	Explanation	Set this element to import global labels from Motion Control Setting Function.
Device	Format	(Device name)(Device No.).b(Bit position)
	Example	Example) Bit 15 of D1000 D1000.b15
	Explanation	Device name and device number. When inserting "(Device)" immediately after "(Network setting)", add a one-byte space between them. To specify a bit of a word device, enter ".b(Bit position)". Some devices require other elements. For the formats of such devices, refer to the following. ➟12.4 Device Range and Settings of Each Controller
Label name Tag name	Format	(Label name or tag name).b(Bit position)
	Example	Example) Bit 15 of a system label named sys_label_001 sys_label_001.b15
	Explanation	Label name or tag name. To specify a bit of a word device, enter ".b(Bit position)". The format varies according to the types of labels or tags. For the details, refer to the following. ➟6.1.3 How to set system labels 6.1.4 How to set global labels 6.1.5 How to set labels (GT Designer3) 6.1.7 How to set OMRON NJ/NX tags 6.1.9 How to set AB native tags 6.1.10 How to set OPC UA tags

■2 Formats in scripts

The following shows the formats in scripts.

Example) Channel No. 2, network No. 5, station No. 10, CPU No. 3, and device X0000

Device, label, or tag	Format
Device	[(Channel):(Network setting):(Data type):(Device)]
System label	[<t:(Label name)>]
Global label	• For setting the global labels imported from GX Works3 or MT Developer2 [(Channel):(Network setting):(Data type)::(Label name)] • For setting the global labels imported from Motion Control Setting Function [(Channel):(Network setting):(Data type)::U (Module No.)-(Label name)]
Label (GT Designer3)	[<$:(Group name):(Label name)>]
OMRON NJ/NX tag	[(Channel):(Network setting):(Data type)::(Tag name)]
AB native tag	[(Channel):(Network setting):(Data type)::(Tag name)]
OPC UA tag	[(Channel):(Data type)::&(Tag name)]

The formats of channel, network setting, module number, device, label name, and tag name are the same as the formats of the elements in [Device] in setting dialogs.

➟6.1.1 ■1 Formats in setting dialogs

Data type is required in scripts.

For its format, refer to the following.

➟9.9.2 ■4 (3) Available devices and how to express the devices

■3 Device setting for network connection

The following shows the monitored stations when "0" or "FF" is specified for the network number and station number of the device.

(1) MELSECNET/H connection

Specified value		Monitored station		Remarks
Network No.	Station No.	Network No.	Station No.	
0 (Own network)	0	Own network	Control station	-
	FF (host station)	Own network	Host station (GOT)	Link devices and GOT internal devices can be monitored but the others (transient devices) cannot be monitored.
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	Own network	As specified	-
Same as the GOT	0	As specified	Control station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-
Other than the above (different network)	0	As specified	Control station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-

(2) CC-Link IE TSN connection

Specified value		Monitored station		Remarks
Network No.	Station No.	Network No.	Station No.	
0 (Own network)	0	Monitoring unavailable	Monitoring unavailable	-
	FF	Own network	Host station (GOT)	Link devices can be monitored but the others (transient devices) cannot be monitored.
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	Monitoring unavailable	Monitoring unavailable	-
Same as the GOT	0	As specified	Master station	-
	FF	Monitoring unavailable	Monitoring unavailable	-
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-
Other than the above (different network)	0	As specified	Master station	-
	FF	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-

(3) CC-Link IE Controller Network connection

Specified value		Monitored station		Remarks
Network No.	Station No.	Network No.	Station No.	
0 (Own network)	0	Own network	Control station	-
	FF (host station)	Own network	Host station (GOT)	Link devices and GOT internal devices can be monitored but the others (transient devices) cannot be monitored.
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	Own network	As specified	-
Same as the GOT	0	As specified	Control station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-
Other than the above (different network)	0	As specified	Control station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-

(4) CC-Link IE Field Network connection

Specified value		Monitored station		Remarks
Network No.	Station No.	Network No.	Station No.	
0 (Own network)	0	Own network	Master station	-
	FF (host station)	Own network	Host station (GOT)	Link devices and GOT internal devices can be monitored but the others (transient devices) cannot be monitored.
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	Own network	As specified	-
Same as the GOT	0	As specified	Master station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Same as the GOT	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-
Other than the above (different network)	0	As specified	Master station	-
	FF (host station)	Monitoring unavailable	Monitoring unavailable	-
	Other than the above	As specified	As specified	-

(5) CC-Link connection

For connection to an intelligent device station using the CC-Link connection, set "0" to [NW No.] and the host station number to [PC No.] to monitor the RX, RY, RWw, and RWr devices assigned to the master station in the CC-Link parameter settings.
To monitor the device of a PLC CPU on other stations, set "0" to [NW No.] and the station number of the relevant station (station No.: n) to [PC No.].
(n: Station number of the monitored station (0: Master station, 1 to 64: Local station))

To monitor the RX, RY, RWw, and RWr devices assigned to other stations in the CC-Link parameter settings, apply the settings of the host station.
Otherwise, display speed may decrease.

6.1.2 How to set devices

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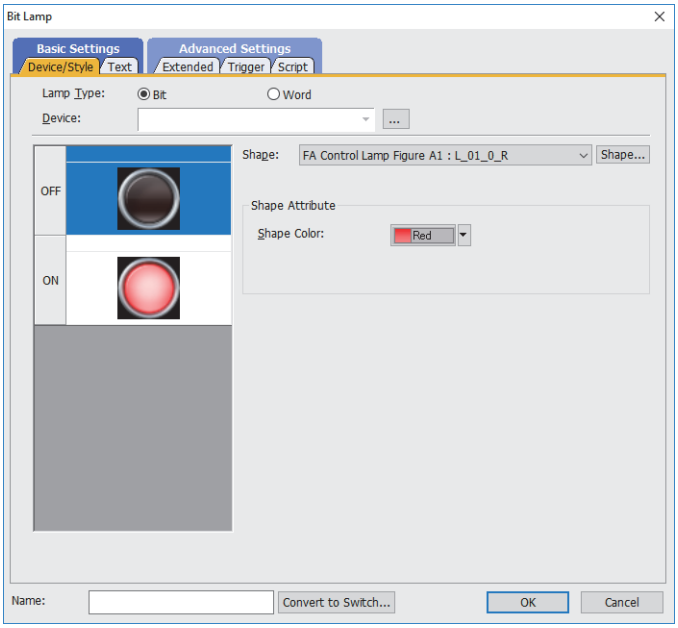
➟■1 Setting devices in the device setting dialog
■2 Setting devices with the input assist

Set devices in the device setting dialog of each object or with the input assist.

Example) When setting a device to be monitored



■1 Setting devices in the device setting dialog

To set devices, display the device setting dialog from the setting dialog of the object.

Step 1 Click the [...] button in the [Device/Style] tab to display the device setting dialog or the [Select CH No.] dialog.

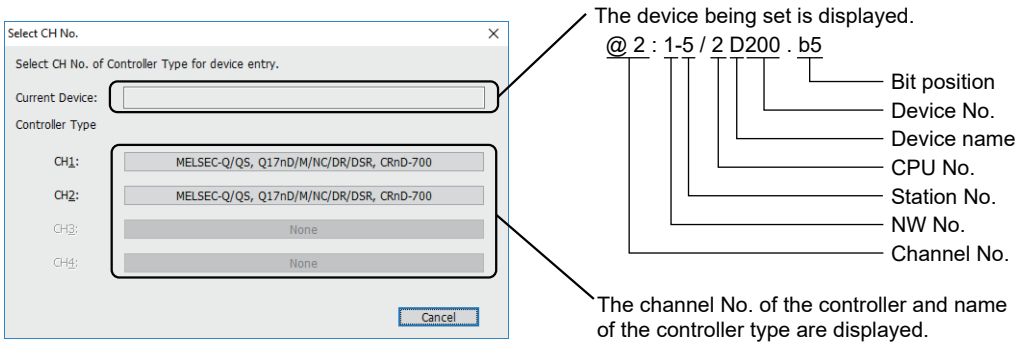
To display the [Select CH No.] dialog, set multiple controllers and then make the following setting or perform the following operation.

- Set [Display only when setting new device] or [Always display] on the [Edit] tab in the [Options] dialog.

  ➟11.10.4 ■1 [Options] dialog ([Edit] tab)
- Click the [...] button while pressing the [Shift] key of the personal computer.

Step 2 In the [Select CH No.] dialog, select the controller.

Click the controller button to display the device setting dialog.



For the details of the system label, refer to the following.

➟6.1.3 How to set system labels

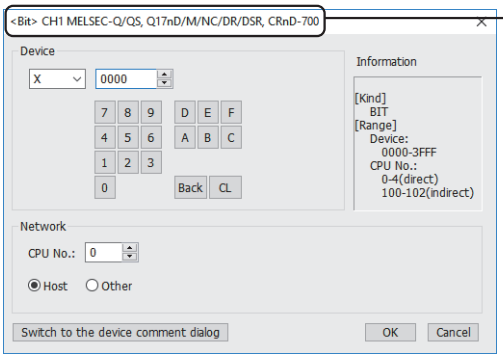
Step 3 Select the target device in the dialog, and click the [OK] button to set the device for the object.

For details of the settings in the device setting dialog for each controller, refer to the following.

➟12.3 Device Range and Settings of Mitsubishi Electric Equipment
12.4 Device Range and Settings of Each Controller

For the monitoring targets when "0" or "FF" is set to the network number and station number for network connection, refer to the following.

➟■3 Device setting for network connection



The channel No. of the controller and name of the controller type being set are displayed.

Step 4 After settings being made in the device setting dialog, the device set in the setting dialog for the object is displayed.

For the display by the object setting dialog, refer to the following.

➟12.4 Device Range and Settings of Each Controller

Once a device is set, the device can be set by selecting from the list in the setting dialog of each object from the next time.

Up to 5 previously set devices are listed. Subsequently, these are replaced in turn by each successive new entry.

■2 Setting devices with the input assist

The target device can be searched in the setting dialog for the object without opening the device setting dialog.

For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

6.1.3 How to set system labels

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➥■1 Conditions for use of system labels
■2 Applicable system labels
■3 System label setting
■4 System label update/check
■5 Registering system labels
■6 Generating route information on GT Designer3
■7 Precautions for system labels

For iQ Works, system labels can be used instead of setting devices on GT Designer3.
(The system labels cannot be used for applications other than iQ Works.)
The system labels are divided into system label Ver.1 and system label Ver.2.
You cannot use system labels Ver.1 and system labels Ver.2 simultaneously.

- System label Ver.1
  The system label Ver.1 is a character string with a controller device assigned.
  The system label Ver.1 is shared among the projects in a workspace.
- System label Ver.2
  Not available to GT21 and GS21.
  The system label Ver.2 is a character string with a global label for GX Works3 or MT Developer2 assigned.
  The system label Ver.2 is shared among projects in a workspace.

You can register the both types of system labels in the system label database with GT Designer3.
The system label database is used to manage the system labels.
When a workspace is saved in MELSOFT Navigator, a system label database is created in the workspace.
When no system label database exists in a workspace, system labels cannot be used.

■1 Conditions for use of system labels

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(1) Conditions for projects

System labels can be used only a workspace saved in MELSOFT Navigator.
A system label database is not created for a GT Designer3 project in a workspace created by GT Designer3 (not started from MELSOFT Navigator). Therefore, the system labels cannot be used.
To use the system labels, save the GT Designer3 project in a workspace created by MELSOFT Navigator.

(2) GOT type setting

To use system labels, select [Use system labels in conjunction with MELSOFT Navigator] in the [Type Setting] dialog.

➥5.1.5 [Type Setting] dialog

(3) Function that does not support the system labels

The system labels cannot be used in the device setting for the MES interface function.
For the MES interface function, specify devices directly.

■2 Applicable system labels

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The GOT can use system labels that satisfy the following conditions.
System labels not applicable to the GOT are recognized as incorrect labels.
Those invalid labels can be set in a GT Designer3 project, but cannot be written to the GOT or data storage.

(1) System label name

The GOT can use system labels that satisfy the following conditions.
System labels that do not satisfy the following conditions cannot be set for GT Designer3.

- For the system label Ver.1, the number of characters used in the name of a system label is 32 or less.
- For the system label Ver.2, the number of characters used in the name of a system label is 256 or less.
- One-byte kana characters are not used.
- The following one-byte symbols are not used.

. , , , [,] , : , ! , ", #, $, %, &, ', (,), *, +, ;, <, =, >, ?, \, ^, `, { , | , } , ~, ?

- A system label name is not the same as a device name.
- Reserved characters are not used.

For reserved characters, refer to the following.

➟GX Works2 Version1 Operating Manual (Common)

(2) Registering system labels in a system label database

System labels that are not registered in a system label database are recognized as incorrect labels.
For how to register the system labels in the system label database, refer to the following.

- Registering system labels by MELSOFT Navigator

➟Help for MELSOFT Navigator

- Registering system labels by GT Designer3

➟■5 Registering system labels

(3) Data types

System labels with the following data types are recognized as incorrect system labels.
Do not set the system labels with the following data types.

- Time
- Pointer
- Structure array

When [Reflect the data type of label] is selected on the [Edit] tab in the [Options] dialog, the data types of system labels are reflected to GT Designer3 settings.

➟11.10.4 Customizing the settings related to editing operations

The following shows the usable data types of system labels.

○: Applicable, -: Not applicable

Data type of system label		Device data type or device type	Bit specification of word device
Bit		Bit	-
Word [Signed]		Signed BIN 16	○
		BCD16	-
Word [Unsigned]/Bit [16bit]		Unsigned BIN 16	○
Double Word [Signed]		Signed BIN 32	-
		BCD32	
Double Word [Unsigned]/Bit [32Bit]		Unsigned BIN 32	-
Timer, Counter, Retentive timer	Current value or setting value	Signed BIN 16	-
	Contact	Bit	-
	Coil		
Timer [Unsigned], Counter [Unsigned], Retentive timer [Unsigned]	Current value	Unsigned BIN 16	-
	Contact	Bit	-
	Coil		
Long timer, Long counter, Long retentive timer	Current value	Unsigned BIN 32	-
	Contact	Bit	-
	Coil		
Single-precision real number		Real numbers (32 bits)	-
Double-precision real number		Real numbers (64 bits)	-
String[*1]		Unsigned BIN 16 or string	-
String [Unicode][*1]			

*1 Available for the following functions.

- Text display object
- Text input object
- Text print object
- Logging function
- Recipe function

(4) System label handled as a special structure

GT Designer3 handles the following data types of system labels as special structures.
Although MELSOFT Navigator handles such a label as one, GT Designer3 handles the label as multiple labels.

Data type of system label	Device data type or device type	Notation of system label	Devices of MELSEC-iQ-R/ iQ-F/Q/L	Devices of MELSEC-FX
Timer	Signed BIN16	System label name	Timer (current value) (TN)	Timer (current value) (T)
		System label name/V	-	Timer (set value) (TS)
	Bit	System label name/T	Timer (contact) (TT)	Timer contact (T)
		System label name/C	Timer (coil) (TC)	-
Timer (unsigned)	Unsigned BIN 16	System label name	Timer (current value) (TN)	-
	Bit	System label name/T	Timer (contact) (TT)	-
		System label name/C	Timer (coil) (TC)	-
Counter	Signed BIN16	System label name	Counter (current value) (CN)	Counter (current value) (C)
		System label name/V	-	Counter (set value) (CS)
	Bit	System label name/T	Counter (contact) (CT)	Counter contact (C)
		System label name/C	Counter (coil) (CC)	-
Counter (unsigned)	Unsigned BIN 16	System label name	Counter (current value) (CN)	-
	Bit	System label name/T	Counter (contact) (CT)	-
		System label name/C	Counter (coil) (CC)	-
Retentive timer	Signed BIN16	System label name	Retentive timer (current value) (SN)	Timer (current value) (T)
		System label name/V	-	Timer (set value) (TS)
	Bit	System label name/T	Retentive timer (contact) (SS)	Timer contact (T)
		System label name/C	Retentive timer (contact) (SC)	-
Retentive timer (unsigned)	Unsigned BIN 16	System label name	Retentive timer (contact) (SN)	-
	Bit	System label name/T	Retentive timer (contact) (SS)	-
		System label name/C	Retentive timer (coil) (SC)	-
Long timer*1	Unsigned BIN 32	System label name	Timer (current value) (LTN)	-
	Bit	System label name/T	Timer (contact) (LTN)	-
		System label name/C	Timer (coil) (LTC)	-
Long counter*2	Unsigned BIN 32	System label name	Counter (current value) (LCN)	-
	Bit	System label name/T	Counter (contact) (LCT)	-
		System label name/C	Counter (coil) (LCC)	-
Long retentive timer*1	Unsigned BIN 32	System label name	Retentive timer (contact) (LSN)	-
	Bit	System label name/T	Retentive timer (contact) (LSS)	-
		System label name/C	Retentive timer (coil) (LSC)	-

*1 Only available to MELSEC iQ-R series.
*2 Available to MELSEC iQ-R series and MELSEC iQ-F.

(5) Devices assigned to system labels

Assign devices that can be monitored by the GOT to system labels.
The following system labels are recognized as incorrect labels.

- System labels with devices assigned that cannot be monitored by the GOT
- System labels without devices assigned

(6) Global labels assigned to system labels Ver.2

Assign global labels settable in GT Designer3 to system labels Ver.2.
The following system labels Ver.2 are recognized as invalid labels.

- System labels Ver.2 to which global labels that cannot be set in GT Designer3 are assigned
- System labels Ver.2 to which no global labels are assigned

For the conditions of global labels usable in GT Designer3, refer to the following.

➟6.1.4 ■1 Usable global labels

■3 System label setting

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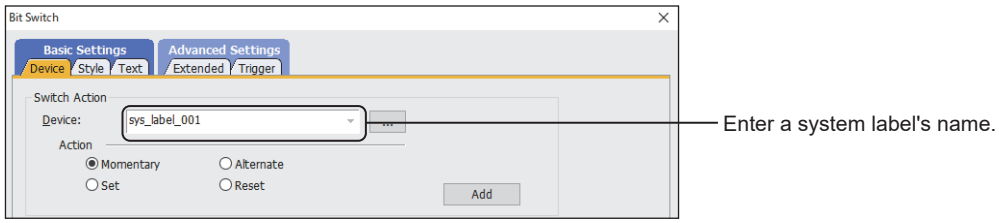
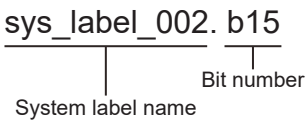
As well as devices, system labels are settable in the setting dialog of objects or others.

(1) Entering system label name directly

Enter a system label name in the text box of [Device] in the setting dialog.



The bit specification is available for a system label whose data type is word.
In this case, enter the label name in the following format.



When incorrect label names including a system label name that is not registered in the system label database is entered, ?? is added to just before the system label name.
Check the system label setting, and then configure the setting again, or register the system label in the system label database.

➟6.1.3 ■4 System label update/check

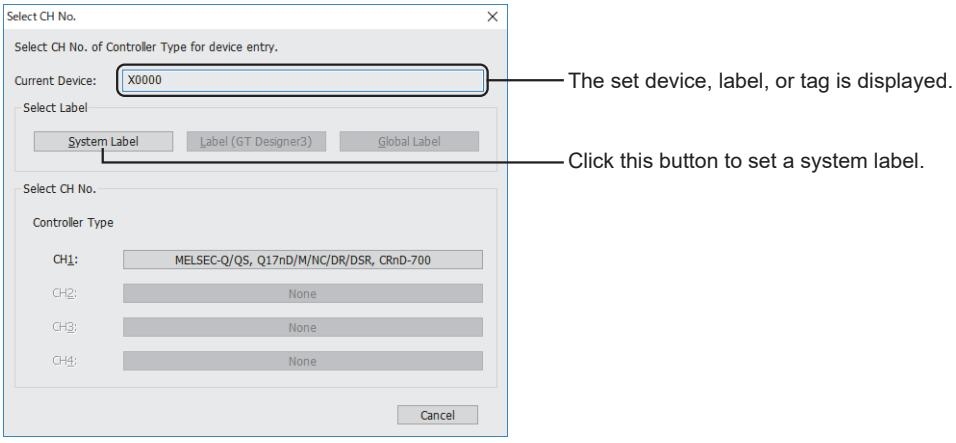
(2) Selecting a system label from the label list

Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button of [Device] to display the [Select CH No.] dialog.

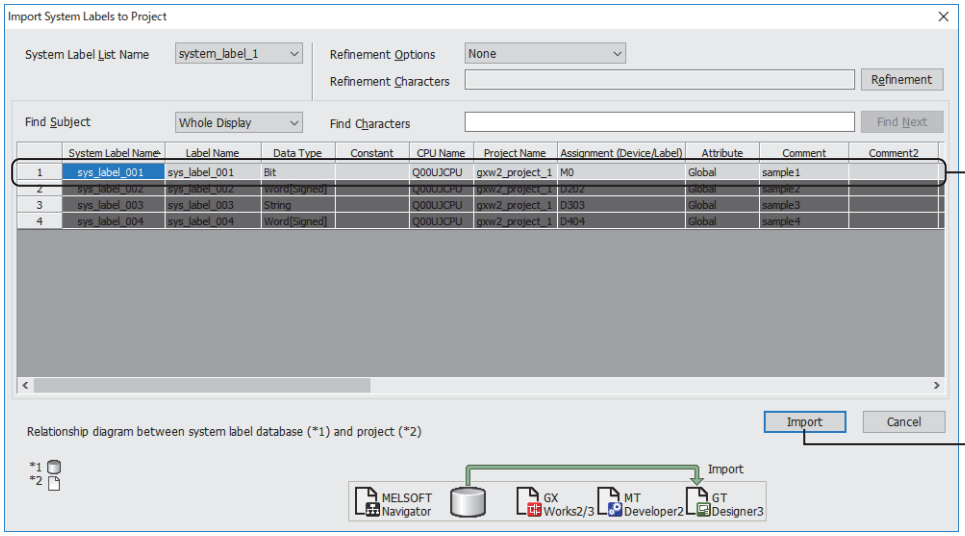
If you click the [...] button without holding down the [Shift] key, the dialog to appear varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.
For the setting details, refer to the following.

➟11.10.4 Customizing the settings related to editing operations

Step 2 In the [Select CH No.] dialog, click the [System Label] button to display the [Import System Labels to Project] dialog.



Step 3 Select a system label from the system label list and click the [Import] button. The selected system label is set for [Device].



(3) Setting system labels with the input assist

You can search and set system labels in the setting dialog for the object, without opening the [Import System Labels to Project] dialog.

For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

■4 System label update/check

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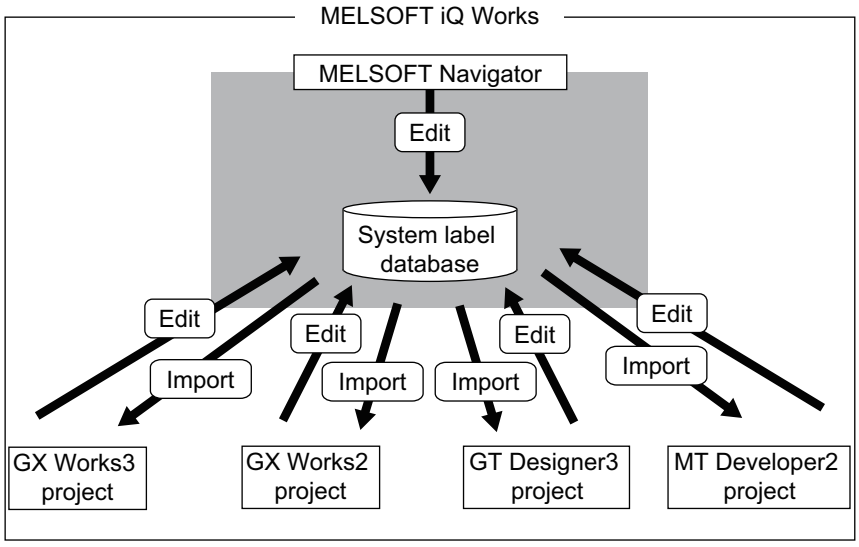
Data of a system label database can be edited by each software for iQ Works.

Therefore, system labels used with GT Designer3 settings may not be updated.

When the system label update/check is executed, GT Designer3 project data are updated by importing data in the system label database. And then the set system labels are checked whether the labels are applicable.

When registering, changing, or deleting data in the system label database by MELSOFT Navigator or others, execute the system label update/check and import the latest system labels.

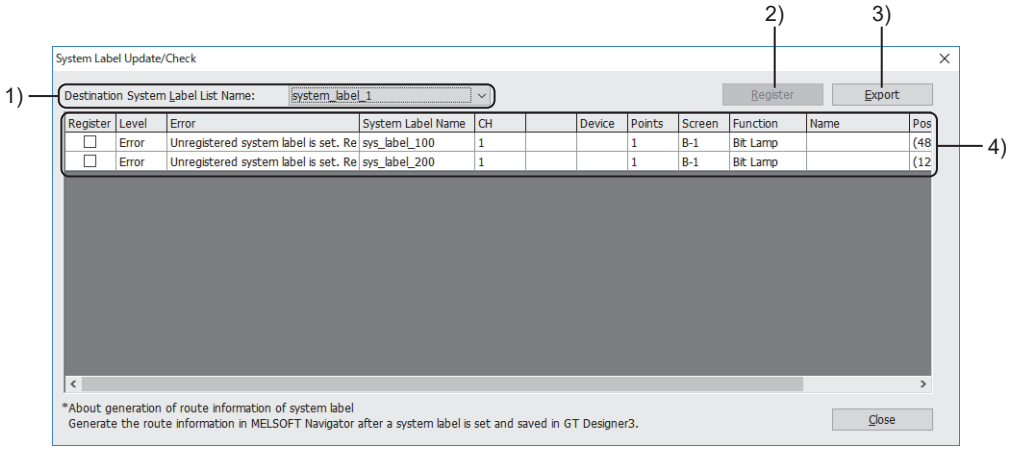


(1) Operating procedure

Step 1 Select [Tools] → [System Label Update/Check] from the menu to update and/or check system labels.

Step 2 When the system label settings are incorrect, the [System Label Update/Check] dialog appears.

Refer to the following to remove errors.



1) **[Destination System Label List Name]**
Select a system label list to which system labels are registered.

2) **[Register] button**
Registers a system label selected in the error list into the system label database.

➟■5 Registering system labels

3) **[Export] button**
Exports the result of the system label update/check as a CSV file or a Unicode text file.

4) **Error list**
Displays error information including the sources of the errors.
For errors, causes, and corrective actions, refer to the following.

➟(5) Error messages

To register an unregistered system label in the system label database, select [Register].

(2) Effect of the system label update/check

When system labels set on GT Designer3 have been deleted from the system label database, they are recognized as invalid labels.
When system labels Ver.2 are used, if you change the names of the labels collectively with MELSOFT Navigator, the changes are reflected to the names of system labels set in GT Designer3.

(3) Automatically executing the system label update/check

To match a project data and another project data, GT Designer3 automatically executes the system label update/check in the following operations.

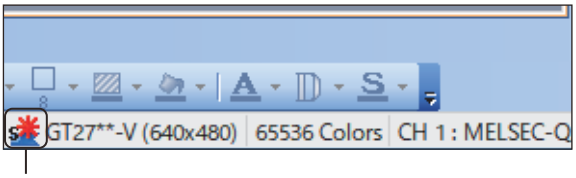
- Open a GT Designer3 project. (Only when system labels are changed)
- Save a GT Designer3 project.
- Select [Communication] → [Write to GOT] or [Write to Memory Card] from the menu.
- Check or uncheck [Use system labels in conjunction with MELSOFT Navigator] in the [Type Setting] dialog.
- Start or update GT Simulator3.
- The supported model is excluded in the [Controller Setting] dialog.

In the [iQ Works] tab of the [Option] dialog, you can set whether or not to execute the automatic check when initiating a GT Designer3 project.
For the setting method, refer to the following.

➟11.10.7 Interaction with iQ Works

(4) System label update notification

When the system labels set for the GT Designer3 project are changed or deleted in the system label database, the system label update notification icon is displayed on the status bar.
Right-click the system label update notification icon, and then select [System Label Update/Check] to update and/or check system labels.



System label update notification icon

(5) Error messages

The following table shows the errors, causes, and corrective actions for the system label update/check.

Error	Cause	Corrective action
Controller and this project are not allocated in MELSOFT Navigator. Allocate this project with the controller and save in MELSOFT Navigator.	• The current used project is not assigned to the system configuration diagram	• Assign the current used project to the controller, and then save the project by MELSOFT Navigator ➟Help for MELSOFT Navigator
Device setting of the system label or controller setting of GT Designer3 is incorrect. Check the device setting of the system label and controller setting.	• A device that cannot be monitored by the GOT is set. • The device number of a device set for the system label is out of range or invalid.	• Check the device setting of the device assigned to the system label. ➟■2 Applicable system labels 12.4 Device Range and Settings of Each Controller Help for MELSOFT Navigator
	• A value out of the range is specified for an element of array. • A label name of the structure that does not exist is specified. • /T, /S, or /C is specified for a system label with the data type other than [Timer], [Counter], and [Retentive Timer].	• Check the data type assigned to the system label. ➟Help for MELSOFT Navigator
	• A system label with an unavailable channel No. is set.	• Check the controller setting for each channel. ➟GOT2000 Series Connection Manual For GT Works3 Version1 compatible for a controller used
The data type cannot be set in MELSOFT Navigator. Set the data type again.	• A system label with the data type or device type not available for the system label is set in the setting dialog of an object or others.	• Set a data type or device type available for the system label. ➟6.1.3 ■2 (3) Data types Help for MELSOFT Navigator
Unregistered system label is set. Register it in a system label of MELSOFT Navigator.	• A system label that is set for GT Designer3 does not exist in the system label database.	• Register the system label in the system label database. ➟■5 Registering system labels
A system label of unavailable data type is selected. Set the device again.	• A system label, whose data type ([Time] or [Pointer]) is not available for GT Designer3, is set.	• Set a system label with the data type available for GT Designer3 to the device setting. ➟■2 Applicable system labels ■3 System label setting Help for MELSOFT Navigator
The device of the system label cannot be obtained. Allocate the device to the system label in MELSOFT Navigator.	• The device assigned to the system label Ver.1 cannot be obtained. • The global label assigned to the system label Ver.2 cannot be obtained.	• Assign a device to the system label Ver.1. • Assign a global label to the system label Ver.2. ➟Help on MELSOFT Navigator GX Works3 Operating Manual
The routing information of the system label cannot be acquired. Generate the routing information of the system label in MELSOFT Navigator.	• The route information cannot be obtained with MELSOFT Navigator. • The system configuration diagram of MELSOFT Navigator does not match the controller setting of the Designer3 project.	• Generate the route information of the system label, and then save a workspace. After saving the workspace, execute the system label update/check again. • Generate the route information of the system label by MELSOFT Navigator, and then reflect parameters on the GT Designer3 project. ➟Help for MELSOFT Navigator
A system label of string type is set. Export the data of corresponding global labels set for the system labels from GX Works3 and import it in GT Designer3, then select the system label again.	• The global labels assigned to the system labels Ver.2 of the string type or Unicode string type have not been imported to GT Designer3.	• Import the assigned global labels to GT Designer3. • After the import, set the relevant system labels Ver.2 again. ➟6.1.4 ■2 Importing global labels

(6) Update notification icon when using with global labels

If changes in system labels and global labels are notified simultaneously, the system label update notification icon is displayed in the status bar.

➟6.1.4 ■2 (3) Notifying and updating a change in the global labels

■5 Registering system labels

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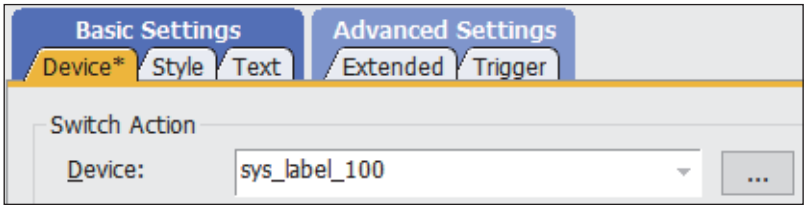
The following procedure shows how to register system labels in the system label database by GT Designer3.

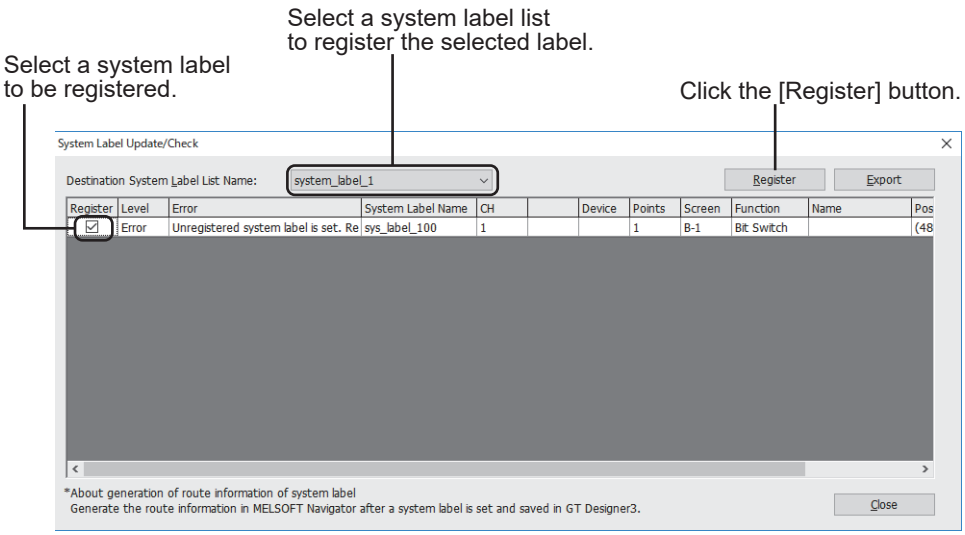
Step 1 Enter a system label name to be registered directly to the text box in [Device] for the dialog box of objects.



Step 2 Select [Tools] → [System Label Update/Check] from the menu to execute the system label update/check and list errors in the [System Label Update/Check] dialog.

Step 3 Configure the following settings and click the [Register] button to display a confirmation dialog.

- Check-mark the box in the [Register] column for the system label to be registered.
- In [Destination System Label List Name], select a system label list to register system labels.



Step 4 Click the [Yes] button to register the selected system label to the system label database.

Step 5 Close the [System Label Update/Check] dialog to save the project on GT Designer3.

Step 6 Update the system label list by using MELSOFT Navigator.

When the system label list is not updated, the registered data are not reflected in the system label list. For how to operate MELSOFT Navigator, refer to the following.

➟Help for MELSOFT Navigator

■6 Generating route information on GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Conditions under which the route information is generated

When all the following conditions are satisfied, the route information can be generated by GT Designer3.

- GT Designer3 is started by using MELSOFT Navigator.
- When the project is saved, only a route information obtainment error has occurred at the system label update/check.

Step 1 Save the project data.

Step 2 The confirmation dialog box appears.

Click the [Yes] button to start generating the route information.

Step 3 The route information is generated, and GT Designer3 is displayed at the front.

(2) Operations with which the route information cannot be created

The route information is not generated under the following conditions.

- The project data is saved collectively by using MELSOFT Navigator.
- The project data is saved in the save confirmation dialog box displayed when GT Designer3 exits.
- GT Desiger3 is started by using MELSOFT Navigator, the GOT type is changed, and then the project data is saved.
- The project data is saved while GT Simulator3 is started by using GT Designer3.
- Generating route information takes 20 minutes or more.

■7 Precautions for system labels

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(1) Changing a system configuration diagram by MELSOFT Navigator

The route information of the system label is manually generated by the system configuration diagram for MELSOFT Navigator.

When changing the system configuration diagram for MELSOFT Navigator, generate the route information again by MELSOFT Navigator.

After generating the route information, reflect parameters with the route information on a GT Designer3 project by MELSOFT Navigator.

For how to operate MELSOFT Navigator, refer to the following.

➟Help for MELSOFT Navigator

(2) Data type of system labels and data type of devices

When [Reflect the data type of system label] is selected in the [Option] dialog, the data types of system labels are reflected to the GT Designer3 settings.

For how to set the items in the [Option] dialog, refer to the following.

➟11.10.7 Interaction with iQ Works

(3) Class for system label

To use a system label with [VAR_GLOBAL_CONSTANT] set for the class, use the system label with a bit device assigned.

When the system label with other than a bit device is assigned, the system label is not applicable to GT Designer3.

(4) System label names that can be set for consecutive devices

To set consecutive devices, system label names that are not registered in the system label database cannot be entered.

Enter a system label name that is registered in the system label database.

When you use a system label to specify consecutive devices, the consecutive devices, beginning with the device or the device of the global label assigned to the system label, must be within the device range.

Otherwise, you cannot set the system label to specify the consecutive devices in the device setting.

(5) When the system label database is inaccessible

Depending on the version of GT Designer3, the system label database is inaccessible.

If this problem is not solved with the troubleshooting shown in the error message, install the latest version of GT Designer3.

(6) Device range when devices are automatically assigned on GX Works2

When devices are automatically assigned to system labels in GX Works2, set the device range that can be monitored by the GOT in the automatic device assignment setting.

Otherwise, the GOT may not monitor some of the assigned devices.

➟Help for GX Works2
12.3 Device Range and Settings of Mitsubishi Electric Equipment

(7) Specifying CPU numbers with system labels

System labels cannot be used to specify CPU numbers.

(8) Precautions for using system labels Ver.1

The GOT incorrectly monitors the system labels to which index-modified devices are assigned.

If you set such system labels on GT Designer3, the index modification is invalid.

Example) When you set the system label Ver.1 to which D0Z0 is assigned, the GOT handles D0Z0 as D0.

(9) Precautions for using system labels Ver.2

(a) Importing global labels

Import the global labels that are assigned to the system labels Ver.2 of the string type or Unicode string type.
The system labels Ver.2 may not work properly when the assigned global labels have not been imported.
After the import, set the relevant system labels Ver.2 again.

(b) Station No. switching

The station No. switching is not available to the station that uses system labels Ver.2.
Do not use system labels Ver.2 for the station requiring the station No. switching.

(c) Writing package data

When you set system labels Ver.2 in a project and write the project data to the GOT, [Write Mode] is not selectable in the [Write Option] dialog.
In this case, [Write Mode] is fixed to [Synchronize].

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

(d) When using a system label Ver.2 to specify consecutive devices

When you use a system label Ver.2 to specify consecutive devices, the consecutive devices, beginning with the device assigned to the label, must be within the device range.
Otherwise, you cannot set the system label Ver.2 to specify the consecutive devices in the device setting.

(10) Updating the system labels used for scripts

The system labels used for scripts cannot be updated by executing the system label update/check.
When you change system labels using MELSOFT Navigator, update the system labels used for scripts by one of the following methods.

- Click the [Update] button on the [Option] tab in the [Script] dialog.

  ➟9.9.5 ■4 [Option] tab

- Select the script in the [Script File List] dialog, click the [Edit Script] button, and then click the [OK] button in the [Edit Script(script name)] dialog that appears.

  ➟9.9.7 [Edit Script(script name)] dialog

6.1.4 How to set global labels

➟■1 Usable global labels
■2 Importing global labels
■3 Setting global labels
■4 Offset setting for global labels
■5 Performing the label name resolution
■6 Precautions for global labels
■7 [Global Label List] dialog
■8 [Select Global Label] dialog
■9 [Global Label Reference] dialog

You can use global labels for the device setting on GT Designer3.
By using global labels, you can create the project data without paying attention to the actual devices.
The following shows the import sources of global labels.

- GX Works3 project in which global labels are set
- CSV file to which global labels are exported from the label editor of GX Works3, MT Developer2, or Motion Control Setting Function

For the details of usable global labels, refer to the following.

➟■1 Usable global labels

For precautions on the use of global labels, refer to the following.

➟■6 Precautions for global labels

The following shows the procedure for setting global labels.

Step 1 Compile global labels with GX Works3, MT Developer2, or Motion Control Setting Function.

Using the global labels without compilation may cause inconsistency in the global label settings between GT Designer3 and the controller.
For how to compile global labels, refer to the following.

➟GX Works3 Operating Manual
Help for MT Developer2
Motion Control Setting Function

To import global labels from a GX Works3 project, proceed to step 3.

Step 2 Export global labels from the project created with GX Works3, MT Developer2, or Motion Control Setting Function to a CSV file.

For structure-type global labels, export global labels and structures separately to a CSV file.
For how to export global labels, refer to the following.

➟GX Works3 Operating Manual
Help for MT Developer2
Motion Control Setting Function

Step 3 Import the global labels to GT Designer3.

➟■2 Importing global labels

You can check the imported global labels in the [Global Label Reference] dialog.

➟■9 [Global Label Reference] dialog

Step 4 Set the imported global labels to objects or others.

➟■3 Setting global labels

To monitor the device assigned to a global label, the GOT performs the label name resolution at the following timing.

- The GOT starts up. (The GOT is powered on, restarts by reset, or re-runs the project.)
- The GOT detects that the labels used for the controllers are updated.
- The Start Label Name Resolution signal (GS1880.b1) turns on.

For the details of the label name resolution, refer to the following.

➟■5 Performing the label name resolution

■1 Usable global labels

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(1) Required setting on GT Designer3

To use global labels, set the following model in the [Controller Setting] window.

- [MELSEC MX Controller]
- [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
- [MELSEC iQ-L]
- [MELIPC]

For the details of [Controller Setting], refer to the following.

➟5.5.1 ■4 [Controller Setting]

(2) Global label setting

Global labels must be created with GX Works3, MT Developer2, or Motion Control Setting Function and have the following settings.

Global label export source	Required settings
GX Works3	• Access to the labels from external devices is permitted. • The class is set to VAR_GLOBAL or VAR_GLOBAL_RETAIN.
MT Developer2	
Motion Control Setting Function	The class is set to VAR_GLOBAL or VAR_GLOBAL_RETAIN.

For the details of the global label setting, refer to the following.

➟GX Works3 Operating Manual
Help for MT Developer2
Motion Control Setting Function

(3) Array-type global label setting

The array must satisfy the following requirements.

- One-, two-, or three-dimensional array
- For the undefined labels: the subscript for each dimension as shown below

Array	Subscript range
One-dimensional array	-2147483647 to 2147483647
Two-dimensional array	-268435455 to 268435455
Three-dimensional array	-262143 to 262143

(4) Global label name

The global label name must satisfy the following requirements.
Otherwise, the global label cannot be set on GT Designer3.

- Up to 256 characters are used for a global label name.
  Up to 300 characters can be used for the name of a structure of global labels.
- A global label name starts from text or an underscore (_).
- No ASCII line terminator is used.
  LF (\n, line feed), CR (\r, carriage return), and CR followed immediately by LF (\r\n)
- No the following space character is used.
  ASCII code: SP (space), VT (\v, vertical tabulation), HT (\t, horizontal tabulation), and FF (\f, form feed)
  Unicode: fullwidth space (\u3000)
- No the following one-byte symbol is used.
  / \ * ? < > | " : [ ] ; , = + % ' ^ @ { } . ! # $ & ~ ` ( ) -
- No device name, identifier of files, or instruction of sequence programs is used as a global label name.
- No reserved character is used.

(5) Data type of the global label

The following shows the usable primitive data type global labels.

○ : Applicable, -: Not applicable

Data type of global label		Data type of device on GX Works3	Device data type or device type on GT Designer3	Bit specification of word device
Bit		BOOL	Bit	-
Word [Signed]		INT	Signed BIN16	○
			BCD16	-
Word [Unsigned]/Bit [16bit]		WORD	Unsigned BIN16	○
Double Word [Signed]		DINT	Signed BIN32	-
			BCD32	-
Double Word [Unsigned]/Bit [32Bit]		DWORD	Unsigned BIN32	-
Single-precision real number		REAL	Real numbers (32 bits)	-
Double-precision real number		LREAL	Real numbers (64 bits)	-
Timer	Contact	TIMER	Bit	-
	Coil	TIMER	Bit	-
	Current value	TIMER	Unsigned BIN16	-
Retentive timer	Contact	RETENTIVETIMER	Bit	-
	Coil	RETENTIVETIMER	Bit	-
	Current value	RETENTIVETIMER	Unsigned BIN16	-
Counter	Contact	COUNTER	Bit	-
	Coil	COUNTER	Bit	-
	Current value	COUNTER	Unsigned BIN16	-
Long timer	Contact	LTIMER	Bit	-
	Coil	LTIMER	Bit	-
	Current value	LTIMER	Unsigned BIN32	-
Long retentive timer	Contact	LRETENTIVETIMER	Bit	-
	Coil	LRETENTIVETIMER	Bit	-
	Current value	LRETENTIVETIMER	Unsigned BIN32	-
Long counter	Contact	LCOUNTER	Bit	-
	Coil	LCOUNTER	Bit	-
	Current value	LCOUNTER	Unsigned BIN32	-
String[*1]		STRING	Unsigned BIN 16 or string	-
String [Unicode][*1]		WSTRING		

*1 Available for the following functions.

- Text display object
- Text input object
- Text print object
- Logging function
- Recipe function

(6) Global label handled as a special structure

GT Designer3 handles the following data types of global labels as special structures.
Although GX Works3 or MT Developer2 handles such a label as one, GT Designer3 handles the label as multiple labels.

Data type of global label		Notation on GT Designer3	Notation on GX Works3 and MT Developer2
Timer Counter Retentive timer Long timer Long counter Long retentive timer	Contact	Global label name.S	Global label name
	Coil	Global label name.C	
	Current value	Global label name.N	

(7) Functions unsupporting the global labels

The global labels cannot be used in the device setting for the MES interface function.
For the MES interface function, specify devices directly.

(8) Using the global label for the setting that requires multiple devices

To set the global label for the setting that requires two or more consecutive devices or multiple devices, use the global label whose data type is as follows.

- Array type
- Bit-specified word device
- String
- String [Unicode]

■2 Importing global labels

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Import global labels from a project or CSV file.
The import source project must be created with GX Works3.

(1) Importing global labels from a project

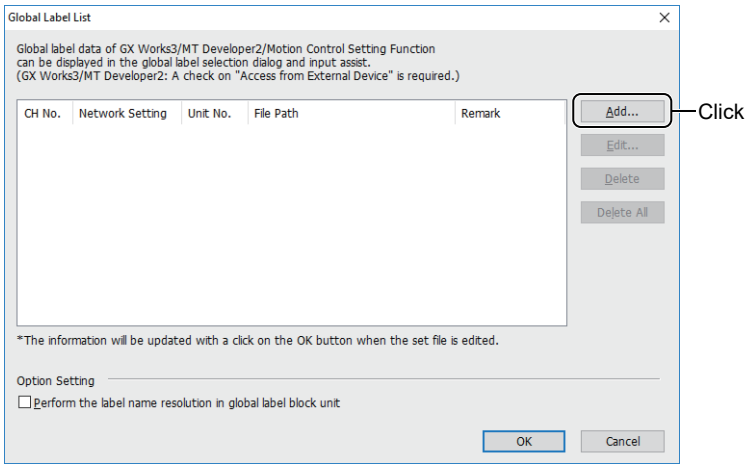
Specify a GX Works3 project and import global labels from the project.
Before the import, install GX Works3.
The required GX Works3 version depends on the GX Works3 project used.

GX Works3 project	GX Works3 version
Uncompressed project data	Version 1.040S or later
Compressed project data	Version 1.050C or later
Security version 2 project data	Version1.096A or later

If GX Works3 has not been installed, you cannot import global labels.

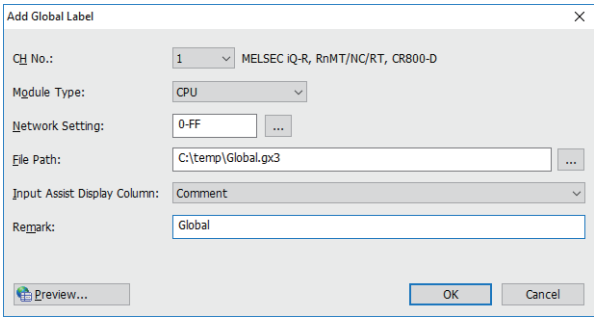
Step 1 Select [Project] → [Import Other Data] → [Global Label] from the menu to display the [Global Label List] dialog.

Step 2 Click the [Add] button to display the [Global Label List] dialog.



Step 3 Specify global labels to be imported.

➟■7 [Global Label List] dialog



Step 4 Click the [OK] button to import the global labels to the project.

(2) Importing global labels from a CSV file

Specify the CSV files exported from GX Works3, MT Developer2, or Motion Control Setting Function, and import the global labels from the files.

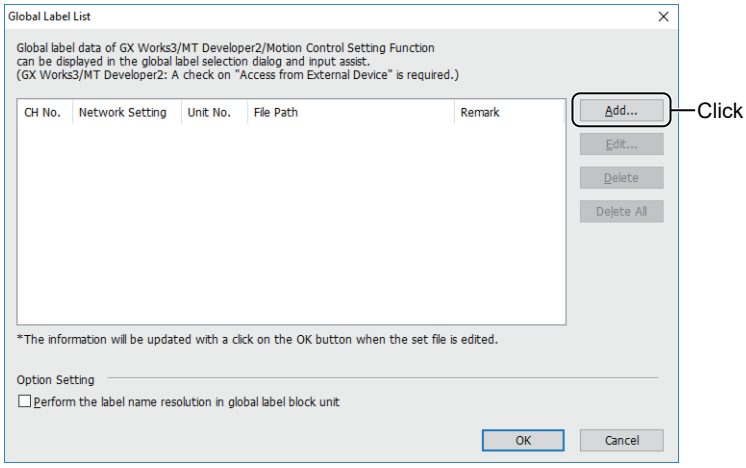
To export CSV files from Motion Control Setting Function, the software version must be 1.005F or later.

Step 1 Save CSV files of global labels, which are exported from GX Works3, MT Developer2, or Motion Control Setting Function, to the hard disk of the personal computer.

Save CSV files of structure-type global labels to the same folder.

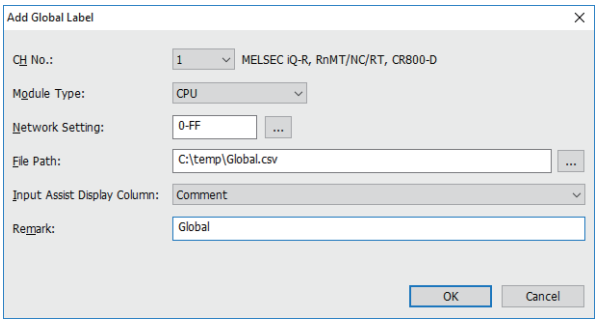
Step 2 Select [Project] → [Import Other Data] → [Global Label] from the menu to display the [Global Label List] dialog.

Step 3 Click the [Add] button to display the [Global Label List] dialog.



Step 4 Specify global labels to be imported.

➟■7 [Global Label List] dialog



Step 5 Click the [OK] button to import the global labels to the project.

(3) Notifying and updating a change in the global labels

Check if there is a change in the project or CSV file specified when global labels are imported.

If the project or CSV file has been changed, update the global labels to operate the labels properly.

(a) Target projects and CSV files for detection

The project or CSV file is detected in the following cases.

- When the time stamp is changed
- When the project or CSV file is renamed, deleted, or moved

(b) Timing to check and notify a change

Projects or CSV files are checked when one of the following operations is performed.

- Opening a project
- Displaying the [Global Label List] dialog
- Displaying the [Global Label Reference] dialog
- Displaying the [Select Global Label] dialog
- Clicking the [OK] button in the [Type Setting] dialog
- Clicking the [OK] button or [Apply] button in the [Controller Setting] window
- Clicking the [Finish] button in the [Utilize] dialog to utilize a screen with new controllers

• Selecting [Communication] → [Write to GOT], [Batch Write to multiple GOTs], or [Write to Memory Card] from the menu

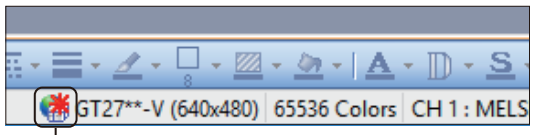
When a project or CSV file that has been changed is detected, the change is notified.

(c) Notification method

When a project or CSV file that has been changed is detected, the change is notified by the following methods.

• Notification icon in the status bar

The global label update notification icon appears in the status bar.



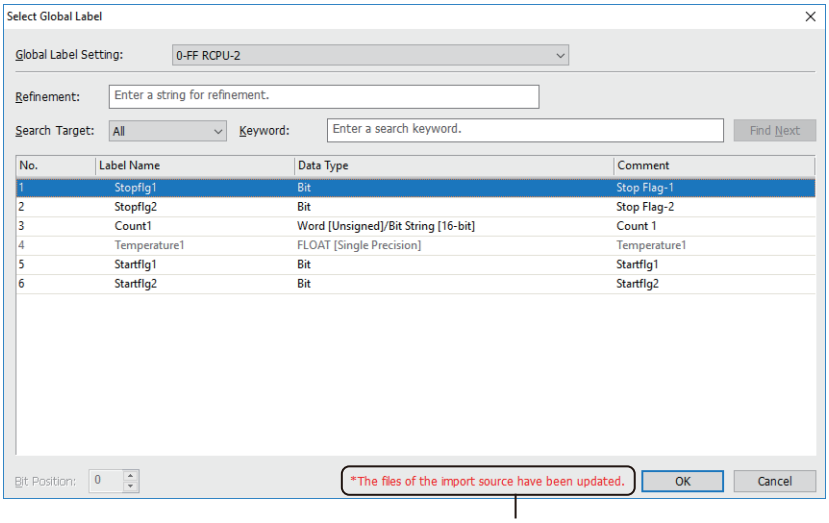
Global label update notification icon

Right-click the global label update notification icon, and click the [Update global label data] button to display the [Global Label List] dialog.

• [Select Global Label] dialog or [Global Label Reference] dialog

When the dialog is displayed, the message is displayed at the bottom of the dialog.

Example) The [Select Global Label] dialog



Message displayed when there is a change

(d) Updating the labels

In the [Global Label List] dialog, set the latest project or CSV file.

➟■7 [Global Label List] dialog

(e) Update notification icon when using with system labels

If changes in system labels and global labels are notified simultaneously, the system label update notification icon is displayed in the status bar.

➟6.1.3 ■4 (4) System label update notification

■3 Setting global labels

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Checking the data type of the global label

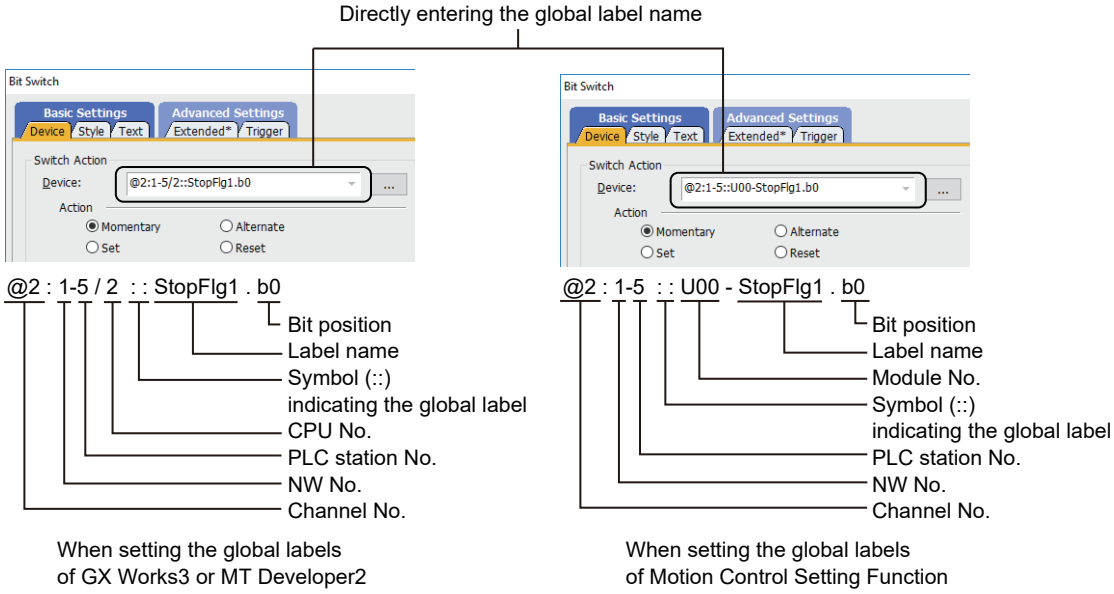
When you change the data type of the object device or others, the data types may be inconsistent between the global label and the object device or others.

After setting the global label, check if the data types are consistent between the global label and the object device or others.

To check the data types, you are recommended to compare the CSV file of global labels with the CSV file exported from [Device List] of GT Designer3.

(1) Directly entering the global label name

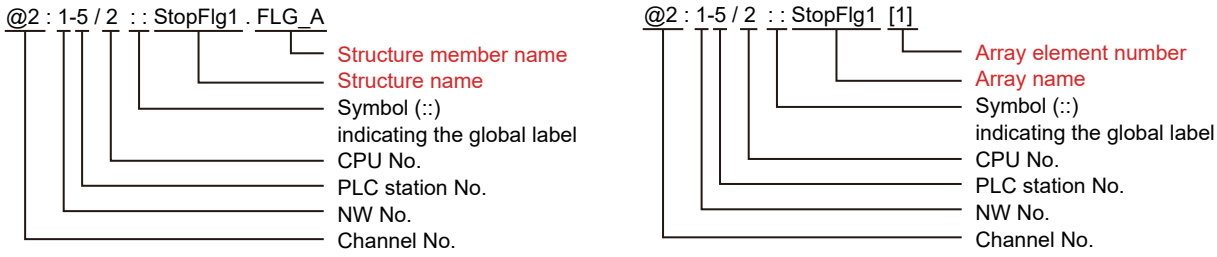
Enter the global label name in the text box of [Device] in the setting dialog.



For a structure-type global label, add a period (.) and a member name after the structure name.

For an array-type global label, add an element number surrounded by square brackets ([ ]) after the array name.

Example) Global labels set with GX Works3 or MT Developer2



When you enter the global label name directly, the data type consistency check between the global label and the object device or others is not performed automatically.

Therefore, the data types may be inconsistent between the global label and the object device or others.

(2) Selecting a global label from the label list

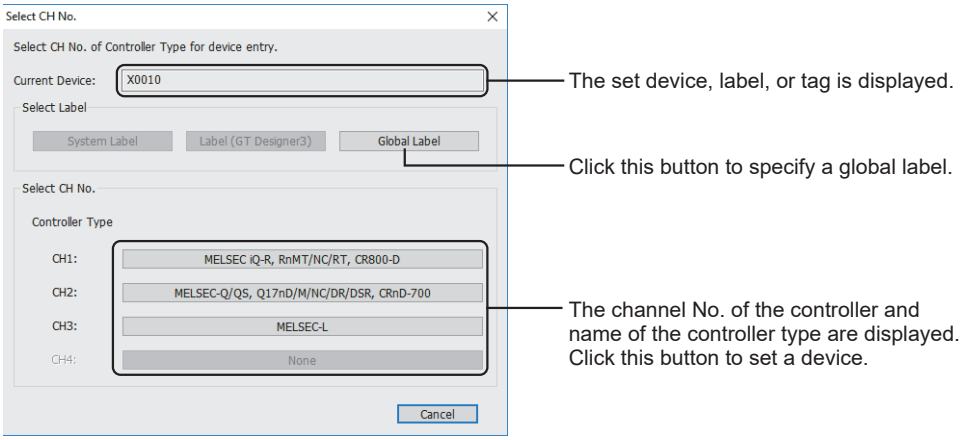
Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button of [Device] to display the [Select CH No.] dialog.

If you click the [...] button without holding down the [Shift] key, the dialog to appear varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.

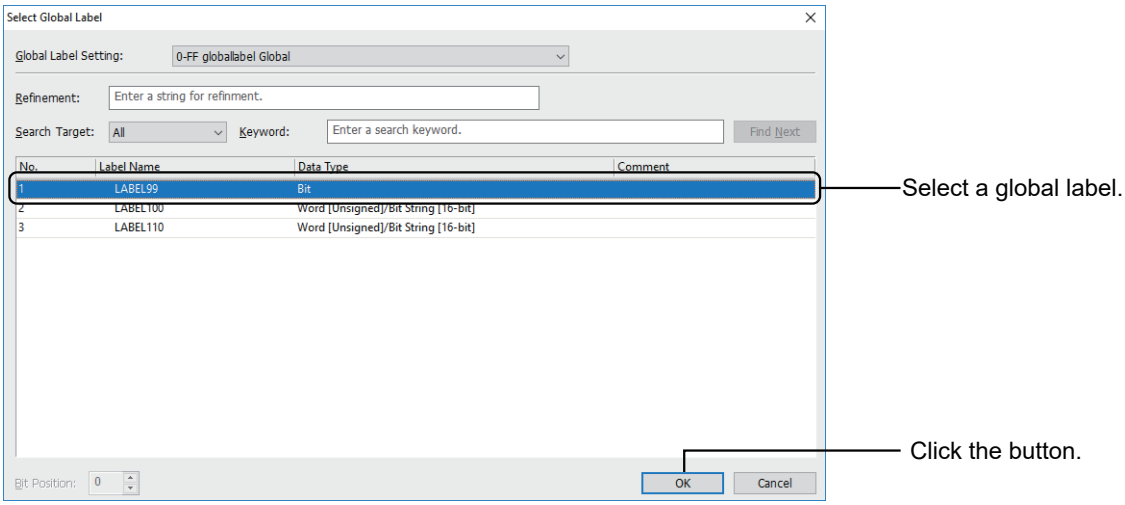
For the setting details, refer to the following.

➟11.10.4 Customizing the settings related to editing operations

Step 2 In the [Select CH No.] dialog, click the [Global Label] button to display the [Select Global Label] dialog.



Step 3 Select a global label from the label list and click the [OK] button to set the selected label for [Device].



(3) Using the input assist

Search and set global labels in the setting dialog of the object.
For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

When using the input assist, you have to import the global labels in advance.
Import the global labels before setting them.

➟■2 Importing global labels

■4 Offset setting for global labels

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The following shows the data types of global labels for which offset setting is available.

- Bit
- Word [Signed]
- Word [Unsigned]/Bit [16bit]
- Double Word [Signed]
- Double Word [Unsigned]/Bit [32Bit]
- Single-precision real number
- Double-precision real number

The offset setting is applied to array element numbers.
Example) Offset setting for an three-dimensional array
For aaa[0..9,0..9,0..9] set for global labels in GT Works3

- First dimension: The start element number is 0, and the number of elements is 10.
- Second dimension: The start element number is 0, and the number of elements is 10.

• Third dimension: The start element number is 0, and the number of elements is 10.

Global label set for an object or others	Offset device value	Offset result
aaa[0.0.1]	8	aaa[0.0.9]
	12	aaa[0.1.3]
	150	aaa[1.5.1]
	352	aaa[3.5.3]
	1100	A system alarm occurs due to invalid array subscripts.

For an array of structures, the offset setting is not applied to the element numbers.
For an array of members of a structure, the offset setting is applied to the element numbers.
Example) Offset setting for a structure

Global label set for an object or others	Applicability of the offset setting
aaa[0].bbb	The offset setting is not applied to an array of structures.
aaa.bbb[0]	The offset setting is applied to an array of members of a structure.

■5 Performing the label name resolution

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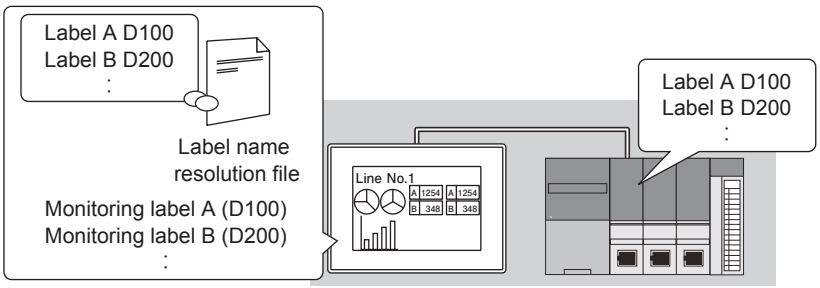
The label name resolution obtains the devices assigned to global labels from controllers.
The obtained device information is recorded in a label name resolution file.
When the GOT starts up or detects the update of global labels, the GOT obtains the devices assigned to global labels from controllers and switches the monitoring devices.

Point

Label name resolution file

The label name resolution file is used to correlate global label names used in the project with device names used in the controller.
Referring to the label name resolution file, the GOT identifies the devices assigned to the global labels.



The label name resolution file is created for each channel in the project startup drive at the timing such as the first execution of the label name resolution.
Using the GOT utility, you can delete the label name resolution file.
For the deletion method, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(1) Label name resolution methods

Select one of the following methods to resolve label names.

- Batch method

  ➟(a) Batch method

- Split method

  Not available to GT SoftGOT2000.

  ➟(b) Split method

To switch between the above methods, set [Perform the label name resolution in global label block unit] in the [Global Label List] dialog.

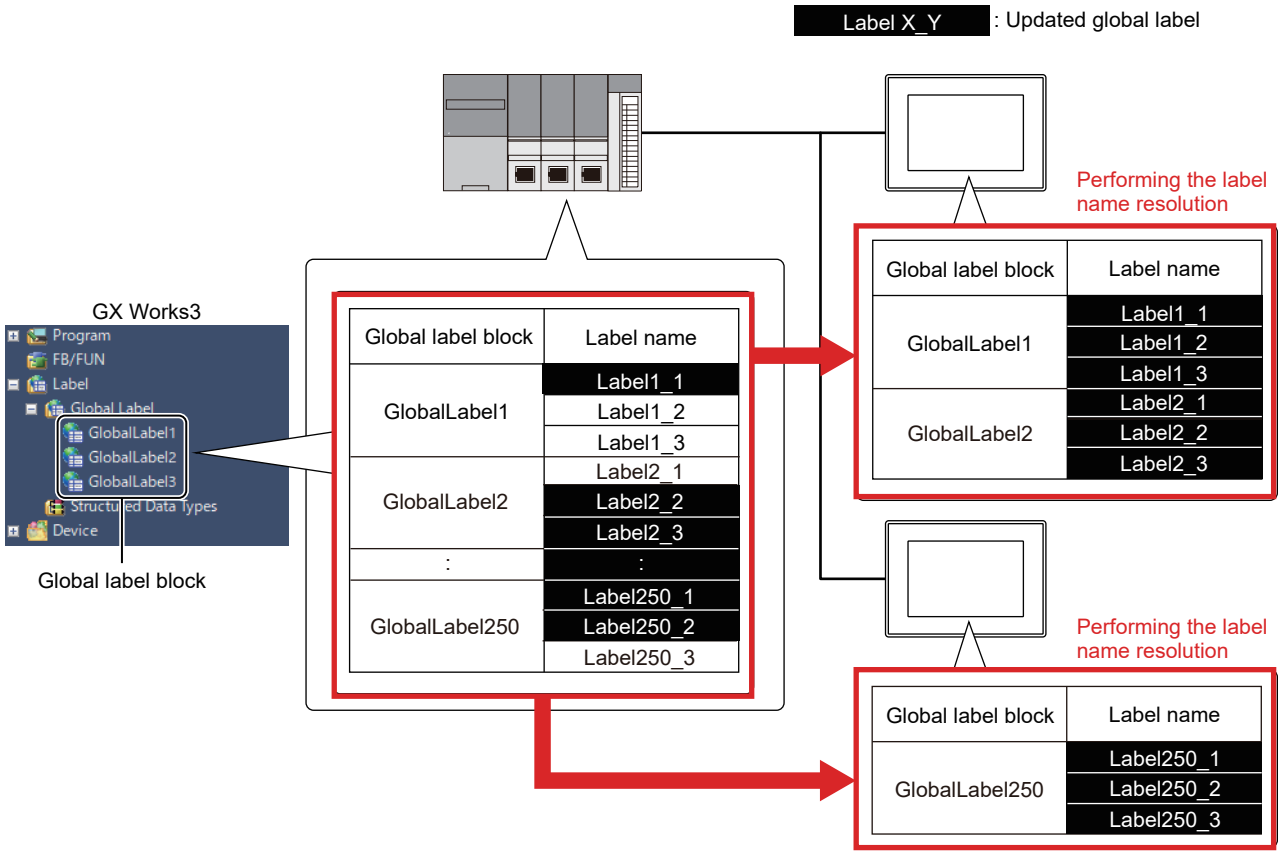
➟6.1.4 ■7 [Global Label List] dialog

(a) Batch method

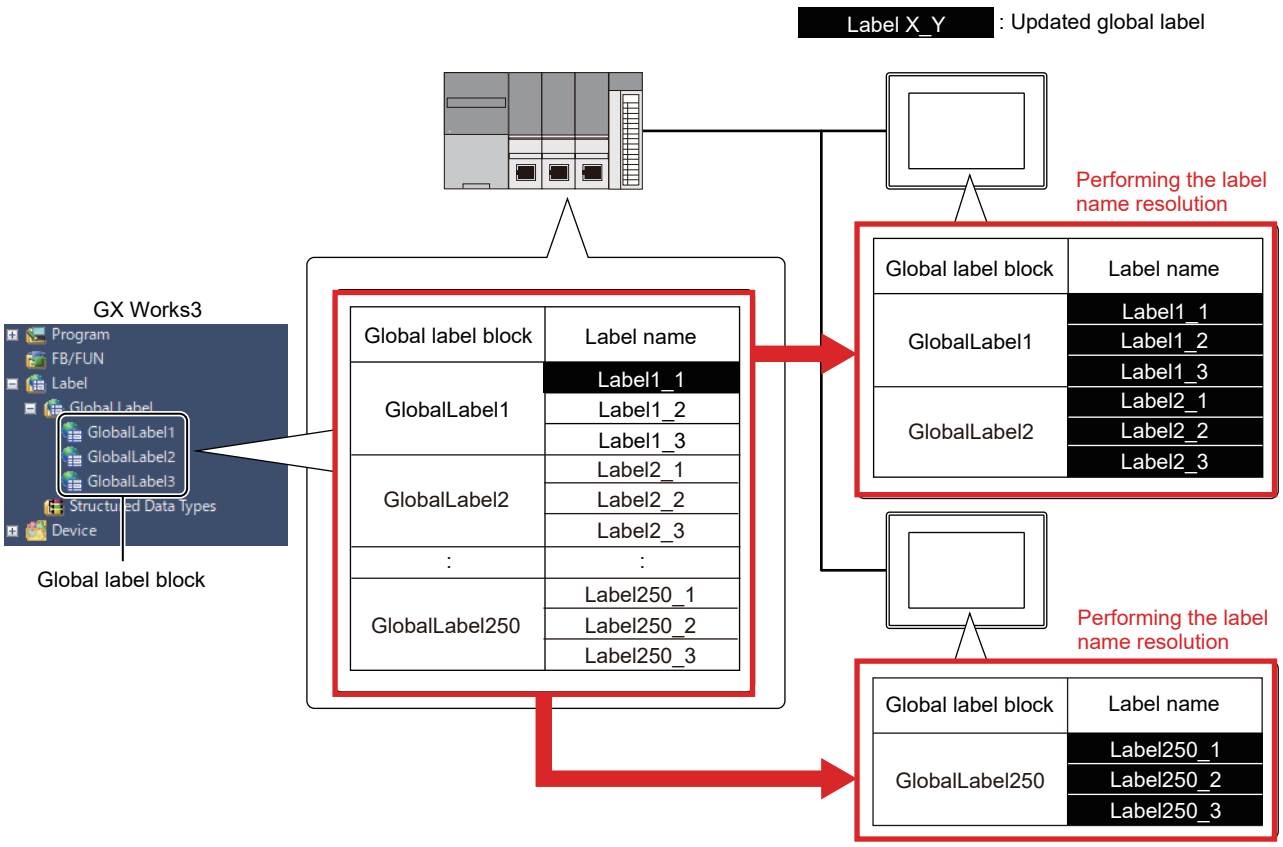
When a global label in a GX Works3 project is updated, the GOT performs the label name resolution on all the global labels in the project.

This method is recommended for use when only one global label block exists in the project or many global label blocks are targeted for the label name resolution.

Example 1) When many global label blocks are targeted for the label name resolution, the batch method takes less time to complete the resolution as compared with the split method.



Example 2) When a few global label blocks are targeted for the label name resolution, the batch method takes more time to complete the resolution as compared with the split method.

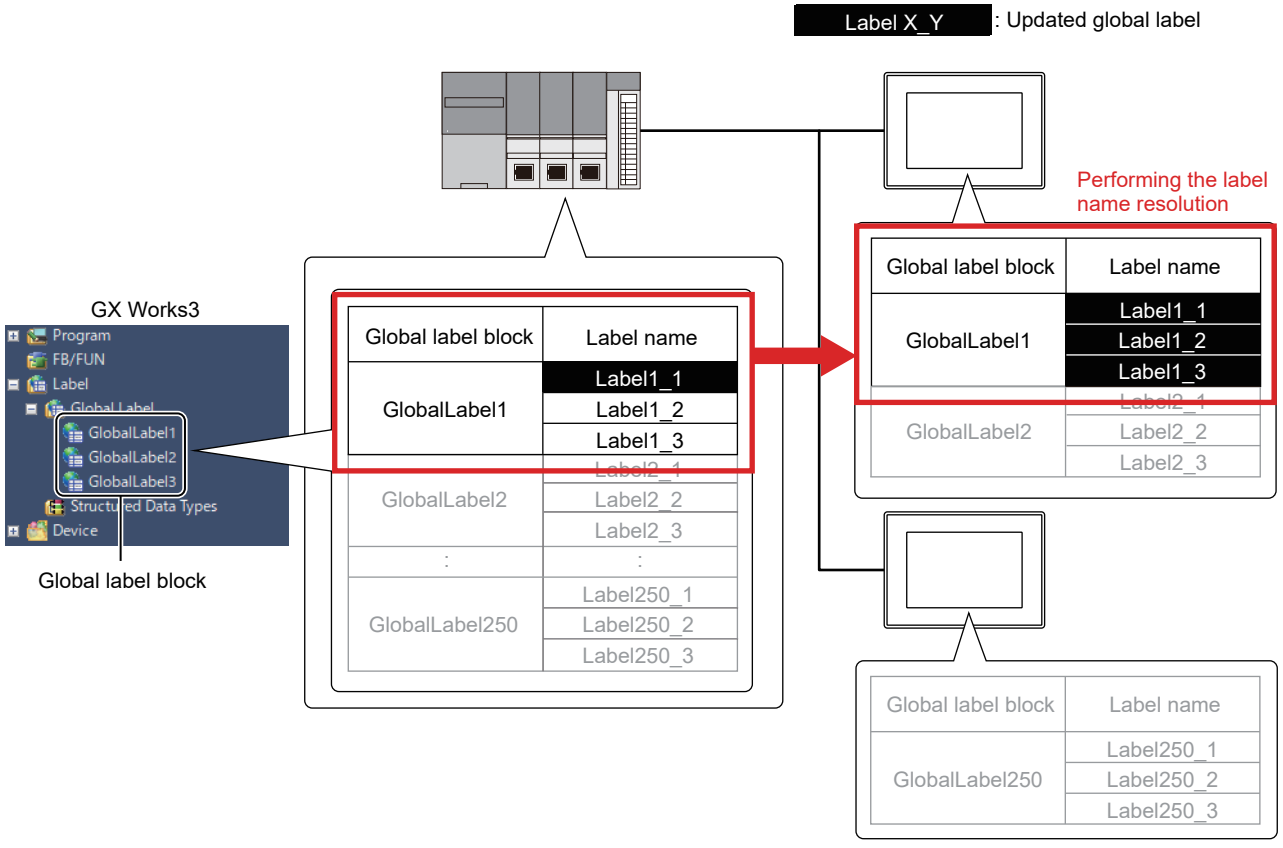


(b) **Split method**

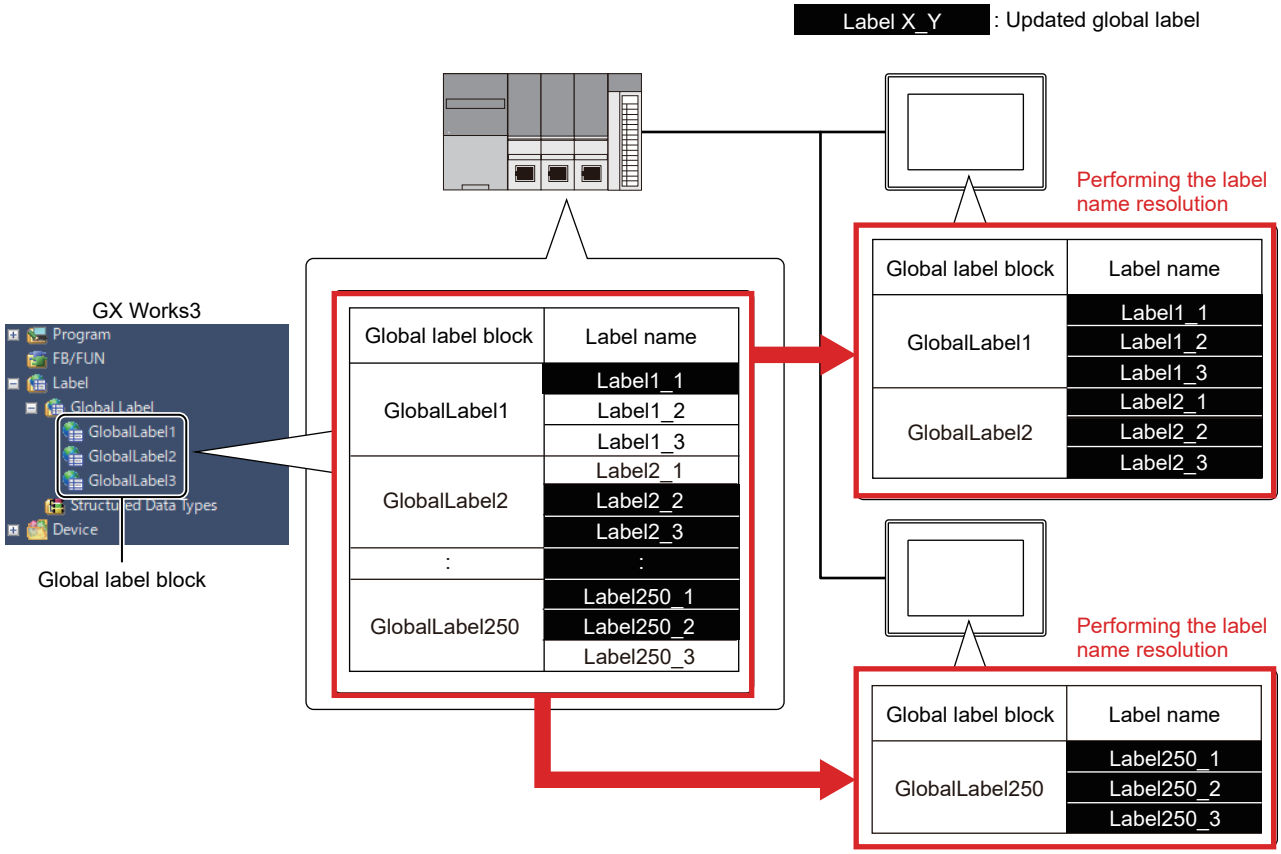
When a global label is updated, the GOT performs the label name resolution only on the global label block containing the updated label.

This method is recommended for use when a few global label blocks are targeted for the label name resolution.

Example 1) When a few global label blocks are targeted for the label name resolution, the split method takes less time to complete the resolution as compared with the batch method.



Example 2) When many global label blocks are targeted for the label name resolution, the split method takes more time to complete the resolution as compared with the batch method.



The split method is usable when one of the following PLC CPUs is connected to the GOT.
If the firmware of the connected PLC CPU does not support the split method, regardless of the setting of [Perform the label name resolution in global label block unit], the GOT will perform the label name resolution by the batch method.

Model	Firmware version
R04CPU R08CPU R16CPU R32CPU R120CPU R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	Version 40 or later
R08PCPU R16PCPU R32PCPU R120PCPU	Version 28 or later
R08SFCPU R16SFCPU R32SFCPU R120SFCPU	Version 16 or later
L04HCPU L08HCPU L16HCPU L32HCPU	All versions

The global labels targeted for the label name resolution vary depending on the conditions under which operations are performed on GX Works3.
If all the following conditions are satisfied, the GOT performs the label name resolution only on the global label block containing the updated label.
Otherwise, the GOT performs the label name resolution on all the global labels in the project.

• The project is kept open between the instant when it is written to a PLC with [Write to PLC] and the instant when it is rewritten to the PLC with [Online Program Change].
• A global label is added to or changed in an existing global label block.

For the operation when a global label is deleted or renamed on the PLC side, refer to the following.

➟6.1.4 ■6 (2) (c) Deleting or renaming a global label

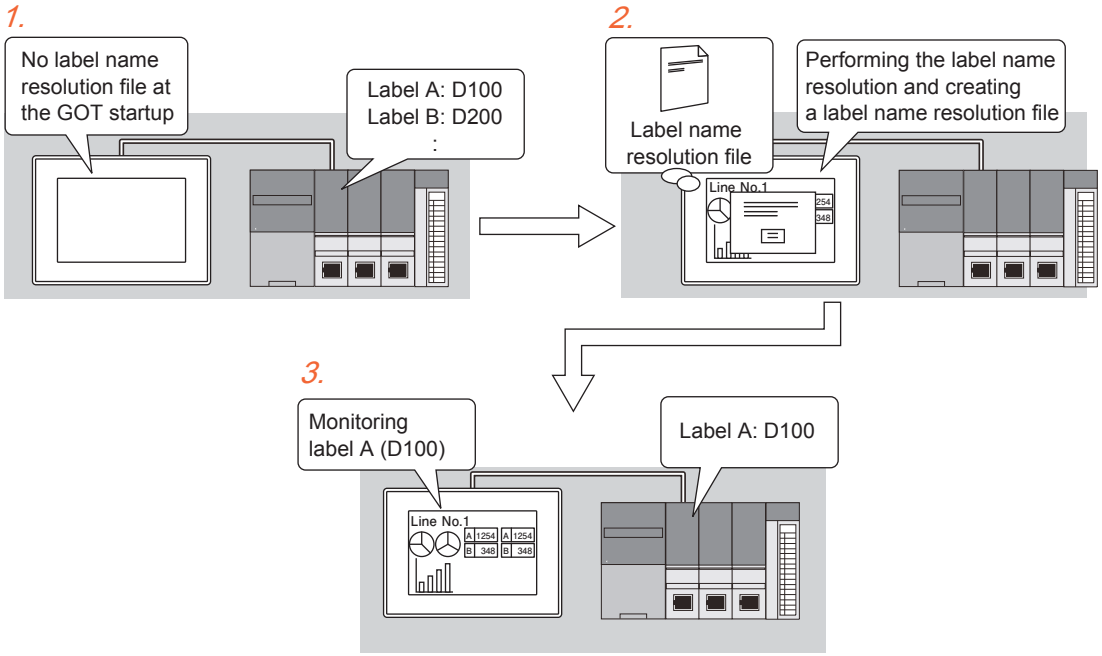
(2) Label name resolution performed automatically

The GOT performs the label name resolution automatically at the following timing.

• The GOT starts up. (The GOT is powered on, restarts by reset, or re-runs the project.)
• The GOT detects that the labels used for the controllers are updated.

(a) When the GOT starts up

The following shows an example of when no label name resolution file exists at the GOT startup.



Step 1 The GOT checks if a label name resolution file exists at startup.

Step 2 If no label name resolution file exists, the GOT performs the label name resolution on all the global labels used in the project and creates a label name resolution file.

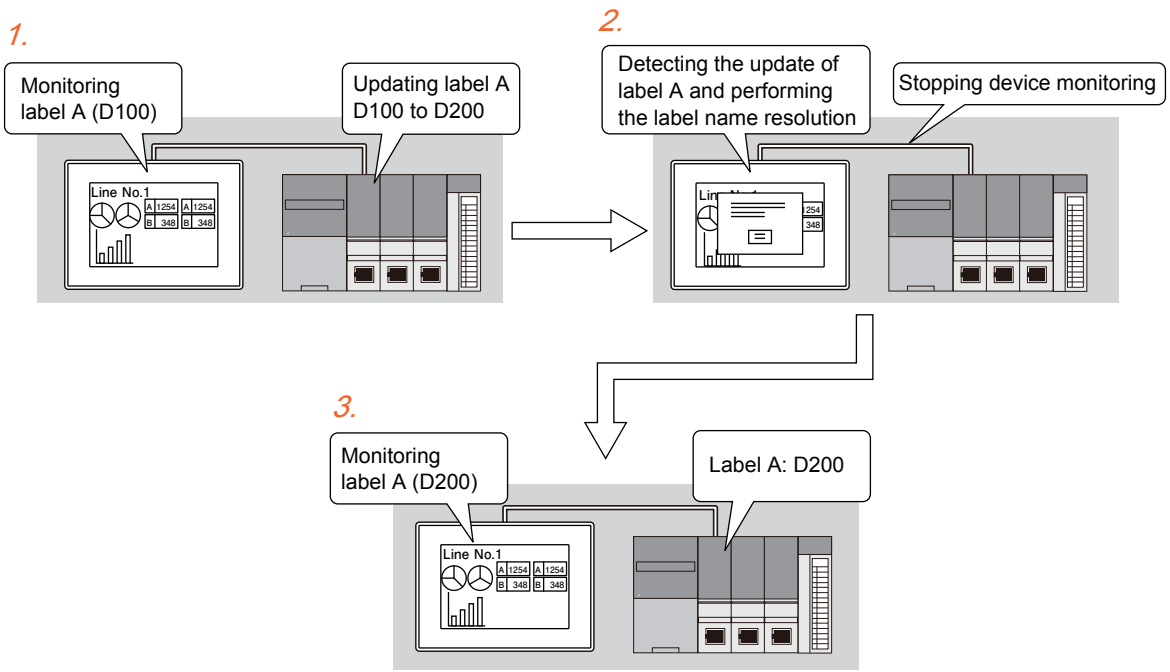
If a label name resolution file exists, the GOT performs the label name resolution on the unresolved global labels in the file.

Step 3 After the label name resolution ends, the GOT starts device monitoring on all the channels.

The GOT stops device monitoring on the channel where the resolution is canceled or not performed.
The GOT cannot monitor the global label that has an error occurred during the resolution.
Accordingly, the object that uses this global label cannot appear on the GOT.
For the resolution results, check the Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084).

➟12.1.3 ■3 (57) Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084)

(b) **When the GOT detects the update of global labels**



Step 1 The device assigned to the monitored global label is updated from D100 to D200.

Step 2 Upon detecting the global label update on a station, the GOT stops the device update on the station and displays a system alarm.

After the label update completes on the PLC side, the GOT performs the label name resolution on the station.

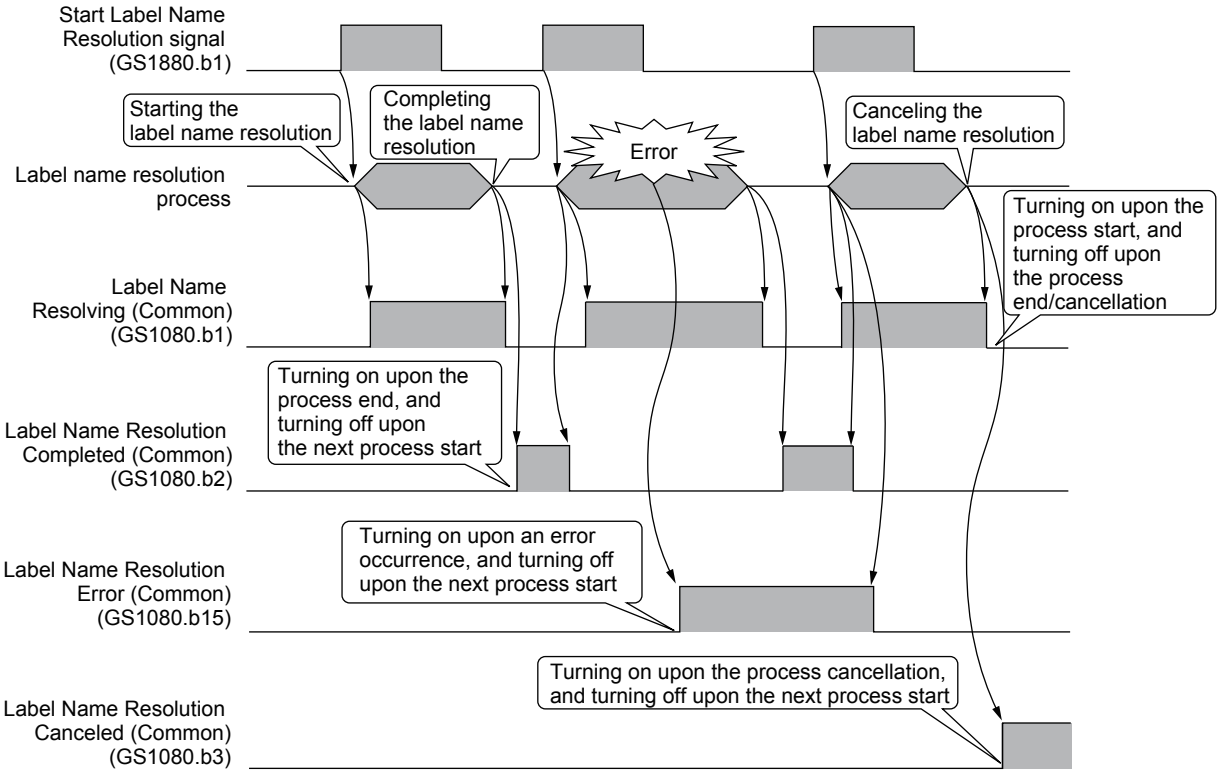
Step 3 After the label name resolution ends, the GOT restarts device monitoring.

The GOT cannot monitor the global label that has an error occurred during the resolution. Accordingly, the object that uses this global label cannot appear on the GOT.
For the resolution results, check the Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084).

➟12.1.3 ■3 (57) Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084)

(3) Label name resolution performed by a user

Turing on the Start Label Name Resolution signal (GS1880.b1) performs the label name resolution.
To monitor the status of the label name resolution, use the Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084) simultaneously.

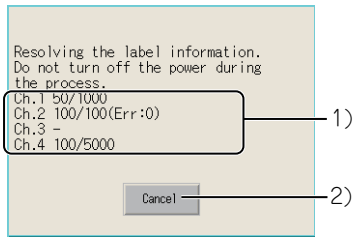


For the details of the Label Name Resolution Control (GS1880) and the Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084), refer to the following.

➥12.1.3 ■3 (57) Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084)
12.1.3 ■6 (22) Label Name Resolution Control (GS1880)

(4) GOT operation during the label name resolution

Upon starting the label name resolution, the GOT stops monitoring all the channels.
The GOT performs the label name resolution on all the monitored global labels by channel.
The following dialog appears during the resolution.



1) **Numbers of resolved label names and errors**
The number of resolved label names by channel is displayed.
The number of errors is displayed after the number of resolved label names.

2) **[Cancel] button**
Cancels the label name resolution.

If an error occurs during the label name resolution, a system alarm occurs after the resolution ends.
Check the system alarm for the details of the error.

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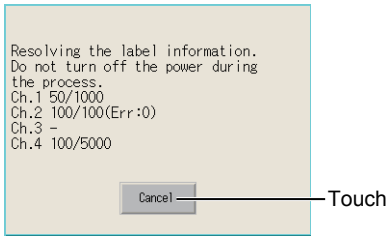
The GOT cannot monitor the global label that has an error occurred during the resolution.
Accordingly, the object that uses this global label cannot appear on the GOT.

(5) Canceling the label name resolution

To cancel the label name resolution, touch the [Cancel] button in the dialog displayed during the resolution.



When the resolution is canceled, the GOT stops monitoring the channels where the resolution is canceled or not performed, and turns on the Channel Shutdown Control (CH1 to CH4) (GS539.b0, GS549.b0, GS559.b0, GS569.b0). To restart monitoring these channels, turn off the Channel Shutdown Control (CH1 to CH4) (GS539.b0, GS549.b0, GS559.b0, GS569.b0).

➟12.1.3 ■5 (66) Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)

■6 Precautions for global labels

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(1) Precautions for using global labels

(a) Station No. switching

The station No. switching is not available to the monitored station that uses global labels.
Do not use global labels for the station requiring the station No. switching.

(b) Writing the package data

When you set global labels in a project and write the project data to the GOT, [Write Mode] is not selectable in the [Write Option] dialog.
In this case, [Write Mode] is fixed to [Synchronize].

(c) When using a global label to specify consecutive devices

When you use a global label to specify consecutive devices, the consecutive devices, beginning with the device assigned to the label, must be within the device range.
Otherwise, you cannot set the global label to specify the consecutive devices in the device setting.

(d) Data type of a global label

The following data types appear incorrectly in the [Global Label Reference] dialog or the [Select Global Label] dialog under the following condition: After importing global labels to a project with version 1.170C or earlier of GT Designer3, you open the project with the latest version of GT Designer3.

- [Timer]
- [Retentive Timer]
- [Counter]
- [Long Timer]
- [Long Retentive Timer]
- [Long Counter]

In such a case, import the global labels again with the latest version of GT Designer3.

(e) Directly entering a global label name

When the data type of a global label is string or Unicode string, import the label and then set the label by entering its name. If you do not import the label before setting it, the data type cannot be recognized as string or Unicode string, and a system alarm occurs.

(f) Number of characters to be displayed

When you use a global label whose data type is string or Unicode string, set the number of characters to be displayed according to the number of characters set with GX Works3.

(g) Setting the object or function that uses a global label

Configure the following settings for the object or function that uses a global label whose data type is string or Unicode string.

Object or function	Data type	Setting
Text display object, text input object	String	Deselect [Display in order of High -> Low] in the [Extended] tab.
	String [Unicode]	Select [Display in order of High -> Low] in the [Extended] tab.
Text print object	String	Deselect [Display in order of High -> Low].
	String [Unicode]	Select [Display in order of High -> Low].
Recipe function, logging function	String	Select [High-->Low] for [Storage Order] in the [Device] tab.
	String [Unicode]	Select [Low-->High] for [Storage Order] in the [Device] tab.

(h) Monitor speed setting

To read or write 235 two-byte characters or more, select [High(Normal)] or [Middle] for [Monitor Speed] in [Detail Setting] in the [Controller Setting] window.

If you select [Low] for [Monitor Speed], a system alarm occurs when the data is read or written.

➟5.5.1 ■4 [Controller Setting]

(i) Global label assigned with a device out of the device range

When data is written to the global label that is assigned with a device out of the device range, a system alarm occurs.
Assign a device within the device range to the global label.

(j) Device assigned to a global label

The monitoring speed may decrease depending on whether data types are consistent between the monitored global label and the device assigned to the label.

For an array-type global label, assigning a device to an element of the array as shown below may improve the monitoring performance.

- When the data type of an element is bit
  Assign a bit device to the element.
- When the data type of an element is not bit
  Assign a word device to the element.

(k) Specifying CPU numbers with global labels

Global labels cannot be used to specify CPU numbers.

(l) Specifying module numbers with global labels

Global labels cannot be used to specify module numbers.

(m) Global label for a Motion module

If the data type of an array-type global label is specified as bit, a system alarm occurs.
Specify any data type other than bit.

(n) Data types of global labels and consecutive/random device setting

To monitor a primitive data type global label, use the random device setting.
To use the consecutive device setting, set an array-type global label.

(o) Importing GX Works3 project data with security settings configured

When GX Works3 project data with security settings configured is specified at import of global labels, user or project authentication may be required.
Perform authentication by entering a user name and password according to the dialog to be displayed.

(2) Precautions for the label name resolution

(a) Differences of whether a label name resolution file exists

In the following cases, the GOT performs the label name resolution on all global labels.
Therefore, the label name resolution may take longer time to complete.

- The GOT has no label name resolution file.
- The GOT has the label name resolution file in which all label names are unresolved.
- The GOT has the label name resolution file that is not created by using the global labels in the project.

(b) Size of a label name resolution file

Using the split method results in a larger label name resolution file as compared with using the batch method.
Reserve enough free space to store the file, and then perform the label name resolution.

(c) **Deleting or renaming a global label**

If a global label on the PLC side is updated with [Online Program Change] of GX Works3, manipulate the relevant label on the GOT side as shown below, and then perform the label name resolution.

- When deleting a global label on the PLC side
  Delete the relevant global label on the GOT side.
- When renaming a global label on the PLC side
  Rename the relevant global label on the GOT side.

(d) **Communication timeout during the label name resolution**

When the controller communication times out during the label name resolution, the resolution is skipped.
The global labels used for the skipped station are counted as the resolved labels.

(e) **Screen switching during the label name resolution**

The GOT stops device monitoring on a channel where the label name resolution is being performed.
Therefore, when you switch the screen during the resolution, objects using the devices of the channel cannot appear on the destination screen.

(f) **Device update during the label name resolution**

The GOT stops the device update on a station where the label name resolution is being performed.
When you monitor the station by using object functions, functions running on the GOT background, or others, the latest device values are not reflected until the resolution process ends.

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(g) **Global labels using a data type of structure**

When a structure-type global label has a structure-type member, if you manually assign devices to the child members of the structure-type member, the GOT will fail to perform the label name resolution on these child members.
System error 328 occurs.
To solve the above problem, take one of the following corrective actions.

- Perform operations so that the devices are automatically assigned to the members.
- Directly set the manually assigned devices as monitor devices.

The following shows an example where the GOT cannot resolve some label names.
Example) When ST_B is set as the data type of Struct_B that is a member of ST_A on GT Works3
If devices are manually assigned to the labels in ST_B, the GOT cannot resolve these label names.
○: Resolved, ×: Not resolved

Structure A			Structure B			[Device] (Manually assigned)	Result of the label name resolution
Structure name	[Label Name] (Name of a member)	[Data Type] (Data type of a member)	Structure name	[Label Name] (Name of a member)	[Data Type] (Data type of a member)		
ST_A	LabelA_1	[Word [Signed]]	-	-	-	D10	○
	LabelA_2	[Word [Signed]]	-	-	-	D20	○
	Struct_B	ST_B(Structure B)	ST_B	LabelA_1	[Word [Signed]]	D100	×
				LabelA_2	[Word [Signed]]	D200	×

(h) **Corrective action for unresolved label names**

The following shows the conditions resulting in unresolved label names.

- The label name resolution is executed during the PLC initial processing.
- The relevant labels are nonexistent on the PLC side.

In both cases, system alarm 328 occurs.
To identify the exact condition resulting in unresolved label names, turn on GS1880.b2 and GS1880.b1 to execute the

label name resolution.

Condition resulting in unresolved label names	Label name resolution result		Corrective action
	When GS1880.b2 is off	When GS1880.b2 is on	
The label name resolution is executed during the PLC initial processing.	Unresolved label names are existent. System error 328 occurs.	The unresolved label names have been resolved. No system alarm occurs.	Change the title display time of the GOT so as to execute the label name resolution after the PLC initial processing. ➟5.3.1 ■2 [Display Setting/ Language Setting]
The relevant labels are nonexistent on the PLC side.		Unresolved label names are existent. System error 328 occurs.	Correct the label settings.

■7 [Global Label List] dialog

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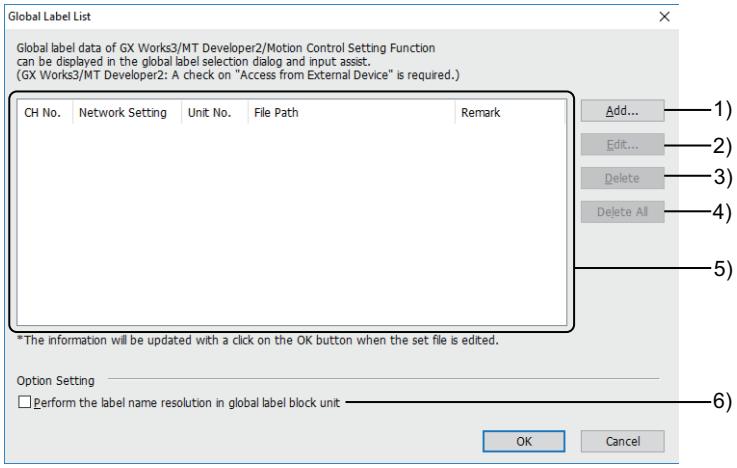
You can add, edit, or delete a global label in the [Global Label List] dialog.
To display this dialog, perform one of the following operations.

- Select [Project] → [Import Other Data] → [Global Label] from the menu.
- In the [Project] window, click [Label] and then [Global Label], and double-click [Import/Setting].



1) **[Add] button**
Displays the [Add Global Label] dialog.
Import global labels.

➟(1) [Add Global Label] dialog or [Edit Global Label] dialog

2) **[Edit] button**
Displays the [Edit Global Label] dialog.
Edit the settings to import the global labels of the selected file.

➟(1) [Add Global Label] dialog or [Edit Global Label] dialog

3) **[Delete] button**
Deletes the global labels of the selected file.

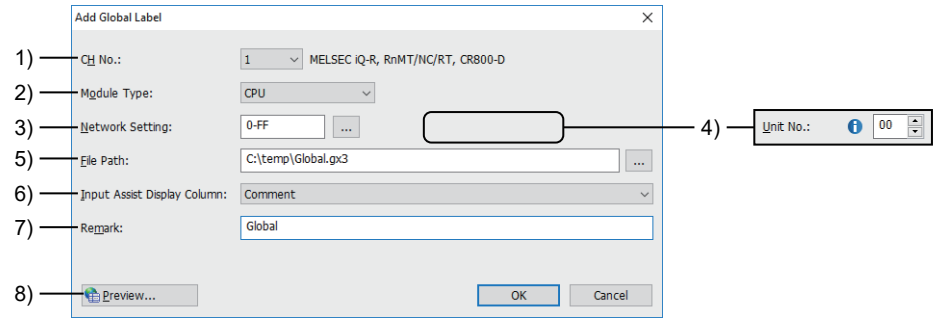
4) **[Delete All] button**
Deletes all global labels.

5) **Global label list**
Lists the imported global labels and the connected channels.

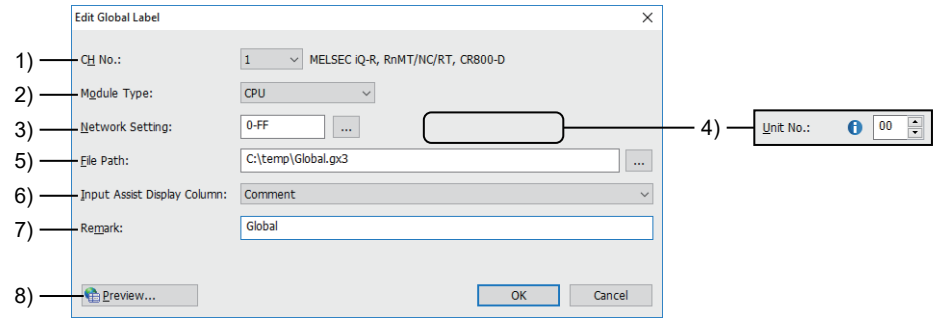
6) **[Perform the label name resolution in global label block unit]**
Not available to GT SoftGOT2000.
Performs the label name resolution by the split method.
The label name resolution is performed only on the global label block containing an updated label.
For the details, refer to the following.

➟6.1.4 ■5 (1) Label name resolution methods

(1) [Add Global Label] dialog or [Edit Global Label] dialog



[Add Global Label] dialog



[Edit Global Label] dialog

1) **[CH No.]**
Select the CH No. for connection to the PLC having the global label setting.

2) **[Module Type]**
Select [CPU] to specify a project or a CSV file exported from GX Works3 or MT Developer2 in [File Path].
Select [Motion Module] to specify a CSV file exported from Motion Control Setting Function in [File Path].

3) **[Network]**
Set the network setting for the PLC having the global label setting.

4) **[Unit No.]**
Set this item to specify a CSV file exported from Motion Control Setting Function in [File Path].
Set the second and third values of the start I/O number of the connected Motion module.
Example) When the start I/O number is 0FE0, set FE to [Unit No.].

5) **[File Path]**
Specify the path to a project or CSV file from which global labels are imported.

6) **[Input Assist Display Column]**
For the comment set in the global label, specify the column of the comment to be displayed in the input assist.
If a project is specified with [File Path], the applicable comments are fixed.

7) **[Remark]**
Set remarks to be displayed in the [Global Label List] dialog.

8) **[Preview] button**
This item appears only when a project is specified with [File Path].
Displays the [Global Label Preview] dialog showing the details of target global labels.
The global label that cannot be imported is highlighted in gray.
The displayed project data is not editable.

■8 [Select Global Label] dialog

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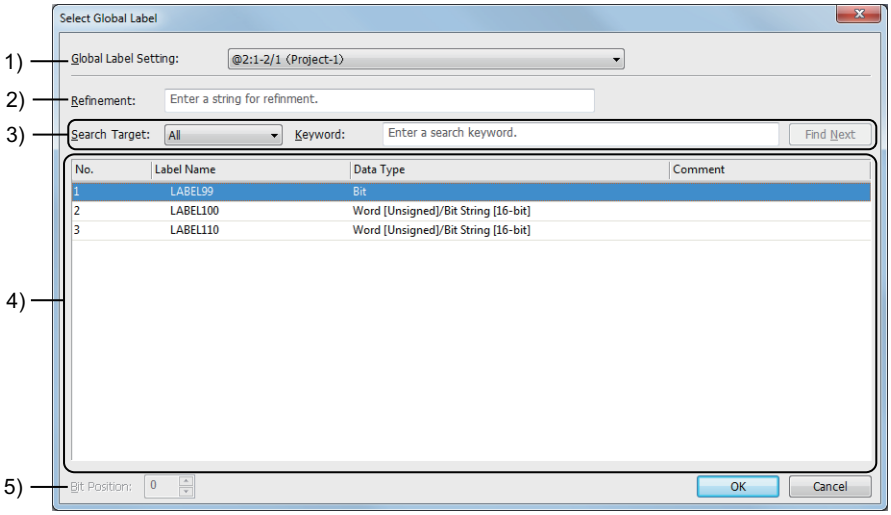
You can select a global label from the label list and set the label in the device setting of an object or others in the [Select Global Label] dialog.
To display this dialog, click the [Global Label] button in the [Select CH No.] dialog.



1) **[Global Label Setting]**
Select a combination of the channel number, network setting, module number, and remarks of the imported global labels.

2) **[Refinement]**
Enter characters to narrow down the global labels in the label list.
Only the global labels narrowed down by the entered characters are displayed in the label list.
Up to 32 characters can be entered.
The entered characters are case-insensitive.

3) **Search**
Search the global label list for a label by the specified keyword.
Set [Search Target] and enter a search keyword in [Keyword].
Click the [Find Next] button to search for a global label by the search keyword.

The following shows the items selectable for [Search Target].
- [All]
- [Label Name]
- [Data Type]
- [Comment]

Up to 32 characters can be entered in [Keyword].
The entered characters are case-insensitive.

4) **Global label list**
Lists global labels.
Select a global label from the label list and click the [OK] button to set the label for [Device].

Item	Description
[No.]	Number of a global label
[Label Name]	Name of a global label
[Data Type]	Data type of a global label
[Comment]	Comment set for a global label

5) **[Bit Position]**
Set the bit position of a global label.
The setting range is [0] to [15].
If you use the [Device List] window to display the [Select Global Label] dialog, [Bit Position] is not settable.

■9 [Global Label Reference] dialog

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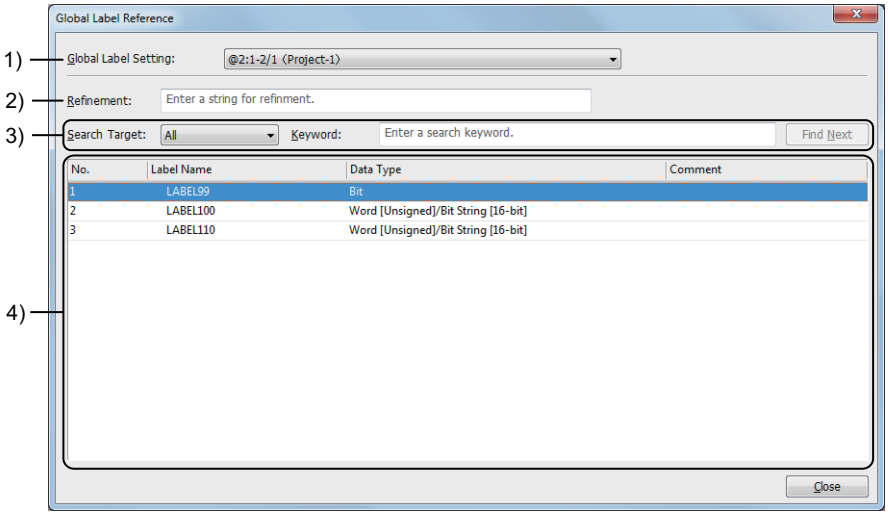
The [Global Label Reference] dialog lists the global labels imported to GT Designer3.
To display this dialog, double-click a target global label, or right-click the label and select [Open] from the right-click context menu in the [Project] window.



1) **[Global Label Setting]**
Select a combination of the channel number, network setting, module number, and remarks of the imported global labels.

2) **[Refinement]**
Enter characters to narrow down the global labels in the label list.
Only the global labels narrowed down by the entered characters are displayed in the label list.
Up to 32 characters can be entered.
The entered characters are case-insensitive.

3) **Search**
Search the global label list for a label by the specified keyword.
Set [Search Target] and enter a search keyword in [Keyword].
Click the [Find Next] button to search for a global label by the search keyword.

The following shows the items selectable for [Search Target].
- [All]
- [Label Name]
- [Data Type]
- [Comment]

Up to 32 characters can be entered in [Keyword].
The entered characters are case-insensitive.

4) **Global label list**
Lists global labels.

Item	Description
[No.]	Number of a global label
[Label Name]	Name of a global label
[Data Type]	Data type of a global label
[Comment]	Comment set for a global label

6.1.5 How to set labels (GT Designer3)

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➥■1 Specifications of the label (GT Designer3)
■2 Registering, editing, and deleting the label (GT Designer3)
■3 Setting a label (GT Designer3)
■4 Label check
■5 Precautions for labels (GT Designer3)
■6 [Label Group List] dialog
■7 [Label Group] window
■8 [Register to Label] dialog
■9 [Select Label (GT Designer3)] dialog

You can use labels (GT Designer3) for the device setting on GT Designer3.
A label (GT Designer3) is a character string with a device assigned and usable only in GT Designer3 projects.
The GOT internal devices and the devices of Mitsubishi Electric and non-Mitsubishi Electric products can be assigned to labels (GT Designer3).
By using labels (GT Designer3), you can create the project data without paying attention to the actual devices.
To create labels (GT Designer3), create a label group first.
By managing the labels (GT Designer3) by label group, you can efficiently perform manipulations on the labels, such as editing label names and changing assigned devices.

■1 Specifications of the label (GT Designer3)

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(1) Devices that can be assigned to the labels

You can assign devices of the following controllers to the labels (GT Designer3).

- Devices of Mitsubishi Electric products
- Devices of non-Mitsubishi Electric products
- GOT internal devices (excluding gateway devices (EG))

You can set the labels (GT Designer3) without devices assigned on GT Designer3. However, if you write a project having such settings to the GOT, the GOT does not operate correctly.
For the details of the controller devices, refer to the following.

➥12.1 GOT Internal Device
12.4 Device Range and Settings of Each Controller

(2) Using different types of labels or tags together

The labels (GT Designer3) can be used together with the following labels and tags.
Select labels or tags as required.

- System label
- Global label
- OMRON NJ/NX tag
- RSLogix 5000 tag
- AB native tag

(3) Label group

A label group is used to classify labels (GT Designer3).
All labels (GT Designer3) are registered in label groups.
Up to 200 label groups can be set for one project.
The numbers or names of the label groups cannot overlap each other.
Set a unique number and name to all label groups.

(4) Number of registrable labels

Up to 204800 labels (GT Designer3) can be registered in one project.
Up to 10000 labels (GT Designer3) can be registered in one label group.

(5) Label name

The label name must satisfy the following requirements.
Otherwise, the label (GT Designer3) cannot be set on GT Designer3.

- A label group contains no labels with the same names.
- Up to 256 characters are used for a label name.
- The following one-byte symbols are not used.

/ \ * ? < > | " : [ ] ; , = + % ' ^ @ { } . ! # $ & ~ ` ( ) -

(6) Data type of the label (GT Designer3)

The following data types are settable for labels (GT Designer3).

○: Applicable, -: Not applicable

Data type of the label (GT Designer3)	Bit specification of word device
[BIT]	-
[Signed BIN16]	○*1
[Unsigned BIN16]	○*1
[Signed BIN32]	-
[Unsigned BIN32]	-
[Signed BIN64]	-
[Unsigned BIN64]	-
[Signed BIN8]	-
[Unsigned BIN8]	-
[BCD16]	-
[BCD32]	-
[BCD64]	-
[Real(32bit)]	-
[Real(64bit)]	-

*1 The bit specification is not available when a device incapable of being bit-specified is assigned to the label (GT Designer3).

When [Reflect the data type of label] is selected on the [Edit] tab in the [Options] dialog, the data types of labels (GT Designer3) are reflected to the settings of objects and others at the time of device specification.

➟11.10.4 Customizing the settings related to editing operations

If you change the data type of a label (GT Designer3) already set to an object or others, the change is not reflected to the setting of the object or others.

(7) Array-type label (GT Designer3)

The array must satisfy the following requirements.

- The number of dimensions is three or less.
- (Number of elements in the first dimension) × (Number of elements in the second dimension) × (Number of elements in the third dimension) is 2147483648 or less.

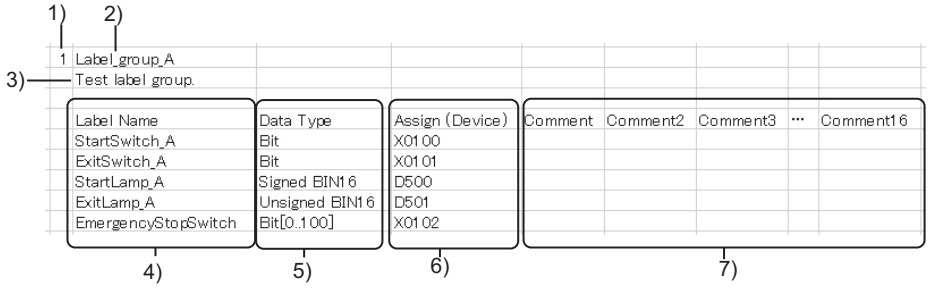
➟6.1.5 ■7 (1) [Data Type Selection] dialog

(8) Functions unsupporting the labels (GT Designer3)

The labels (GT Designer3) cannot be used in the device setting for the MES interface function.
For the MES interface function, specify devices directly.

(9) Exported file of a label group

The following shows the exported file configuration of a label group.



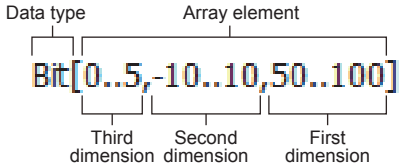
1) **Label group No.**
   Group No. of the label group.
   The setting range is [1] to [200].

2) **Label group name**
   Name of the label group.
   Up to 32 characters can be set.

3) **Detailed description**
   Detailed description of the label group.
   Up to 512 characters can be set.
   A line feed is counted as two characters.

4) **[Label Name]**
   Name of the label (GT Designer3).
   Up to 256 characters can be set.

5) **[Data Type]**
   Data type of the label (GT Designer3), and array elements
   The array elements are displayed only when the array setting is configured.
   Example) When the data type is bit and array elements are set in three dimensions



   The following shows the items to be selected for the data type.
   - [BIT]
   - [Signed BIN16]
   - [Unsigned BIN16]
   - [Signed BIN32]
   - [Unsigned BIN32]
   - [Signed BIN64]
   - [Unsigned BIN64]
   - [Signed BIN8]
   - [Unsigned BIN8]
   - [BCD16]
   - [BCD32]
   - [BCD64]
   - [Real(32bit)]
   - [Real(64bit)]

   The setting range of array elements is [-2147483648] to [2147483647].
   (Number of elements in the first dimension) × (Number of elements in the second dimension) × (Number of elements in the third dimension) must be 2147483648 or less.

6) **[Assign (Device)]**
   Device assigned to the label (GT Designer3).
   An invalid device is displayed as [??].

7) **[Comment], [Comment2] to [Comment16]**
Comment set for the label (GT Designer3).
Up to 1024 characters can be set.

(10)Labels that can be imported

The following labels can be imported.

- Labels (GT Designer3)
- Global labels created with GX Works3, GX Works2, or MT Developer2 (except structure-type global labels)

■2 Registering, editing, and deleting the label (GT Designer3)

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Register labels (GT Designer3) in a label group.
Create a label group in advance, and register the labels (GT Designer3).

(1) Creating a label group

The following shows the procedure for creating a label group.

Step 1 Perform one of the following operations to open the [Label Group Property] dialog.

- Select [Common settings] → [Label] → [Open] from the menu to display the [Label Group List] dialog, and click the [New] button.

  ➟6.1.5 ■6 [Label Group List] dialog

- In the [Project] window, double-click [New] under [Label (GT Designer3)].
  Alternatively, right-click [Label (GT Designer3)] and select [New Label Group] from the right-click context menu.

  ➟2.2.4 ■1 [Project] window

Step 2 In the [Label Group Property] dialog, set the label group.

➟6.1.5 ■6 (1) [Label Group Property] dialog

(2) Registering, editing, or deleting a label in the [Label Group] window

Step 1 Perform either of the following operations to open the [Label Group] window.

- Select [Common settings] → [Label] → [Open] from the menu to display the [Label Group List] dialog. In the dialog, select a target label group and click the [Edit] button.

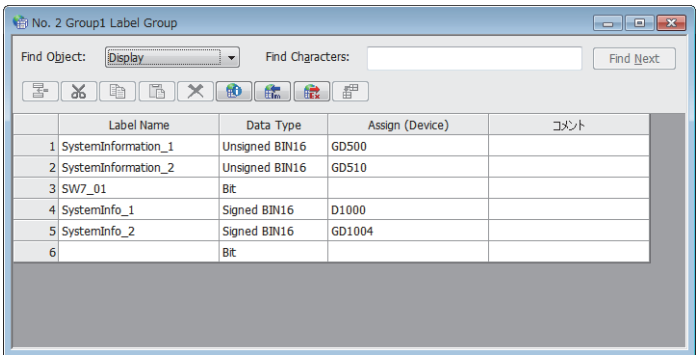
  ➟6.1.5 ■6 [Label Group List] dialog

- Right-click a target label group in [Label] of the project tree, and select [Open].

  ➟2.2.4 ■1 [Project] window

Step 2 Register, edit, or delete a label (GT Designer3) in the [Label Group] window.

➟■7 [Label Group] window



(3) Utilizing a label (GT Designer3) from a screen

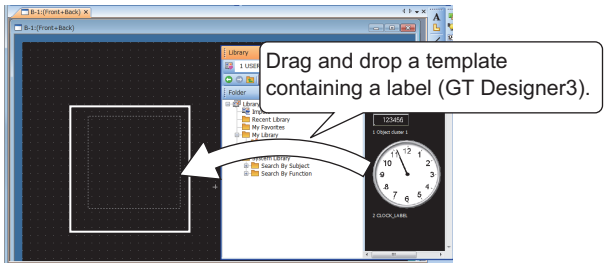
When a screen is created by utilizing screen data from a different project, the label groups set in the source screen are selectable.
For how to create a screen by utilizing screen data from a different project, refer to the following.

➟11.4.2 How to use the project utilization

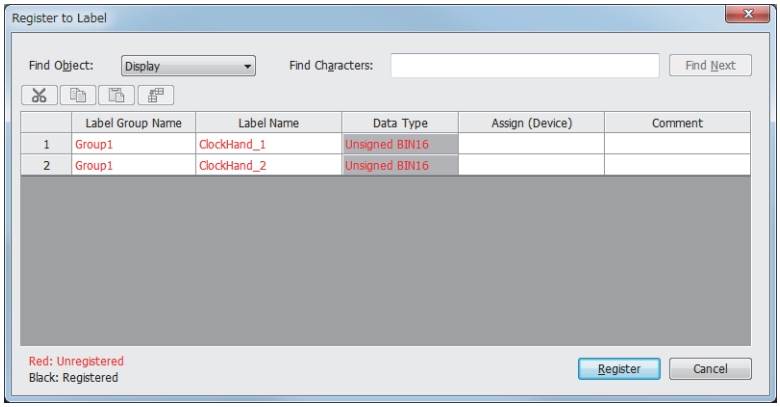
(4) Utilizing a label (GT Designer3) from a template

When a template containing a label (GT Designer3) is dragged and dropped from the library or others, the label also comes with the template.

Step 1 Drag and drop a template containing a label (GT Designer3) from the library or others to the screen editor.



Step 2 When the template is pasted, the [Register to Label] dialog appears.
Import the labels (GT Designer3).
➞■8 [Register to Label] dialog



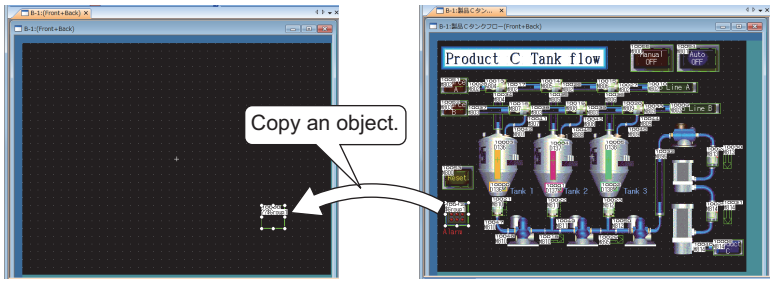
When some labels (GT Designer3) listed have the same label group name and label name, but have different assigned devices and comments, registration is made as follows:
Consecutive numbers are added to the label names, and the labels are registered as different ones.

(5) Utilizing a label (GT Designer3) from an object

When an object with a label (GT Designer3) set is copied, the label also comes with the object.

Step 1 Open a copy source project and a copy destination project on different GT Designer3 modules.

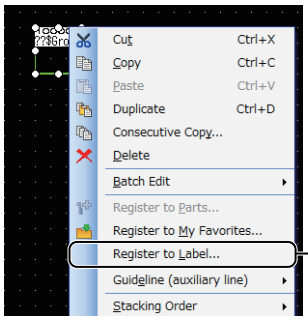
Step 2 Copy an object with a label set in the source project, and paste the object in the destination project.



Copy destination project Copy source project

If a label (GT Designer3) registered in the copy destination project has the same label group name and label name, but has a different assigned device and comment, the following occurs.
The label setting of the source object is not copied, and the setting of the label already registered remains effective.
(The rest of the procedure is unnecessary.)

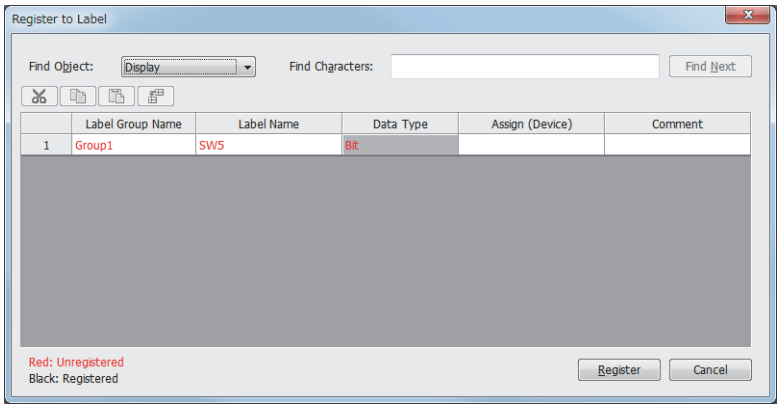
Step 3 Right-click the pasted object, and select [Register to Label].



Select the item from the right-click context menu.

Step 4 In the [Register to Label] dialog, incorporate the label into the project.

➟■8 [Register to Label] dialog



(6) Importing and exporting a label group

You can import or export a label group by specifying a file as shown below.

- Import
  CSV file, Unicode text file, or GX Works3 project
- Export
  CSV file or Unicode text file
  For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

To import global labels from a GX Works3 project, install GX Works3.
The required GX Works3 version depends on the GX Works3 project used.

GX Works3 project	GX Works3 version
Uncompressed project data	Version 1.040S or later
Compressed project data	Version 1.050C or later

Step 1 Perform either of the following operations to open the [Label Group] window.

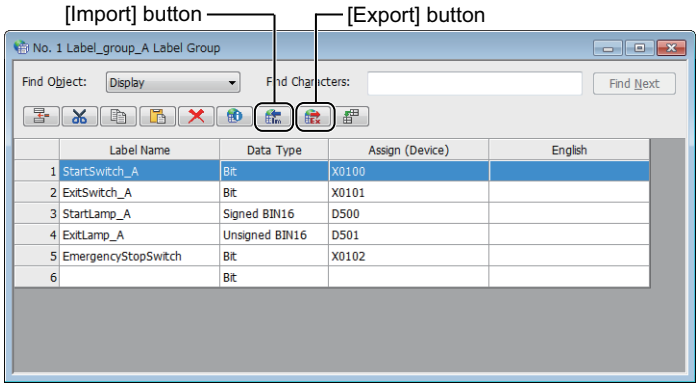
- Select [Common settings] → [Label] → [Open] from the menu to display the [Label Group List] dialog. In the dialog, select a target label group and click the [Edit] button.

➟6.1.5 ■6 [Label Group List] dialog

- Right-click a target label group in [Label] of the project tree, and select [Open].

➟2.2.4 ■1 [Project] window

Step 2 Click the [Import] or [Export] button to import or export a label group.



Step 3 In the displayed dialog, perform the import or export operation.

- Import

  In the [Import Label] dialog, select a file of labels (GT Designer3) or global labels to be imported, and click the [OK] button.

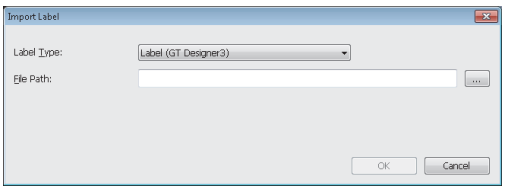
  ➟6.1.5 ■7 (2) [Import Label] dialog

  If [Access from External Device] is enabled for the global labels to be imported, a confirmation dialog appears upon clicking the [OK] button in the [Add Global Label] dialog.
  To disable the access from external devices and import the labels as the labels (GT Designer3), click the [Yes] button in the confirmation dialog.
  To display the [Global Label List] dialog, click the [No] button in the confirmation dialog.
  The access from external devices remains enabled, and you cannot import the labels as the labels (GT Designer3).
  To import the labels as global labels, perform the operation in the [Global Label List] dialog.

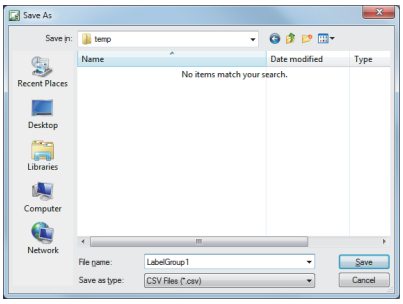
  ➟6.1.4 ■7 [Global Label List] dialog

  To return to the [Label Group] window, click the [Cancel] button in the confirmation dialog.
- Export

  In the [Save As] dialog, set [Save in], [File Name], and [Save as type], and then click the [Save] button.



Import



Export

(7) Registering labels (GT Designer3) automatically

Labels (GT Designer3) are automatically registerable based on the profile (CSP+) data in the personal computer used. For the details, refer to the following.

➟11.2 Registering the Labels (GT Designer3) Created from Profile Data

■3 Setting a label (GT Designer3)

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Point

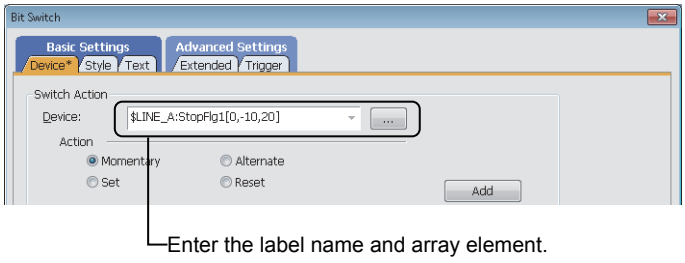
Checking the data type of the label (GT Designer3)

When you change the data type of the object or others, the data types may be inconsistent between the label (GT Designer3) and the object or others.
After setting the label (GT Designer3), check if the data types are consistent between the label (GT Designer3) and the object or others.
To check the data types, you are recommended to compare the exported CSV file of a label group with the CSV file exported from [Device List].

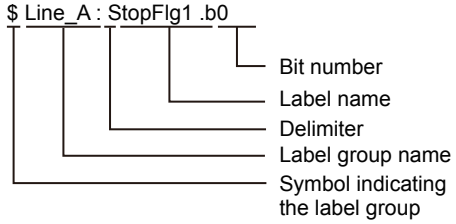
➟11.8.2 Listing devices (Device list)
6.1.5 ■2 (6) Importing and exporting a label group

(1) Directly entering a label name

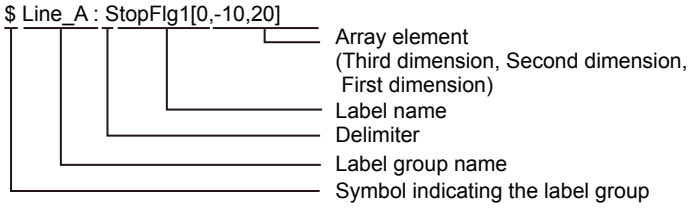
In the setting dialog of an object or others, enter the name of a label (GT Designer3) directly in the text box of [Device].
At the beginning of the name, enter a symbol "$" indicating the label group.
Between the label group name and the label name, enter a delimiter ":".
To specify a bit of the label (GT Designer3) to which a word device is assigned, append a bit number (b0 to b15) to the label name.
To enter an array element, enclose the subscripts of the element in a square bracket ([]).
For a multidimensional array, enter a comma (,) to separate the subscripts in each dimension.



· Label name



· Array



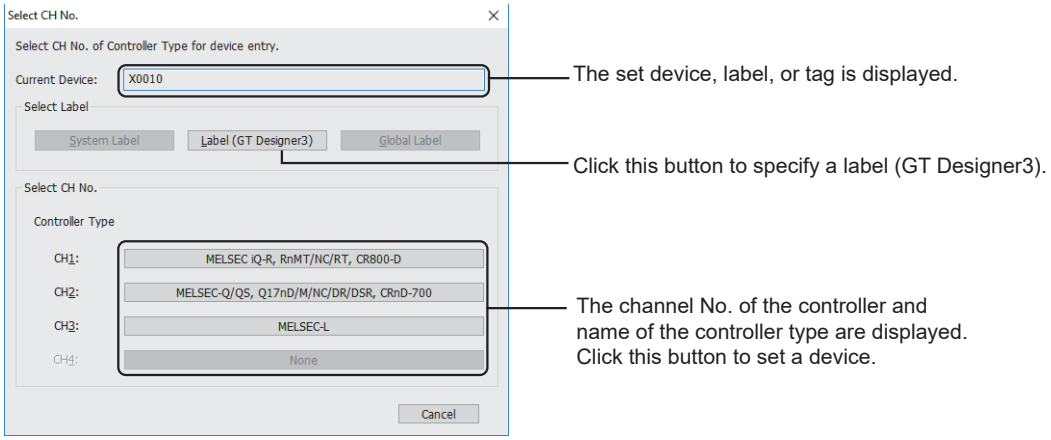
(2) Selecting a label (GT Designer3) from the label list

Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button of [Device] to display the [Select CH No.] dialog.

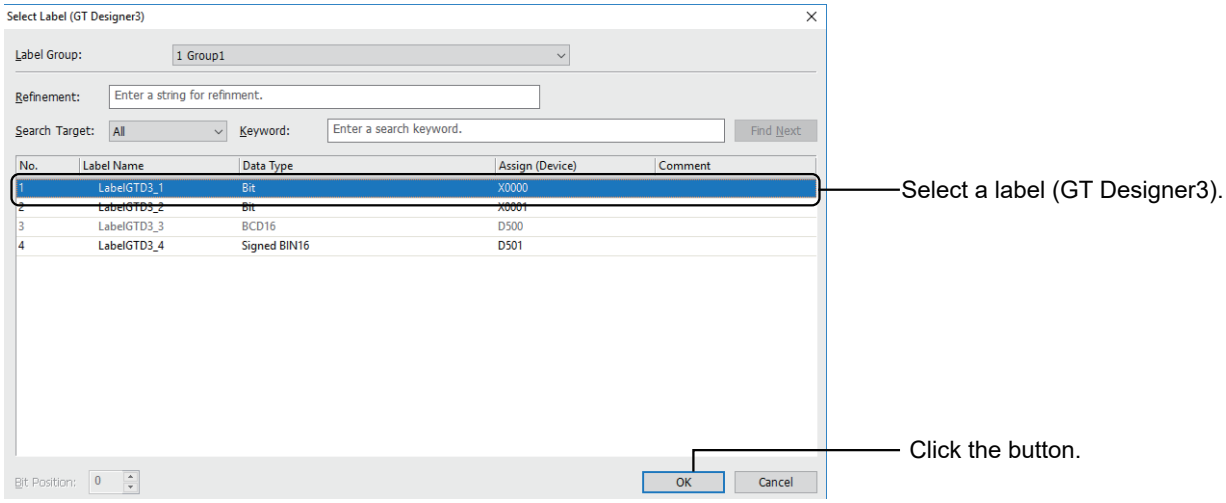
If you click the [...] button without holding down the [Shift] key, the dialog to appear varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.
For the setting details, refer to the following.

➟11.10.4 Customizing the settings related to editing operations

Step 2 In the [Select CH No.] dialog, click the [Label (GT Designer3)] button to display the [Select Label (GT Designer3)] dialog.



Step 3 Select a label (GT Designer3) from the label list and click the [OK] button to set the selected label for [Device].



(3) Using the input assist

When setting a device, you can enter a label (GT Designer3) using the input assist.
Search for and set the label (GT Designer3) in the setting dialog of an object.
For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

■4 Label check

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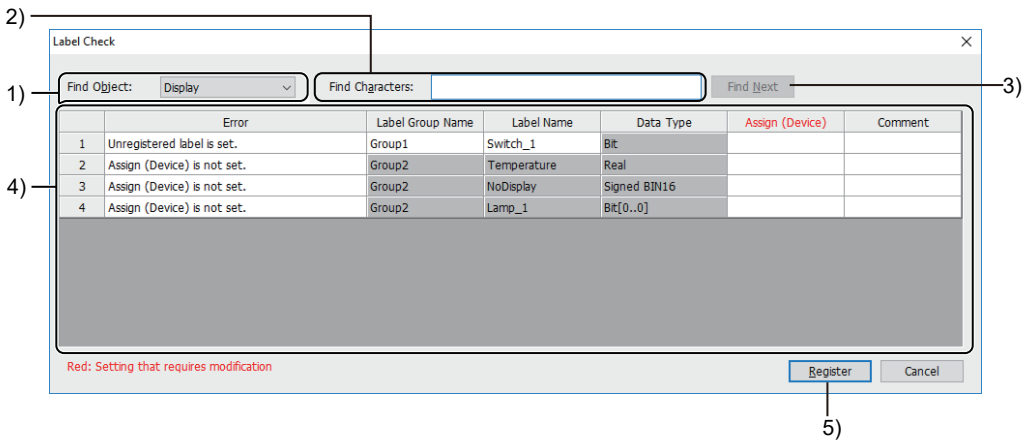
The label check function checks set labels (GT Designer3) for errors to correct the errors.
Perform one of the following operations to execute the label check.

- Select [Tool] → [Label Check] from the menu.
- Right-click a target label group in [Label] of the project tree, and select [Open].

➟2.2.4 ■1 [Project] window

In the [Label Check] dialog, correct the errors.



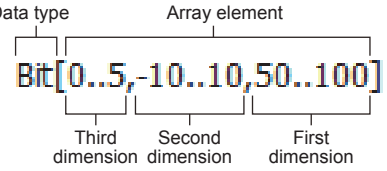
1) **[Find Object]**
Select the target to be searched in the label check error list.

2) **[Find Characters]**
Set a character string to be searched for.
The search string is case-insensitive.

3) **[Find Next]**
Searches the list by the settings of [Find Object] and [Find Characters].

4) **Label check error list**
Lists errors detected by the label check.

You can correct each item in the list.

Item	Description
[Error]	Description of the detected error. ➟(1) Error messages, causes, and corrective actions
[Label Group Name]	Name of the label group to which the label (GT Designer3) belongs.
[Label Name]	Name of the label (GT Designer3). Up to 256 characters can be set.
[Data Type]	Data type of the label (GT Designer3), and array elements The array elements are displayed only when the array setting is configured. Example) When the data type is bit and array elements are set in three dimensions 
[Assign (Device)]	Device assigned to the label (GT Designer3). An invalid device is displayed as [??].
[Comment]	Comment set for the label (GT Designer3) where an error occurs. The comment is displayed according to the setting of [Input Assist Display] in the [Label Group Property] dialog. ➟6.1.5 ■6 (1) [Label Group Property] dialog Up to 1024 characters can be set.

5) **[Register] button**

Registers the label (GT Designer3) in the label group.

(1) Error messages, causes, and corrective actions

The following lists messages, causes, and corrective actions for errors detected by the label check.

Error message	Cause	Corrective action
Unregistered label is set.	• A label (GT Designer3) unregistered in the label group is set.	• Resister the label (GT Designer3) in the label group. • Delete the label (GT Designer3) if unnecessary. ➟■7 [Label Group] window
The array element count is invalid. Register the label as a new label or check the setting on the Device List, etc. and change the setting.	• After an array-type label (GT Designer3) was set for an object or others, the array setting of the label was changed in the label list.	• Register the relevant label (GT Designer3) in the label group as a new one. • Correct the array setting of the relevant label (GT Designer3). • Delete the label (GT Designer3) if unnecessary. ➟■7 [Label Group] window
Assign (Device) is not set.	• A label (GT Designer3) without a device assigned is set.	• Assign a device to the label (GT Designer3). ➟■7 [Label Group] window
Invalid device is set for Assign (Device).	• A device of a channel No. that cannot be set is assigned to a label (GT Designer3). • A device that cannot be monitored by the GOT is assigned to a label (GT Designer3).	• Assign a valid device to the label (GT Designer3). ➟■7 [Label Group] window

■5 Precautions for labels (GT Designer3)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Consecutive copy of an object with a label (GT Designer3) set

When you copy an object with a label (GT Designer3) set by using the consecutive copy function, the device number is not incremented.

When using the consecutive copy, specify the device directly in the device setting of an object copy.

(2) Changing a label (GT Designer3) in the script text

Even if you change a label name or label group in the [Label Group] dialog, the change is not reflected to the script text containing the label.

When using a label (GT Designer3) in the script text, check the script text and change the label setting accordingly.

(3) When using a label (GT Designer3) to specify consecutive devices

When you use a label (GT Designer3) to specify consecutive devices, the consecutive devices, beginning with the device assigned to the label, must be within the device range.
Otherwise, you cannot set the label (GT Designer3) to specify the consecutive devices in the device setting.
You also cannot use an unregistered label (GT Designer3) to specify consecutive devices.

(4) Utilizing labels (GT Designer3) from a different project

You cannot incorporate labels (GT Designer3) from a different project in the [Utilize Data (Project)] dialog or the [Utilize Data (Screen)] dialog.
To utilize a label group from a different project, use [Utilize Project].

➟11.4 Utilizing Other Project Data

(5) When an unregistered label (GT Designer3) is used in the device setting

When you set an unregistered label (GT Designer3) in the device setting for an object, after registering the label in the [Label Group] window, close the screen on which the object is placed.
If you edit the label name and the label group name without closing the screen after the registration, the changes are not reflected to the object.

(6) Writing package data

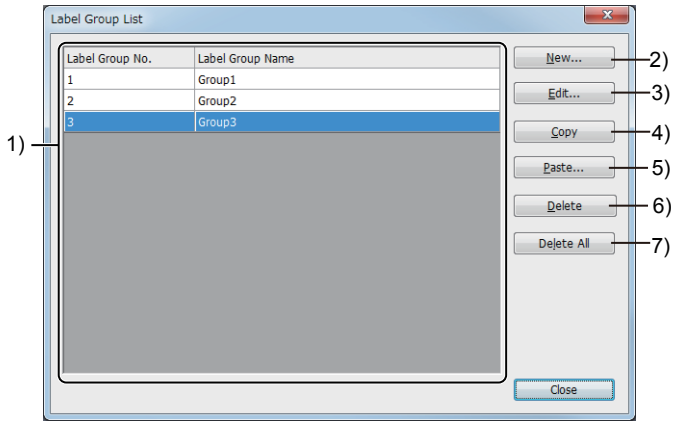
When you set labels (GT Designer3) in a project and write the project data to the GOT, [Write Mode] is not selectable in the [Write Option] dialog.
In this case, [Write Mode] is fixed to [Synchronize].

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

■6 [Label Group List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Create, edit, or delete a label group.



1) **Label group list**
Lists label groups registered in the project.

2) **[New] button**
Displays the [Label Group Property] dialog to create a label group.

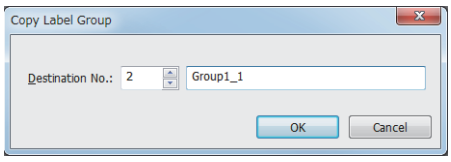
➟(1) [Label Group Property] dialog

3) **[Edit] button**
Displays the [Label Group] window to edit the label group setting and labels (GT Designer3).

➟■7 [Label Group] window

4) **[Copy] button**
Copies a selected label group.

5) **[Paste] button**
Pastes a copied label group in the label group list.



- **[Destination No.]**
  Set the number of the label group to be pasted.
- **Label group name**
  Set the name of the label group to be pasted.

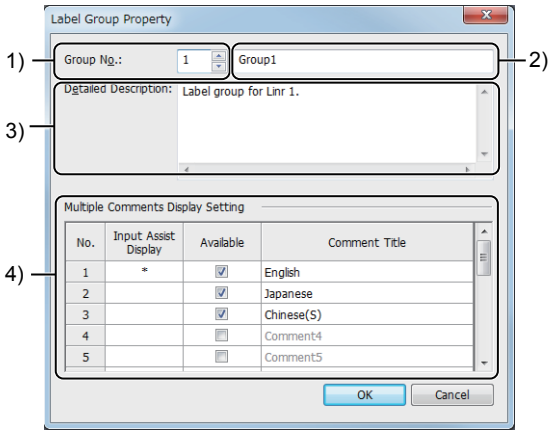
6) **[Delete] button**
Deletes a selected label group.

7) **[Delete All] button**
Deletes all the label groups in the label group list.

(1) [Label Group Property] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Create or delete a label group.



1) **[Group No.]**
Set the group No. of the label group.
The setting range is [1] to [200].

2) **Label group name**
Set the name of the label group.
Up to 32 characters can be set.

3) **[Detailed Description]**
Set the detailed description of the label group.
Up to 512 characters can be set.
A line feed is counted as two characters.

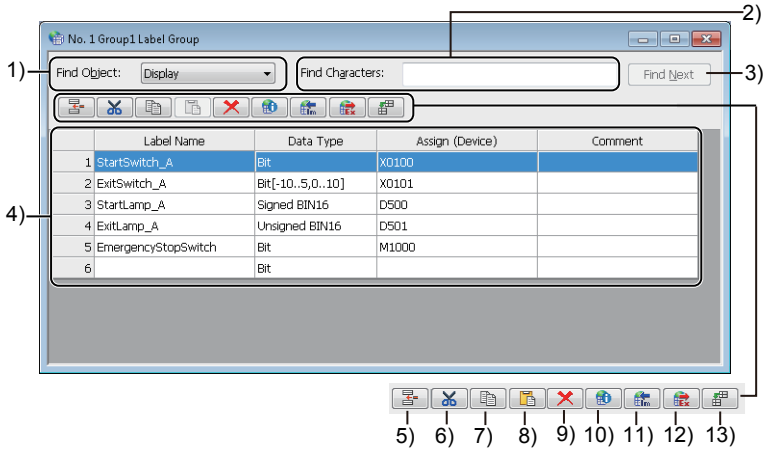
4) **[Multiple Comments Display Setting]**
Set comments for the label group.
Up to 16 comments can be set.
The set comments can be used for the input assist.

Item	Description
[Input Assist Display]	Select comments to be displayed in the input assist.
[Available]	Enables the comment title input.
[Comment Title]	Set remarks for the comment. Up to 32 characters can be set.

■7 [Label Group] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Create, edit, or delete a label (GT Designer3) in a label group.
The label group setting is also changeable.

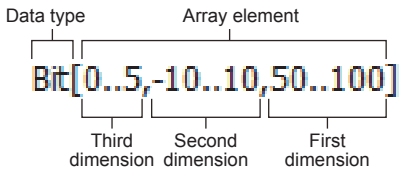


1) **[Find Object]**
Select the target to be searched in the label (GT Designer3) list.

2) **[Find Characters]**
Set a character string to be searched for.
The search string is case-insensitive.

3) **[Find Next]**
Searches the list by the settings of [Find Object] and [Find Characters].

4) **Label (GT Designer3) list**
Lists labels (GT Designer3) that belong to the label group.

Item	Description
[Label Name]	Name of the label (GT Designer3). Up to 256 characters can be set. Click [Label Name] to select the column. To select multiple cells in the same column, perform one of the following operations. • Drag the target cells. • Select the first cell in the range, hold down the [Shift] key and click the last cell in the range. • Select the first cell, hold down the [Shift] key and press an arrow key to extend the selection.
[Data Type]	Data type of the label (GT Designer3), and array elements Click a target cell and then click the [...] button to display the [Data Type Selection] dialog. ➟(1) [Data Type Selection] dialog The array elements are displayed only when the array setting is configured. Example) When the data type is bit and array elements are set in three dimensions 
[Assign (Device)]	Device assigned to the label (GT Designer3). An invalid device is displayed as [??]. Click [Assign (Device)] to select the column. To select multiple cells in the same column, perform one of the following operations. • Drag the target cells. • Select the first cell in the range, hold down the [Shift] key and click the last cell in the range. • Select the first cell, hold down the [Shift] key and press an arrow key to extend the selection.

Item	Description
[Comment], [Comment2] to [Comment16]	Comments for the label (GT Designer3). Up to 1024 characters can be set. Click [Comment] or [Comment2] to [Comment16] to select the corresponding column. To select multiple cells in the same column, perform one of the following operations. • Drag the target cells. • Select the first cell in the range, hold down the [Shift] key and click the last cell in the range. • Select the first cell, hold down the [Shift] key and press an arrow key to extend the selection.

5) **[Insert Row] button**
Inserts a row above a selected row in the label (GT Designer3) list.

6) **[Cut] button**
Cuts a row, column, or cell selected in the label (GT Designer3) list.
Note that a cell in the [Data Type] column cannot be cut alone.
You can paste the cut data on another text editing application (such as Microsoft Excel and Notepad).

7) **[Copy] button**
Copies a row, column, or cell selected in the label (GT Designer3) list.
You can paste the copied data on another text editing application (such as Microsoft Excel and Notepad).

8) **[Paste] button**
Pastes a copied row, column, or cell to the location specified in the label (GT Designer3) list.
You can also copy or cut data that is created with a text editing application (such as Microsoft Excel and Notepad), and paste the data to the label (GT Designer3) list.
However, you cannot paste data to multiple columns at once.

9) **[Delete] button**
Deletes a row, column, or cell selected in the label (GT Designer3) list.
Note that a cell in the [Data Type] column cannot be deleted alone.

10) **[Label Group Property] button**
Displays the [Label Group Property] dialog to change the label group setting.

➟6.1.5 ■6 (1) [Label Group Property] dialog

11) **[Import] button**
Imports a label group from a CSV file, Unicode text file, or GX Works3 project.
Set the file to be imported in the [Import Label] dialog.

➟(2) [Import Label] dialog

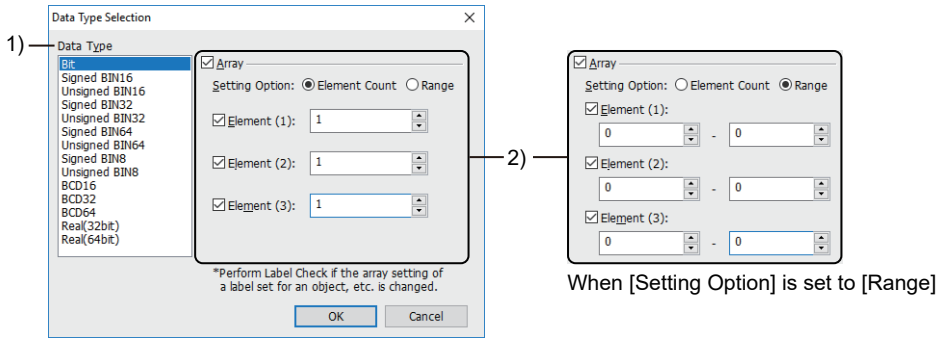
12) **[Export] button**
Exports the label group to a CSV file or Unicode text file.
Set the file to be exported in the [Save As] dialog.

13) **[Batch Edit] button**
Displays the [Batch Edit] dialog to collectively change the label group, channel, or network settings of rows selected in the label (GT Designer3) list.

➟(3) [Batch Edit] dialog

(1) [Data Type Selection] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Setting Option] is set to [Element Count]

When [Setting Option] is set to [Range]

1) **[Data Type]**

Select the data type of the label (GT Designer3).

The following shows the items to be selected.

- [Bit]
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

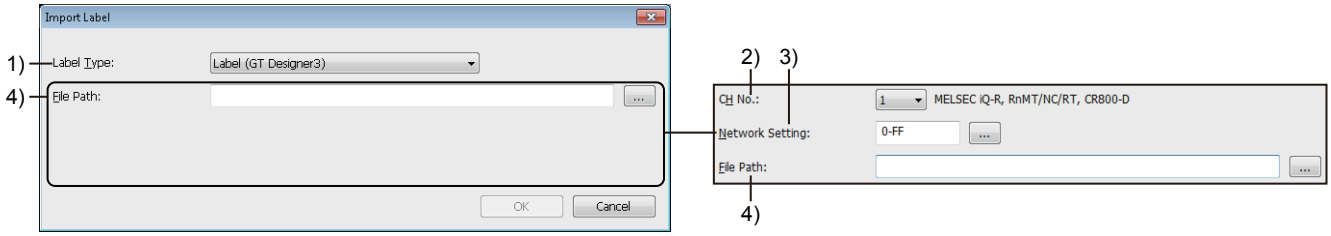
2) **[Array]**

Set the array for the label (GT Designer3).

Item	Description
[Setting Option]	Select the method of specifying the array. The following shows the items to be selected. • [Element Count] • [Range]
[Element (1)], [Element (2)], [Element (3)]	When [Element Count] is selected for [Setting Option], the number of array elements in each dimension is settable. (The smallest subscript for each dimensions is always 0.) The setting range is [1] to [2147483648]. (Number of elements in the first dimension) × (Number of elements in the second dimension) × (Number of elements in the third dimension) must be 2147483648 or less.
[Element (1)], [Element (2)], [Element (3)]	When [Range] is selected for [Setting Option], the lower and upper bounds of each dimension are settable. The setting range is [-2147483648] to [2147483647]. (Number of elements in the first dimension) × (Number of elements in the second dimension) × (Number of elements in the third dimension) must be 2147483648 or less.

(2) [Import Label] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Label Type] is set to [Label (GT Designer3)]

When [Label Type] is set to [Global Label (GX Works2)], [Global Label (GX Works3)], or [Label (MT Developer2)]

1) **[Label Type]**

Select the type of labels to be imported.

The setting of [Controller Type] in the [Controller Setting] window determines the selectable items.

○: Selectable ×: Not selectable

[Controller Type]	[Label Type]			
	[Label (GT Designer3)]	[Global Label (GX Works2)]	[Global Label (GX Works3)]	[Label (MT Developer2)]
[MELSEC MX Controller]	○	×	○	×
[MELSEC iQ-R, RnMT/NC/RT, CR800-D] (GT27, GT25, GT23, GT SoftGOT2000, GS25) [MELSEC iQ-R, RnMT/RT, CR800-D] (GT21 and GS21)	○	×	○	○
[MELSEC iQ-L]	○	×	○	×
[MELSEC iQ-F]	○	×	○	×
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] (GT27, GT25, GT23, GT SoftGOT2000, GS25) [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700] (GT21 and GS21)	○	○	×	○
[MELSEC-QnA, MELDAS C6*]	○	○	×	×
[MELSEC-QnA]	○	○	×	×
[MELSEC-L]	○	○	×	×
[MELSEC-A]	○	○	×	×
[MELSEC-FX]	○	○	×	×
[MELIPC]	○	×	○	○

2) **[CH No.]**

This item is settable when [Label Type] is set to [Global Label (GX Works2)], [Global Label (GX Works3)], or [Label (MT Developer2)].

Select the channel number of the controller that uses labels (GT Designer3) or global labels.

3) **[Network Setting]**

This item is settable when [Label Type] is set to [Global Label (GX Works2)], [Global Label (GX Works3)], or [Label (MT Developer2)].

Set the network for the controller that uses labels (GT Designer3) or global labels.

For GT21 and GS21, this item is not settable if [Controller Type] is set to [MELSEC-QnA] or [MELSEC-A] in the [Controller Setting] window.

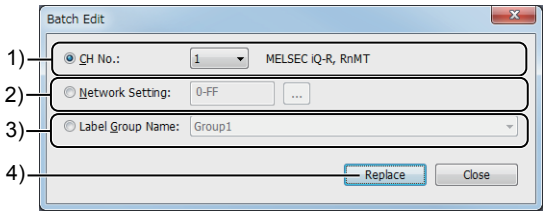
4) **[File Path]**

Specify the path to a CSV file, Unicode text file, or GX Works3 project.

(3) [Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Collectively change the settings of the labels (GT Designer3) selected in the label (GT Designer3) list in the [Label Group] window or the [Register to Label] dialog.



1) **[CH No.]**

This item cannot be set in the following cases.

- No devices are assigned to all the selected labels (GT Designer3).
- GOT internal devices are assigned to all the selected labels (GT Designer3).

The channel numbers of the labels (GT Designer3) are changed collectively.
Select the channel number to be changed to.

2) **[Network Setting]**

This item cannot be set in the following cases.

- Devices of different controllers are assigned to the selected labels (GT Designer3).
- No devices are assigned to all the selected labels (GT Designer3).
- GOT internal devices are assigned to all the selected labels (GT Designer3).

The network settings of the labels (GT Designer3) are changed collectively.
Click [...] and configure the network setting in the [Network Setting] dialog.
The setting contents depend on the controller. Refer to the descriptions of the device setting dialog for each controller.

➟12.4 Device Range and Settings of Each Controller

3) **[Label Group Name]**

This item can be set only when this dialog is opened in the [Register to Label] dialog.
The label group names of the labels (GT Designer3) are changed collectively.
Select a label group name.

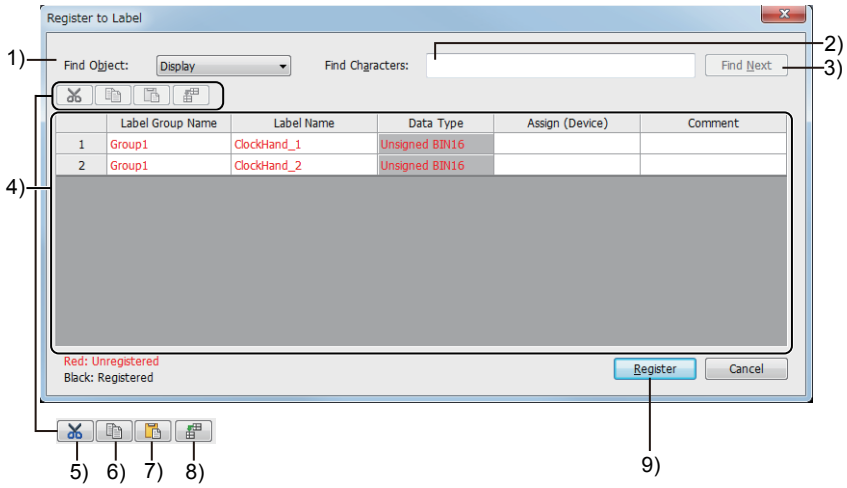
4) **[Replace] button**

Collectively reflects the setting changes made in this dialog to the labels (GT Designer3) selected in the [Label Group] window or the [Register to Label] dialog.

■8 [Register to Label] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The labels (GT Designer3) set for an object and others are listed. Register unregistered labels (GT Designer3) in label groups.



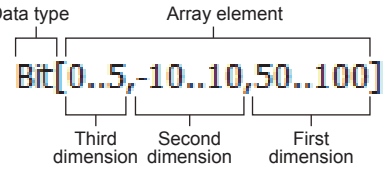
1) **[Find Object]**

Select the target to be searched in the label (GT Designer3) list.

2) **[Find Characters]**
Set a character string to be searched for.
The search string is case-insensitive.

3) **[Find Next]**
Searches the list by the settings of [Find Object] and [Find Characters].

4) **List of labels (GT Designer3)**
Lists the labels (GT Designer3) set in the project.
The names of labels (GT Designer3) unregistered in label groups are shown in red.

Item	Description
[Label Group Name]	Name of the label group. Up to 32 characters can be set.
[Label Name]	Name of the label (GT Designer3). Up to 256 characters can be set.
[Data Type]	Data type of the label (GT Designer3), and array elements The array elements are displayed only when the array setting is configured. Example) When the data type is bit and array elements are set in three dimensions 
[Assign (Device)]	Device assigned to the label (GT Designer3). An invalid device is displayed as [??].
[Comment]	Comment for the label (GT Designer3). The comment is displayed according to the setting of [Input Assist Display] in the [Label Group Property] dialog. ➟6.1.5 ■6 (1) [Label Group Property] dialog Up to 1024 characters can be set.

5) **[Cut] button**
Cuts a selected row from the label (GT Designer3) list.

6) **[Copy] button**
Copies a selected row in the label (GT Designer3) list.

7) **[Paste] button**
Pastes a copied row in the label (GT Designer3) list.

8) **[Batch Edit] button**
Displays the [Batch Edit] dialog to collectively change the label group, channel, or network settings of rows selected in the label (GT Designer3) list.

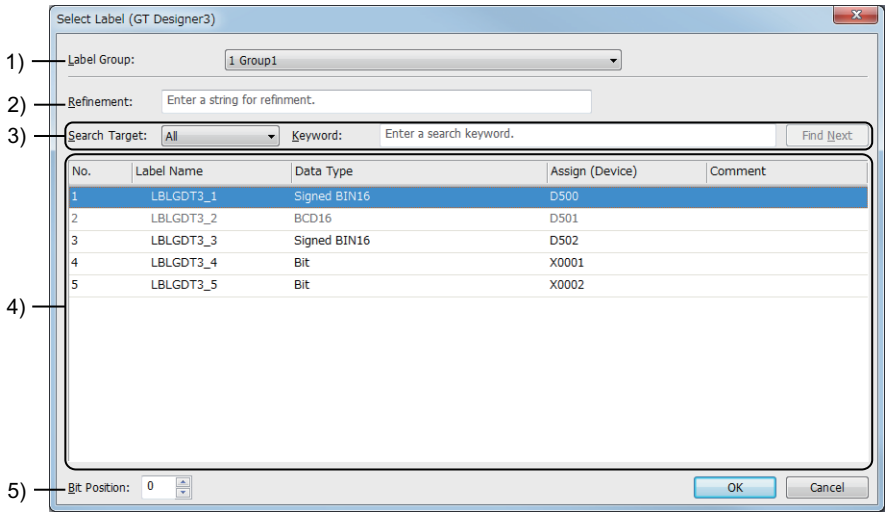
➟6.1.5 ■7 (3) [Batch Edit] dialog

9) **[Register] button**
Registers the labels (GT Designer3) in label groups.

■9 [Select Label (GT Designer3)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can select a label (GT Designer3) from the label list and set the label in the device setting of an object or others in the [Select Label (GT Designer3)] dialog.
To display this dialog, click the [Label (GT Designer3)] button in the [Select CH No.] dialog.



1) **[Label Group]**
Select a label group to be displayed in the label (GT Designer3) list.

2) **[Refinement]**
Enter characters to narrow down the labels (GT Designer3) in the label list.
Only the labels (GT Designer3) narrowed down by the entered characters are displayed in the label list.
Up to 32 characters can be entered.
The entered characters are case-insensitive.

3) **Search**
Search the label (GT Designer3) list for a label by the specified keyword.
Set [Search Target] and enter a search keyword in [Keyword].
Click the [Find Next] button to search for a label (GT Designer3) by the search keyword.

The following shows the items selectable for [Search Target].
- [All]
- [Label Name]
- [Data Type]
- [Assign (Device)]
- [Comment]

Up to 32 characters can be entered in [Keyword].
The entered characters are case-insensitive.

4) **Label (GT Designer3) list**
Lists the labels (GT Designer3) of the label group selected in [Label Group].
Select a label (GT Designer3) from the label list and click the [OK] button to set the label for [Device].

Item	Description
[No.]	Number of a label (GT Designer3)
[Label Name]	Name of a label (GT Designer3)
[Data Type]	Data type of a label (GT Designer3)
[Assign (Device)]	Device assigned to a label (GT Designer3)
[Comment]	Comment set for a label (GT Designer3)

5) **[Bit Position]**
Set the bit position of a label (GT Designer3).
The setting range is [0] to [15].
If you use the [Device List] window or the [Edit Script (script name)] dialog to display the [Select Label (GT Designer3)] dialog, [Bit Position] is not settable.

6.1.6 Using device comments and device definitions

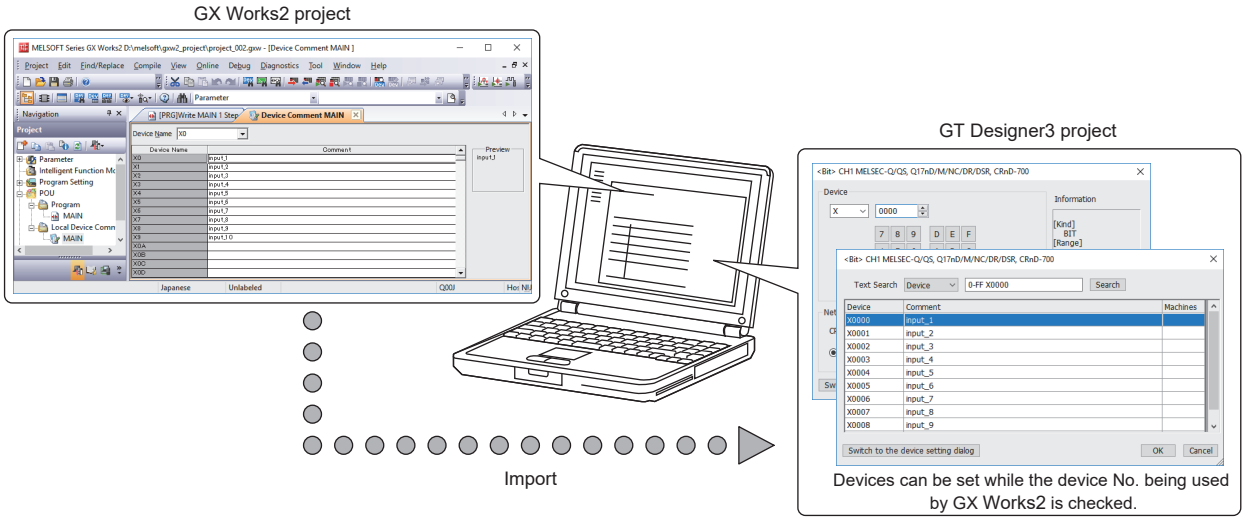
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Importing device comments and device definitions
■2 Referring to device comments and device definitions
■3 Precautions for device comments and device definitions
■4 [Device Comment / Device Definition List] dialog
■5 Device comment setting dialog
■6 Device definition setting dialog

You can retrieve the following device comments and device definitions for the device setting on GT Designer3.

- Device comments of a MITSUBISHI ELECTRIC PLC or MELIPC
- Device definitions of a MITSUBISHI ELECTRIC servo amplifier, inverter, or others

While checking the details of devices in a sequence program or others, you can set the devices on GT Designer3, avoiding setting incorrect device numbers.



To retrieve the device comments, select the MITSUBISHI ELECTRIC PLC for [Controller Type] in the controller setting.
To retrieve the device definitions, select a MITSUBISHI ELECTRIC servo amplifier, inverter, or others for [Controller Type] in the controller setting.

■1 Importing device comments and device definitions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Import device comments and device definitions to refer to devices with GT Designer3.

Step 1 Select [Project] → [Import Other Data] → [Device Comment/Device Definition] from the menu.

Step 2 The [Device Comment/Device Definition] dialog is displayed.
Set device comments or device definitions to be used.
➟■4 [Device Comment / Device Definition List] dialog

Step 3 Click the [OK] button to complete the import.

(1) Destination for device comment data

Device comment data (***.csv) of GX Works2 is created in the destination specified when the device comment is exported.
Device comment data (***.wcd) of GX Developer is created in the project of GX Developer.

(2) Data of GX Developer to be used

Data of GX Developer that is necessary to use this function is only device comment data (***.wcd).
The other projects of GX Developer are not needed.

(3) If device comments are corrected using GX Works2 or GX Developer

The device comments that have been set in a GT Designer3 project are not updated automatically.
To update the comments, click the [OK] button in the [Device Comment/Device Definition] dialog.

(4) Set device comments and device definitions

They are saved in the project and retained.

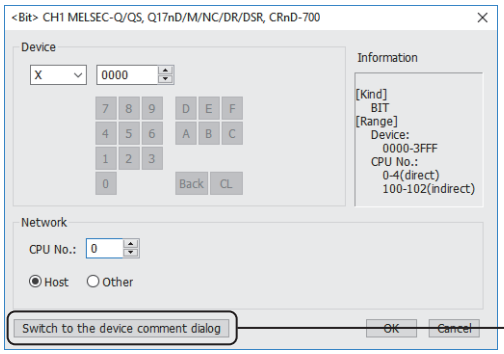
■2 Referring to device comments and device definitions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set device comments and device definitions to be retrieved with the setting dialog or input assist.

(1) Setting device comments and device definitions to be retrieved with the dialog for selecting

Step 1 In the device setting dialog, click the [Switch to the device comment dialog] button or [Switch to the device define dialog] button.

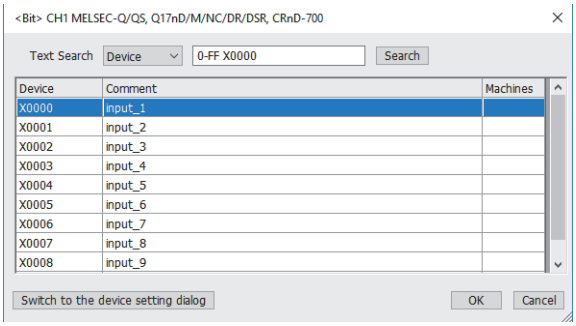


Step 2 The setting dialog for device comments or device definitions appears.

Search devices to be used and set them.

➟6.1.6 ■5 Device comment setting dialog

6.1.6 ■6 Device definition setting dialog



Step 3 Click the [OK] button after the settings to complete the device settings.

(2) Setting device comments and device definitions to be retrieved using the input assist

Device comments and device definitions can be searched and set in the setting dialog for the object without opening the setting dialog for device comments or device definitions.

For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

■3 Precautions for device comments and device definitions

(1) Restriction by the project security

Users who are prohibited to edit by the security for the whole project cannot import device comments, device definitions, and tag files.

For the project security, refer to the following.

➟2.13 Protecting a Project by Registering Users

(2) Changing storage location of tag files

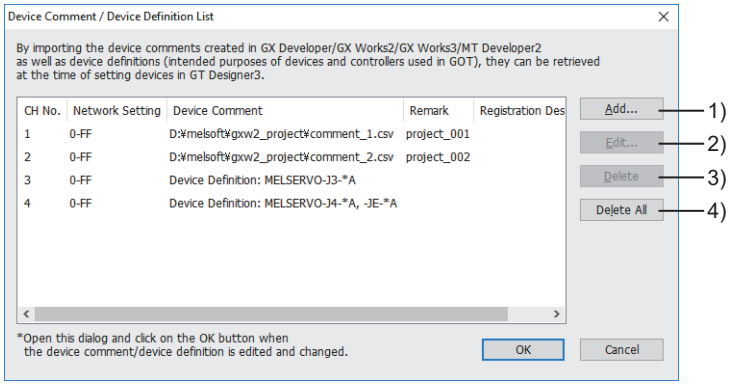
If the storage location of the tag files has been changed after tag files were imported, update the tag files and set the path to the new storage location.

If the path is not changed, the tag files are not displayed in the tag view when device settings are made.

■4 [Device Comment / Device Definition List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Project] → [Import Other Data] → [Device Comment/Device Definition] from the menu to display the setting dialog.



Device definitions describe the uses of servo amplifier devices and inverter devices.
For the correspondences between the devices used in the GOT and the data of a servo amplifier or inverter, refer to the following.

➟12.4 Device Range and Settings of Each Controller

1) **[Add] button**
Displays the [Add Device Comment / Device Definition] dialog.
Add the device comments or device definitions to be retrieved.

➟(1) [Add Device Comment / Device Definition] dialog or [Edit Device Comment / Device Definition] dialog

2) **[Edit] button**
Displays the [Edit Device Comment / Device Definition] dialog.
Edit the settings to import the device comments or device definitions of the selected controller.

➟(1) [Add Device Comment / Device Definition] dialog or [Edit Device Comment / Device Definition] dialog

3) **[Delete] button**
Deletes selected device comments or device definitions.

4) **[Delete All] button**
Deletes all device comments or device definitions.

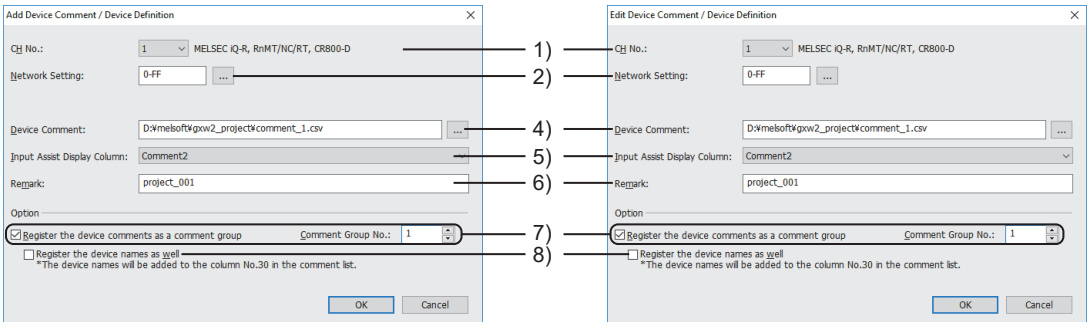
Point

(1) **Changing the GOT type**
After the GOT type being changed, if the CH No. set in the [Device Comment / Device Definition List] dialog cannot be used by the newly set GOT type, the device comments and device definitions of the CH No. are deleted.

(2) **Changing the controller model**
If the controller model is changed, the device comments and device definitions of the CH No., for which the previous model is set, are deleted.

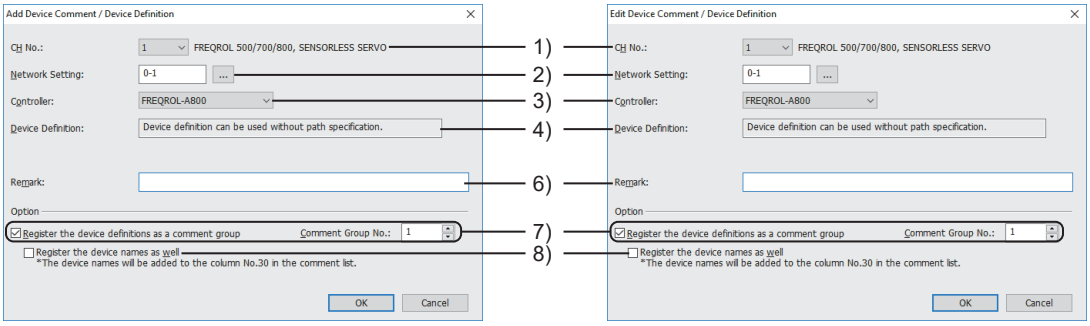
(3) **Device definitions for which [Network Setting] is set to [0-0]**
If a MITSUBISHI ELECTRIC servo amplifier is selected for [Controller Type] in the controller setting, the device definitions for which [Network Setting] is set to [0-0] are added automatically.
The device definitions can be retrieved in the device definition setting dialog or by the input assist, but cannot be updated and deleted because they are not displayed in the list in the [Device Comment / Device Definition List] dialog.

(1) [Add Device Comment / Device Definition] dialog or [Edit Device Comment / Device Definition] dialog



Adding device comments

Editing the settings for the device comments



Adding device definitions

Editing the settings for the device definitions

1) **[CH No.]**
Select the channel number of the controller having the device comments or device definitions to be added.

2) **[Network Setting]**
Specify the network of the controller having the device comments or device definitions to be added.

3) **[Controller]**
Set this item only for connection to an inverter.
Select the controller having the device comments or device definitions to be added.

4) **[Device Comment], [Device Definition]**
Set the file necessary to use the device comments.
If a MITSUBISHI ELECTRIC servo amplifier or inverter is selected with [CH No.], this setting is unnecessary.
- GX Works3, GX Works2: CSV file into which the device comment is exported
- GX Developer: Device comment file

5) **[Input Assist Display Column]**
Specify the column of the device comment to be displayed in the input assist.

6) **[Remark]**
Set remarks to be displayed in the [Device Comment / Device Definition List] dialog.
Up to 200 characters can be set.
When the device comments of GX Works2 are imported, the project name of GX Works2 is set.

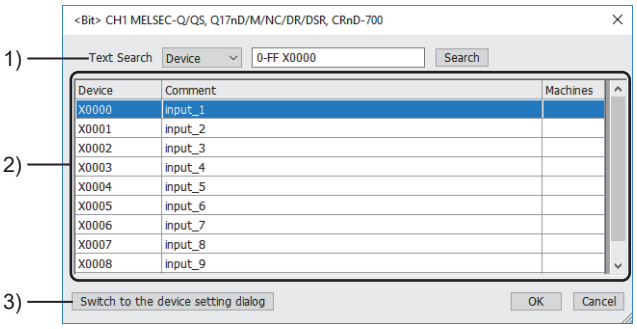
7) **[Register the device comments as a comment group], [Register the device definitions as a comment group]**
Registers the imported device comments or device definitions as a comment group.
Set the destination comment group number in [Comment Group No.].
The setting range is [1] to [500].
The data of [Remark] is set to the comment group name.
Up to 32 characters can be used for the comment group name, and the 33rd or later characters are not used.

8) **[Register the device names as well]**
Registers the device names to the comment group, together with the device comments or the device definitions.
The device names are added to column No.30 in the comment group where the device comments are registered.

■5 Device comment setting dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the device setting dialog, click the [Switch to the device comment dialog] button to display the device comment setting dialog.



1) **[Text Search]**
Select the range (category) of the character string and type the character string to search the target device comment.
The following shows the items to be selected.
- [Device]
- [Comment]
- [Machines]

2) **Device comment list**
Displays the device comments that match the search criteria.

3) **[Switch to the device setting dialog] button**
Switches the display to the device setting dialog.

Point

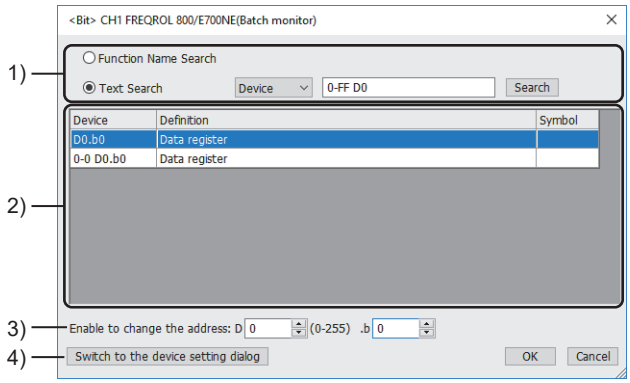
Searching the buffer memory

If any of the following items has been selected for [Controller Type] in the [Controller Setting] dialog, the buffer memory cannot be searched in the dialog for selecting device comments.
- [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] (GT27, GT25, GT23, GT SoftGOT2000, GS25)
- [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700] (GT21 and GS21)
- [MELSEC-QnA, MELDAS C6*]
- [MELSEC-L]
- [MELSEC-FX]

■6 Device definition setting dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the device setting dialog, click the [Switch to the device define dialog] button to display the device definition setting dialog.



1) Search method

Select the method of searching.

Item	Description
[Function Name Search]	Select a function to search the target device. Depending on the controller, the setting range differs.
[Text Search]	Select the range (category) of the character string and type the character string to search the target device comment. The following shows the items to be selected. • [Definition] • [Symbol] • [Device]

2) Device definition list

Displays the device definitions that match the search criteria.

3) Changing the address

The device number or axis number of each set device definition is changeable.

This item appears when [Controller Type] is set to one of the following items in the [Controller Setting] window and the selected device definition is available.

- [MELSERVO-J5(W)-*G(-RJ), -JET-*G]
- [FREQROL 800]
- [FREQROL 800/E700NE(Batch monitor)]
- [IAI ROBO CYLINDER]
- [IAI X-SEL Controller]
- [Azbil DMC50]

The setting range differs depending on the device.

4) [Switch to the device setting dialog] button

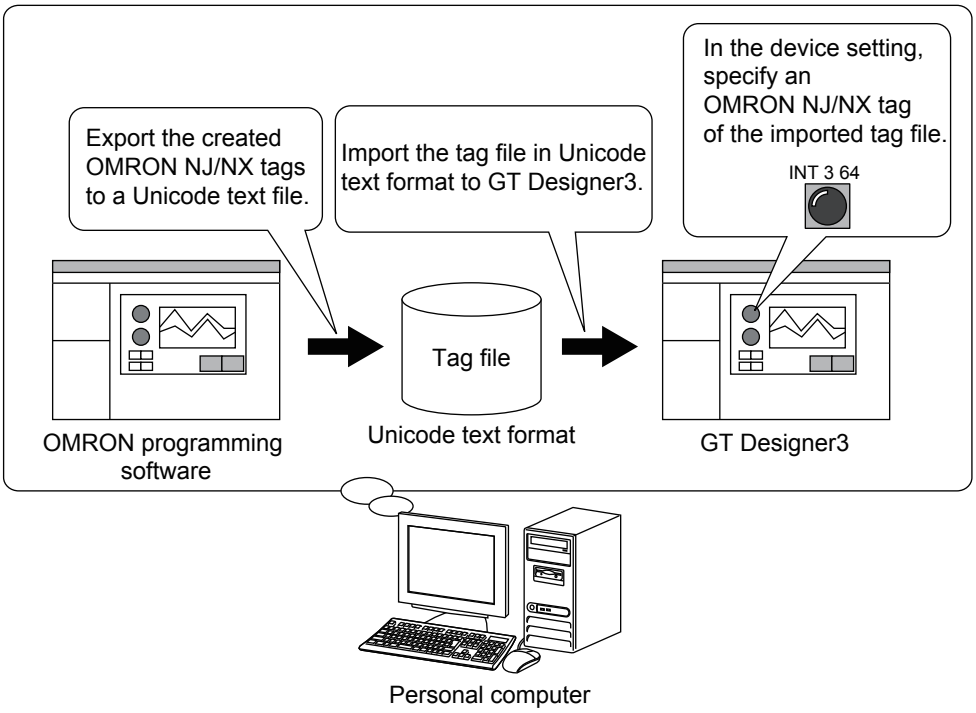
Switches the display to the device setting dialog.

6.1.7 How to set OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Usable OMRON NJ/NX tags
■2 Requirements for OMRON NJ/NX tags
■3 Offset setting for OMRON NJ/NX tags
■4 Importing a tag file
■5 Setting an OMRON NJ/NX tag
■6 Precautions for OMRON NJ/NX tags
■7 [OMRON NJ/NX Tag List] dialog
■8 [Select OMRON NJ/NX Tag] dialog

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
You can import the OMRON NJ/NX tags created with OMRON programming software to GT Designer3.
The imported OMRON NJ/NX tags are usable in the device setting.
Using OMRON NJ/NX tags enables you to create project data without paying attention to the actual devices.



For the usable OMRON NJ/NX tags, refer to the following.

➟■1 Usable OMRON NJ/NX tags

For the precautions on using OMRON NJ/NX tags, refer to the following.

➟■6 Precautions for OMRON NJ/NX tags

The following shows the procedure for specifying an OMRON NJ/NX tag in the device setting.

Step 1 Create OMRON NJ/NX tags with OMRON programming software.

For the procedure for creating an OMRON NJ/NX tag, refer to the following.

➟OMRON programming software manual

Step 2 Export the created OMRON NJ/NX tags.

The contents of the exported OMRON NJ/NX tags are copied to the clipboard.
For the procedure for exporting the tags, refer to the following.

➟OMRON programming software manual

Step 3 Paste the copied contents from the clipboard to a text file, and save the file in Unicode text format.

Step 4 Import the tag file in Unicode text format to GT Designer3.

➟■4 Importing a tag file

Step 5 In the device setting, specify an OMRON NJ/NX tag of the imported tag file.

➞■5 Setting an OMRON NJ/NX tag

■1 Usable OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
You can import the OMRON NJ/NX tags created with OMRON programming software to GT Designer3.
The imported OMRON NJ/NX tags are usable for the channel whose [Controller Type] is set to [OMRON NJ/NX] in the controller setting.
For the above channel, only OMRON NJ/NX tags and GOT internal devices are usable in the device setting.

(1) Specifications of the tag file

You can import the tag files created for the following PLCs to GT Designer3.

PLC type		Model
OMRON PLC	NJ series	NJ501-1500, NJ501-1400, NJ501-1300, NJ501-1520, NJ501-1420, NJ501-1320, NJ501-1340, NJ301-1200, NJ301-1100, NJ101-1000, NJ101-9000, NJ101-1020, NJ101-9020
	NX series	NX1P2-1140DT, NX1P2-1140DT1, NX1P2-1040DT, NX1P2-1040DT1, NX1P2-9024DT, NX1P2-9024DT1, NX701-1700, NX701-1600, NX502-1700, NX502-1600, NX502-1500, NX502-1400, NX502-1300, NX102-1200, NX102-1100, NX102-1000, NX102-9000

(2) Supported software

You can import the tag files created with the following programming software to GT Designer3.

Manufacturer	Software
OMRON Corporation	Sysmac Studio

(3) Tag file format

Create tag files in Unicode text format.
You cannot import the tag files in any other file format to GT Designer3.

(4) Importable pieces of data

Importable pieces of data is 204800 per tag file.

■2 Requirements for OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

(1) Tag name and structure name

The tag name or structure name must satisfy the following requirements.

- A name consists of alphanumeric characters (A to Z, a to z, and 0 to 9), one-byte katakana, multibyte characters, and underscores (_).
- The length of a tag name is 127 bytes or less.
  Up to 300 characters can be set for a structure name.

However, the names containing the following combinations of characters are unusable.

- A name begins with a number (0 to 9).
- A name ends with an underscore (_).
- Underscores (_) are used successively in a name.
- A name begins or ends with a space.

(2) Data type

The following shows the usable data types.

○: Applicable, -: Not applicable

Data type of OMRON NJ/NX tag	Device data type or device type on GT Designer3	Bit specification of word device
BOOL	Bit	-
BYTE	Signed BIN8	-
	Unsigned BIN8	-
WORD	Signed BIN16	○
	Unsigned BIN16	○
	BCD16	-
DWORD	Signed BIN32	-
	Unsigned BIN32	-
	BCD32	-
	Real(32bit)	-
LWORD	Signed BIN64	-
	Unsigned BIN64	-
	BCD64	-
	Real(64bit)	-
SINT	Signed BIN8	-
	Unsigned BIN8	-
INT	Signed BIN16	○
	Unsigned BIN16	○
	BCD16	-
DINT	Signed BIN32	-
	Unsigned BIN32	-
	BCD32	-
	Real(32bit)	-
LINT	Signed BIN64	-
	Unsigned BIN64	-
	BCD64	-
	Real(64bit)	-
USINT	Signed BIN8	-
	Unsigned BIN8	-
UINT	Signed BIN16	○
	Unsigned BIN16	○
	BCD16	-
UDINT	Signed BIN32	-
	Unsigned BIN32	-
	BCD32	-
	Real(32bit)	-
ULINT	Signed BIN64	-
	Unsigned BIN64	-
	BCD64	-
	Real(64bit)	-
REAL	Signed BIN32	-
	Unsigned BIN32	-
	BCD32	-
	Real(32bit)	-

Data type of OMRON NJ/NX tag	Device data type or device type on GT Designer3	Bit specification of word device
LREAL	Signed BIN64	-
	Unsigned BIN64	-
	BCD64	-
	Real(64bit)	-
STRING *1	String	-

*1 Available for the following functions.

- Text display object
- Text input object
- Text print object
- Logging function
- Recipe function

(3) Using an OMRON NJ/NX tag for the setting that requires multiple devices

To set an OMRON NJ/NX tag for the setting that requires consecutive or separate devices, use an OMRON NJ/NX tag whose data type is as follows.

- Structure
- String
- Array
- Bit specification of word device

(4) Structure-type OMRON NJ/NX tags

Tags of a structure that consist of members of the following data types are usable.

- Boolean
- Bit string
- Integer
- Real
- String
- Array specification
- Enumeration

For an enumeration-type tag, when a tag name is directly entered, reading the value of the tag is available.
For data type and device type, select [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)].

➟6.1.7 ■5 (1) Directly entering a tag name

(5) Union type OMRON NJ/NX tags

Union-type tags of a structure that consist of members of the following data types are usable.

- Boolean
- Bit string

(6) Enumeration type OMRON NJ/NX tags

When a tag name is directly entered, reading the value of the tag is available.
For data type and device type, select [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)].

➟6.1.7 ■5 (1) Directly entering a tag name

(7) Array-type OMRON NJ/NX tags

The array must satisfy the following requirements.

- One-, two-, or three-dimensional array
- Any data type other than string
- For the undefined tags: the subscript for each dimension as shown below

Array	Subscript range
One-dimensional array	0 to 65535
Two-dimensional array	0 to 65535
Three-dimensional array	0 to 65535

■3 Offset setting for OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
For an array-type tag, the offset setting is applied to the element numbers.
Example) Offset setting for an OMRON NJ/NX tag in Tag[4,4,4]

OMRON NJ/NX tag set for an object or others	Offset device value	Offset result
Tag[0,1,1]	2	Tag[0,1,3]
	-1	Tag[0,1,0]
	5	Tag[0,2,1] (As the row number of the element tag is changed, a system alarm occurs if Tag[4,4,4] has not been imported.)
	119	A system alarm occurs due to invalid array subscripts.

For the tags of a structure, if the structure is set as an array element, the offset setting is not applied to the tags.
For the array-type tags of a structure, the offset setting is applied to the tags.
Example) Offset setting for the OMRON NJ/NX tags of a structure

OMRON NJ/NX tag set for an object or others	Offset result
STRUCT01[1].INT01	The offset setting is not applied to the tags of a structure that is set as an array element.
STRUCT01.INT02[1]	The offset setting is applied to the array-type tags of a structure.

■4 Importing a tag file

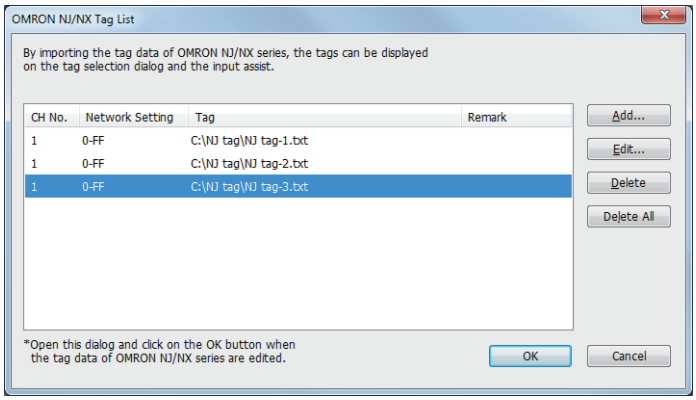
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
The following shows the procedure for importing a tag file to GT Designer3.

Step 1 Select [Project] → [Import Other Data] → [Tag] → [OMRON NJ/NX Tag] from the menu.

Step 2 The [OMRON NJ/NX Tag List] dialog appears.

➟■7 [OMRON NJ/NX Tag List] dialog



■5 Setting an OMRON NJ/NX tag

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

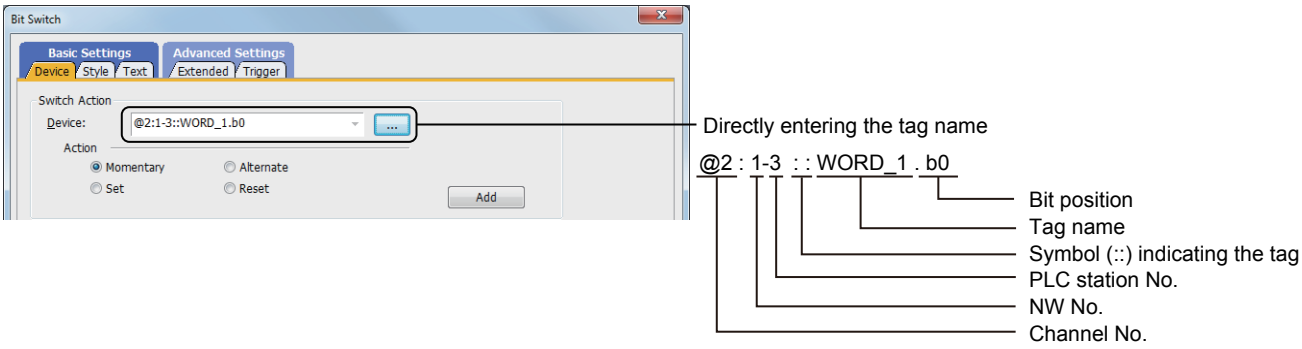
Point

Checking the data type of an OMRON NJ/NX tag

If you change the data type of an object or others, the data types may be inconsistent between the set OMRON NJ/NX tag and the object or others.
After setting an OMRON NJ/NX tag, check if the data types are consistent between the tag and the object or others.
To check the data type consistency, you are recommended to compare the used tag file with the file exported from [Device List] of GT Designer3.

(1) Directly entering a tag name

Enter an OMRON NJ/NX tag name directly in the textbox of [Device] in the setting dialog of an object or others.
At the beginning of the tag name, add a "::" symbol indicating the tag.



When you enter the tag name directly, the data type consistency check between the OMRON NJ/NX tag and the object or others is not performed automatically.
The data types may be inconsistent between the OMRON NJ/NX tag and the object or others.

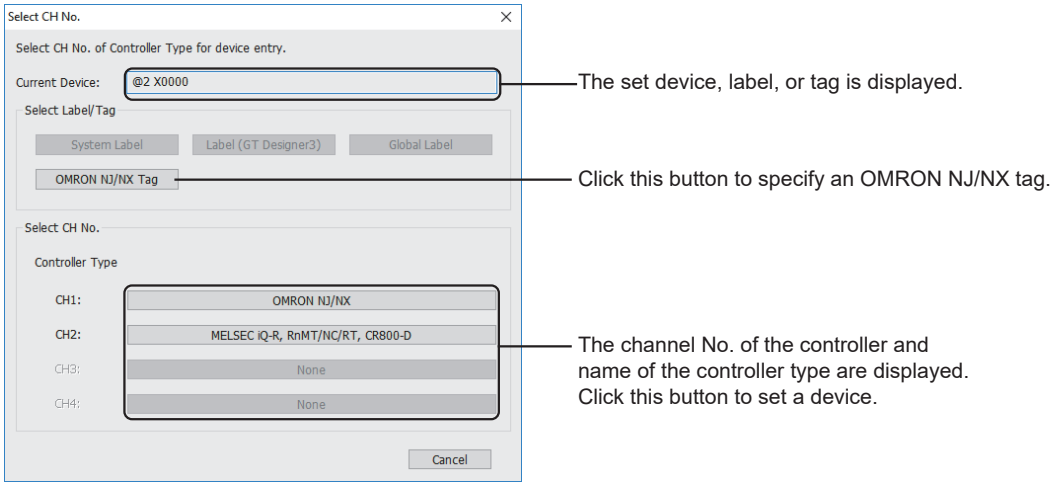
(2) Selecting an OMRON NJ/NX tag from the tag list

Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button of [Device] to display the [Select CH No.] dialog.

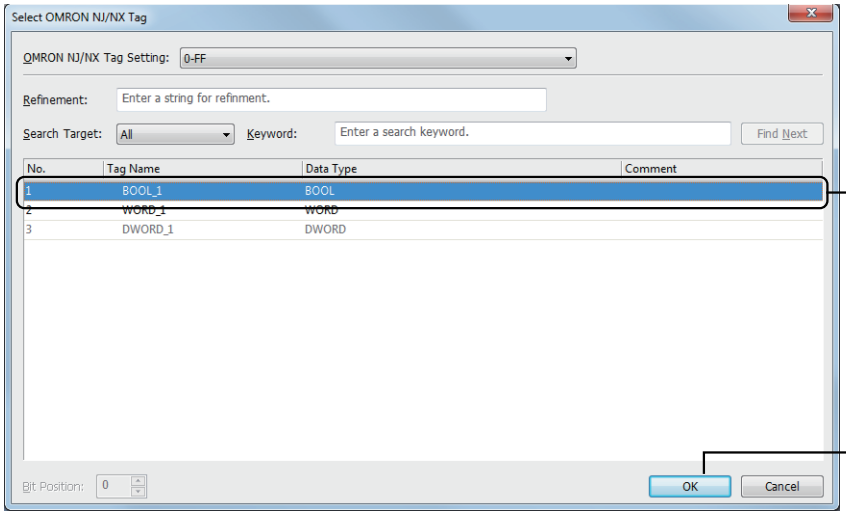
If you click the [...] button without holding down the [Shift] key, the dialog to appear varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.
For the setting details, refer to the following.

➟11.10.4 Customizing the settings related to editing operations

Step 2 In the [Select CH No.] dialog, click the [OMRON NJ/NX Tag] button to display the [Select OMRON NJ/NX Tag] dialog.



Step 3 Select an OMRON NJ/NX tag from the tag list and click the [OK] button to set the tag in [Device].



(3) Using the input assist

Search for an OMRON NJ/NX tag to set the tag in the setting dialog of an object or others.
For information on how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

When using the input assist, you must import OMRON NJ/NX tags in advance.
Import the OMRON NJ/NX tags before setting them.

➟■4 Importing a tag file

■6 Precautions for OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

(1) OMRON NJ/NX tag name

When you use multiple OMRON NJ/NX tags whose names are long, the monitoring process may take a longer time.

(2) Tag settings in a project read from the GOT

When a project containing OMRON NJ/NX tags is read from the GOT, check the tags in the [OMRON NJ/NX Tag List] dialog.
If a tag file is displayed in red, import the tag file again.

(3) Directly entering an OMRON NJ/NX tag name

For a string-type OMRON NJ/NX tag, import the tag and enter the tag name to specify it.
If you do not import the tag before setting it, the data type cannot be recognized as string, and a system alarm occurs.

(4) Importing an identically-named OMRON NJ/NX tag of a different data type

After an OMRON NJ/NX tag is set in the project, if you import an identically-named OMRON NJ/NX tag of a different data type, the set tag may be displayed as [??].
If [??] is displayed, set the relevant OMRON NJ/NX tag again.

(5) Setting the object or function that uses an OMRON NJ/NX tag

Configure the following settings for the object or function that uses a string-type OMRON NJ/NX tag.

- Text display object, text input object
  Select [Display in order of High -> Low] in the [Extended] tab.
- Text print object
  Select [Display in order of High -> Low].
- Recipe function, logging function
  Select [Low-->High] for [Storage Order] in the [Device] tab.

(6) Character code

The GOT uses UTF-16 encoding, and the OMRON NJ or NX series uses UTF-8 encoding.
When you use a string-type OMRON NJ/NX tag, perform encoding conversion (between UTF-16 and UTF-8) and then write or read the tag.
The string length in bytes varies with the encoding format.

• UTF-16
One character takes two bytes.

• UTF-8
One character takes one to three bytes.
A null (one byte) is appended to a string.

As the length of a string in UTF-16 differs from that of the string in UTF-8, an OMRON NJ/NX tag may not be written or read properly.
Set the number of characters to be displayed and the number of bytes for a string-type OMRON NJ/NX tag with consideration of the string length difference between UTF-16 and UTF-8.

(7) Startup time setting

If data is written to or read from an OMRON NJ/NX tag immediately after the OMRON NJ or NX series is turned on, a system alarm may occur.
In such a case, specify a longer time after which the GOT start communicating with the OMRON NJ or NX series by setting [Startup Time(Sec)] of the [Detail Setting] dialog in the controller setting.

➟12.15.5 [Detail Setting] dialog

(8) Station No. switching while an OMRON NJ/NX tag is being used

The station No. switching is not available to the station using an OMRON NJ/NX tag.
Do not use an OMRON NJ/NX tag for the station requiring the station No. switching.

(9) Number of characters of the comment set for an OMRON NJ/NX tag

For an OMRON NJ/NX tag, set a comment in 1024 characters or less.
The 1025th and subsequent characters are not displayed on GT Designer3.

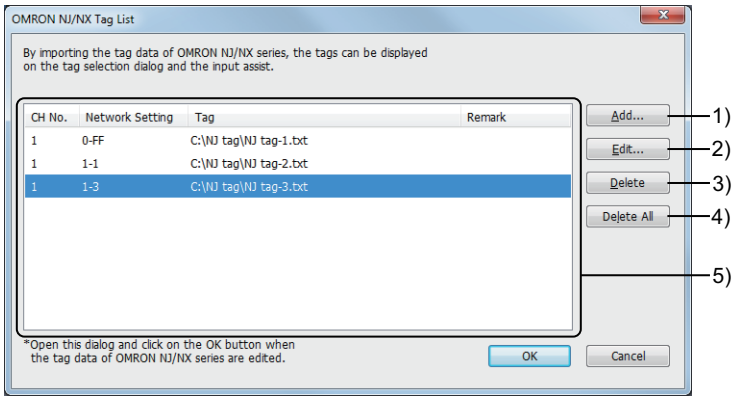
(10) Bit specification of a word device assigned to an OMRON NJ/NX tag

The GOT reads the value of the device in word units, then writes a value to the device in bit units.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

■7 [OMRON NJ/NX Tag List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
To display this dialog, select [Project] → [Import Other Data] → [Tag] → [OMRON NJ/NX Tag] from the menu.



1) **[Add] button**
Displays the [Add Tag] dialog.
Import an OMRON NJ/NX tag file.

➟(1) [Add Tag] dialog or [Edit Tag] dialog

2) **[Edit] button**
Displays the [Edit Tag] dialog.
Edit the settings of the selected tag file.

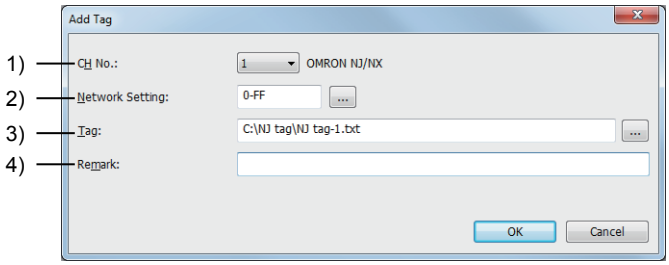
➟(1) [Add Tag] dialog or [Edit Tag] dialog

3) **[Delete] button**
Deletes a selected tag file.

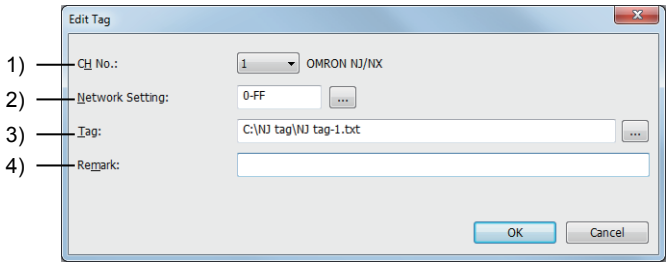
4) **[Delete All] button**
Deletes all tag files.

5) **Tag file list**
Lists the imported OMRON NJ/NX tag files and the connected channels.

(1) [Add Tag] dialog or [Edit Tag] dialog



[Add Tag] dialog



[Edit Tag] dialog

1) **[CH No.]**
Select the channel number of the PLC having the OMRON NJ/NX tag setting.

2) **[Network Setting]**
Specify the network of the PLC having the OMRON NJ/NX tag setting.

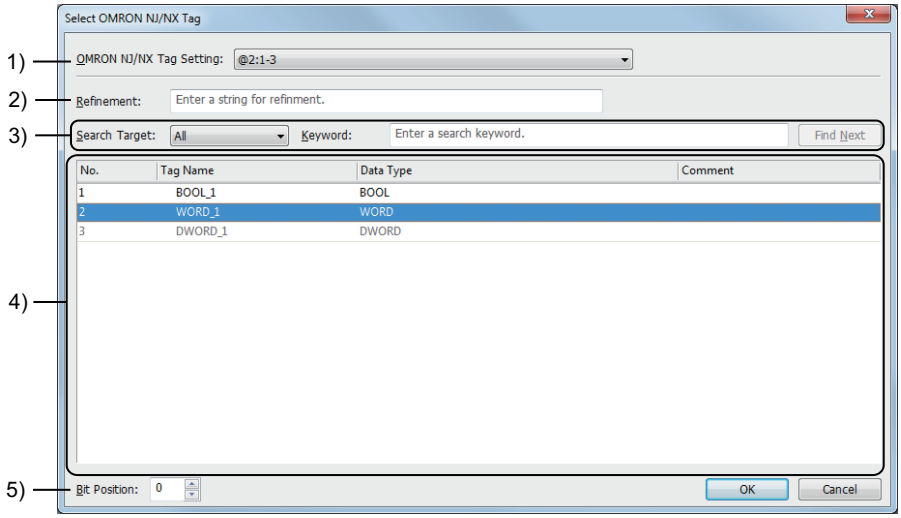
3) **[Tag]**
Specify the path to a Unicode text file of OMRON NJ/NX tags.

4) **[Remark]**
Set remarks to be displayed in the [OMRON NJ/NX Tag List] dialog.

■8 [Select OMRON NJ/NX Tag] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
In the [Select OMRON NJ/NX Tag] dialog, select an OMRON NJ/NX tag from the tag list to set the tag in the device setting of an object or others.
To display this dialog, click the [OMRON NJ/NX Tag] button in the [Select CH No.] dialog.



1) **[OMRON NJ/NX Tag Setting]**
Select a combination of the channel number, network setting, and remarks of the imported OMRON NJ/NX tags.

2) **[Refinement]**
Enter characters to narrow down the OMRON NJ/NX tags in the tag list.
Only the OMRON NJ/NX tags narrowed down by the entered characters are displayed in the tag list.
Up to 32 characters can be entered.
The entered characters are case-insensitive.

3) **Search**
Search the OMRON NJ/NX tag list for a tag by the specified keyword.
Set [Search Target] and enter a search keyword in [Keyword].
Click the [Find Next] button to search for the next occurrence of the keyword.

The following shows the items selectable for [Search Target].
- [All]
- [Tag Name]
- [Data Type]
- [Comment]

Up to 32 characters can be entered in [Keyword].
The entered characters are case-insensitive.

4) **OMRON NJ/NX tag list**
Lists the OMRON NJ/NX tags.
Select an OMRON NJ/NX tag from the tag list and click the [OK] button to set the tag in [Device].

Item	Description
[No.]	Number of an OMRON NJ/NX tag
[Tag Name]	Name of an OMRON NJ/NX tag
[Data Type]	Data type of an OMRON NJ/NX tag
[Comment]	Comment set for an OMRON NJ/NX tag

5) **[Bit Position]**
Set the bit position of an OMRON NJ/NX tag.
The setting range is [0] to [15].
If the [Select OMRON NJ/NX Tag] dialog has been brought up from the [Device List] dialog, [Bit Position] is not settable.

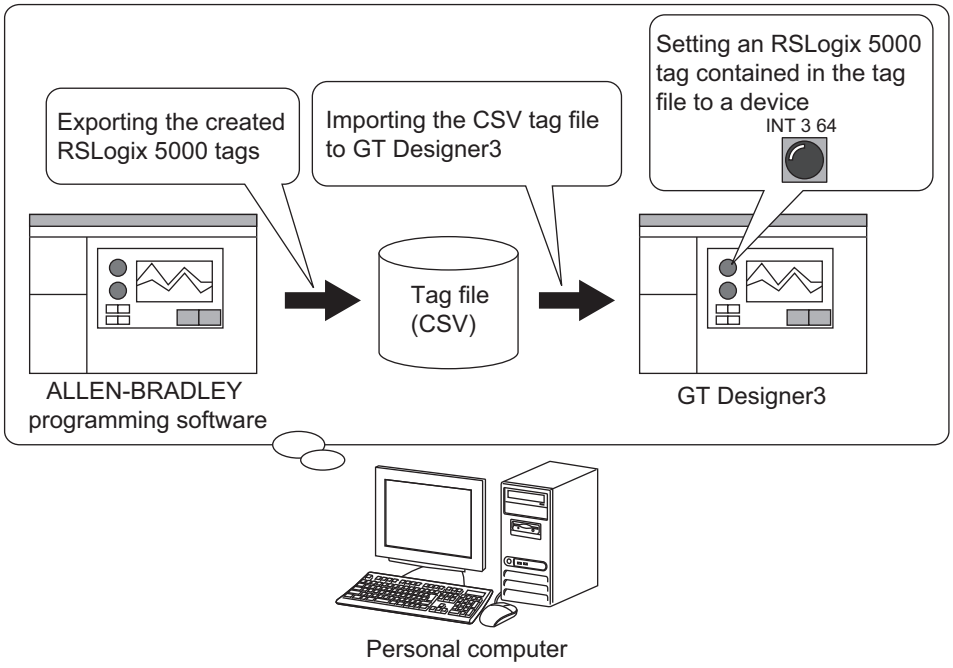
6.1.8 Using RSLogix 5000 tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Importing a tag file
■2 Referring to RSLogix 5000 tags
■3 [RSLogix 5000 Tag List] dialog
■4 Tag list dialog (RSLogix 5000 tag)

Not available to GT2105-Q.

You can import RSLogix 5000 tags, which are created with ALLEN-BRADLEY programming software, to GT Designer3. The imported RSLogix 5000 tags are usable in the device setting.



The following shows the procedure for setting RSLogix 5000 tags to devices.

Step 1 Create RSLogix 5000 tags with ALLEN-BRADLEY programming software.
For how to create RSLogix 5000 tags, refer to the following.
➟ALLEN-BRADLEY programming software manual

Step 2 Export the created RSLogix 5000 tags in the CSV format.
For the procedure for exporting tags, refer to the following.
➟ALLEN-BRADLEY programming software manual

Step 3 Import the tag files which were created in the CSV format to GT Designer3.
➟■1 Importing a tag file

Step 4 Set the RSLogix 5000 tags in the imported tag file to devices.
➟■2 Referring to RSLogix 5000 tags

■1 Importing a tag file

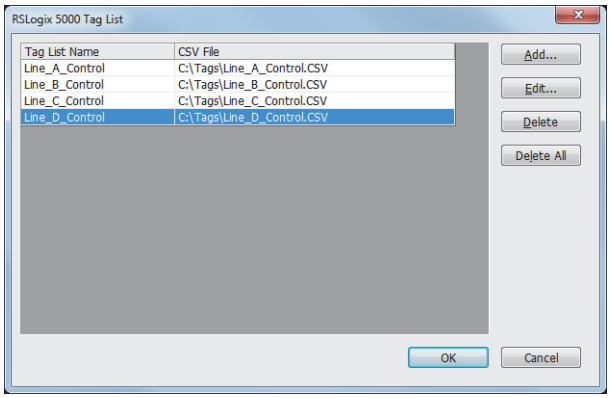
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for importing tag files to GT Designer3.

Step 1 Select [Project] → [Import Other Data] → [Tag] → [RSLogix 5000 Tag] from the menu.

Step 2 Add, delete, or edit tag files in the [RSLogix 5000 Tag List] dialog.

➟■3 [RSLogix 5000 Tag List] dialog



(1) Specifications of the tag file

(a) Supported PLC

GT Designer3 can import tag files which are created for the following PLCs.

PLC type		Model
ALLEN-BRADLEY PLC	ControlLogix series	1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3, 1756-L61, 1756-L62, 1756-L63, 1756-L64, 1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24
	CompactLogix series	1769-L31, 1769-L32E, 1769-L32C, 1769-L35E, 1769-L35CR

(b) Supported software

You can import tag files, which are created with the following programming software, to GT Designer3.

Manufacturer	Software
Rockwell Automation, Inc. (ALLEN-BRADLEY)	RSLogix 5000

(c) Supported tag

You can import only controller tags with GT Designer3.
Program tags cannot be imported.

(2) Requirements for creating tag files

The following explains the requirements for creating tag files with RSLogix 5000.

(a) Tag mapping

Map the created RSLogix 5000 tags.
Tags without mapping cannot be set in devices using GT Designer3.

(b) Tag file format

Create tag files in the CSV format.
GT Designer3 cannot import tag files in formats other than the CSV format.

(c) Composition of tag files

To import tag files to GT Designer3, the following settings are required.
Set the following fields with RSLogix 5000.

Field	Description	Input example
TYPE	Set the type of the target records. Set the type TAG: the tag type that can be read to GT Designer3 is only the type TAG.	TAG
SCOPE	Leave blank.	-
NAME	Set a tag name. The setting range is 0 to 40 character (s).	tagBOOL

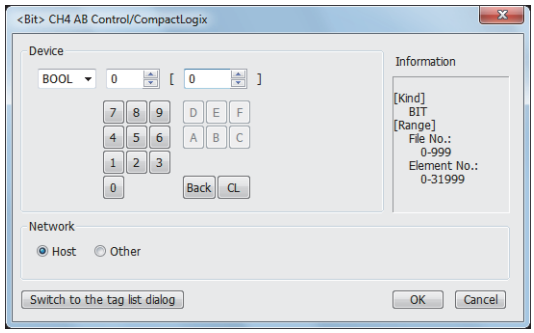
Field	Description	Input example
DESCRIPTION	Set the comment of the tag in ASCII characters. The setting range is 0 to 120 character (s).	$0050$004C$0043
DATATYPE	Set the data type and the element number. The setting range of the element number depends on the data type. • INT, DINT, REAL: The setting range is [0] to [1000]. • BOOL: The setting range is [32] to [32000]. The element number must be set in multiples of 32.	BOOL[32]
SPECIFIER	Leave blank.	-
ATTRIBUTES	Set the attribute. RADIX PLCMappingFile or PLC2Mapping can be selected. If this field is PLCMappingFile, set the file number. The setting range of the file number is 0 to 999. (PLCMappingFile := 100) File number Attribute	(PLCMappingFile := 100)

■2 Referring to RSLogix 5000 tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

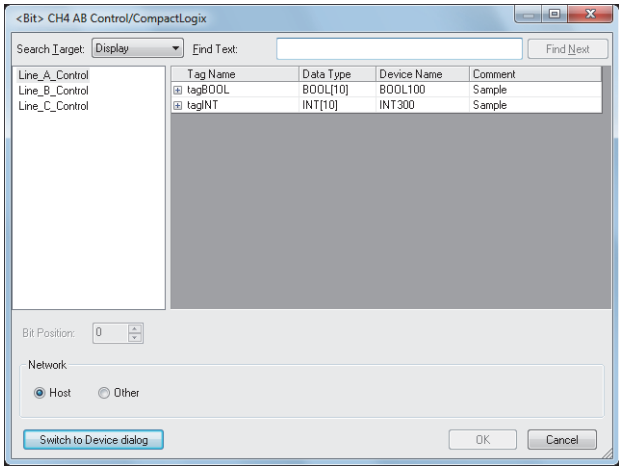
The following shows the procedure for setting imported tags into devices.

Step 1 Click the [Switch to the tag list dialog] button from the device setting dialog.



Step 2 In the tag list dialog (RSLogix 5000 tag), set the RSLogix 5000 tag to be used.

➟■4 Tag list dialog (RSLogix 5000 tag)

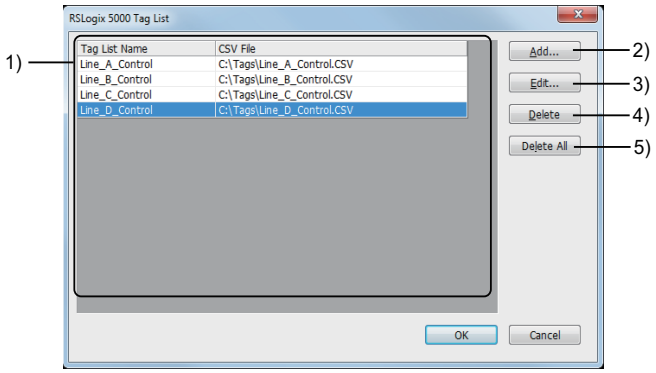


Step 3 Click the [OK] button to complete the RSLogix 5000 tag setting.

■3 [RSLogix 5000 Tag List] dialog

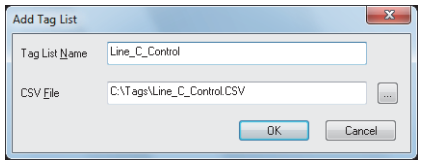
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Project] → [Import Other Data] → [Tag] → [RSLogix 5000 Tag] from the menu to display the setting dialog.



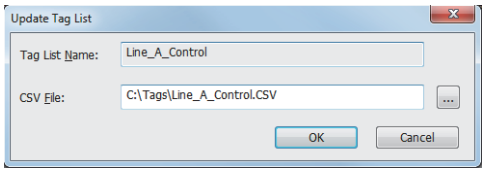
1) **Tag file list**
The tag files which have been imported to GT Designer3 appear in a list.

2) **[Add] button**
Displays the [Add Tag List] dialog.
Add a tag file to the tag file list.



- [Tag List Name] Set the tag list name for the tag file to be added.
- [CSV File] Set the path to the tag file to add.

3) **[Edit] button**
Displays the [Edit Tag List] dialog.
Edit the settings of the selected tag file.



- [Tag List Name] Displays the tag list name before the edit.
- [CSV File] Displays the tag list name before the edit.

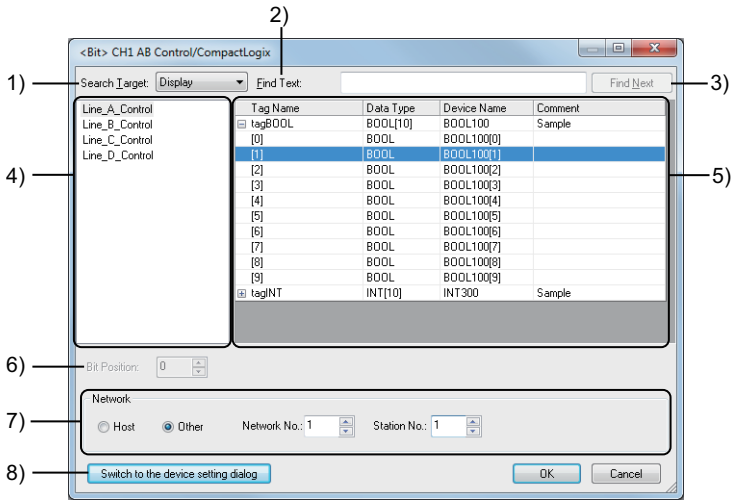
4) **[Delete] button**
Deletes a selected tag file.

5) **[Delete All] button**
Deletes all the tag files from the tag file list.

■4 Tag list dialog (RSLogix 5000 tag)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Click the [Switch to the tag list dialog] button in the device setting dialog to display the tag list dialog.



1) **[Search Target]**
Select the target item for searching in the tag view.
The following shows the items to be selected.
- [Display]
- [Tag Name]
- [Data Type]
- [Device Name]
- [Comment]

2) **[Find Text]**
Set a character string to search.
This search operation is case-insensitive.

3) **[Find Next] button**
Searches by the settings in [Search Target] and [Find Text].

4) **Tag file list**
The tag files which have been imported to GT Designer3 appear in a list.

5) **Tag view**
Displays the contents of a selected tag file in a list.

6) **[Bit Position]**
Set a bit position.
The setting range is [0] to [15].

7) **[Network]**
Set the station No. of the destination controller for monitoring.
[Host] or [Other] can be set.
When selecting [Other], set [Network No.] and [Station No.].

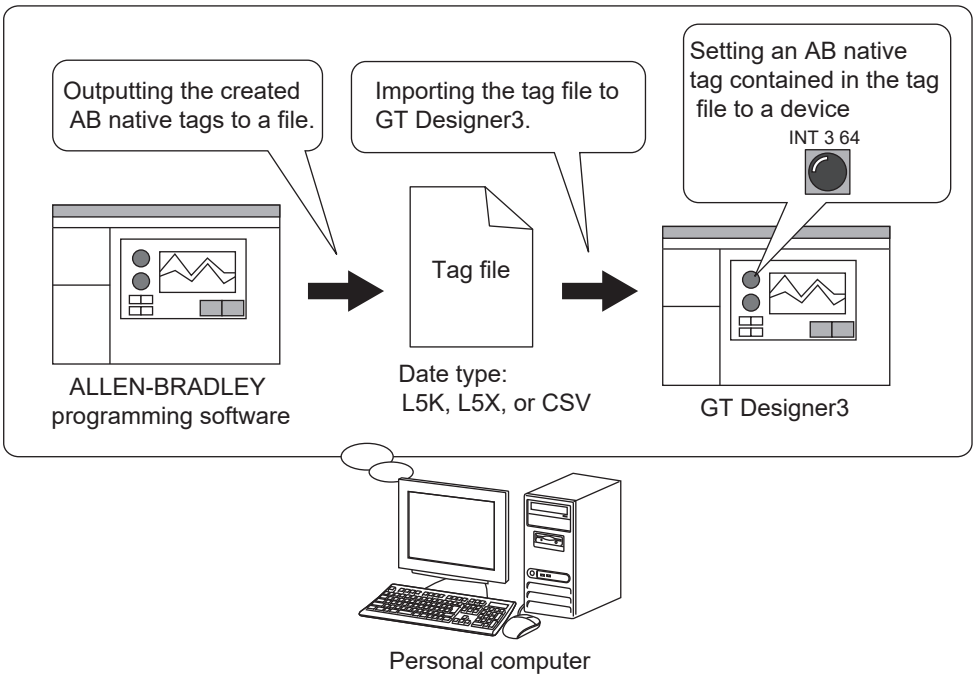
8) **[Switch to the device setting dialog] button**
Switches to the device setting dialog.

6.1.9 How to set AB native tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➞■1 Usable AB native tags
■2 Importing a tag file
■3 Setting AB native tags
■4 Precautions for AB native tags
■5 [AB Native Tag List] dialog
■6 [Select AB Native Tag] dialog

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
You can import AB native tags, which are created with ALLEN-BRADLEY programming software, to GT Designer3.
The imported AB native tags are usable in the device setting.
By using AB native tags, you can create the project data without paying attention to the actual devices.



For the details of usable AB native tags, refer to the following.

➞■1 Usable AB native tags

For precautions on the use of AB native tags, refer to the following.

➞■4 Precautions for AB native tags

The following shows the procedure for setting AB native tags to devices.

Step 1 Create AB native tags with ALLEN-BRADLEY programming software.
For how to create AB native tags, refer to the following.
➞ALLEN-BRADLEY programming software manual

Step 2 Output the created AB native tags to an L5K, L5X, or CSV file.
The output method depends on the file format.
For the details, refer to the following.
➞ALLEN-BRADLEY programming software manual

Step 3 Import the outputted tag file to GT Designer3.
➞■2 Importing a tag file

Step 4 Set the AB native tags contained in the imported tag file to devices.
➞■3 Setting AB native tags

■1 Usable AB native tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
You can import AB native tags, which are created with ALLEN-BRADLEY programming software, to GT Designer3.
The imported AB native tags are usable for the channel whose [Controller Type] is [AB Control/CompactLogix(Tag)] in the controller setting.
For the channel whose [Controller Type] is [AB Control/CompactLogix(Tag)], only AB native tags and GOT internal devices are usable in the device setting.
To use controller devices in the device setting, do not select [AB Control/CompactLogix(Tag)] for [Controller Type].

(1) Specifications of the tag file

GT Designer3 can import tag files which are created for the following PLCs.

PLC type		Model
ALLEN-BRADLEY PLC	ControlLogix5000 series	1756-L, 1756-L1M1, 1756-L1M2, 1756-L1M3, 1756-L55M12, 1756-L55M13, 1756-L55M14, 1756-L55M16, 1756-L55M22, 1756-L55M23, 1756-L55M24, 1756-L61, 1756-L62, 1756-L63, 1756-L64, 1756-L72S, 1794-L33, 1794-L34
	ControlLogix 5570 series	1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75
	ControlLogix 5580 series	1756-L81E, 1756-L82E, 1756-L83E, 1756-L84E, 1756-L85E
	CompactLogix series	1769-L32E, 1769-L35E

(2) Supported software

You can import tag files, which are created with the following programming software, to GT Designer3.

Manufacturer	Software	Software version
Rockwell Automation, Inc. (ALLEN-BRADLEY)	RSLogix 5000	L5K: 10, 11, 12, 13, 15, 20, 32 L5X: 20, 32 CSV: 13 or later

(3) Tag file format

Create tag files in one of the following formats.

- L5K
- L5X
- CSV

If created in any formats other than the above, the tag files cannot be imported to GT Designer3.

(4) Required setting for AB native tags

(a) External access

To use AB native tags, select an item other than [None] for the external access.

(b) Scope

The AB native tags must be defined as follows.

Scope	Description
Controller (global data)	Controller tags. Direct access to the tags is available. The tags are not output to the [SCOPE] column of a CSV file.

(c) Tag name and structure name

Tag names and structure names must satisfy the following requirements.

- A name consists of one-byte alphanumeric characters (A to Z, a to z, 0 to 9) and underscores (_).
- A name begins with a one-byte alphanumeric character (A to Z, a to z) or an underscore (_).
- Up to 40 characters are set for a tag name.
  Up to 300 characters can be set for a structure name.
- Underscores (_) are not used successively in a name.
- A tag name does not end in an underscore (_).

(d) Tag type

The following types of tags can be used.

- Alias tags
- Base tags
- Produced tags

• Consumed tags

For the details, refer to the following.

➟ALLEN-BRADLEY programming software manual

(e) **Data type**

You can use the AB native tag whose data type is as follows.

○: Supported, -: Unsupported

Data type of AB native tag	Device data type or device type on GT Designer3	Bit specification of word device
BOOL	Bit	-
SINT	Signed BIN8	-
	Unsigned BIN8	
INT	Signed BIN16	○
	Unsigned BIN16	
	BCD16	-
DINT	Signed BIN32	○
	Unsigned BIN32	
	BCD32	-
	Real numbers (32 bits)	
LINT	Signed BIN64	-
	Unsigned BIN64	
	BCD64	
	Real numbers (64 bits)	
REAL	Signed BIN32	○
	Unsigned BIN32	
	BCD32	-
	Real numbers (32 bits)	
USINT*1	Signed BIN8	-
	Unsigned BIN8	
UINT*1	Signed BIN16	○
	Unsigned BIN16	
	BCD16	-
UDINT*1	Signed BIN32	○
	Unsigned BIN32	
	BCD32	-
	Real numbers (32 bits)	
ULINT*1	Signed BIN64	-
	Unsigned BIN64	
	BCD64	
	Real numbers (64 bits)	
LREAL*1	Signed BIN64	-
	Unsigned BIN64	
	BCD64	
	Real numbers (64 bits)	

*1 Only available to ControlLogix 5580 series.

(f) **Using the AB native tag for the setting that requires multiple devices**

To set the AB native tag for the setting that requires two or more consecutive devices or multiple devices, use the AB native tag whose data type is as follows.

• Structure

• String

• Array
• Bit specification of word device

(g) **Constant value**

The AB native tags specified as constants (True) are not usable.

(h) **Structure-type AB native tags**

The data type of a structure must be as follows.

• String
• Predefined data type
• Module-defined data type
• User-defined data type

The string-type AB native tags are usable for the following functions.

• Text display object
• Text input object
• Text print object
• Logging function
• Recipe function

(i) **Array-type AB native tags**

The array must satisfy the following requirements.

• One-, two-, or three-dimensional array
• For the BOOL data type: one-dimensional array
(However, for the BOOL undefined tags, one-, two-, or three-dimensional arrays are usable.)
• For the undefined tags: the subscript for each dimension as shown below

Array	Subscript range
One-dimensional array	0 to 2147483647
Two-dimensional array	0 to 268435455
Three-dimensional array	0 to 262143

■2 Importing a tag file

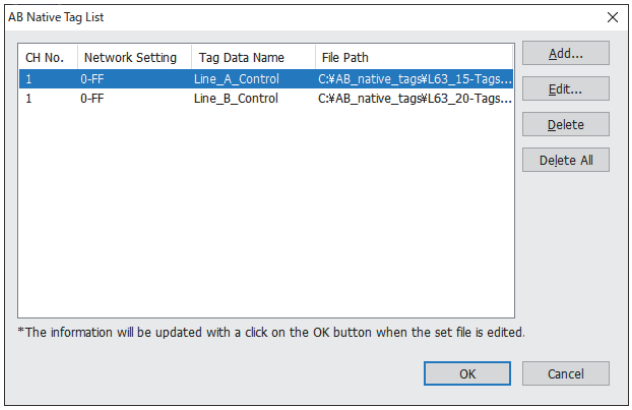
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
The following shows the procedure for importing tag files to GT Designer3.

Step 1 Select [Project] → [Import Other Data] → [Tag] → [AB Native Tag] from the menu.

Step 2 Add, delete, or edit tag files in the [AB Native Tag List] dialog.

➟■5 [AB Native Tag List] dialog



■3 Setting AB native tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

Point

Checking the data type of the AB native tag

When you change the data type of the object device or others, the data types may be inconsistent between the AB native tag and the object device or others.

After setting the AB native tag, check if the data types are consistent between the AB native tag and the device of an object or others.

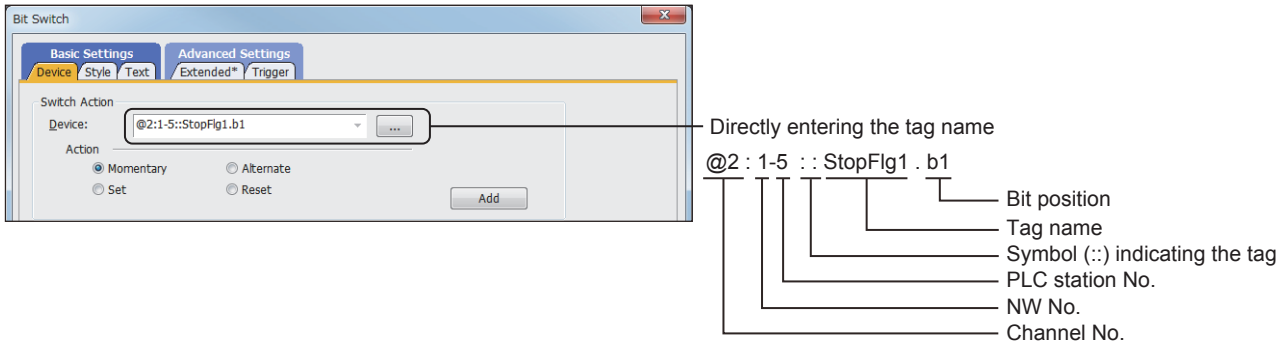
To check the data type consistency, you are recommended to compare the tag file created with RSLogix 5000 with the file exported from [Device List] of GT Designer3.

(1) Directly entering the tag name

Enter the AB native tag name directly in the text box of [Device] in the setting dialog.

At the beginning of the tag name, add a "::" symbol indicating the tag.

When specifying a tag which has not been imported with bit position, available bit positions are b0 to b15.



When you enter the tag name directly, the data type consistency check between the AB native tag and the object device or others is not performed automatically.

Therefore, the data types may be inconsistent between the AB native tag and the object device or others.

(2) Using the input assist

Search and set AB native tags in the setting dialog of objects or others.

For how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

When using the input assist, you have to import the AB native tags in advance.

Import the AB native tags before setting them.

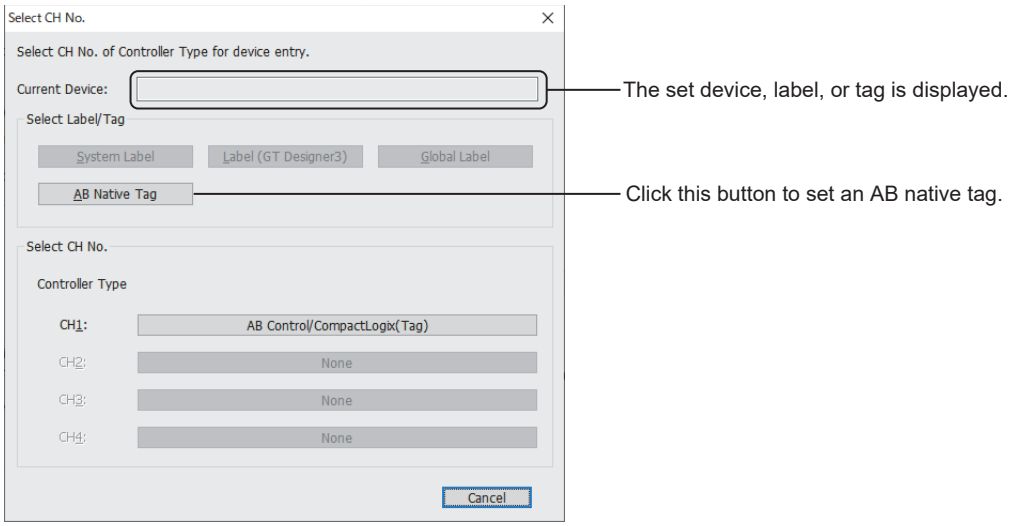
➟■2 Importing a tag file

(3) Selecting a tag from the tag list

Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button for [Device] to display the [Select CH No.] dialog.

If you click the [...] button without holding down the [Shift] key, the dialog that appears varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.

11.10.4 Customizing the settings related to editing operations



Step 2 In the [Select CH No.] dialog, click the [AB Native Tag] button to display the [Select AB Native Tag] dialog.

➟■6 [Select AB Native Tag] dialog

Step 3 Select an AB native tag from the tag list, and click the [OK] button to set the tag for [Device].

■4 Precautions for AB native tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

(1) Precautions for importing a tag file

(a) Tag files to be imported

For importing AB native tags, use L5K, L5X, or CSV files outputted from RSLogix 5000.
If you edit an outputted file, the tag may not be imported to GT Designer3 properly.

(b) Tag files when using structure-type AB native tags

When using structure-type AB native tags, import L5K or L5X tag files.

(c) Tag files when using alias tags that refer to structure-type tags

When using alias tags that refer to structure-type tags, import L5K or L5X tag files.

(d) Hierarchy layers of importable tags

When you import an L5K or L5X tag file, the supported number of hierarchy layers is up to 15.
Tags with 16 or more hierarchy layers are not imported.

(2) Unusable AB native tags

The string-type AB native tags of a structure are unusable on the GOT.

(3) AB native tag name

When you use multiple AB native tags whose names are long, the monitoring process may take a longer time.

(4) Directly entering an AB native tag name

When the data type of an AB native tag is string, import the tag and then set the tag by entering its name.
If you do not import the tag before setting it, the data type cannot be recognized as string, and a system alarm occurs.

(5) Device setting for the channel whose [Controller Type] is [AB Control/CompactLogix(Tag)]

For the channel whose [Controller Type] is [AB Control/CompactLogix(Tag)] in the controller setting, only AB native tags and GOT internal devices are usable in the device setting.
To use controller devices in the device setting, do not select [AB Control/CompactLogix(Tag)] for [Controller Type].

(6) Station No. switching while AB native tags are being used

The station No. switching is not available to the station using AB native tags.
Do not use AB native tags for the station requiring the station No. switching.

(7) Number of characters when a string-type AB native tag is used

Set an even number of characters to be stored.
If you set an odd number of characters, some characters may not be monitored.

(8) Data type of a structure

When a CSV file is imported, the data type of a structure varies depending on the data type name of the structure.

• When the data type name contains the word "STRING"

String-type structure

• When the data type name does not contain the word "STRING"

Non-string type structure.

(9) Offset setting for AB native tags

The offset setting is not available to AB native tags.

Do not configure the offset setting for AB native tags.

➟6.1.11 Offset

(10)Writing package data

When you set AB native tags in a project and write the project data to the GOT, [Write Mode] is not selectable in the [Write Option] dialog.

In this case, [Write Mode] is fixed to [Synchronize].

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

(11)Number of characters of the comment set for an AB native tag

Set the comment in 1024 characters or less for an AB native tag.

The 1025th and subsequent characters are not displayed on GT Designer3.

(12)Bit specification of a double-word device of an AB native tag

If you use the latest GT Designer3 to open a project to which AB native tags have been imported using GT Designer3 Version1.275M or earlier, bit specification (b0 to b31) is not available for the tags of the following data types.

• [DINT]

• [REAL]

• [UDINT]

The AB tag information needs to be updated in the latest GT Designer3.

Display the [AB Native Tag List] dialog.

The tag files that need updates are displayed in red text in the tag file list.

Click the [OK] button to update the files.

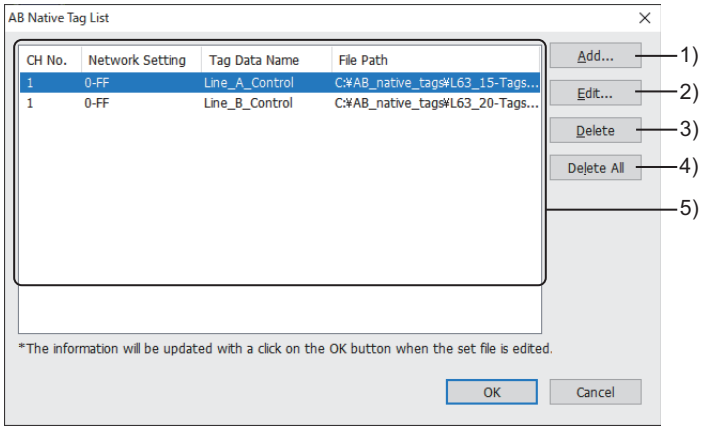
➟6.1.9 ■5 [AB Native Tag List] dialog

■5 [AB Native Tag List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

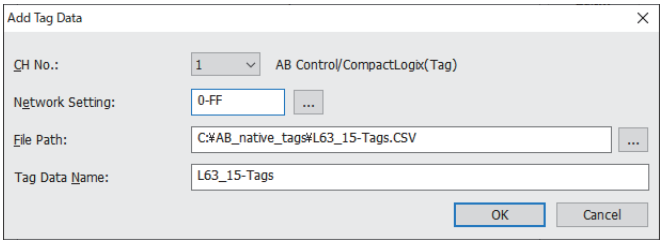
Select [Project] → [Import Other Data] → [Tag] → [AB Native Tag] from the menu to display the setting dialog.



1) **[Add] button**

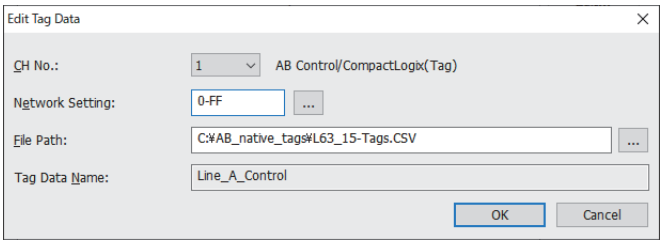
Displays the [Add Tag Data] dialog.

Import an AB native tag file.



- **[CH No.]**
  Select the CH No. for connection to the PLC that uses AB native tags.
- **[Network Setting]**
  Specify the network for the PLC that uses AB native tags.
- **[File Path]**
  Set the path to the tag file to be imported.
- **[Tag Data Name]**
  Set the tag data name displayed on GT Designer3.

2) **[Edit] button**
Displays the [Edit Tag Data] dialog.
Edit the settings of the selected tag file.



- **[CH No.]**
  Select the CH No. for connection to the PLC that uses AB native tags.
- **[Network Setting]**
  Specify the network for the PLC that uses AB native tags.
- **[File Path]**
  Set the path to the tag file to be imported.
- **[Tag Data Name]**
  Displays the tag data name displayed on GT Designer3.

3) **[Delete] button**
Deletes a selected tag file.

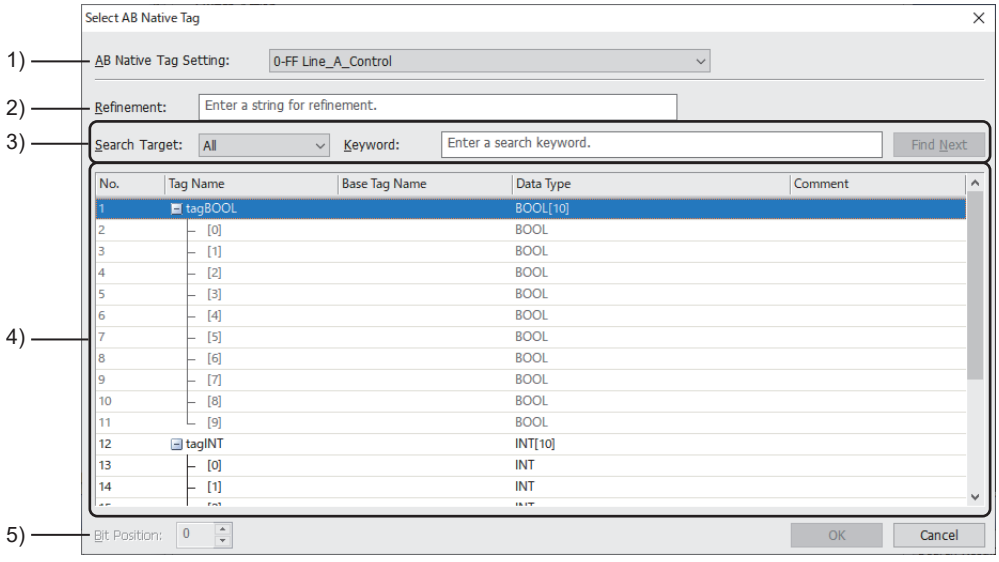
4) **[Delete All] button**
Deletes all tag files.

5) **Tag file list**
Lists the imported tag files of AB native tags and the connected channels.

■6 [Select AB Native Tag] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
Select an AB native tag from the tag list to set the tag in the device setting of an object or others.
To display this dialog, click the [AB Native Tag] button in the [Select CH No.] dialog.



1) **[AB Native Tag Setting]**
Select a combination of the channel number, network setting, and remarks of the imported AB native tags.

2) **[Refinement]**
Enter characters to narrow down the AB native tags in the tag list.
Only the AB native tags narrowed down by the entered characters are displayed in the tag list.
Up to 32 characters can be entered.

The entered characters are case-insensitive.

3) **Search**

Search the AB native tag list for a tag by the specified keyword.
Set [Search Target] and enter a search keyword in [Keyword].
Click the [Find Next] button to search for the next occurrence of the keyword.

The following shows the items selectable for [Search Target].

- [All]
- [Tag Name]
- [Base Tag Name]
- [Data Type]
- [Comment]

Up to 32 characters can be entered in [Keyword].
The entered characters are case-insensitive.

4) **AB native tag list**

AB native tags are listed.
Select an AB native tag from the tag list and click the [OK] button to set the tag in [Device].

Item	Description
[No.]	Number of an AB native tag
[Tag Name]	Name of an AB native tag
[Base Tag Name]	Base tag name of an AB native tag
[Data Type]	Data type of an AB native tag
[Comment]	Comment set for an AB native tag

5) **[Bit Position]**

Set the bit position of an AB native tag.
The setting range depends on the data type.

- Word type: [0] to [15]
- Double-word: [0] to [31]

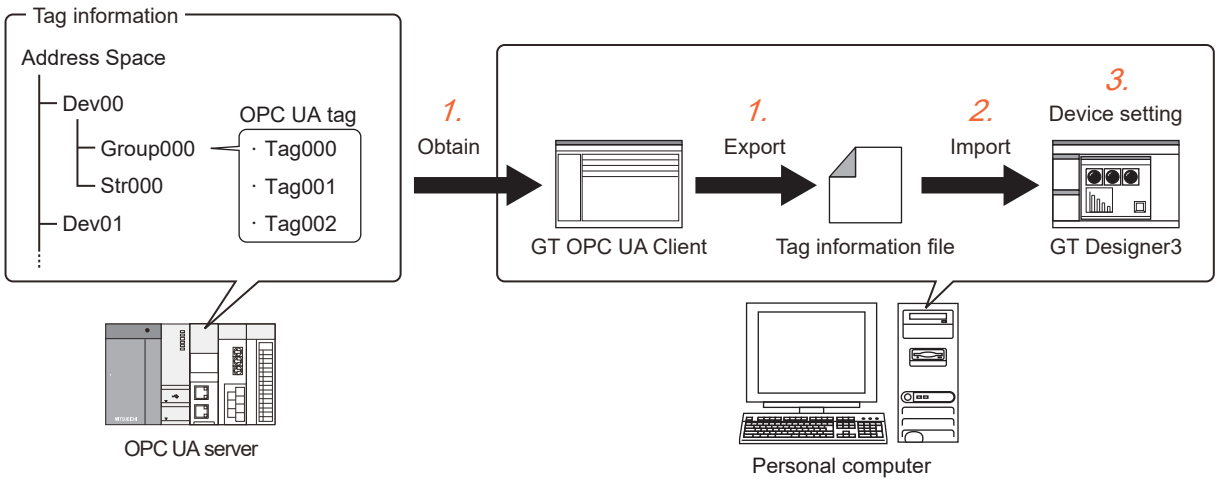
If the [Select AB Native Tag] dialog has been brought up from the [Device List] dialog, [Bit Position] is not settable.

6.1.10 How to set OPC UA tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Usable OPC UA tags
■2 Importing a tag information file
■3 Setting an OPC UA tag
■4 Precautions for OPC UA tags
■5 [OPC UA Tag List] dialog
■6 [Select OPC UA Tag] dialog

You can specify the OPC UA tags of an OPC UA server in device settings in GT Designer3.
To do this, import the tag information of the OPC UA server to GT Designer3.
The following shows the steps taken to specify an OPC UA tag as a device in GT Designer3.



Step 1 With GT OPC UA Client, obtain tag information from an OPC UA server and export the obtained data to a tag information file.

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Step 2 Import the tag information file to GT Designer3.

➟■2 Importing a tag information file

Step 3 Specify an OPC UA tag as a device in GT Designer3.

➟■3 Setting an OPC UA tag

GT SoftGOT2000 monitors the OPC UA tags of an OPC UA server by using a project in which the tags are set.
For the OPC UA client connection, refer to the following.

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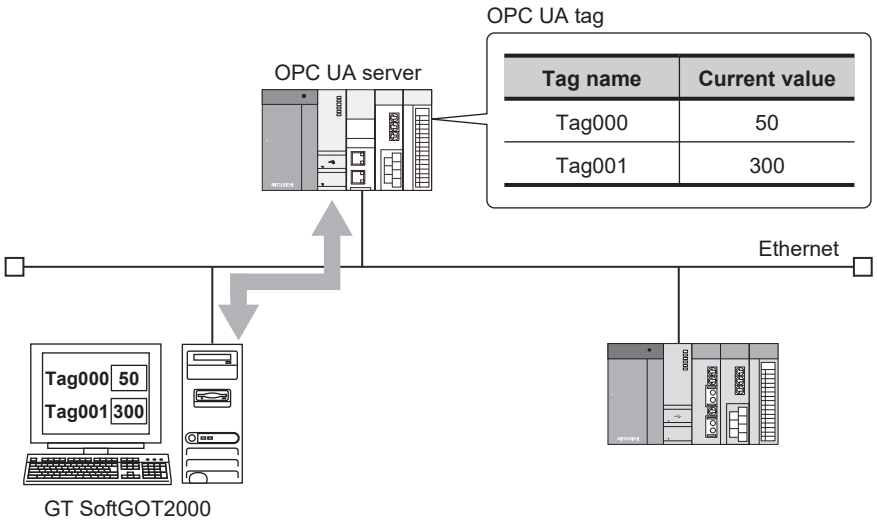

■1 Usable OPC UA tags

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The following shows the specifications of tag information files that can be imported and the specifications of usable OPC UA tags.

(1) Importable tag information files

Item	Specifications
File format	Tag information file (*.gtuc)
Maximum number of tag information files	One tag information file is imported for each channel. A tag information file is imported for a channel for which [Controller Type] is set to [OPC UA] in the [Controller Setting] window.
Maximum number of OPC UA tags	20480 in one tag information file

(2) Characters in the tag names of OPC UA tags

OPC UA tags with the following characters in their names will not be imported.

- " & ( ) . ; { }
- // (Double slash)
- U+0000 to U+001F (C0 control code)
- U+007F (Delete character)
- U+0080 to U+009F (C1 control code)
- One-byte space at the start or end of a tag name
- Two-byte space at the start or end of a tag name

An OPC UA server, GT Designer3, and GT SoftGOT2000 use different encoding formats for tag names.
For precautions for encoding formats, refer to the following.

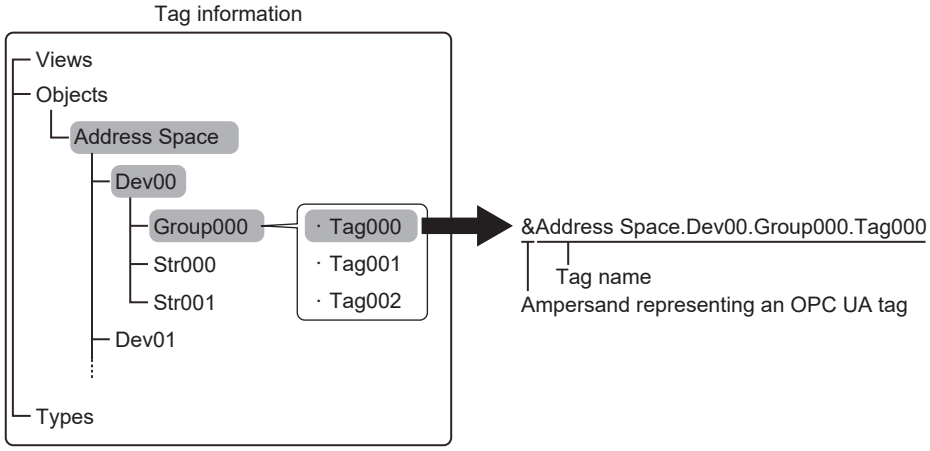
➥6.1.10 ■4 (6) Encoding formats used

Case sensitivity differs between an OPC UA server and GT Designer3.
For precautions for case sensitivity, refer to the following.

➥6.1.10 ■4 (7) Case sensitivity of tag names

(3) Display of OPC UA tags in GT Designer3

The imported tag information and OPC UA tags are displayed in GT Designer3 as shown below.



In GT Designer3, a tag name includes the names of parent folders (groups and structures) of the tag.
The tag name does not include the folder names "Views", "Objects", and "Types".
The folder names within a tag name are separated by a period (.).
If a tag name includes 532 or more characters (excluding the ampersand), the tag will not be imported.
For arrays, if a tag name includes 553 or more characters including element numbers (excluding the ampersand), the tag will not be imported.

➥6.1.10 ■1 (6) Array

(4) Supported data types of OPC UA tags

The following shows the data types of OPC UA tags supported by GT Designer3.
In GT Designer3, select the data types or device types that correspond to the data types of OPC UA tags.
Only the following types of OPC UA tags will be imported to GT Designer3.

Supported data type of OPC UA tags	Data type or device type selectable in GT Designer3	Remarks
Boolean	Bit	The word specification of bit devices is not available.
Int16	Signed 16-bit binary	The bit specification of word devices is not available.
	Unsigned 16-bit binary	
	BCD16	
UInt16	Signed 16-bit binary	The bit specification of word devices is not available.
	Unsigned 16-bit binary	
	BCD16	
Int32	Signed 32-bit binary	The bit specification of word devices is not available.
	Unsigned 32-bit binary	
	BCD32	
	Real number	
UInt32	Signed 32-bit binary	The bit specification of word devices is not available.
	Unsigned 32-bit binary	
	BCD32	
	Real number	
Float	Signed 32-bit binary	The bit specification of word devices is not available.
	Unsigned 32-bit binary	
	BCD32	
	Real number	
String*1	Character string	The bit specification of word devices is not available.

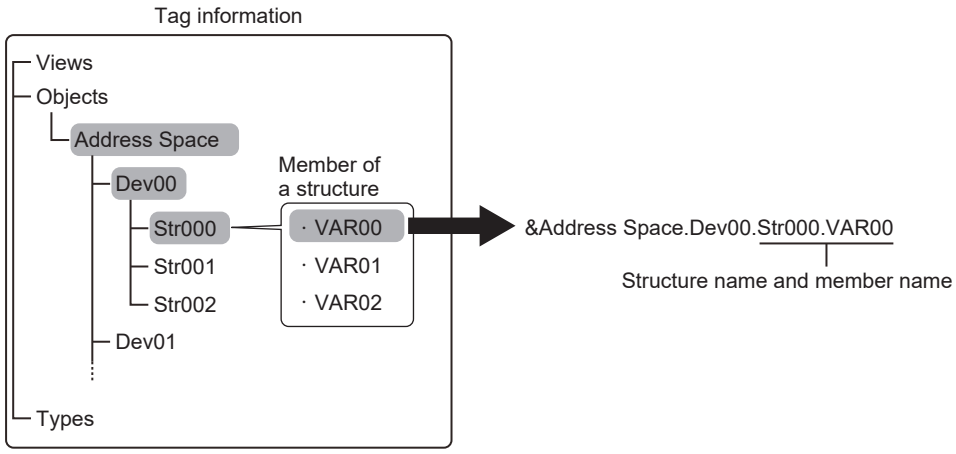
*1 An OPC UA server, GT Designer3, and GT SoftGOT2000 use different encoding formats for string data.
For precautions for encoding formats, refer to the following.
➟6.1.10 ■4 (6) Encoding formats used

For settings requiring consecutive devices or devices that store string data, use the following types of OPC UA tags.

Item	Settable OPC UA tag
Consecutive devices	Use array-type OPC UA tags. Make sure that as many array elements as the required number of consecutive devices are set on an OPC UA server. For precautions for writing data to arrays, refer to the following. ➟6.1.10 ■4 (5) Writing data to arrays
Devices that store string data	Use string-type OPC UA tags. Make sure that a data length equivalent to the required number of devices is set for the OPC UA tags on an OPC UA server.

(5) Structure

You can specify the members of a structure in device settings.
The supported data types of members are the same as the supported data types of usable OPC UA tags.
➟6.1.10 ■1 (4) Supported data types of OPC UA tags
A member of a structure is displayed in GT Designer3 as shown below.
Example) Display of member VAR00 of structure Str000



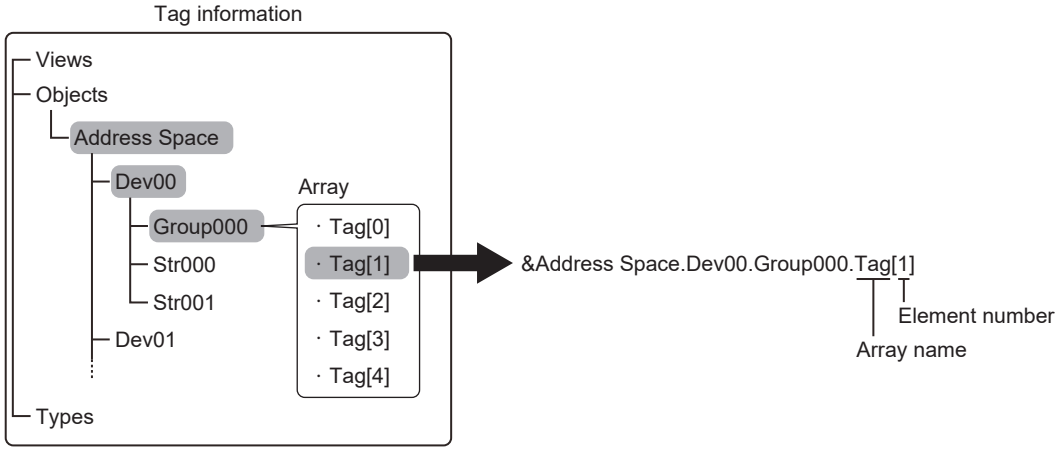
The structure name and member name within a tag name are separated by a period (.).

(6) Array

Arrays must satisfy the following requirements.

Item	Specifications
Number of dimensions	3 or less Tag[0..3,0..5,0..10] Third dimension Second dimension First dimension
Maximum number of elements	65536 regardless of the number of dimensions
Data type	Supported data types other than string ➟6.1.10 ■1 (4) Supported data types of OPC UA tags

An array is displayed in GT Designer3 as shown below.
Example) Display of array Tag [1]



Regardless of the start element number of an array set on an OPC UA server, GT Designer3 assumes the start element number to be zero.
For precautions for element numbers, refer to the following.

➟6.1.10 ■4 (4) Start element number of arrays

(7) Offset setting for OPC UA tags

The offset setting is applied to array element numbers.
Example) Offset setting for an three-dimensional array
For Tag[0..4,0..4,0..4] set on an OPC UA server

- First dimension: The start element number is 0, and the number of elements is 5.
- Second dimension: The start element number is 0, and the number of elements is 5.
- Third dimension: The start element number is 0, and the number of elements is 5.

OPC UA tag set for an object or others	Offset device value	Offset result
Tag[0,1,1]	2	Tag[0,1,3]
	-1	Tag[0,1,0]
	5	Tag[0,2,1]
	119	A system alarm occurs due to invalid array subscripts.

For an array of structures, the offset setting is not applied to the element numbers.
For an array of members of a structure, the offset setting is applied to the element numbers.
Example) Offset setting for a structure

OPC UA tag set for an object or others	Applicability of the offset setting
Str[1].VAR01	The offset setting is not applied to an array of structures.
Str.VAR01[1]	The offset setting is applied to an array of members of a structure.

■2 Importing a tag information file

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Export a tag information file from GT OPC UA Client, and import the file to GT Designer3.
For information on how to install and operate GT OPC UA Client, refer to the following.

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The following shows how to import a tag information file to GT Designer3.

Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 For the channel for connecting to an OPC UA server, select [OPC] for [Manufacturer].

➟5.5.1 Setting channels

Step 3 Select [Project] → [Import Other Data] → [Tag] → [OPC UA Tag] from the menu to display the [OPC UA Tag List] dialog.

Step 4 Import a tag information file.

➟6.1.10 ■5 [OPC UA Tag List] dialog

■3 Setting an OPC UA tag

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Specify an OPC UA tag as a device by one of the following methods.

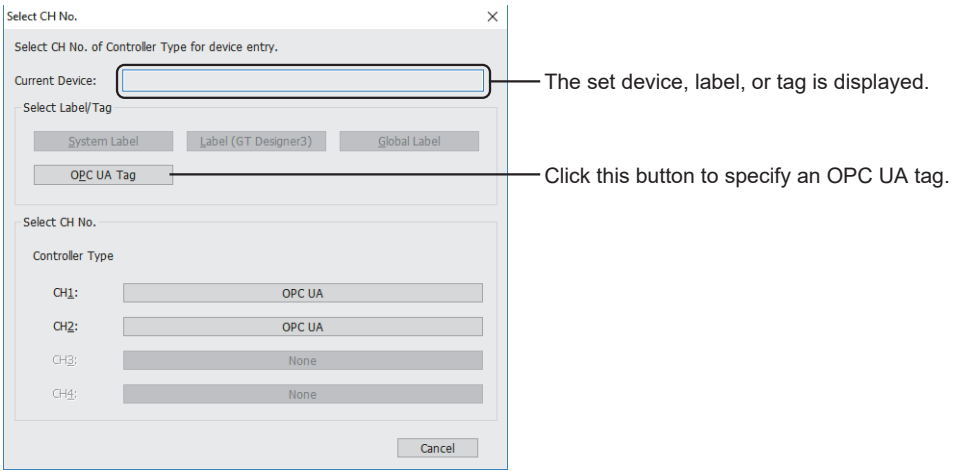
➟(1) Selecting an OPC UA tag from the tag list
(2) Setting an OPC UA tag with the input assist
(3) Directly entering a tag name

(1) Selecting an OPC UA tag from the tag list

Step 1 In the setting dialog of an object or others, hold down the [Shift] key and click the [...] button for [Device] to display the [Select CH No.] dialog.

If you click the [...] button without holding down the [Shift] key, the dialog that appears varies with the selection of [CH No. Selection Dialog Display Setting] on the [Edit] tab of the [Options] dialog.

➟11.10.4 Customizing the settings related to editing operations



Step 2 In the [Select CH No.] dialog, click the [OPC UA Tag] button to display the [Select OPC UA Tag] dialog.

➟6.1.10 ■6 [Select OPC UA Tag] dialog

Step 3 Select an OPC UA tag from the tag list, and click the [OK] button to set the tag for [Device].

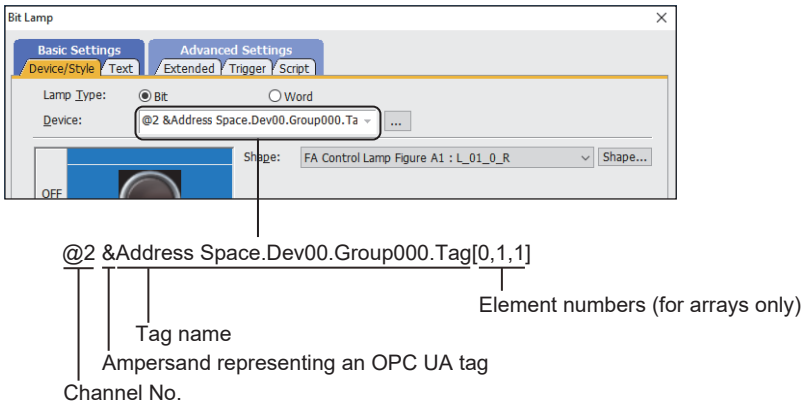
(2) Setting an OPC UA tag with the input assist

Search for an OPC UA tag to set the tag in the setting dialog of an object or others.
For information on how to use the input assist, refer to the following.

➟11.3 Setting Devices from Device Comments (Input Assist)

(3) Directly entering a tag name

Enter an OPC UA tag name directly in the textbox of [Device] in the setting dialog of an object or others.
Prepend one ampersand (&), which represents an OPC UA tag, to the tag name.



For information on how tag names are displayed in GT Designer3, refer to the following.

➟6.1.10 ■1 (3) Display of OPC UA tags in GT Designer3

■4 Precautions for OPC UA tags

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(1) Changing channel settings

If you change the settings of the channel for connecting to an OPC UA server in the [Controller Setting] window, the tag information for the channel will be deleted.

(2) Importing a tag information file if an OPC UA tag is set

After you specify an OPC UA tag as a device, if you import a same-name OPC UA tag of a different data type, the specified tag may be displayed as [??].
If [??] is displayed, specify the relevant OPC UA tag again.

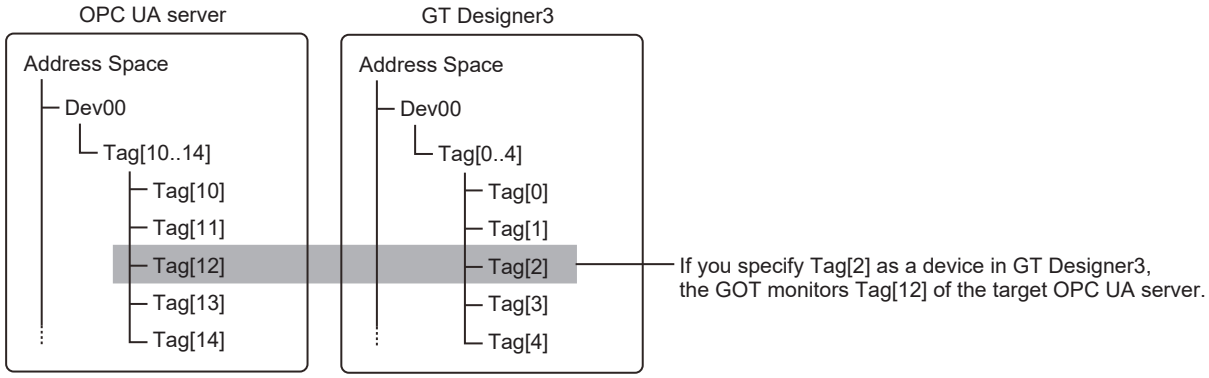
(3) Checking the data types of OPC UA tags

If you change the data type of an object or others, the data types may be inconsistent between the specified OPC UA tag and the object or others.
Check that the data types are consistent between the tag and the object or others.
To check the data type consistency, you are recommended to compare the tag information in GT OPC UA Client and the file exported from [Device List] of GT Designer3.

(4) Start element number of arrays

Regardless of the start element number of an array set on an OPC UA server, GT Designer3 assumes the start element number to be zero.
However, GT SoftGOT2000 monitors the array elements as they are set on the OPC UA server.

Example) Monitoring a one-dimensional array with 5 elements, starting with element number 10
To monitor Tag[12] of the OPC UA server, specify Tag[2] as a device in GT Designer3.



(5) Writing data to arrays

Data is written to the arrays set as consecutive devices only when all the following conditions are satisfied.

- Array element number 0 is set for the start device of consecutive devices.
- The number of array elements set on an OPC UA server equals to the number of consecutive devices set in GT Designer3.

(6) Encoding formats used

An OPC UA server, GT Designer3, and GT SoftGOT2000 use different encoding formats.

- OPC UA server: UTF-8
- GT Designer3 and GT SoftGOT2000: UTF-16

Therefore, GT Designer3 and GT SoftGOT2000 change the encoding format of tag names and string data.
The following shows how the data is converted in the software applications.

Software	Tag name	String data
GT Designer3	Changes the encoding format to UTF-16 when importing a tag information file. Does not import OPC UA tags with invalid characters in their names.	-
GT SoftGOT2000	Changes the encoding format when accessing an OPC UA tag. (between UTF-8 and UTF-16) If invalid characters are included, a system alarm occurs.	Changes the encoding format when accessing an OPC UA tag. (between UTF-8 and UTF-16) Converts invalid characters to one-byte spaces (0x20).

(7) Case sensitivity of tag names

Tag names are case-insensitive in GT Designer3.
If tag names are case-sensitive on an OPC UA server, tag names may be duplicated when OPC UA tags are imported to GT Designer3.
Duplicate tags will not be imported.

(8) Data storage order settings when string-type OPC UA tags are set

Configure the following settings for functions that use string-type OPC UA tags.

- Text display object, text input object
  Select [Display in order of High -> Low] in the [Extended] tab.
- Text print object
  Select [Display in order of High -> Low].
- Recipe function, logging function
  Select [Low-->High] for [Storage Order] in the [Device] tab.

■5 [OPC UA Tag List] dialog

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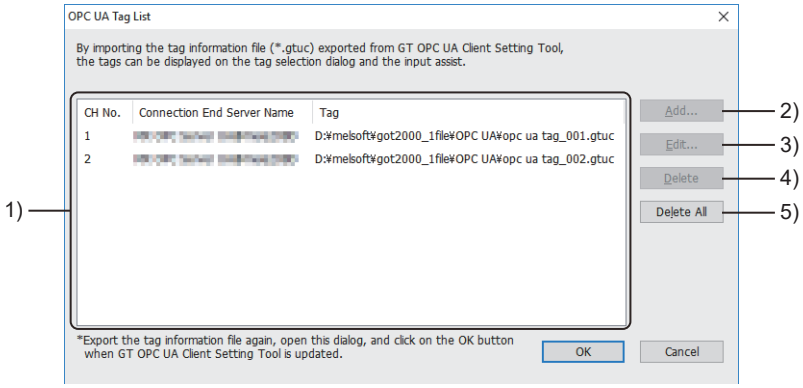
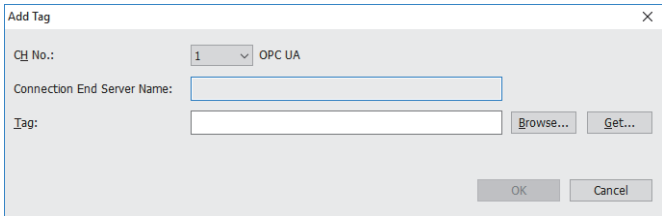
Select [Project] → [Import Other Data] → [Tag] → [OPC UA Tag] from the menu to display the setting dialog.



1) **Tag information file list**
Lists the channels for connecting to OPC UA servers and the imported tag information files.

2) **[Add] button**
Displays the [Add Tag] dialog.
Import a tag information file.



- **[CH No.]**
  Select a channel for connecting to an OPC UA server.
- **[Connection End Server Name]**
  Displays the name of the OPC UA server to be connected when a tag information file is selected.
- **[Tag]**
  Displays the path to the selected tag information file.
- **[Browse] button**
  Displays the [Browse] dialog.
  Select a tag information file to be imported.
- **[Get] button**
  Starts GT OPC UA Client.
  Obtain tag information from an OPC UA server in GT OPC UA Client.

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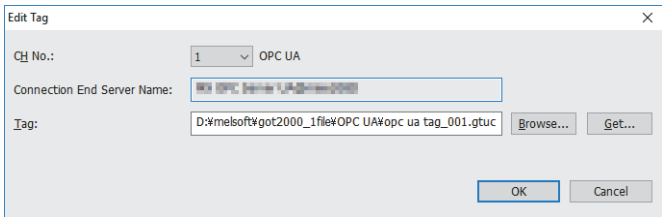
3) **[Edit] button**
Displays the [Edit Tag] dialog.
Change the tag information file.



- **[CH No.]**
  Select a channel for connecting to an OPC UA server.
- **[Connection End Server Name]**
  Displays the name of the OPC UA server to be connected.
- **[Tag]**
  Displays the path to the selected tag information file.
- **[Browse] button**
  Displays the [Browse] dialog.
  Select a tag information file to be imported.
- **[Get] button**
  Starts GT OPC UA Client.
  Obtain tag information from an OPC UA server in GT OPC UA Client.

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4) **[Delete] button**
Deletes the selected tag information file.

5) **[Delete All] button**
Deletes all tag information files.

■6 [Select OPC UA Tag] dialog

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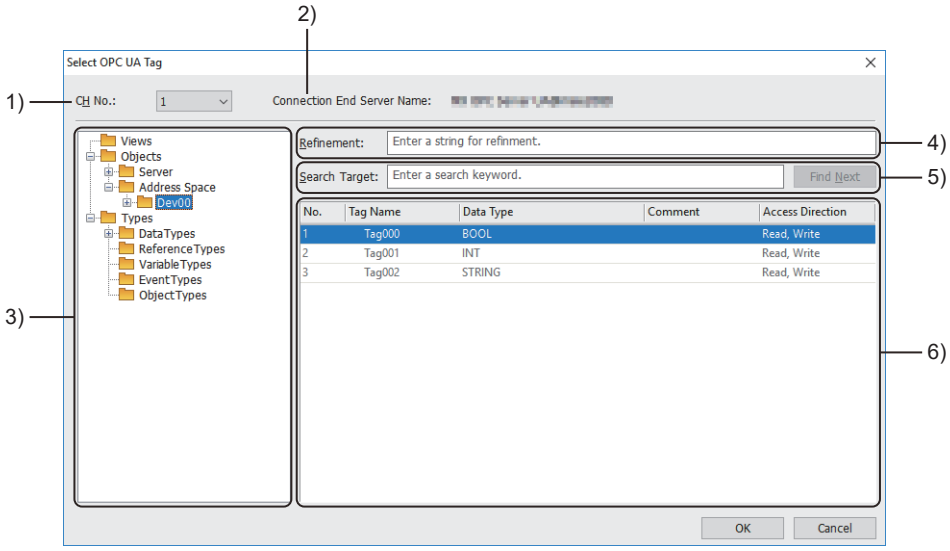
To display this dialog, click the [OPC UA Tag] button in the [Select CH No.] dialog.



1) **[CH No.]**
Select a channel for connecting to an OPC UA server.

2) **[Connection End Server Name]**
Displays the name of the OPC UA server corresponding to the channel selected for [CH No.].

3) **Tag information tree**
Displays the tag information corresponding to the channel selected for [CH No.].

4) **[Refinement]**
Enter a string to display tags with names containing the entered string in the OPC UA tag list.
Tags are narrowed down as a string is entered.
[Tag Name], [Data Type], [Comment], and [Access Direction] are searched.
Up to 64 characters can be entered.
The entered characters are case-insensitive.

5) **[Search Target]**
Enter a keyword and click the [Find Next] button to search for the OPC UA tags containing the keyword.
You can perform a search in the list after tags are narrowed down with [Refinement].
Up to 64 characters can be entered.
The entered characters are case-insensitive.

6) **OPC UA tag list**
OPC UA tags in the folder (group or structure) selected in the tag information tree.
Select an OPC UA tag and click the [OK] button to set the tag as a device.

6.1.11 Offset

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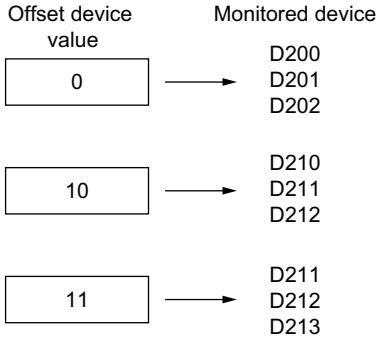
➟■1 Offset setting
■2 Application examples
■3 Precautions for the offset setting

Multiple target devices for monitoring can be switched according to a single device setting.
(In the simple alarm display, multiple target comments for displaying can be switched according to a single device.)
Example) Monitoring the status of multiple devices by switching them with a single device
The value set in the device using the offset is added to the devices set for each object.
The device set by the offset is hereinafter referred to as offset device.

- Devices set for each object: D200, D201, D202
- Offset device: D100



Monitored devices are switched according to the value stored in the offset device.

■1 Offset setting

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(1) Objects and functions for which the offset setting is available

The offset setting is available for the following objects and functions.
For how to set, refer to the following.

Object, function	Reference
Touch switch*1*2	➟8.2 Placing a Touch Switch
Lamp (bit, word)*3	➟8.3 Placing a Lamp
Numerical Display	➟8.4 Placing a Numerical Display and Numerical Input
Numerical Input	
Text Display	➟8.5 Placing a Text Display and Text Input
Text Input	
Comment Display	➟8.7 Placing a Comment Display
Parts display (bit, word)	➟8.8 Placing a Parts Display
Parts movement (bit, word)	➟8.9 Placing a Parts Movement
Simple Alarm Display	➟8.12 Placing a Simple Alarm Display
Level	➟8.23 Placing a Level Object
Panelmeter	➟8.24 Placing a Panelmeter
Line Graph	➟8.15 Placing a Line Graph
Trend Graph	➟8.16 Placing a Trend Graph
Bar Graph	➟8.17 Placing a Bar Graph
Statistics Bar Graph	➟8.18 Placing a Statistics Bar Graph
Statistics Pie Graph	➟8.19 Placing a Statistics Pie Graph
Scatter Graph	➟8.20 Placing a Scatter Graph
Slider	➟8.25 Placing a Slider
Script	➟9.8 Controlling Operations with Scripts ([Script])
Trigger Action	➟9.5 Operating a Device as a Trigger ([Trigger Action])

*1 For the switch, the offset device value is added to the device number of the device specified for the target action in [Action List].
However, the offset device value is not added to the device number of the device specified for any action of [SP function].

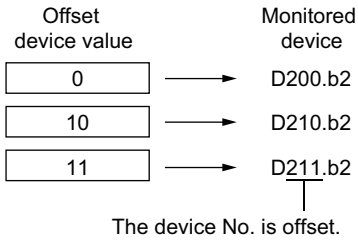
*2 For the following touch switches, the offset setting is available for the lamp function as well.
- Switch
- Bit switch
- Word switch
- Go To Screen switch
- Change Station No. switch
- Key window display switch

*3 The offset device value is added to the device number set in [Device] in the [Device/Style] tab.

(2) Device settings

If a bit of a word device is specified, the device No. is offset.
Example)

· Devices set for each object D200.b2
· Offset device D100



■2 Application examples

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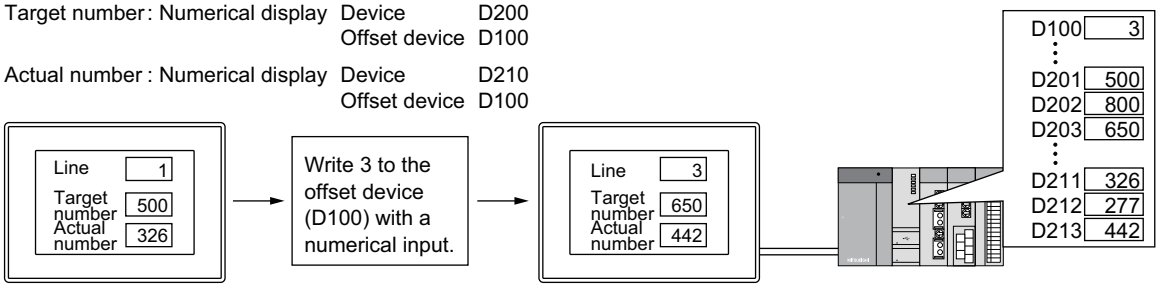
(1) Switching and monitoring multiple line statuses with a single numerical display

➟8.4 Placing a Numerical Display and Numerical Input

Line : Numerical input Device D100
Target number : Numerical display Device D200
Offset device D100
Actual number : Numerical display Device D210
Offset device D100



"Target number" monitors D201.
(D200 + 1 = D201)
"Actual number" monitors D211.
(D210 + 1 = D211)

"Target number" monitors D203.
(D200 + 3 = D203)
"Actual number" monitors D213.
(D210 + 3 = D213)

(2) Displaying multiple comments by switching them with a single device

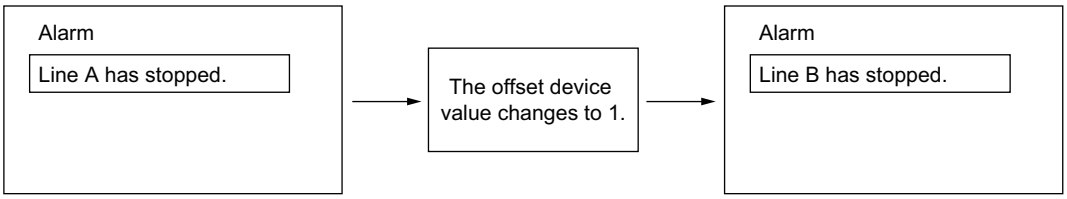
The offset device value is added to the comment No. of comments set for a simple alarm display.
To display multiple comments using a simple alarm display in the usual way, you have to set the same number of bit devices with that of comments to be displayed. If the offset is used, multiple comments can be displayed by switching them with a single device.

➟9.1.5 Viewing alarm events (Alarm display)

(a) Offsetting display settings

The offset device value is added to the No. associated with the comment to be displayed.

First comment No. : 1
Comment No. offset device : D200

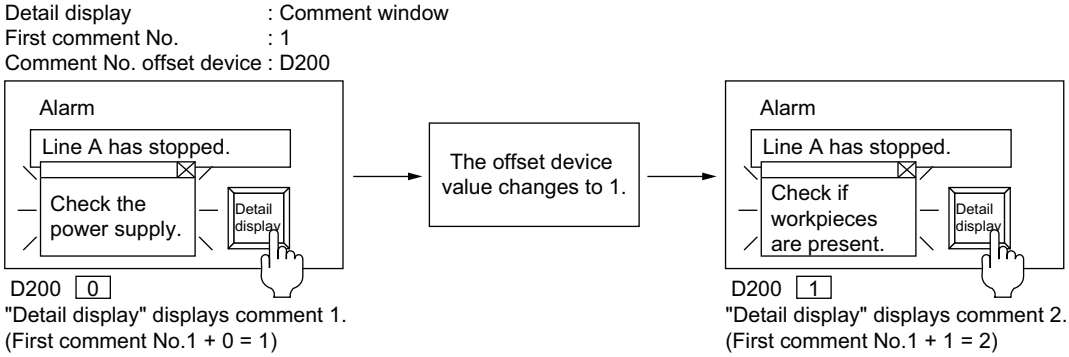


D200 0
Comment 1 is displayed when an alarm occurs.
(First comment No.1 + 0 = 1)

D200 1
Comment 2 is displayed when an alarm occurs.
(First comment No.1 + 1 = 2)

(b) **Offsetting detail display settings**

The offset device value is added to the No. of the comment (comment window), window screen, and base screen to be displayed as detail displays.



■3 Precautions for the offset setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Precautions for drawing

(a) **Monitoring a trigger device for a trigger action periodically**

Offset with a cycle longer than that of monitoring.

Example) Sampling cycle (7 s) of the offset device value > Sampling cycle of trigger action (5 s)

(b) **Operation is not performed normally with the sampling cycle setting for the trigger action**

If an object for which the offset has been specified is placed on the monitor screen, monitoring the trigger device for a trigger action becomes slow.

If a trigger action has been used, do not place objects for which the offset has been specified on the monitor screen.

(2) Precautions for use

(a) **Changing the offset value**

Monitor devices are read every time the offset value changes.

Frequent changes of the offset value may cause slower monitor speeds.

(b) **When the device No. goes out of the range by executing the offset**

When the device No. goes out of the range by executing the offset, monitoring and writing are not performed.

The error can be displayed if a simple alarm display is set.

If multiple devices are monitored in a single graph display, the display depends on the setting of the devices being monitored.

Trend graph, line graph, bar graph, and statistics graph

- If the devices are set contiguously: The previous display is held.
- If the devices are set randomly:

  The previous display is held only when the device No. goes out of the range. Otherwise the display reflects the offset devices in monitoring.

Scatter graph

- If the devices are set contiguously: The previous display is held.
- If the devices are set randomly: The previous display is held.

(c) **When an offset device is set outside the device range**

Even if you set an offset device outside the device range, no system alarm occurs.

Make sure to set the offset device within the device range.

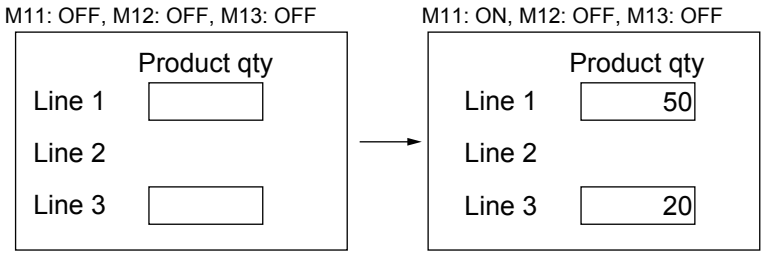
6.2 Setting Trigger Types

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following conditions can be set to each object for monitoring or writing.

■1 Display condition

Set to an object that monitors a device.
If the condition is not satisfied, monitoring the device is stopped or the display of the object is deleted.
Example)
Displaying only the numerical display function which is used for monitoring lines in production
Production Start signal (Line1: M11, Line 2: M12, Line3: M13)

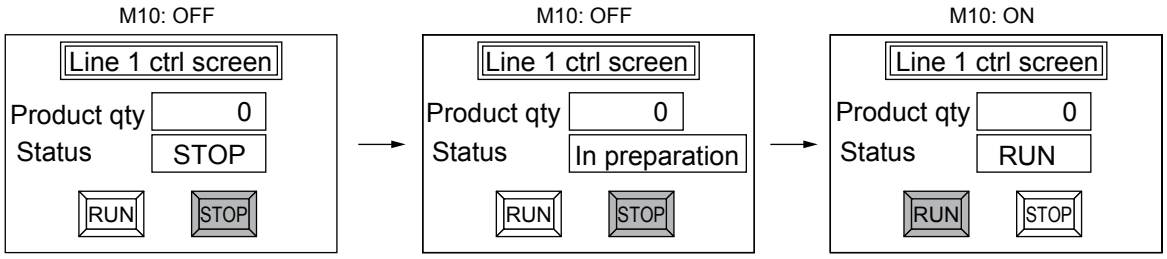


The production quantities of suspended lines are not displayed.

The production quantities of lines in operation are displayed.

■2 Operating condition

Set to an object that writes to a device.
If the condition is not satisfied, operation is prohibited or the display of the object is retained.
Example)
Setting a device for interlock to a touch switch
Line Operation Ready signal: M10



The line is stopped.

The line does not start to work even though the RUN switch is touched.

After completion of the preparation, the line starts to work by touching the RUN switch.

■3 Background function condition

Set to functions including the script and logging.
If the set condition is not satisfied, operation and saving data are not executed.

6.2.1 Specifications of the trigger type

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Trigger types
■2 Correspondence between functions and trigger types

■1 Trigger types

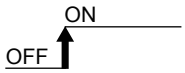
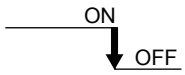
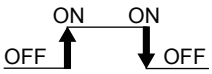
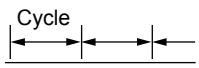
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

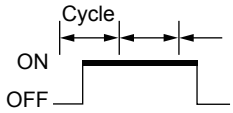
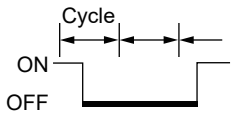
The following shows trigger types available for the display condition, operating condition, and background function condition.

(1) Available trigger type

For the trigger types available for each object and function, refer to the following.

➥■2 Correspondence between functions and trigger types

Trigger type	Execution condition	Operation
Ordinary	None	The device is monitored at the monitoring cycle of the GOT.
ON		The condition is satisfied while the trigger device is on or off. • When set to an object (display condition) While the condition is satisfied, the device is monitored at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the object is deleted. Operation performed while the condition is not satisfied can be changed by changing the setting. ➥(a) Operation performed when the display condition is not satisfied • When set to an object (operating condition) While the condition is satisfied, the set operation is executed at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the previous object is retained. Operation performed while the condition is not satisfied can be changed by changing the setting. ➥(b) Operation performed when the operating condition is not satisfied • When set as the background function condition Operation and saving data are executed.
OFF		
Rise		The condition is satisfied when the trigger device is on or off. • When set to an object (display condition) When the condition is satisfied, the device is monitored only once. While the condition is not satisfied, the display of the object is retained. Operation performed while the condition is not satisfied can be changed by changing the setting. ➥(a) Operation performed when the display condition is not satisfied • When set as the background function condition Operation and saving data are executed.
Fall		
Rise/Fall		
Sampling		The condition is satisfied at each set cycle. • When set to an object (display condition) When the condition is satisfied, the device is monitored only once. While the condition is not satisfied, the display of the object is deleted. Operation performed while the condition is not satisfied can be changed by changing the setting. ➥(a) Operation performed when the display condition is not satisfied • When set as the background function condition Operation and saving data are executed.

Trigger type	Execution condition	Operation
Range	Word device value Example) Trigger device: D100 Range: 0 < D100 < 100 Condition is satisfied: D100 = 100 Condition is not satisfied: D100 = -100	When the trigger device value is within the set range, the condition is satisfied. • When set to an object (display condition) While the condition is satisfied, the device is monitored at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the object is retained. Operation performed while the condition is not satisfied can be changed by changing the setting. ➟(a) Operation performed when the display condition is not satisfied • When set to an object (operating condition) While the condition is satisfied, the set operation is executed at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the previous object is retained. Operation performed while the condition is not satisfied can be changed by changing the setting. ➟(b) Operation performed when the operating condition is not satisfied • When set as the background function condition Operation and saving data are executed.
Bit Trigger	Logical operation result of the on/off status of the specified bit devices	When the set AND or OR condition matches with the status of the specified devices, the condition is satisfied. • When set to an object (display condition) While the condition is satisfied, the device is monitored at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the object is deleted. Operation performed while the condition is not satisfied can be changed by changing the setting. ➟(a) Operation performed when the display condition is not satisfied • When set to an object (operating condition) While the condition is satisfied, the set operation is executed at the monitoring cycle of the GOT. While the condition is not satisfied, the display of the previous object is retained. Operation performed while the condition is not satisfied can be changed by changing the setting. ➟(b) Operation performed when the operating condition is not satisfied • When set as the background function condition Operation and saving data are executed.
ON Sampling		The condition is satisfied while the trigger device is on or off. • When set to an object (display condition) While the condition is satisfied, the device is monitored at the set cycle. While the condition is not satisfied, the display of the object is deleted. Operation performed while the condition is not satisfied can be changed by changing the setting. ➟(a) Operation performed when the display condition is not satisfied • When set as the background function condition Operation and saving data are executed.
OFF Sampling		
View Change	When the display of the object is changed	The condition is satisfied when the display of the object is changed. • When set as the background function condition Operation and saving data are executed.
Synchronize Display Trigger	The same condition as the display condition set to the object	The condition is satisfied when the object for which the trigger type is set is displayed. • When set as the background function condition Operation and saving data are executed.
Key Code Input	When the following key codes are input • 0008h (Delete the least significant digit and right-shift all digits for one digit) • 0088h (Delete the content being input) • 002Dh (Alternate the sign) • 002Eh (.) • ASCII code, shift JIS code, Kanji code	The condition is satisfied when the key codes shown on the left are input. • When set as the background function condition Operation and saving data are executed.
Input Fixation	When the input data is written into the device by the key code 000Dh (Execute)	The condition is satisfied when the key code which determines the input content. • When set as the background function condition Operation and saving data are executed.

Trigger type	Execution condition	Operation
Device Writing	When bit set or word set is executed by a touch switch	The condition is satisfied when the touch switch with the bit set or word set is executed. • When set as the background function condition Operation and saving data are executed.
When closing a screen	When the screen is switched to another screen or closed	The condition is satisfied when the screen is switched to another screen or closed. • When set as the background function condition Operation and saving data are executed.
Time*1	The day and time which are set	The condition is satisfied when the day and time set to the GOT comes. • When set as the background function condition Operation and saving data are executed.

*1 For the setting procedure, refer to the following.

➟9.6 Operating the Set Time as a Trigger ([Time Action])

(a) Operation performed when the display condition is not satisfied

Operation performed when the condition is not satisfied can be changed by changing the setting in the setting dialog.
For the setting items for each trigger type, refer to the following.

➟6.2.2 ■1 Setting display conditions and operating conditions

- Displaying an object when the screen is switched for the first time

  When [Display objects immediately after the screen is switched regardless of display conditions] is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.
- Retaining the display of the object

  When [Retain the object display when display conditions are not satisfied] is selected, the display of the object is retained when the condition which has been satisfied goes to be not satisfied.

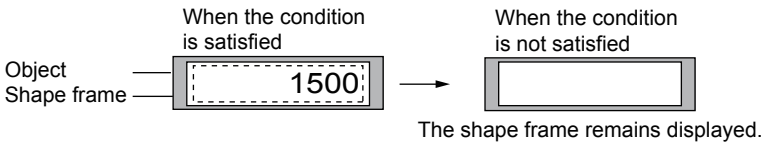
(b) Operation performed when the operating condition is not satisfied

When [Clear the input object] of the [Environmental Setting] window or the [Screen Property] dialog is selected, the display of the object is deleted when the condition is not satisfied.
For how to configure the setting in the [Environmental Setting] window or the [Screen Property] dialog, refer to the following.

➟2.7 Changing Screen Property
5.2.4 Setting key windows ([Key Window])

(c) Object with a shape

When the trigger type is [ON], [OFF], or [Bit Trigger] and a shape frame is set to the object
If the object is deleted, only the shape frame is left and displayed.



(2) Operation of multiple bit conditions

As the display condition, operating condition, or background function condition, two to eight bit devices and their on/off status can be set.

Logical AND or logical OR is executed to the on/off status of the bit devices for the set number.

Example) When M10, M11, and M12 are used as the display conditions

○: Condition is satisfied

×: Condition is not satisfied

Display condition	M10 is ON	M11 is OFF	M12 is ON	Operation result	
				Logical AND	Logical OR
ON, OFF (Satisfied/Not satisfied)	OFF (×)	OFF (○)	OFF (×)	×	○
	ON (○)	OFF (○)	OFF (×)	×	○
	OFF (×)	ON (×)	OFF (×)	×	×
	ON (○)	ON (×)	OFF (×)	×	○
	OFF (×)	OFF (○)	ON (○)	×	○
	ON (○)	OFF (○)	ON (○)	○	○
	OFF (×)	ON (×)	ON (○)	×	○
	ON (○)	ON (×)	ON (○)	×	○

■2 Correspondence between functions and trigger types

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows objects and functions for which the display condition, operating condition, and background function condition can be set.
Available trigger types differ depending on the type of an object or a function.

(1) Display condition

Function	Available trigger type	
	GT27, GT25, GT23, GT SoftGOT2000, GS25	GT21, GS21
Lamp	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • Range • Bit Trigger • ON Sampling • OFF Sampling	• Ordinary • ON • OFF • Range • Bit Trigger
Numerical display		
Text display		
Comment display		
Parts display (Bit part) *1		
Parts display (Word part) *2		
Parts movement		
Line graph		
Bar graph		
Statistics bar graph		
Statistics pie graph		
Graphical meter		-
Level object		• Ordinary • ON • OFF • Range • Bit Trigger
Panelmeter		
Parts display (Fixed parts)	• ON • OFF • Range • Bit Trigger	
Alarm display	• Ordinary • ON • OFF • Range • Bit Trigger	
Simple alarm display		
Trend graph	• Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling	• Sampling
Scatter graph	• Ordinary • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling	• Ordinary • Sampling

*1 If [Display Mode] is [Replace] and [Retain the object display when display conditions are not satisfied] is not selected, the object is deleted when the condition is not satisfied.

*2 If [Display Mode] is [Locus] and/or [Retain the object display when display conditions are not satisfied] is selected, the display of the object is retained when the condition is not satisfied.

(2) Operating condition

Function	Available trigger type
Touch switch	• Ordinary • ON • OFF • Range • Bit Trigger
Numerical input	
Text Input	
Slider	
Operation panel keys (Operation Panel function)	

(3) Background function condition

(a) Time setting

Function	Available trigger type
Time setting	• Rise • Fall • Sampling

(b) Backup/restore

Function	Available trigger type
Backup/restore	• Rise • Time*1

*1 For the setting procedure, refer to the following.

➟9.6 Operating the Set Time as a Trigger ([Time Action])

(c) Script

Script	Available trigger type
Project script	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling
Screen script	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling • When closing a screen
Script parts	

Script		Available trigger type
	• Lamp • Date display • Time display • Graphical meter • Panelmeter	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling • View Change
Display object script	• Numerical display • Numerical input (When [Display] is selected in the [Operation/ Script] tab) • Text display • Text input (When [Display] is selected in the [Script] tab) • Comment display • Parts display • Parts movement • Line graph • Trend graph • Bar graph • Statistics bar graph • Statistics pie graph • Scatter graph • Historical trend graph • Level object	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling • View Change • Synchronize Display Trigger
Input object script	• Numerical input (When [Input] is selected in the [Operation/ Script] tab) • Text input (When [Input] is selected in the [Script] tab)	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling • Key Code Input • Input Fixation
Switch object script	• Touch switch	• Ordinary • ON • OFF • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling • Device Writing

(d) **Logging**

Function	Available trigger type
Logging (When set in the [Basic] tab)	• Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling
Logging (When set in the [File Save] tab)	• None • Rise • Fall • Rise/Fall • Sampling • ON Sampling • OFF Sampling

(e) **Device data transfer**

Function	Available trigger type
Device data transfer	• Rise • Fall • Sampling

(f) **Trigger action**

Function	Available trigger type
Trigger action	• Ordinary • Rise • Fall • Rise/Fall • ON • OFF • Sampling • Range • Bit Trigger • ON Sampling • OFF Sampling

6.2.2 Setting Trigger Types

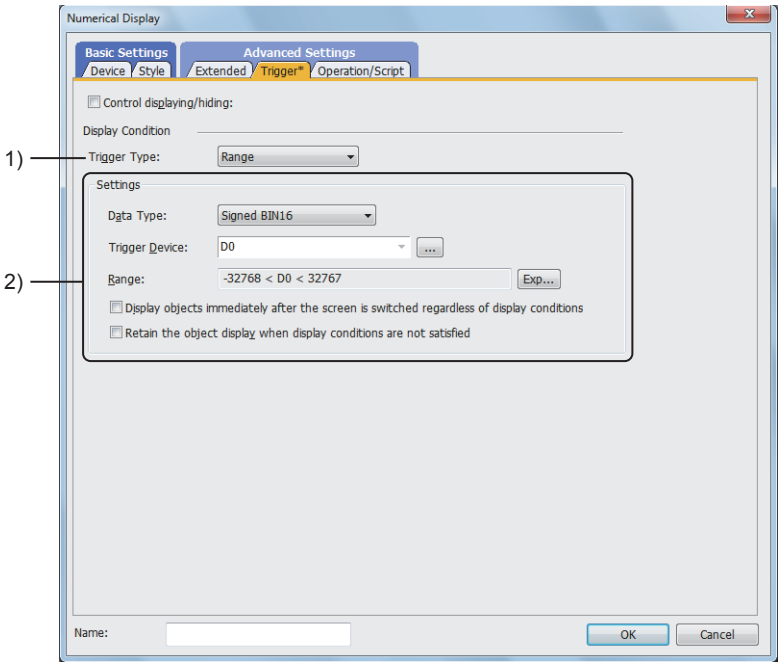
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Setting display conditions and operating conditions
■2 Setting background function conditions

■1 Setting display conditions and operating conditions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The display condition and operating condition can be set in the [Trigger] tab of the setting dialog of each object.
Since different setting items are prepared for each display condition and operating condition, refer to each description for the setting item displayed on the setting dialog.



1) **[Trigger Type]**
Select a trigger to display or operate the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

For available triggers for each object, refer to the following.

➥■2 Correspondence between functions and trigger types

2) **[Settings]**
The setting items differ depending on the setting of [Trigger Type].
For the setting items for each trigger, refer to the following.

➥(1) When [Ordinary] is selected
(2) When [ON] or [OFF] is selected
(3) When [Rise], [Fall], or [Rise/Fall] is selected
(4) When [Sampling] is selected

(5) When [Range] is selected
(6) When [Bit Trigger] is selected
(7) When [ON Sampling] or [OFF Sampling] is selected

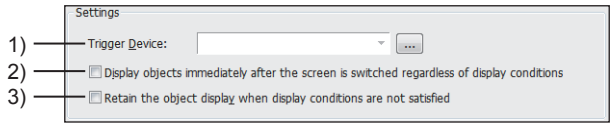
To set a device, refer to the following.

➟6.1 Device Settings

(1) When [Ordinary] is selected

No setting item is prepared.

(2) When [ON] or [OFF] is selected

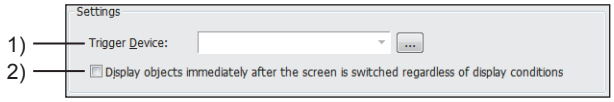


1) **[Trigger Device]**
Set a trigger device.

2) **[Display objects immediately after the screen is switched regardless of display conditions]**
Not available to GT21 and GS21.
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

3) **[Retain the object display when display conditions are not satisfied]**
Not available to GT21 and GS21.
When this item is selected, the display of the object is retained when the condition which has been satisfied goes to be unsatisfied.

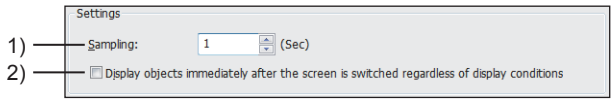
(3) When [Rise], [Fall], or [Rise/Fall] is selected



1) **[Trigger Device]**
Set a trigger device.

2) **[Display objects immediately after the screen is switched regardless of display conditions]**
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

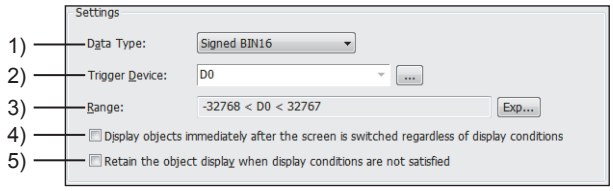
(4) When [Sampling] is selected



1) **[Sampling]**
Set a cycle at which the device is monitored.
The setting range differs depending on the type of an object or a function.
- [1] second to [3600] seconds
- [1] x 100ms to [36000] x 100ms

2) **[Display objects immediately after the screen is switched regardless of display conditions]**
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

(5) When [Range] is selected



1) **[Data Type]**

Select the data type of the trigger device.
The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [Real(32bit)]
- [Real(64bit)]

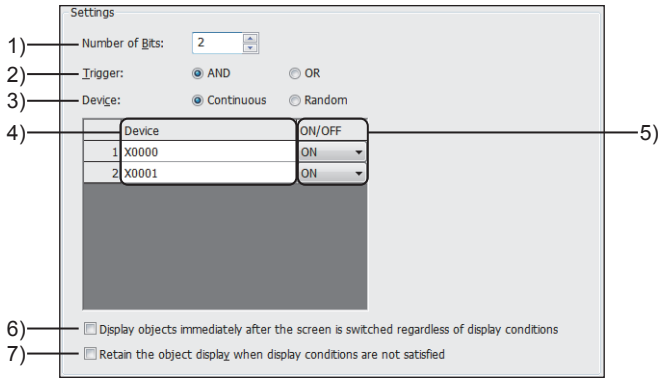
2) **[Trigger Device]**
Set a trigger device.

3) **[Range]**
Click the [Range] button to set the range of the trigger device.
➟6.5.5 ■2 (3) [Edit Range] dialog

4) **[Display objects immediately after the screen is switched regardless of display conditions]**
Not available to GT21 and GS21.
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

5) **[Retain the object display when display conditions are not satisfied]**
Not available to GT21 and GS21.
When this item is selected, the display of the object is retained when the condition which has been satisfied goes to be unsatisfied.

(6) When [Bit Trigger] is selected



1) **[Number of Bits]**
Set the number of conditions.
The setting range is [2] to [8].

2) **[Trigger]**
Select trigger conditions of multiple bits.
The following shows the items to be selected.

- [AND]: The condition is satisfied when all the set [ON/OFF] conditions match with the on/off status of the devices.
- [OR]: The condition is satisfied when one or more of the set [ON/OFF] conditions match with the on/off status of the devices.

3) **[Device]**
Select how to set the multiple devices.
The following shows the items to be selected.

- [Continuous]: Sets devices successively for the number set in [Number of Bits] starting from the device numbers specified for the set device.
- [Random]: Sets devices one by one for the number set in [Number of Bits].

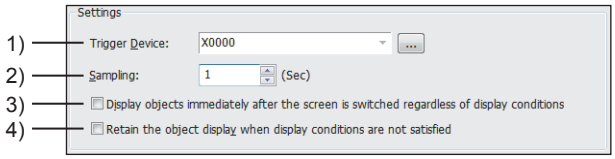
4) **[Device]**
Select each row to set a trigger device.
The set devices are displayed on the list.

5) **[ON/OFF]**
Select the on/off status as the trigger condition for each device set in [Device].
The following shows the items to be selected.
- [ON]
- [OFF]

6) **[Display objects immediately after the screen is switched regardless of display conditions]**
Not available to GT21 and GS21.
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

7) **[Retain the object display when display conditions are not satisfied]**
Not available to GT21 and GS21.
When this item is selected, the display of the object is retained when the condition which has been satisfied goes to be unsatisfied.

(7) When [ON Sampling] or [OFF Sampling] is selected



1) **[Trigger Device]**
Set a trigger device.

2) **[Sampling]**
Set a cycle at which the device is monitored.
The setting range differs depending on the type of an object or a function.
- [1] second to [3600] seconds
- [1] x 100ms to [36000] x 100ms

3) **[Display objects immediately after the screen is switched regardless of display conditions]**
When this item is selected and if the screen is switched for the first time, the device is monitored and displayed even though the display condition is not satisfied.

4) **[Retain the object display when display conditions are not satisfied]**
When this item is selected, the display of the object is retained when the condition which has been satisfied goes to be unsatisfied.

■2 Setting background function conditions

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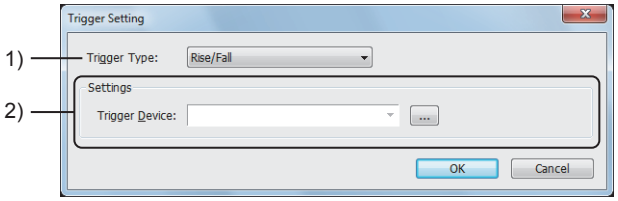
Set the background function condition in one of the following dialogs according to the function used.

- The setting dialog for each function
- [TriggerSetting] dialog

Example) When set in the [TriggerSetting] dialog

Click the [TriggerSetting] button in the setting dialog to display the [TriggerSetting] dialog.



1) **[Trigger Type]**

Select a trigger to display or operate the object.

The following shows the items to be selected.

- [None]
- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]
- [View Change]
- [Synchronize Display Trigger]
- [Key Code Input]
- [Input Fixation]
- [Device Writing]
- [When closing a screen]

For available triggers for each object, refer to the following.

➟■2 Correspondence between functions and trigger types

2) **[Settings]**

The setting items differ depending on the setting of [Trigger Type].

For the setting items for each trigger, refer to the following.

➟(1) When [None], [Ordinary], [View Change], [Synchronize Display Trigger], [Key Code Input], [Input Fixation], [Device Writing], or [When closing a screen] is selected
(2) When [ON] or [OFF] is selected
(3) When [Rise], [Fall], or [Rise/Fall] is selected
(4) When [Sampling] is selected
(5) When [Range] is selected
(6) When [Bit Trigger] is selected
(7) When [ON Sampling] or [OFF Sampling] is selected

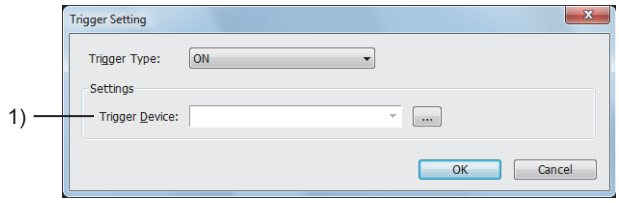
To set a device, refer to the following.

➟6.1 Device Settings

(1) When [None], [Ordinary], [View Change], [Synchronize Display Trigger], [Key Code Input], [Input Fixation], [Device Writing], or [When closing a screen] is selected

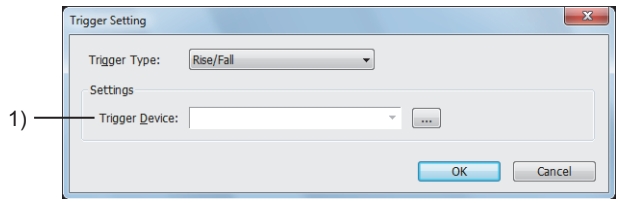
No setting item is prepared.

(2) When [ON] or [OFF] is selected



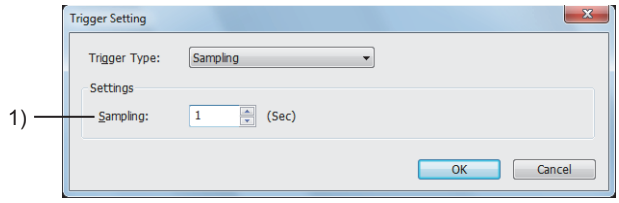
1) **[Trigger Device]**
Set a trigger device.

(3) When [Rise], [Fall], or [Rise/Fall] is selected



1) **[Trigger Device]**
Set a trigger device.

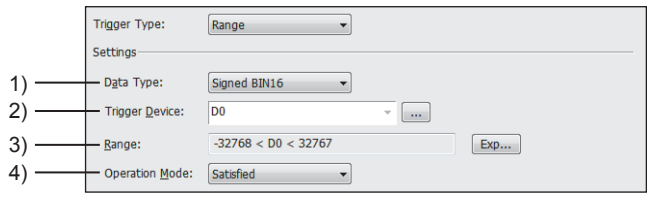
(4) When [Sampling] is selected



1) **[Sampling]**
Set a cycle at which the device is monitored.
The setting range differs depending on the type of an object or a function.

- [1] second to [3600] seconds
- [1] x 100ms to [36000] x 100ms
- [1] x 100ms to [600] x 100ms
- [1] minute to [1440] minutes

(5) When [Range] is selected



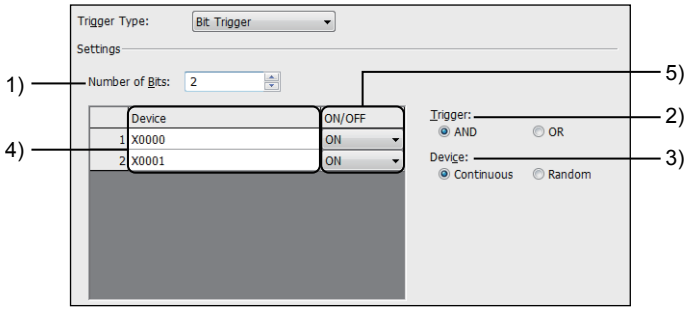
1) **[Data Type]**
Select the data type of the trigger device.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [Real(32bit)]
- [Real(64bit)]

2) **[Trigger Device]**
Set a trigger device.

3) **[Range]**
Click the [Range] button to set the range of the trigger device.
➟6.5.5 ■2 (3) [Edit Range] dialog

4) **[Operation Mode]**
Select an operation mode of when the condition is satisfied.
- [Satisfied]: When the condition is satisfied, the operation is executed.
- [Satisfied (Sampling)]: While the condition is satisfied, the operation is executed at each set cycle.

(6) When [Bit Trigger] is selected



1) **[Number of Bits]**
Set the number of conditions.
The setting range is [2] to [8].

2) **[Trigger]**
Select trigger conditions of multiple bits.
The following shows the items to be selected.
- [AND]: The condition is satisfied when all the set [ON/OFF] conditions match with the on/off status of the devices.
- [OR]: The condition is satisfied when one or more of the set [ON/OFF] conditions match with the on/off status of the devices.

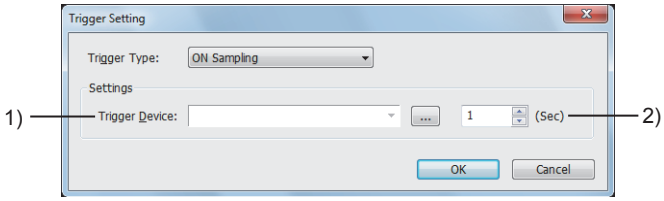
3) **[Device]**
Select how to set the multiple devices.
The following shows the items to be selected.
- [Continuous]: Sets devices successively for the number set in [Number of Bits] starting from the device numbers specified for the set device.

• [Random]: Sets devices one by one for the number set in [Number of Bits].

4) **[Device]**
Select each row to set a trigger device.
The set devices are displayed on the list.

5) **[ON/OFF]**
Select the on/off status as the trigger condition for each device set in [Device].
The following shows the items to be selected.
• [ON]
• [OFF]

(7) When [ON Sampling] or [OFF Sampling] is selected



1) **[Trigger Device]**
Set a trigger device.

2) **[Sampling]**
Set a cycle at which the device is monitored.
The setting range differs depending on the type of an object or a function.
• [1] second to [3600] seconds
• [1] x 100ms to [36000] x 100ms
• [1] x 100ms to [600] x 100ms
• [1] minute to [1440] minutes

6.2.3 Precautions

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■1 Trigger setting for a line graph

If the number of devices monitored by the line graph is large and [Trigger Type] is [Ordinary], processing the object may delay.
In that case, change [Trigger Type] to [Sampling] and set 2 or more seconds for the cycle.

6.3 Date/Time Format Settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When the date and time are displayed on the objects, the display format of the date and time can be selected.

■1 Date format

Set the display format of the date.
The display of the date can be changed according to language switching.

■2 Time format

Set the display format of the time.

6.3.1 Specifications of date/time formats

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Types of date/time formats
■2 Correspondence between functions and date/time formats

■1 Types of date/time formats

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the types of date/time formats.

(1) Date format

Example) To display Wednesday, December 25, 2013

Date format			Display contents
[Delimiter] is [/]	[Delimiter] is [-]	[Delimiter] is [.]	
25/12/13	25-12-13	25.12.13	Date, month, year
25/Dec	25-Dec	25.Dec	Date, month
25/DEC	25-DEC	25.DEC	
25/Dec(WED)	25-Dec(WED)	25.Dec(WED)	Date, month (day)
25/DEC(WED)	25-DEC(WED)	25.DEC(WED)	
25/Dec/13	25-Dec-13	25.Dec.13	Date, month, year
25/DEC/13	25-DEC-13	25.DEC.13	
25/Dec/13(WED)	25-Dec-13(WED)	25.Dec.13(WED)	Date, month, year (day)
25/DEC/13(WED)	25-DEC-13(WED)	25.DEC.13(WED)	
25/Dec/2013	25-Dec-2013	25.Dec.2013	Date, month, year
25/DEC/2013	25-DEC-2013	25.DEC.2013	
25/Dec/2013(WED)	25-Dec-2013(WED)	25.Dec.2013(WED)	Date, month, year (day)
25/DEC/2013(WED)	25-DEC-2013(WED)	25.DEC.2013(WED)	
25/12/2013	25-12-2013	25.12.2013	Date, month, year
25/12/2013(WED)	25-12-2013(WED)	25.12.2013(WED)	Date, month, year (day)
25/12	25-12	25.12	Date, month
25/12(WED)	25-12(WED)	25.12(WED)	Date, month (day)
25/12/13(WED)	25-12-13(WED)	25.12.13(WED)	Date, month, year (day)
12月25日	12月25日	12月25日	Month, year
12月25日(水)	12月25日(水)	12月25日(水)	Month, year (day)
13年12月25日	13年12月25日	13年12月25日	Year, month, date
13年12月25日(水)	13年12月25日(水)	13年12月25日(水)	Year, month, date (day)
2013年12月25日	2013年12月25日	2013年12月25日	Year, month, date

Date format			Display contents
[Delimiter] is [/]	[Delimiter] is [-]	[Delimiter] is [.]	
2013年12月25日(水)	2013年12月25日(水)	2013年12月25日(水)	Year, month, date (day)
12/25(水)	12-25(水)	12.25(水)	Month, year (day)
13/12/25(水)	13-12-25(水)	13.12.25(水)	Year, month, date (day)
2013/12/25(水)	2013-12-25(水)	2013.12.25(水)	

(2) Time format

Example) To display 13:25:45

Time format	Display contents
13:25	Hour:minute
13:25:45	Hour:minute:second
01:25(PM)	Hour:minute (12-hour display format)
01:25:45(PM)	Hour:minute:second (12-hour display format)
13時25分	Hour:minute
13時25分45秒	Hour:minute:second
午前01時25分	Hour:minute (12-hour display format)
午前01時25分45秒	Hour:minute:second (12-hour display format)

■2 Correspondence between functions and date/time formats

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The following shows the objects for which the date/time formats can be set.

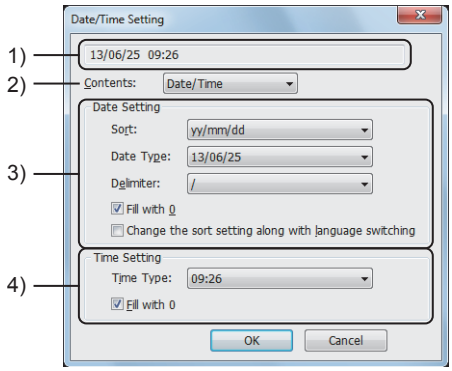
Object, function	Display format
Alarm display	Date/Time formats
Logging	
Date display	Date format
Time display	Time format

6.3.2 Date/time format settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Click the button of the date/time setting item in the setting dialog of each object to display the [Date/Time Setting] dialog. For how to set [Date Display] and [Time Display], refer to the following.

➟8.6 Placing a Date Display and Time Display



1) **Preview**
Displays a preview of the date and time.

2) **[Contents]**
Select the date and time to be displayed.
The following shows the items to be selected.
- [Date/Time]: Displays the date and time.
- [Date]: Displays only the date.
- [Time]: Displays only the time.

3) **[Date Setting]**
Set the display format of the date.

Item	Description
[Sort]	Select a sorting order of year, month and date. When [Change the sort setting along with language switching] is selected, a sorting order cannot be selected. The following shows the items to be selected. • [yy/mm/dd] • [mm/dd/yy] • [dd/mm/yy]

Item	Description
[Date Type]	Select the display type of the date. The items to be displayed differ depending on the selected item of [Delimiter] and [Fill with 0]. The following shows the default items to be selected. Example) To display Wednesday, December 25, 2013 • [25/12/13] • [25/Dec] • [25/DEC] • [25/Dec(WED)] • [25/DEC(WED)] • [25/Dec/13] • [25/DEC/13] • [25/Dec/13(WED)] • [25/DEC/13(WED)] • [25/Dec/2013] • [25/DEC/2013] • [25/Dec/2013(WED)] • [25/DEC/2013(WED)] • [25/12/2013] • [25/12/2013(WED)] • [25/12] • [25/12(WED)] • [25/12/13(WED)] • [12月25日] • [12月25日(水)] • [13年12月25日] • [13年12月25日(水)] • [2013年12月25日] • [2013年12月25日(水)] • [12/25(水)] • [13/12/25(水)] • [2013/12/25(水)]
[Delimiter]	Select a delimiter used for separating expressions of year, month and date. The following shows the items to be selected. • [/] • [-] • [.]
[Fill with 0]	When the month and/or date are/is in single digit, 0 is displayed before the single-digit number.
[Change the sort setting along with language switching]	Changes a sorting order of the date associating with language switching. When the following items are selected in [Date Type], this function cannot be set. • [12月25日] • [12月25日(水)] • [13年12月25日] • [13年12月25日(水)] • [2013年12月25日] • [2013年12月25日(水)] • [12/25(水)] • [13/12/25(水)] • [2013/12/25(水)] To use this function, set [Region Setting] in [Language Switching] of [Environmental Setting] window. ⇒5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

4) **[Time Setting]**

Set the display format of the time.

Item	Description
[Time Type]	Select the display type of the time. The display of the setting range differs depending on the selected item of [Fill with 0]. The following shows the default items to be selected. Example) To display 13:25:45 • [13:25] • [13:25:45] • [01:25(PM)] • [01:25:45(PM)] • 〔13時25分〕 • 〔13時25分45秒〕 • 〔午前01時25分〕 • 〔午前01時25分45秒〕
[Fill with 0]	When the time, minute, and/or second are/is in single digit, 0 is displayed before the single-digit number.

6.4 Color Settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set colors for objects, figures, and characters.

➟6.4.1 Specifications of colors
6.4.2 Color settings

6.4.1 Specifications of colors

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

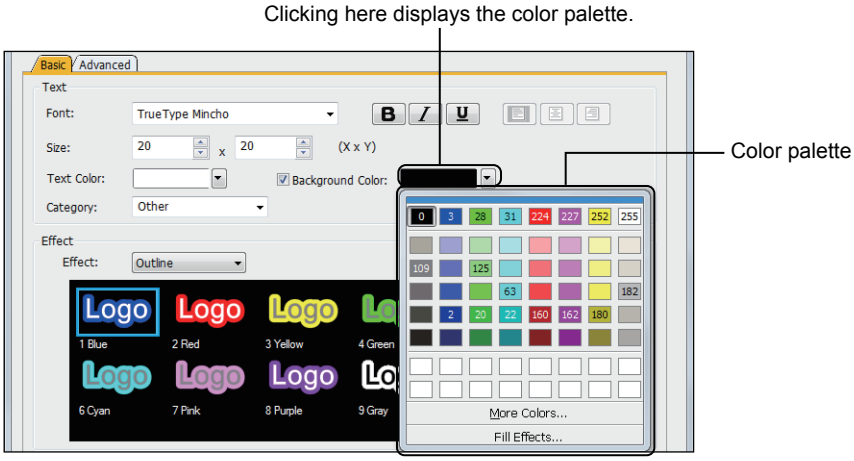
■1 Available colors

65536 colors are prepared.

6.4.2 Color settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Click the color set in each setting dialog or the button on the right of the color to display the color palette.

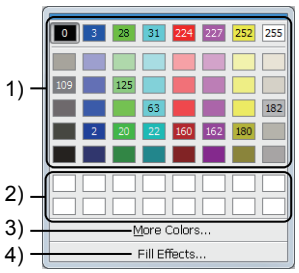


Select a color from the color palette.

➟■1 Color palette

■1 Color palette

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **Basic colors**
Select a color to be displayed.

2) **Custom colors**
Select a color to be displayed.
When you specify a color in the dialog displayed with the [More Color] button, the color is added to the color palette.
The colors existing in the palette will not be added as a new one.

3) **[More Color] button**
Displays the [65536 Colors] dialog.

➥■2 [65536 Color] dialog

4) **[Fill Effects] button**
Displays the [Fill Effects] dialog.
Set the gradation or pattern.

➥■4 [Fill Effects] dialog

■2 [65536 Color] dialog

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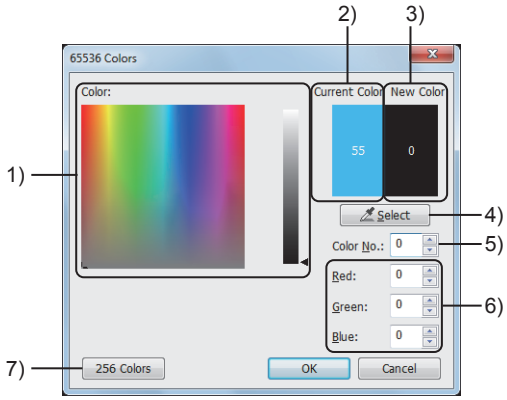

1) **[Color]**
Select a color to be displayed.

2) **[Current Color]**
Displays the currently set color.

3) **[New Color]**
Displays the color set in the following setting items.

- [Color]
- [Select] button
- [Color No.]

4) **[Select] button**
Changes the shape of the mouse cursor to a dropper and displays the color of the clicked position in [New Color].
When you move the mouse cursor with the display of the dropper, the color on which the cursor is placed is displayed in [New Color].

5) **[Color No.]**
Specifies a color to be displayed with its number from 256 colors.
The setting range is [0] to [255].
For each number of 256 colors, refer to the following.

➥■3 [256 Color] dialog

6) **RGB value**
Set a color to be displayed with three colors: red, green, and blue.

Item	Description
[Red]	Set the display ratio of red. The setting range is [0] to [255].
[Green]	Set the display ratio of green. The setting range is [0] to [255].
[Blue]	Set the display ratio of blue. The setting range is [0] to [255].

7) **[256 Colors] button**
Switches the dialog to the [256 Color] dialog.
If a color which cannot be displayed with 256 colors is set, the color is changed to an approximate color in 256 colors when the dialog is switched to the [256 Color] dialog.

■3 [256 Color] dialog

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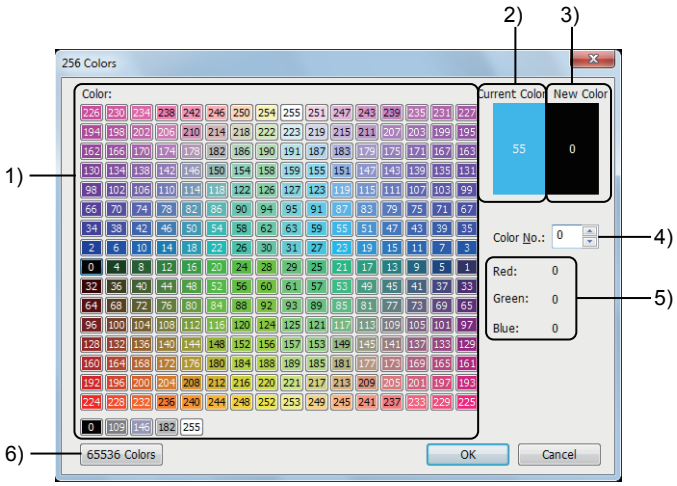

1) **[Color]**
Select a color to be displayed.

2) **[Current Color]**
Displays the currently set color.

3) **[New Color]**
Displays the color set in the following setting items.
- [Color]
- [Color No.]

4) **[Color No.]**
Specifies a color to be displayed with its number from 256 colors.
The setting range is [0] to [255].

5) **RGB value**
Indicates the numerical values of red, green, and blue for the selected color.

6) **[65536 Colors] button**
Switches the dialog to the [65536 Color] dialog.

■4 [Fill Effects] dialog

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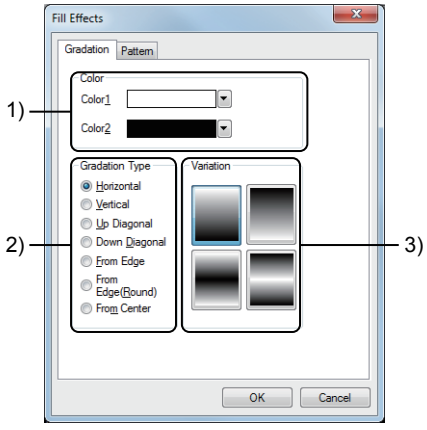
Set the fill effects, such as the gradation or pattern.
To apply the setting configured on a tab, click the [OK] button on the tab.

➟(1) [Gradation] tab
(2) [Pattern] tab

(1) [Gradation] tab



1) **[Color]**
Select two gradient colors.

➟■1 Color palette

2) **[Gradation Type]**
Select a gradation type.
The following shows the items selectable for the logo text.

- [Horizontal]
- [Vertical]
- [Up Diagonal]
- [Down Diagonal]
- [From Edge]
- [From Edge (Round)]
- [From Center]

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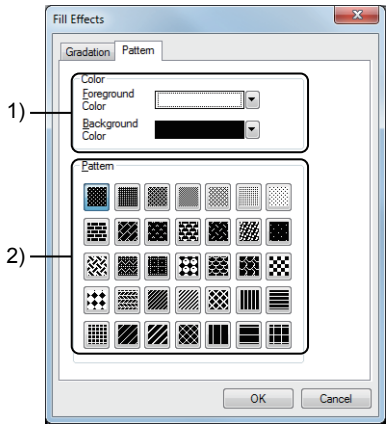
The following shows the items selectable for the screen background color.

- [Horizontal]
- [Vertical]
- [Up Diagonal]
- [Down Diagonal]

3) **[Variation]**
Select a gradient to be applied.
The displayed gradients vary depending on the setting of [Gradation Type].

(2) [Pattern] tab



1) **[Color]**
Select a foreground color and a background color for the pattern.

Item	Description
[Foreground Color]	Pattern color.
[Background Color]	Pattern background color.

2) **[Pattern]**
Select a pattern.

6.4.3 Precautions

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■1 Changing to an approximate color

When a color out of the range of 65536 colors is selected, the color is changed to an approximate color which is available in 65536 colors.

The changing method to an approximate color differs depending on the following setting items.

- Selecting a color with the [Color] or [Select] button
  When the [OK] button is clicked, the color is changed to an approximate color.
- Setting a color by the RGB value
  When the values of [Red], [Green], and [Blue] are input, the values are changed to approximate values.

6.5 Placing and Editing Figures and Objects

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Use figures and objects placing them on the screen.
For placements and settings common to both figures and objects, refer to the following.

➟6.5.1 Placing figures and objects
6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects
6.5.4 Common setting for figures
6.5.5 Common setting for objects

- Figures

  With figures, characters and shapes can be designed.
  Being unchanged according to devices and setting values, figures have no function other than being characters and shapes.
  For available figures and the setting methods with GT Designer3, refer to the following.

  ➟7. FIGURES

- Objects

  With objects, device values can be displayed, and characters and shapes can be designed.
  The objects of each type have its own functions and change according to devices and setting values.
  For available objects and the setting methods with GT Designer3, refer to the following.

  ➟8. OBJECT FUNCTION

6.5.1 Placing figures and objects

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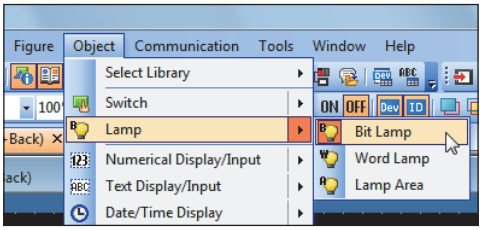
■1 Selecting figures and objects to be placed

Select figures and objects to be placed.

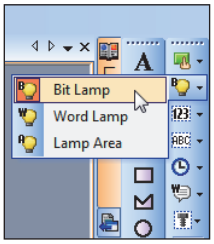
(1) Selecting from the menu

You can select a figure or an object to be placed from [Figure] or [Object] in the menu bar.



(2) Selecting from the tool bars

When the tool bars are displayed, figures and objects can be selected from the buttons in the tool bars.

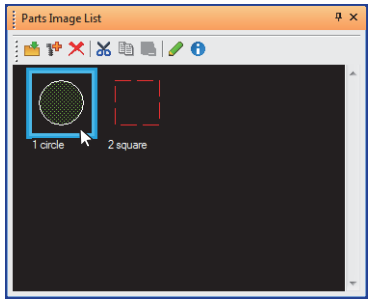


For how to display the tool bars and for the types of buttons in the tool bars, refer to the following.

➟2.2.2 Toolbar and shortcut keys

(3) Selecting from the part image list

If figures have been registered in the list as parts, you can select them to place, from the part image list in the [Parts Image List] window.



For how to register parts and display the [Parts Image List] window, refer to the following.

➟5.9 Registering Parts ([Parts])

■2 Placing selected figures and objects

Place figures and objects you have selected on the screen editor.

(1) Placing without changing size

Place figures and objects in their default sizes.

Step 1 Select a figure or an object.

When a figure or an object is selected, the mouse cursor changes its shape.

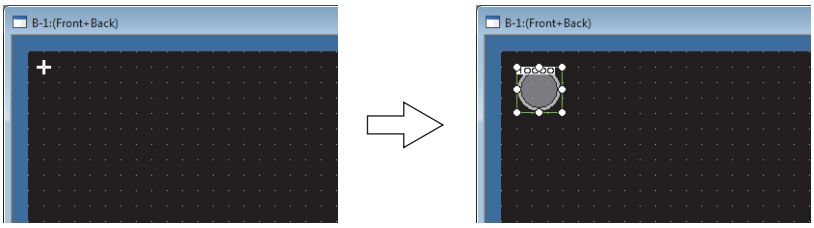
Step 2 Move the cursor to the position where the figure or object is to be placed.

Step 3 In the following operation with the mouse or keyboard, the figure or object is placed.

- Mouse

  Click.
- Keyboard

  Press the [Enter] key twice.



(2) Placing with changing size

Place figures and objects in changing their sizes.

Step 1 Select a figure or an object.

When a figure or an object is selected, the mouse cursor changes its shape.

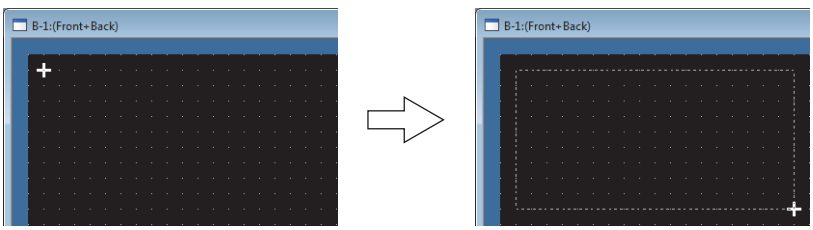
Step 2 Move the cursor to the position where the figure or object is to be placed.

Step 3 In the following operation with the mouse or keyboard, the size of the figure or object to be placed is changed.

- Mouse

  Click and drag it to the desired position.
- Keyboard

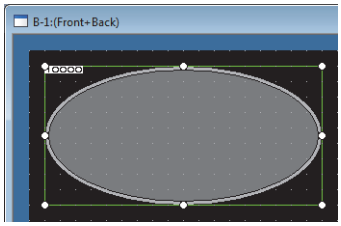
  Press the [Enter] key once and move the cursor key to the desired position.



Step 4 In the following operation with the mouse or keyboard, the figure or object that has been changed in its size

is placed.

- Mouse
  Release the mouse button.
- Keyboard
  Press the [Enter] key once.



■3 Changing the operation performed when figures and objects are placed

To change the operation performed when figures and objects are placed, set the following items on the [Edit] tab in the [Options] dialog.

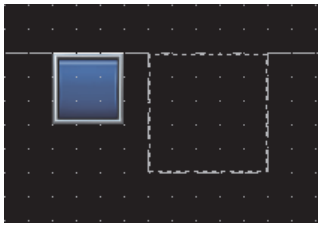
- [Place figures/objects sequentially]
- [Deselect figures/objects once they are placed]
- [Display the setting dialog once figures/objects are placed]
- [Move figures/objects in the screen display area (move to temporary area with the Alt key)]

For how to display the [Option] dialog and for the operations with the above setting items, refer to the following.

➟11.10.4 Customizing the settings related to editing operations

■4 Placing a figure or object with guidelines

You can place figures and objects with the help of guidelines.



For how to display the guidelines, refer to the following.

➟2.6.9 Displaying guidelines

■5 Setting and checking the object ID

Object ID numbers are automatically set to figures and objects that are placed.
Users cannot change set object ID numbers.

(1) Range of the object ID numbers to be set

The setting range is [10000] to [64999].

(2) Retaining object ID numbers

Object ID numbers are retained by the project.

(3) Pasting copied or cut figures and objects

Pasted figures and objects have new object ID numbers.

(4) Checking object ID numbers

When [Object ID] is selected in the [Option] dialog, objects that are placed on the screen editor are displayed with their object ID numbers.
Figures are not displayed with object ID numbers.
For how to display the [Option] dialog and set the items in the dialog, refer to the following.

➟11.10.5 Customizing the display

6.5.2 Selecting figures and objects on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Selecting figures and objects on the screen editor
■2 Selecting figures and objects in the [Data View] window
■3 [Data View] window

■1 Selecting figures and objects on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can select figures and objects by clicking the figures and objects on the screen editor with the mouse cursor.

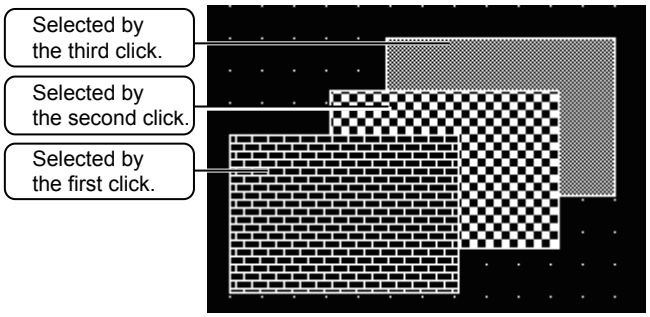
(1) Selectable figures and objects on the screen editor

The target for selecting can be set in three ways: figures only, objects only, or figures and objects.
For how to select the target, refer to the following.

➟6.6.7 [Object of Selection]

(2) Selecting figures and objects that have been placed behind others

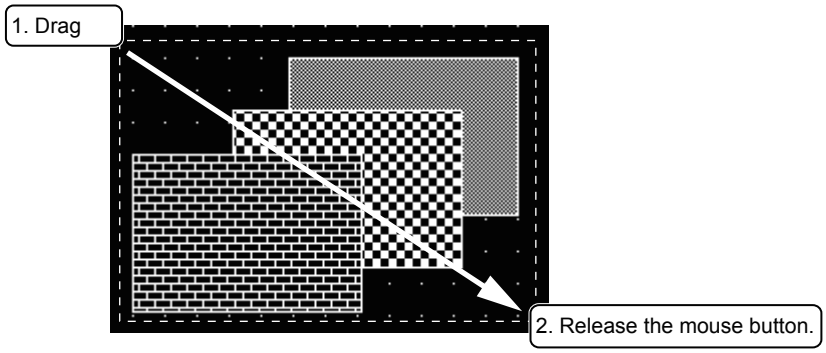
Click the overlapping part of the figures and objects while pressing the [Ctrl] key.
Figures can be selected one by one with each click.



(3) Selecting multiple figures and objects

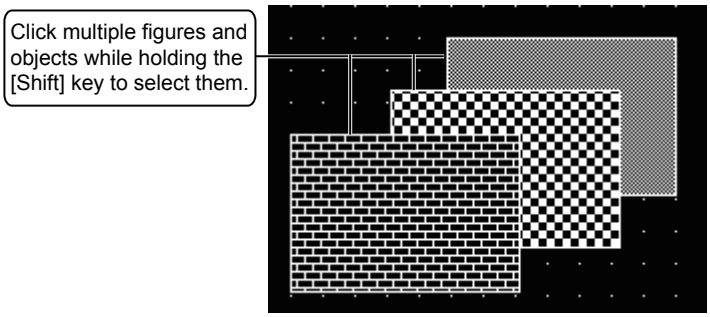
(a) **Mouse drag operation**

Drag to take the figures and objects in the square area.
When the mouse button is released, all the figures and objects in the area are selected.



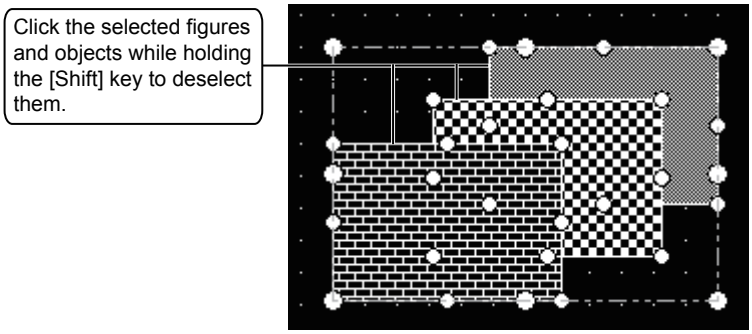
(b) **[Shift] key + Mouse operation**

Click the figures and objects to be selected while pressing the [Shift] key.



(4) Deselecting figures and objects

Click the targets for deselecting in a selection of multiple figures and objects, while pressing the [Shift] key.



■2 Selecting figures and objects in the [Data View] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

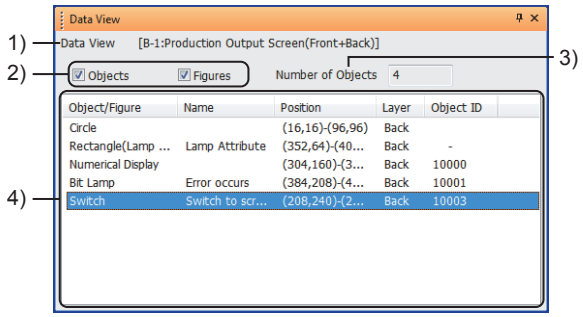
The [Data View] window displays the list of the figures and objects displayed on the screen editor being edited.
If you select a figure or an object displayed in the [Data View] window, the corresponding figure or object on the screen editor is selected.
For how to display the [Data View] window and set the items in the window, refer to the following.

➟■3 [Data View] window

■3 [Data View] window

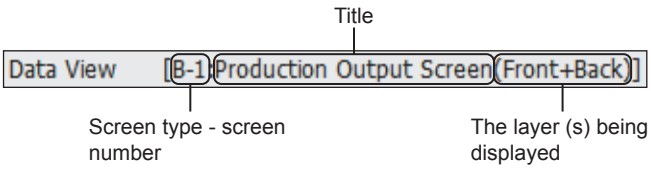
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [View] → [Docking Window] → [Data View] from the menu to display the setting window.



1) **[Data View]**

Displays the screen type, screen number, and title of the screen editor being edited and the layers displayed on the editor.



2) **Objects to be displayed**

Select whether to display the figures and objects in the data view or not.

Item	Description
[Objects]	Displays the objects in the data view.
[Figures]	Displays the figures in the data view.

3) **[Number of Objects]**

Displays the number of the objects placed in the screen editor.
The number is displayed regardless of the [Objects] setting.
As to figures, only those with the lamp attribute setting are counted in as objects.

4) **Data view**

Displays the list of the figures and objects which are placed on the screen editor being edited.
The items in the list depend on the [Objects] and [Figures] settings.

Item	Description
[Figure/Object]	Displays the names of the figures and objects.
[Name]	Displays the set names if they have been set for [Name] of the figures and objects.
[Position]	Displays the coordinates of the figures and objects which are placed on the screen editor.
[Layer]	Displays the layers in which the figures and objects are placed.
[Object ID]	Displays the object ID numbers which are set for the objects. As to figures, what are displayed depend on whether or not the lamp attribute has been set. • If the lamp attribute has been set [-] is displayed. • If the lamp attribute has not been set Nothing is displayed.

6.5.3 Editing figures and objects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Operating with the menu
■2 Moving, enlarging, or reducing a figure or object with guidelines
■3 Changing sizes
■4 Changing the attributes in the property sheets

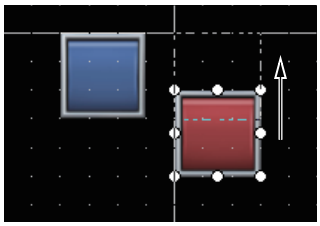
■1 Operating with the menu

Edit selected figures and objects with the [Edit] menu.
For the items in the [Edit] menu and restrictions on the items, refer to the reference for each editing operation.

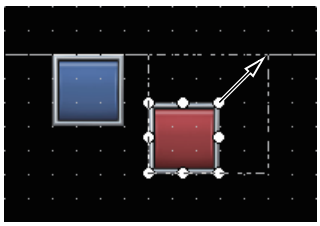
Editing operation	Reference
Canceling the last operation or redoing the canceled operation	➥6.6.1 [Undo], [Redo]
Copying or cutting figures and objects and pasting them	➥6.6.2 [Cut], [Copy], [Paste]
Copying and pasting figures and objects simultaneously	➥6.6.3 [Duplicate]
Copying and pasting figures and objects specifying the number of them and the interval between them	➥6.6.4 [Consecutive Copy]
Deleting figures and objects	➥6.6.6 [Delete]
Grouping two or more figures and objects or releasing them from grouping	➥6.6.8 [Group], [Ungroup]
Changing the display order of figures and objects on the screen editor	➥ 6.6.9 ■1 [Move to the Front of Front Layer] 6.6.9 ■2 [Move to the Back of Back Layer]
Changing the display order of objects in the same layer	➥ 6.6.9 ■3 [Move to the Front of Layer] 6.6.9 ■4 [Move to the Back of Layer] 6.6.9 ■7 [Move to the Front] 6.6.9 ■8 [Move to the Back]
Aligning the display positions of multiple figures and objects	➥6.6.10 [Align]
Flipping figures and objects	➥ 6.6.11 ■1 [Flip Vertical] 6.6.11 ■2 [Flip Horizontal]
Rotating figures and objects	➥ 6.6.11 ■3 [Rotate Left] 6.6.11 ■4 [Rotate Right]
Moving the vertexes of figures	➥6.6.12 [Edit Vertices]
Fixing the frame width of the object shape when the object is resized	➥6.6.13 [Edit Objects with Fixed Frame Width]
Selecting whether to adjust the touch areas of objects automatically or manually	➥6.6.14 [Edit Touch Area]
Scaling the texts set on objects in proportion to the object sizes	➥6.6.15 [Adjust Direct Text Size]
Setting categories of figures and objects	➥6.6.19 [Add to Category]
Changing the shapes of objects	➥6.6.20 [Shape Change]

■2 Moving, enlarging, or reducing a figure or object with guidelines

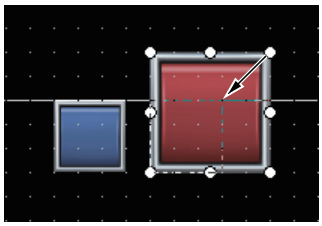
You can move, enlarge, or reduce a figure or object by using the guidelines as the reference.



Move



Enlarge



Reduce

For how to display the guidelines, refer to the following.

➟2.6.9 Displaying guidelines

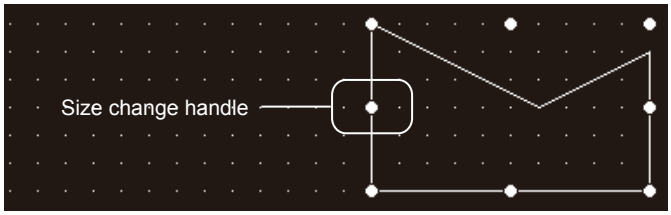
■3 Changing sizes

Change the sizes of figures and objects.

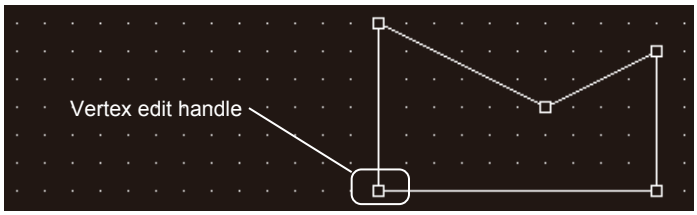
(1) Types of handles

The point that appears around selected figures and objects is called "handle".
There are two types of handles:

- Size change handle
  Use this handle to change the sizes of figures and objects.



- Vertex edit handle
  Use this handle to edit the sides of figures.



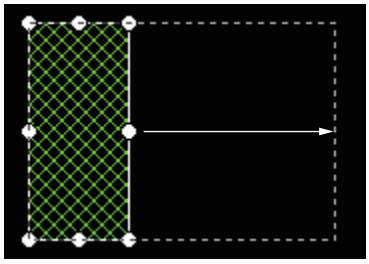
For how to switch between the types of the handles, refer to the following.

➟6.6.12 [Edit Vertices]

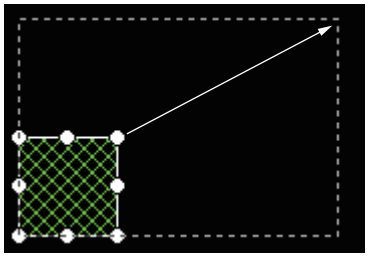
(2) Resizing a figure

Resize a figure.
If the vertex edit handles have been displayed, switch to the size change handles.
The following shows the procedure for resizing a figure.

Step 1 Select a figure.
Step 2 The handles are displayed around the figure.
Step 3 Drag a handle with the mouse cursor to change the size of the figure.



Example) Size change in the horizontal direction

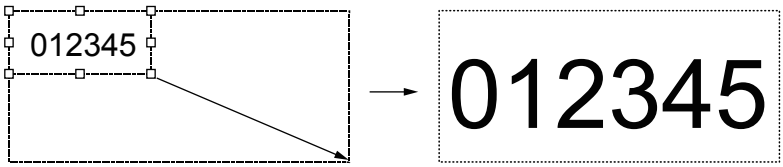


Example) Size change in the vertical and horizontal directions with the base point of the corner

(3) Resizing an object

Resize an object.
If the vertex edit handles have been displayed, switch to the size change handles.
The following shows the procedure for resizing an object.

Step 1 Select an object.
Step 2 The handles are displayed around the object.
Step 3 Drag a handle with the mouse cursor to change the size of the object.



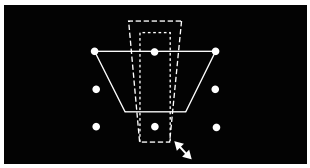
The sizes of the following objects are determined according to the text sizes that the objects display.
When sizes need to be changed, change the text sizes in the setting dialogs for the objects.

- Alarm display
- Historical data list

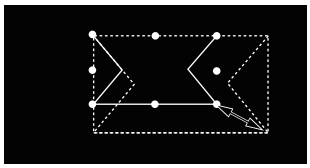
(4) Operations in combination of the [Ctrl] key, the [Shift] key, and the [Alt] key

The size changing method can be changed in combination of the [Ctrl] key, the [Shift] key, and the [Alt] key.

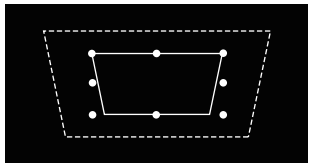
- Dragging handles while pressing the [Ctrl] key
  The sizes of figures and objects can be changed symmetrically about their centers.



- Dragging handles while pressing the [Shift] key
  The sizes can be changed with their horizontal-to-vertical ratios fixed.



- Dragging handles while pressing the [Ctrl] and [Shift] keys
  The sizes of figures and objects can be changed symmetrically about their centers with the horizontal-to-vertical ratios fixed.



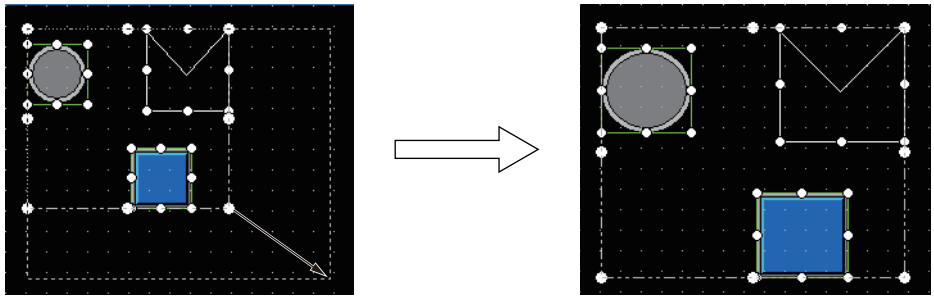
- Dragging handles while pressing the [Alt] key

The [Snap] setting in the [Option] dialog becomes invalid and the sizes can be changed in dots.

➟11.10.5 Customizing the display

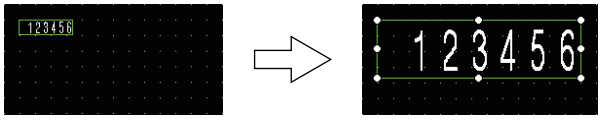
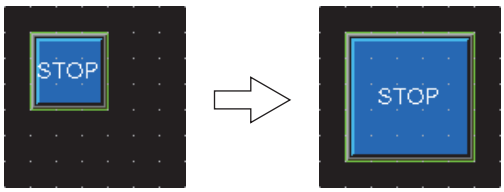
(5) Resizing multiple figures and objects

Resize the selected figures and objects collectively.



(6) Resizing the text displayed on an object

Text other than direct text automatically change their sizes in proportion to the changes of the objects sizes. Whether or not the text sizes are automatically changed depends on the type of the objects.

Tex size (changed/ unchanged)	Object	Description
Changed	• Numerical Display • Numerical Input • Text Display • Text Input • Date Display • Time Display	The text sizes are enlarged by 0.5 to 8 times in proportion to the changes of the object sizes. Example) When the size of an object for numerical display is changed 
Unchanged	• Touch Switch • Bit Lamp • Word Lamp • Comment Display • Historical Data List Display • Alarm Display • Recipe Display (Record List) • Line Graph • Trend Graph • Bar Graph • Statistics Bar Graph • Statistics Pie Graph • Scatter Graph • Historical Trend Graph • Graphical Meter • Panelmeter • Slider • Hyperlink	Change the text sizes with the text size setting of each object. The text sizes are not changed automatically even if the object sizes are changed. Example) When the size of a touch switch is changed 

The font type is automatically switched between 12-dot Standard and 16-dot Standard (Gothic) according to the changed text size.

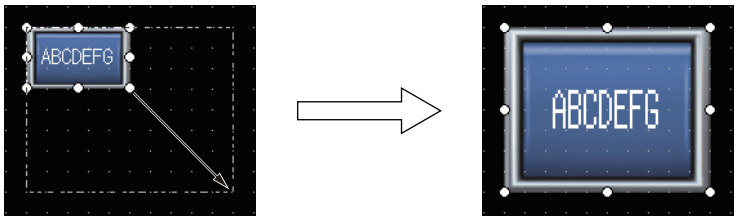
(7) Resizing the text when [Text Type] is set to [Text]

When [Adjust Direct Text Size] is selected, the text displayed on one of the following objects is resized automatically according to the object size.

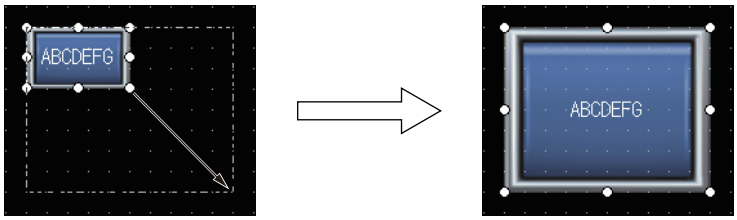
- Touch switch
- Word lamp
- Bit lamp
- Graphical meter
- Panelmeter
- Hyperlink

For how to set [Adjust Direct Text Size], refer to the following.

➟6.6.15 [Adjust Direct Text Size]



When [Adjust Direct Text Size] is enabled



When [Adjust Direct Text Size] is disabled

The font type is automatically switched between 12-dot Standard and 16-dot Standard (Gothic) according to the changed text size.

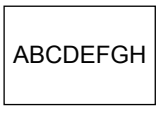
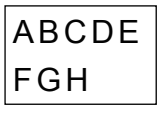
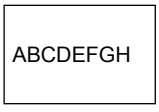
(8) Resizing the text when [Text Type] is set to [Comment]

When [Adjust Text Size] is selected in the object setting dialog, the text is resized automatically according to the object size.
(The text displayed in a Windows font is not enlarged automatically, and is reduced differently from the one displayed in a non-Windows font.)
The minimum text size to be adjusted is settable with [Minimum Size].
The following shows the objects for which [Adjust Text Size] and [Minimum Size] are settable.

- Touch switch
- Bit lamp
- Word lamp
- Comment display
- Historical data list display
- Alarm display
- Recipe display (Record list)
- Graphical meter
- Hyperlink

If a part of the text extends off the display frame, the text appears differently according to the setting of [Adjust Text Size] as shown below.

<table>
<tr><th rowspan="2">Text to be displayed on the object</th><th colspan="2">[Adjust Text Size]</th></tr>
<tr><th>Selected</th><th>Deselected</th></tr>
<tr><td rowspan="2">Display frame

Character string to be displayed
 </td><td>• Font other than a Windows font
The text is resized automatically to fit on the display frame.
  </td><td>• Font other than a Windows font
The portion of the character string that has been extending off the frame starts a new line to fit in the display frame.
  </td></tr>
<tr><td>• Windows font
The text is resized automatically to fit on the display frame.
  </td><td>• Windows font
Even if a part of the text extends off the display frame, the text does not wrap to the next line.
The part extending off the frame is not displayed.
(If a character straddles the frame, only the part of the character within the frame is displayed.)
 </td></tr>
</table>

Text to be displayed on the object	[Adjust Text Size]	
	Selected	Deselected
Display frame Character string to be displayed ABCDEFGH	• Font other than a Windows font After the text is displayed in the size specified with [Minimum Size], if a part of the text still extends off the display frame, the part is not displayed. (If a character straddles the frame, the character is not displayed.) The text is displayed left aligned. 	• Font other than a Windows font After the text wraps to the next line, if a part of the text still extends off the display frame, the part is not displayed. (If a character straddles the frame, the character is not displayed.)
	• Windows font After the text is displayed in the size specified with [Minimum Size], if a part of the text still extends off the display frame, the part is not displayed. (If a character straddles the frame, only the part of the character within the frame is displayed.) The text alignment is not changed. 	• Windows font Even if a part of the text extends off the display frame, the text does not wrap to the next line. The part extending off the frame is not displayed. (If a character straddles the frame, only the part of the character within the frame is displayed.)

If the HG font is used, the appearance of the font may change after the change of the size.
If the appearance has been changed, adjust the size of the object so that the appearance returns to that of the HG font.

(9) Resizing the shape of an object

The shape of an object is resized according to the object size.
The resize behavior of the shape frame width varies according to the shape type and the frame width fixing setting.

Shape type		Resize behavior of the shape frame width
Library	System Library	The resize behavior of the frame width varies according to the frame width fixing setting. ➟6.6.13 [Edit Objects with Fixed Frame Width] • When the frame width fixing setting is enabled For the object shape to which the setting is applicable, resizing the object does not change the frame width. For the object shape to which the setting is inapplicable, resizing the object resizes the frame width. • When the frame width fixing setting is disabled Resizing an object resizes the frame width.
	My Library	Resizing an object resizes the frame width.

Shape type	Resize behavior of the shape frame width
Basic Figure	The resize behavior of the frame width varies according to the shape state. For the shape with a fixed frame width, the shape name includes [Fixed Width]. • For the object shape with a fixed frame width Resizing an object does not change the frame width. • For the object shape with a variable frame width Resizing an object resizes the frame width.

(10)Resizing the touch area

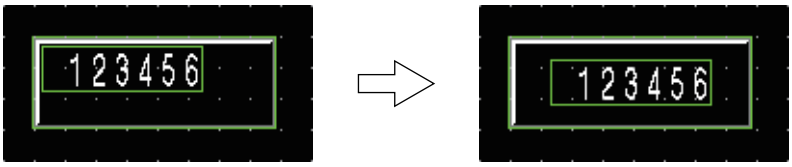
When you set a shape for an object, resizing the object may make the touch area and the shape different-sized and misaligned.

In such a case, select the object and perform the following operations to adjust the touch area and the shape.

• Centering the touch area in the shape

Right-click the object and select [Centering] from the right-click menu.

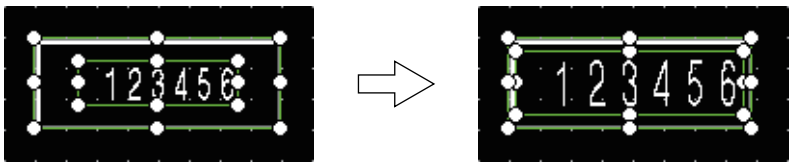
The touch area is centered in the shape.



• Editing the touch area and the shape separately

Select the object, and then select [Edit] → [Edit Touch Area] → [Manual Edit] from the menu.

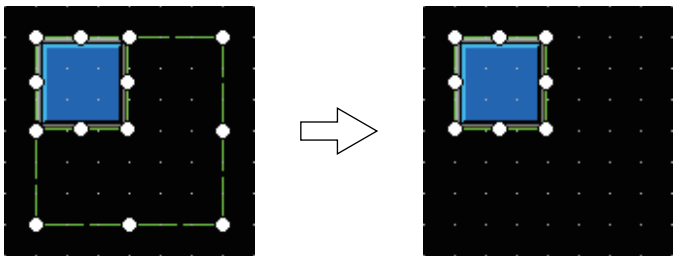
The sizes and display positions of the touch area and the shape can be edited separately.



• Making the shape and the touch area fit into each other

Select the touch switch, and then select [Edit] → [Edit Touch Area] → [Self-adjust] from the menu.

The shape and the touch area fit into each other.



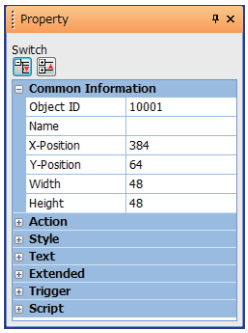
• Always adjusting the shape and the touch area automatically

Select [Edit] → [Edit Touch Area] → [Constant Self-adjust] from the menu.

For all objects, their shapes and touch areas are always adjusted automatically.

■4 Changing the attributes in the property sheets

Figure and object settings can be changed in the property sheets.



For how to display the property sheets and set in the property sheets, refer to the following.

➟11.9 Checking and Editing Settings of Screens and Objects (Property Sheet)

6.5.4 Common setting for figures

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➟■1 Lamp attribute setting

■1 Lamp attribute setting

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(1) Figures for which the lamp attributes can be set

The following lists the figures for which the lamp attributes can be set.
For how to set the lamp attributes, refer to the setting dialog of each figure.

Figure	Reference
Line	➟7.3 Drawing a Line
Freeform line	➟7.4 Drawing a Line Freeform
Rectangle	➟7.5 Drawing a Rectangle
Polygon	➟7.6 Drawing a Polygon
Circle	➟7.7 Drawing a Circle
Piping	➟7.11 Drawing a Piping

(2) Display and operation when the lamp attribute is set

The figure having the lamp attribute setting changes its display color and operates in the same manner as a bit lamp.

(3) The maximum number of figures per screen

When figures that have the lamp attributes set for them are placed on the screen editor, they are counted as lamps.
For the maximum number of lamps per screen, refer to the following.

➟1.2.3 ■3 Functions arrangeable on the screen

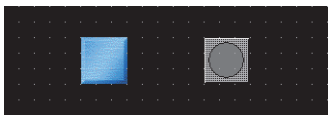
6.5.5 Common setting for objects

➟■1 Setting object shapes
■2 Setting conditions
■3 Superimposition
■4 Setting data operations

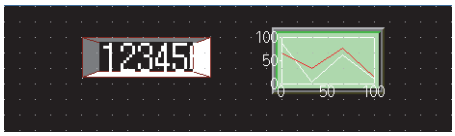
■1 Setting object shapes

Setting shapes for objects spruces up the displays of the objects.
There are two types of shapes: those for external forms such as a lamp and those for frames, such as a numerical display and graph.

• Shapes for external forms



• Shapes for frames



(1) Specifications of object shapes

(a) **Image types that can be set for objects**
Images can be selected from the basic figures, library, or parts

(b) **Applying shapes to two or more conditions or both the on and off statuses for a single object**
Shapes can be applied to each condition, the on status, and the off status.
However, the basic figures, library, and parts cannot be mixed.

(c) **Selecting shapes from the favorite in the library, my library, or parts**
Shapes cannot be selected if they have not been registered in the library or as parts.
For how to register shapes in the library and as parts, refer to the following.

➟5.9 Registering Parts ([Parts])
8.1.2 ■2 Registering the data in the library

(2) How to use object shapes

The following shows the procedure for setting a shape for an object.
Example) setting a shape for a bit lamp

Step 1 Place a bit lamp on the screen editor and display the setting dialog.

Step 2 Click the [Shape] button in the [Device/Style] tab to display the [Image List] dialog.

➟(3) [Image List] dialog

Step 3 In the [Image List] dialog, select the shapes for the on and off statuses.

Step 4 After selecting the shapes, click the [OK] button of the [Image List] dialog and setting dialog to complete the shape settings.

(3) [Image List] dialog

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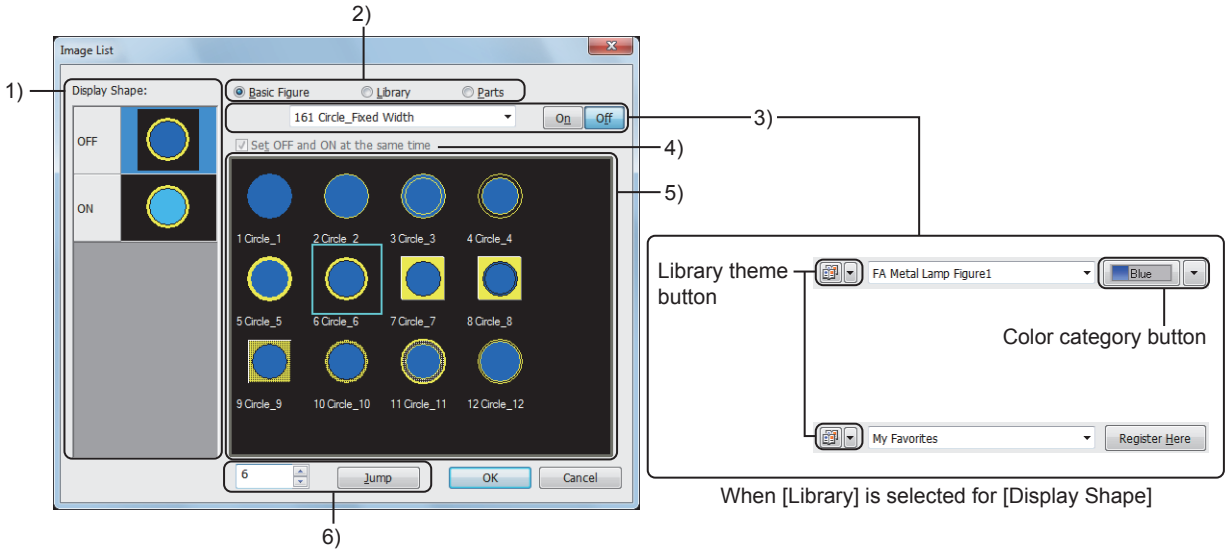
This section explains each setting item using the setting dialog for a bit lamp.
Different types of objects have different necessary setting items. Refer to the setting items explained in this section that are provided for the object to be used.



When [Library] is selected for [Display Shape]

1) **[Display Shape]**
Displays the image for each condition or the on/off status.
When selecting different images for each condition, or for the on and off statuses, select the target object with this setting item.

2) **Image types**
This item is not displayed when the target object has one selectable image type only.
Select the image type of the shapes.
The following shows the items to be selected.
- [Basic Figure]
- [Library]
- [Parts]

3) **Types of the basic figure or library**
Can be set if [Basic Figure] or [Library] is selected for the image type.
Select shape types from the basic figure or library.

Item	Description
[ON] button, [OFF] button	Switches between displaying the on status image and off status image in [Display Shape] and the shape image list.
Library theme button	Can be set only when [Library] is selected for the image type. Select the type of the library.
Color category button	Changes the color category of the shape image list.
[Register Here] button	Can be set only when items other than [System Library] are selected with the library theme button. Registers in the favorite or my library the shapes selected for [Display Shape] and in the shape image list.

4) **[Set OFF and ON at the same time], [Set every state at the same time]**
Different objects have different setting items.
- [Set OFF and ON at the same time]
  Sets the same shape for both objects displayed in [ON] and [OFF] of [Display Shape].
- [Set every state at the same time]
  Sets the same shape for all the conditions displayed in [Display Shape].

5) **Shape image list**
Select the shape to be set for the object.

6) **[Jump] button**

Specify a number shown in the shape image list and click the [Jump] button to select the shape associated with the specified number.

■2 Setting conditions

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If conditions are set, colors, shapes, and characters set for the object can be changed according to the on/off statuses of bit devices and the values of word devices.

(1) Specifications of conditions

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(a) Settable conditions

The following lists the conditions that can be set for objects.

- ON or OFF status of bit devices
- Values of word devices
- Values of word devices that the objects monitor

(b) Objects for which the conditions can be set

The following shows the objects for which the conditions can be set and the conditions that can be set for each object.

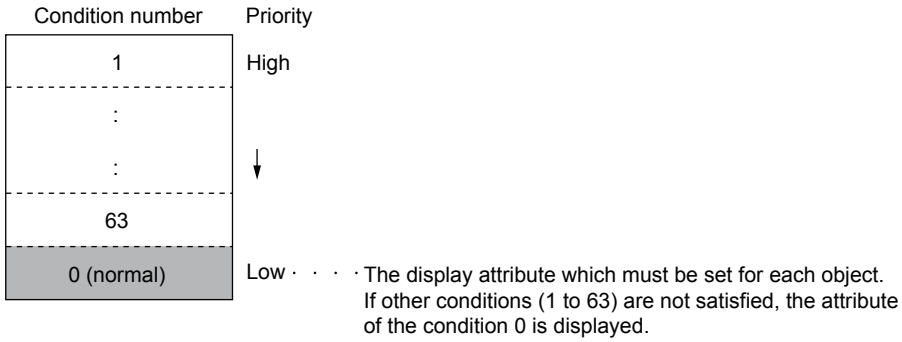
Object	Condition
Word lamp	• On and off statuses of bit devices • Values of word devices • Values of word devices that the objects monitor
Numerical display	
Parts display (Word part)	
Parts movement (Word part)	
Numerical input	• Values of word devices • Values of word devices that the objects monitor
Comment display (Word comment)	
Level object	
Panelmeter	
Scatter graph	

(c) The maximum number of conditions set for a single object

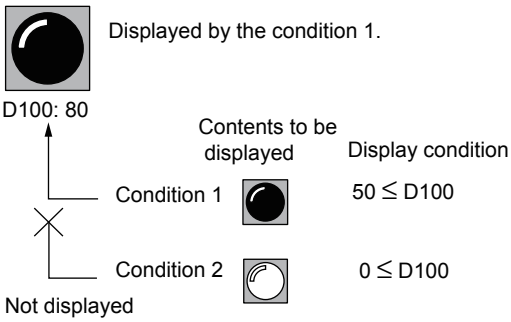
Up to 64 types of conditions can be set.

(d) Order of the priority given to displays

If two or more conditions overlap, the display that results from a satisfied condition with smaller No. is prioritized.
If all the conditions 1 to 63 are not satisfied, the display for the condition 0 is shown.



Example) If condition 1 and condition 2 are satisfied simultaneously



(2) How to use conditions

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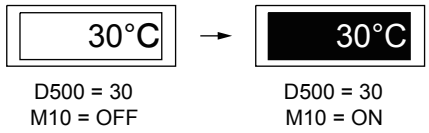
(a) The operating examples of conditions

• Changing the display according to the on and off statuses of a bit device

Example) Setting the following conditions for a numerical display
If M10 is on, the shape color changes to black.

· Word device being monitored: D500 (Temperature)
· Bit device set to the condition: M10 (Turns on when an error occurs)



D500 = 30
M10 = OFF

D500 = 30
M10 = ON

Since M10 turned on due to an error, the display is changed.

• Changing the display according to the value of a word device

Example) Setting the following conditions for a numerical display
If condition 1, 5 <= D100 <= 9, is true, the shaped color changes to gray.
If condition 2, 10 <= D100, is true, the shape color changes to black.

· Word device being monitored: D500 (Production quantity)
· Word device set for the condition: D100 (Quantity of defective products)

D500 = 30
D100 = 0

D500 = 150
D100 = 7
5 <= D100 <= 9

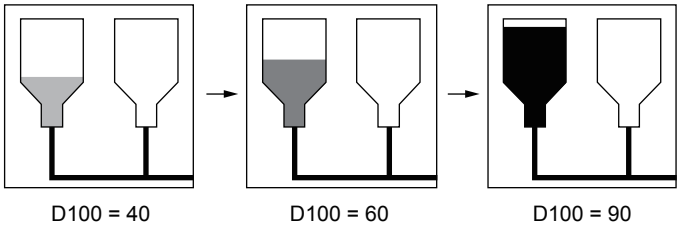
D500 = 200
D100 = 12
10 <= D100

The display is changed when quantity of defective products exceeds a specified amount.

• Changing the display according to the value of a word device being monitored

Example) Setting the following conditions for a level display
If condition 1, D100 = 40, is true, the shape color changes to light gray.
If condition 2, D100 = 60, is true, the shape color changes to gray.
If condition 3, D100 = 90, is true, the shape color changes to black.

· Word device being a monitored: D100



D100 = 40 D100 = 60 D100 = 90

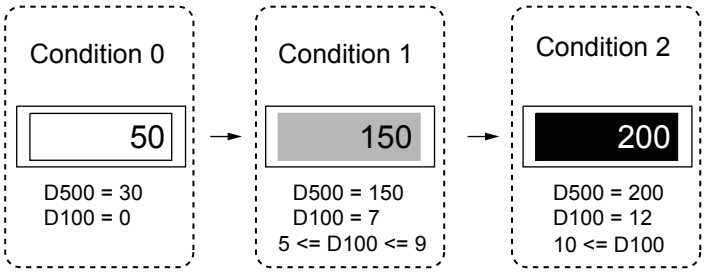
Changing the color according to the value of a word device being monitored

(b) Setting example of conditions

The following shows a setting example of conditions.
For details of the setting items, refer to the setting dialog of each object.
Example) Setting condition 0 to condition 2 for a numerical display

• If condition 1, 5 <= D100 <= 9, is true, the shape color changes to gray.
• If condition 2, 10 <= D100, is true, the shape color changes to black.

· Word device being monitored:
D500 (Production quantity)
· Word device set for the condition:
D100 (Quantity of defective products)



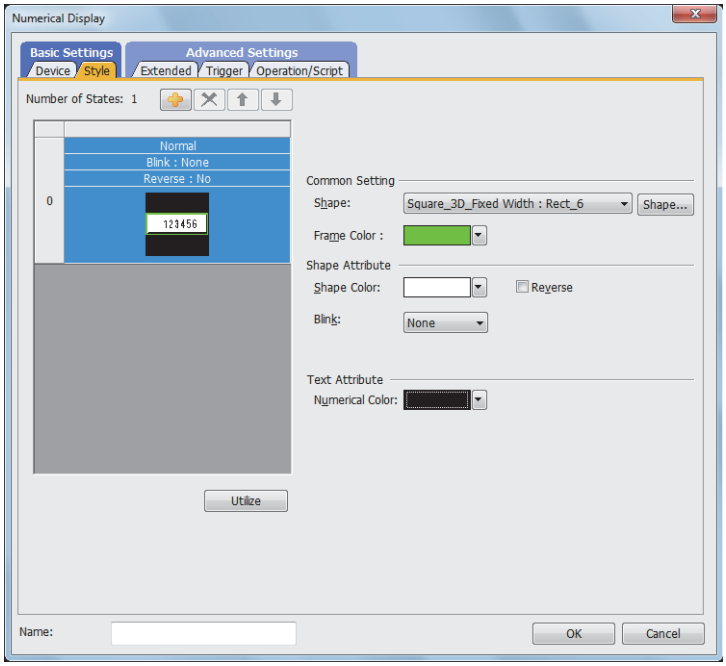
The display is changed when quantity of defective products exceeds a specified amount.

Step 1 Place a numerical display on the screen editor and display the setting dialog.

Step 2 Set condition 0 in the [Style] tab.

If both condition 1 and 2 have not been satisfied, the shape which has been set for condition 0 is displayed.

- Numerical Color: Black
- Blink: None
- Reverse: Unchecked
- Shape Color: White
- Frame Color: Green

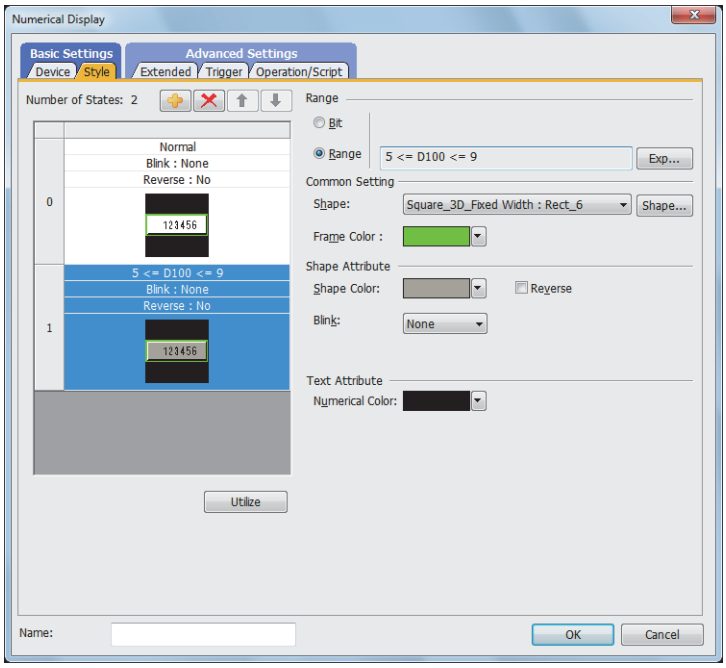


Step 3 Set condition 1 in the [Style] tab.

- Click the add button to create condition 1.
- Condition 1: 5 < = D100 < = 9
- Numerical Color: Black
- Blink: None
- Reverse: Unchecked
- Shape Color: Gray
- Frame Color: Green

For the setting dialog displayed by clicking the [Range] button, refer to the following.

➟(3) [Edit Range] dialog

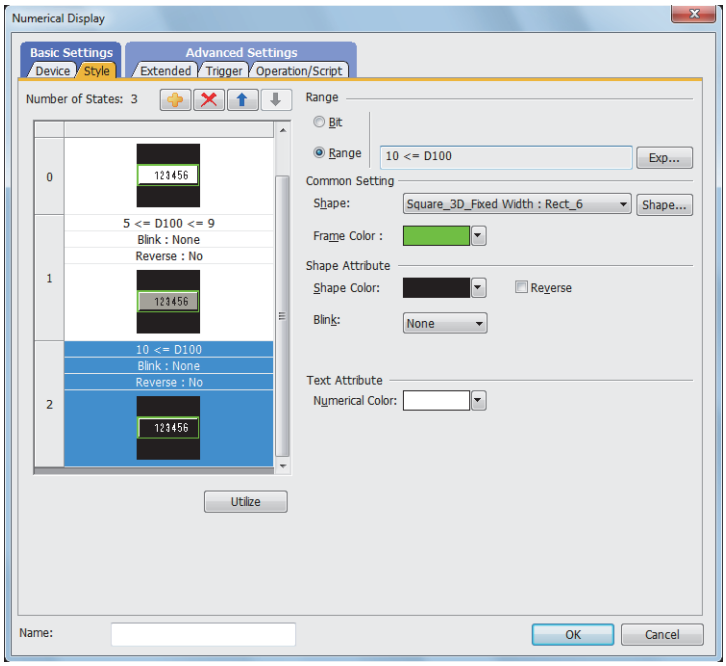


Step 4 Set condition 2 in the [Style] tab.

- Click the add button to create condition 2.
- Condition 2: 10 < = D100
- Numerical Color: White
- Blink: None
- Reverse: Unchecked
- Shape Color: Black
- Frame Color: Green

For the setting dialog displayed by clicking the [Range] button, refer to the following.

➟(3) [Edit Range] dialog



Step 5 Click the [OK] button of the setting dialog to complete the shape settings.

(c) Display example of overlapping conditions

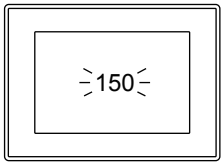
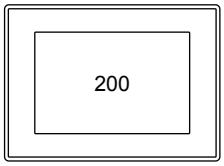
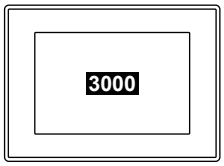
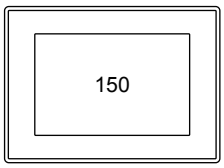
If conditions are overlapped, the condition of smaller No. is prioritized.

Example)

Setting conditions for a numerical display

• Monitored device: D500
• Data type: Signed 16-bit binary data

Order of priority given to operations when they overlap	Condition No.	Value range with which the set color is displayed	Numerical value color
High ↓ Low	1	M10: ON	Red (with blink)
	2	200 <= $V <= 300	Blue
	3	1000 <= $V	Yellow (inverted)
	Condition 0 (normal)	-	Green

Condition 1	If M10 turns on, the numerical value is displayed in red (with blink).	
Condition 2	If the value of the monitor device is 200 to 300 (200 <= $V <= 300), the numerical value is displayed in blue.	
Condition 3	If the value of the monitor device value is 1000 or greater (1000 <= $V), the numerical value is displayed in yellow (inverted).	
Condition 0 (normal)	If the condition is other than condition 1 to 3, the numerical value is displayed in green.	

(3) [Edit Range] dialog

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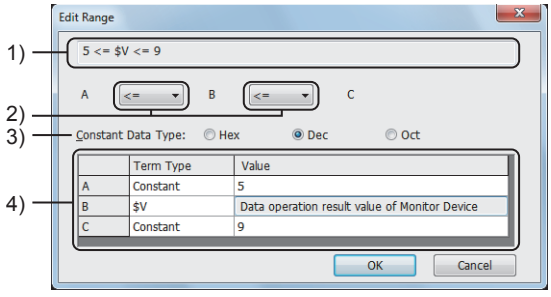
Displayed by clicking the [Range] button in the object's setting dialog.
Depending on the type of the object, the setting items in the setting dialog differ.
Refer to the setting items explained in this section that are provided for the object to be used.



1) **Range expression**
Range expression that has been set.

2) **Relational operators**
Select relational operators used in the range expression.
The following shows the items to be selected.
• [<]: The left side value is smaller than the right side value.
• [<=]: The left side value equals or smaller than the right side value.
• [==]: The left side value equals the right side value.

• [!=]: The left side value and the right side value are different.
• [None]: Not compared.

3) **[Constant Data Type]**

Select the data type if [Constant] has been selected for [Term Type] of the range expressing setting.
This item is available if other than [Real] is set for [Data Type] when setting [Range] of [Trigger Type].
The following shows the items to be selected.

• [Hex]
• [Dec]
• [Oct]

4) **Range expression setting**

Item	Description
[Term Type]	Select the type and value of each side (A to C) of the range expression. The following shows the items to be selected. • [Constant]: Operates with constants. • [$V], [$W], monitor device: Operates the value of the target word device for monitoring or writing. If a monitor device is selected, the target word device that has been set is displayed. Set this item in the range expression as it is compulsory. • [Other Device]: Operates the value of a word device. The data type is the same as the device to be monitored ([$V], [$W], monitor device)
[Value]	Select the value of each side (A to C) of the range expression. Depending on the [Term Type], the setting item differs. • When [Constant] is selected: Set a numerical value. • If [$V], [$W], or monitor device: The target device for monitoring is displayed. • When [Other Device] is selected: Set a device.

Point

Device range setting when [Data Type] is [Real]

For a device whose [Data Type] is [Real], the GOT and a controller handle the device value a little differently.
If you set a precise input condition using [==] or [!=], the input range may not be checked properly.
When checking the input range with such a device, do not use [==] and [!=] to set the input condition.
For the data type specifications, refer to the following.

➟1.2.7 ■2 Data type of devices

■3 Superimposition

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Windows can be displayed in superimposition in layers and on the same screen.

➟(1) Specifications of superimposition
(2) Using layers
(3) Not using layers
(4) Special superimposition
(5) Precautions

(1) Specifications of superimposition

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In superimposition, figures and objects are placed and displayed in the same layer or multiple layers.
For the layers, refer to the following.

➟1.2.3 ■2 (5) Layer

(a) Display method

The following shows how to display figures and objects in superimposition.

Display method	Description	Windows for which superimposition is enabled
Superimposing in the same layer	**GOT Graphic Ver.2** The object stacking order on the GOT conforms to that on GT Desiger3. **GOT Graphic Ver.1** If [Adjust object display order in GOT to the one in GT Designer3] of the [Type Setting] dialog is checked, the display order arranged on GT Designer3 is ensured when the figures and objects are displayed on the GOT. ➟5.1.5 [Type Setting] dialog If objects are superimposed in the same layer, the objects are not displayed or operate normally depending on the type of objects. For the objects that are displayed and operate normally in the same layer, refer to the following. ➟(3) Not using layers	• Base screen • Overlap window • rimpose window • Dialog window • Key window • Mobile Screen
Superimposing in the use of the front and back layer	Figures and objects can be displayed in superimposition if they are placed separately in the front layer and the back layer. For the superimposition using the layers, refer to the following. ➟(2) Using layers (4) Special superimposition	• Base screen • Overlap window • rimpose window • Key window For windows other than those listed above, the object stacking order on the GOT may differ from that on GT Desiger3 because the layers are combined into one layer. In such a case, enable the object stacking order adjustment so that the object stacking order on the GOT conforms to that on GT Desiger3. ➟5.1.5 [Type Setting] dialog

(b) Figures and objects that are displayed in the topmost position in the layer at all times

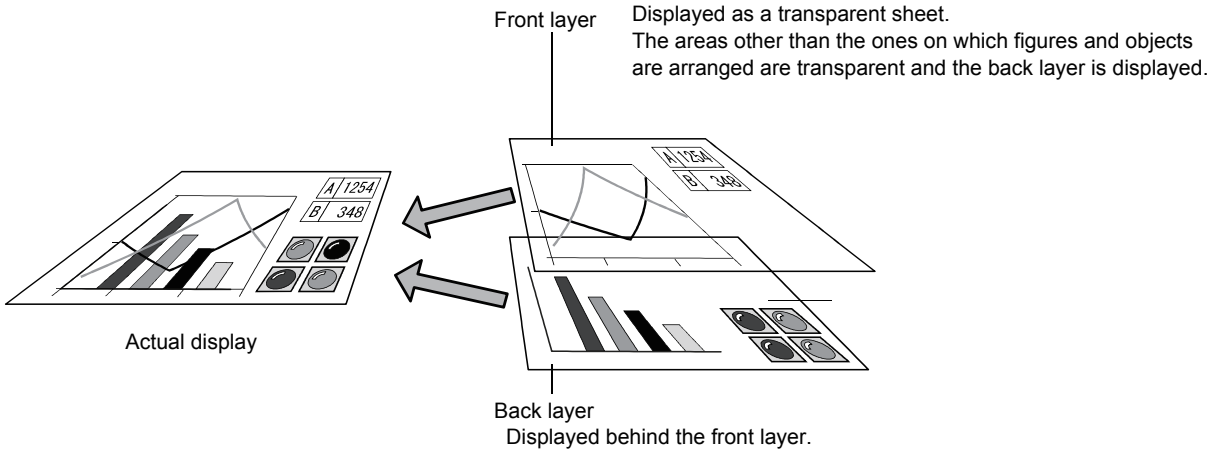
The following figures and objects are displayed in the topmost position in the layer at all times.

- Alarms: If [Display Type] is set to [Flow]
- Scatter graphs: If [Store Memory] is set
- Figures drawn by the free figure drawing function of the object scripts

(2) Using layers

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A base screen and a window screen consist of two layers: the front layer and the back layer.
Two objects can be superimposed by placing objects and figures separately in each layer.

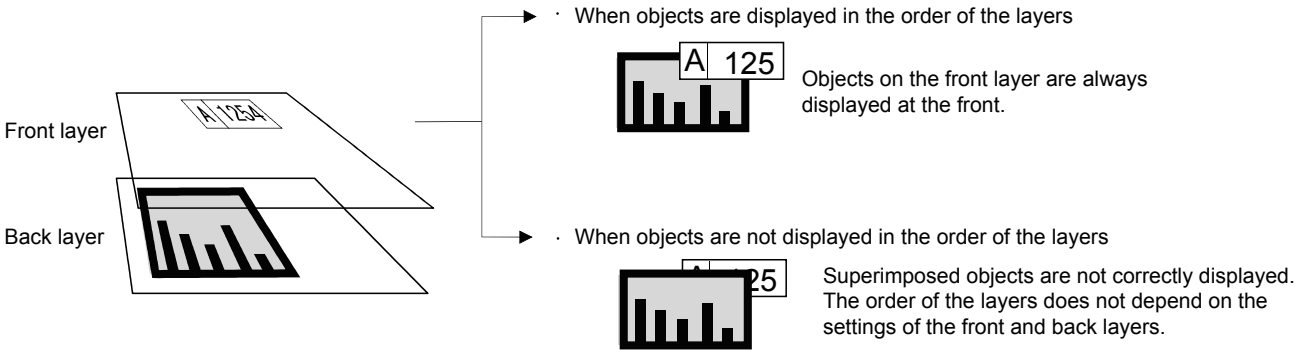


(a) Figures and objects which can be placed in each layer

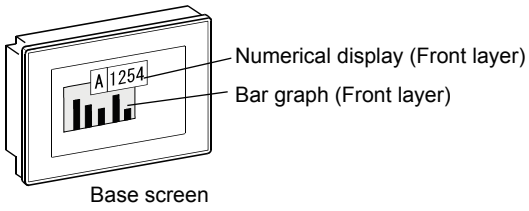
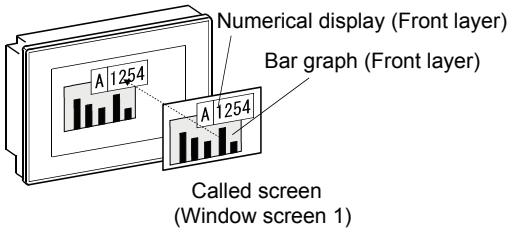
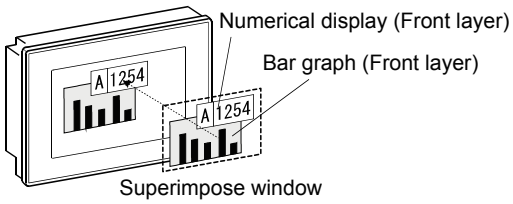
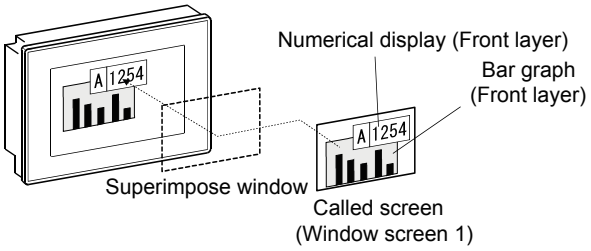
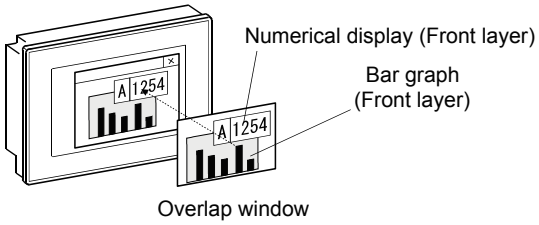
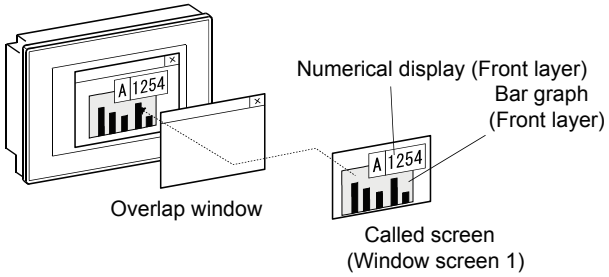
Layer	Available figures and objects
Front layer	Figures (Pipings with the lamp attribute), objects
Back layer	Figures, objects

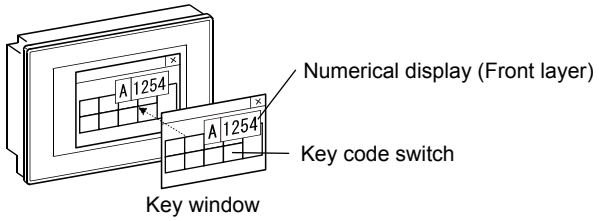
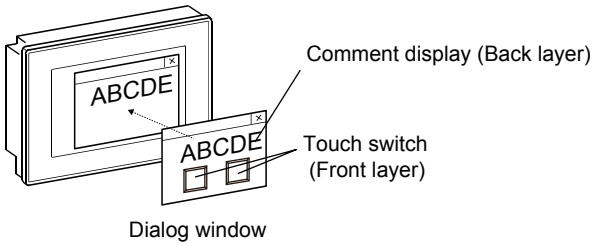
(b) Screens on which the layers are enabled, and the display order of figures and objects

The display order of figures and objects placed in the front layer and back layer may or may not follow the order of the layers.



The following shows the display order of figures and objects on each screen.

Screen type	Layer	Display order of objects on the GOT
Base screen	Valid	Displayed in order of the layers. 
Windows called on base screens by the set overlay screen function		Displayed in order of the layers. 
Superimpose window	Valid	Displayed in order of the layers. 
Windows called on superimpose windows by the set overlay screen function		Displayed in order of the layers. 
Overlap window	Valid	Displayed in order of the layers.  With GT23, the layers are combined into a single layer and displayed.
Windows called on overlap windows by the set overlay screen function		Displayed in order of the layers.  With GT23, the layers are combined into a single layer and displayed.

Screen type	Layer	Display order of objects on the GOT
Key window	Valid	Displayed in order of the layers.  With GT23, the layers are combined into a single layer and displayed.
Dialog window	Invalid	The layers are combined into a single layer and displayed. 

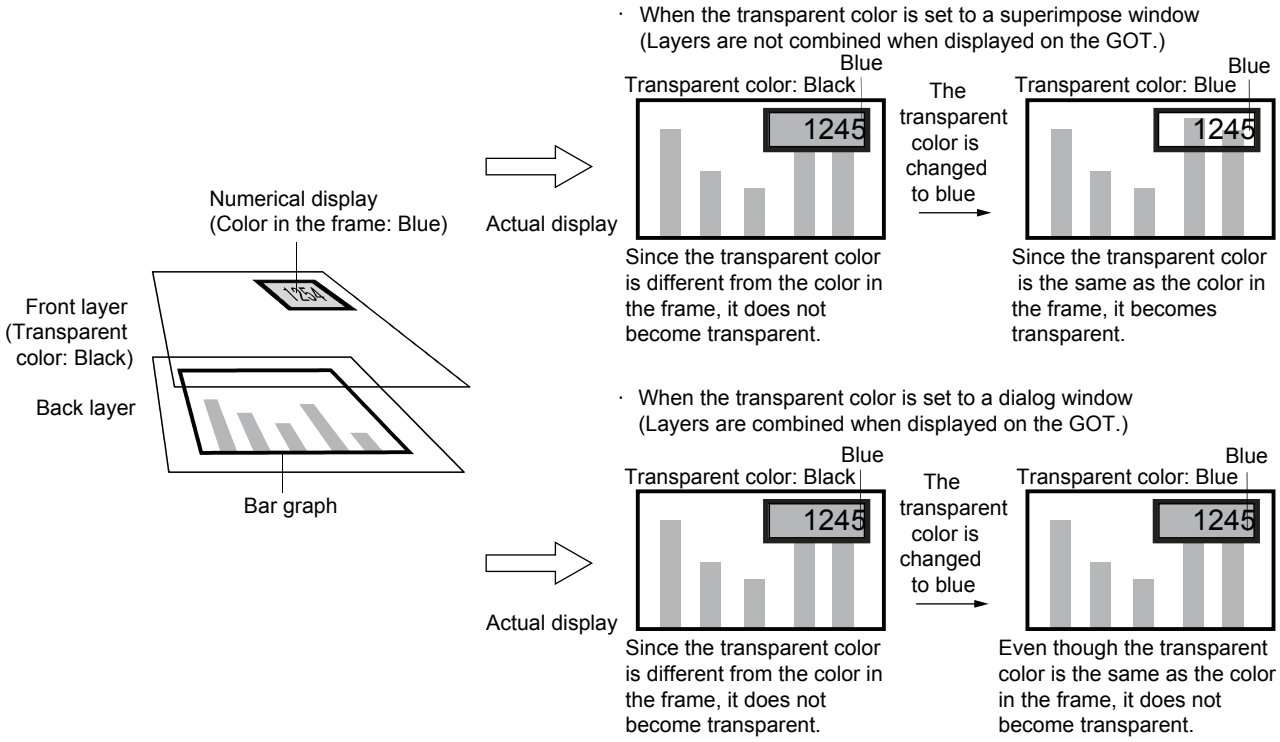
(c) Transparent color

GOT Graphic Ver.1

The transparent color is set for the front layer.
The part of an object that is in the same color as the transparent color has transparency.
To make an object transparent, match the transparent color with the color of the part of the object.
Set the transparent color for the front layer in the [Screen Property] dialog.
For how to set the [Screen Property] dialog, refer to the following.

➟2.7 Changing Screen Property

This function is not available on windows, such as a dialog window, where the layers are combined into a single one when they are displayed on the GOT.
If an object for which the same color as the transparent color of the front layer is set is placed on windows such as a dialog window, the object is displayed in the set color without transparency.
Example) If transparent colors are set for superimpose windows and dialog windows



(d) **Superimposing two or more windows using the layers**

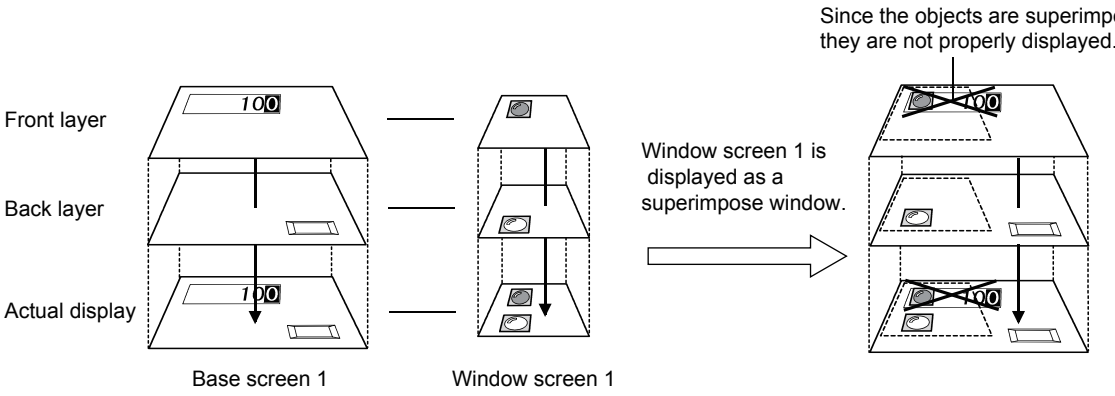
The following shows how the layers and the transparent colors act when superimpose windows and set overlay screen function are used to superimpose and display two or more windows.

• Layers

The front layers and back layers that have been set for two or more windows are combined into a single front layer and back layer when the screen are superimposed.

Superimposed objects on the combined layers may not be displayed or operate normally.

When superimposing windows, prevent the objects in the front layers or back layers from being superimposed.



Certain objects can be displayed and operate normally.

For the objects that can be superimposed in the same layer, refer to the following.

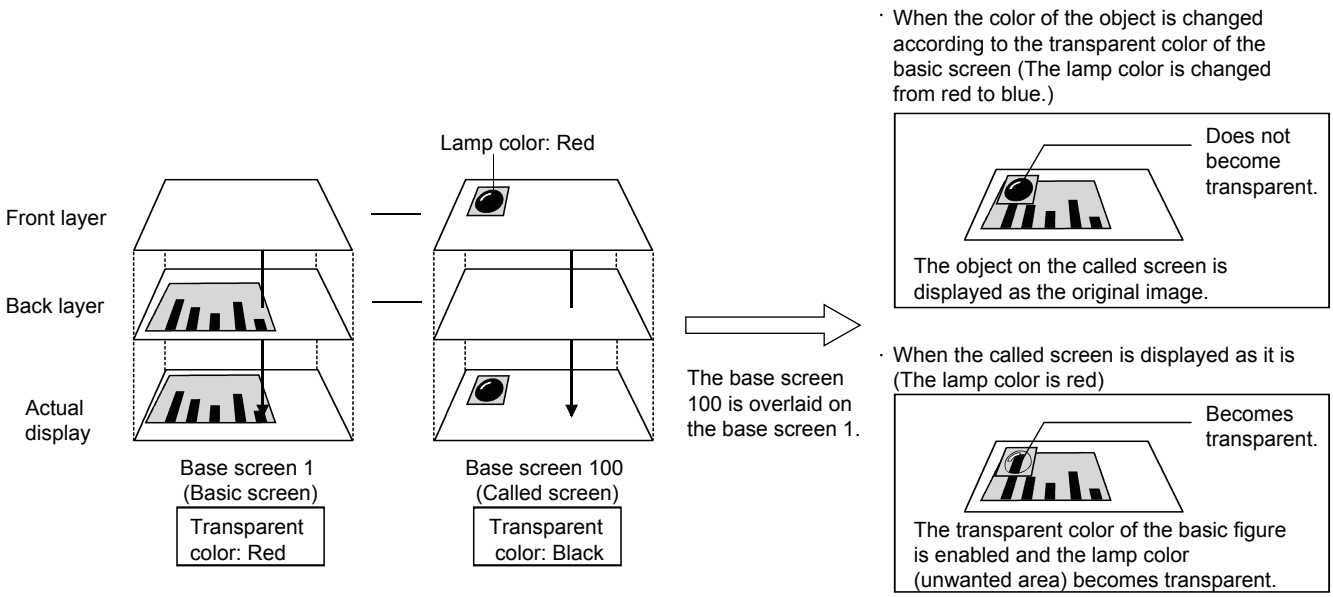
➟(3) Not using layers

• Transparent colors

GOT Graphic Ver.1

The transparent colors for superimpose windows and called windows are ignored and the transparent colors for the base screens are enabled.

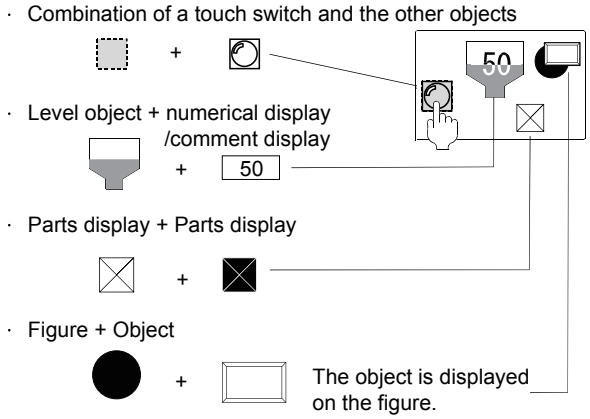
To make the objects transparent, match the colors with the transparent colors for the base screens.



(3) Not using layers

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

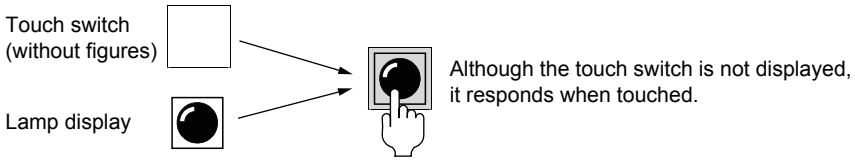
Certain objects can be displayed and operate normally even when they are superimposed in the same layer.
The following lists the objects that can be superimposed in the same layer.



Combination	Reference
Touch switch and the other objects	(a) Superimposition with touch switches
Level object, numerical display, comment display	(b) Superimposition with level objects
Parts display and parts display	(c) Superimposition of parts displays

(a) Superimposition with touch switches

Touch switches without figures and texts can be used in superimposition with the other objects.



The following lists the objects that can be superimposed with touch switches.

Objects that can be superimposed with touch switches			
Lamp	Numerical display*1	Numerical input	Text display*1
Text input	Date display	Time display	Comment display
Parts display	Parts movement	Historical data list display	Alarm display*2
Level object	Panelmeter	Line graph	Trend graph
Bar graph	Statistics bar graph	Statistics pie graph	Scatter graph
Historical trend graph	Hyperlink		

*1 To superimpose a numerical display and a text display, place them in separate layers.

➟(2) Using layers

*2 An alarm display with a touch operation arranged for it cannot be superimposed with touch switches.

When superimposing touch switches with objects, do not make the following settings for the touch switches.

- Selecting items other than [None] for [Shape] in the [Style] tab
- Setting [Reverse switch area] if [None] has been selected for [Shape] in the [Style] tab
- Selecting [Text] for [Text Type] in the [Text] tab and then inputting a text to [Text]

For how to set touch switches, refer to the following.

➟8.2 Placing a Touch Switch

(b) Superimposition with level objects

The numerical display, numerical input, and comment display objects can be superimposed on the level object.
Multiple objects can be superimposed on one level object.

GOT Graphic Ver.2

For a level object, the boundary color cannot be set.
For a numerical display or comment display, [Display Mode] is fixed to [Transparent].
For superimposing objects on a level object, refer to the following.

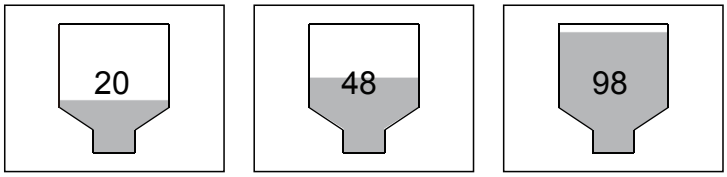
➟8.23.2 How to use the level object (GOT Graphic Ver.2)

GOT Graphic Ver.1

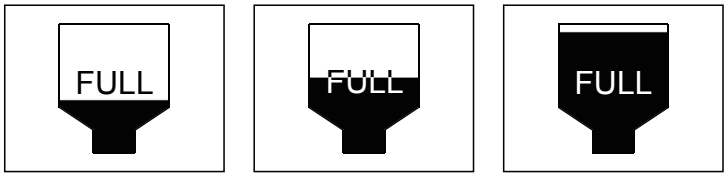
For superimposing objects on a level object, refer to the following.

➟8.23.3 How to use the level object (GOT Graphic Ver.1)

Depending on the display mode of the objects with which levels objects are superimposed, the displays of the level objects differ.
The following shows application examples.
Example 1) When [Display Mode] is set to [Transparent] for a numerical display, numerical input, or comment display
The numerical display color and text color are displayed as is.



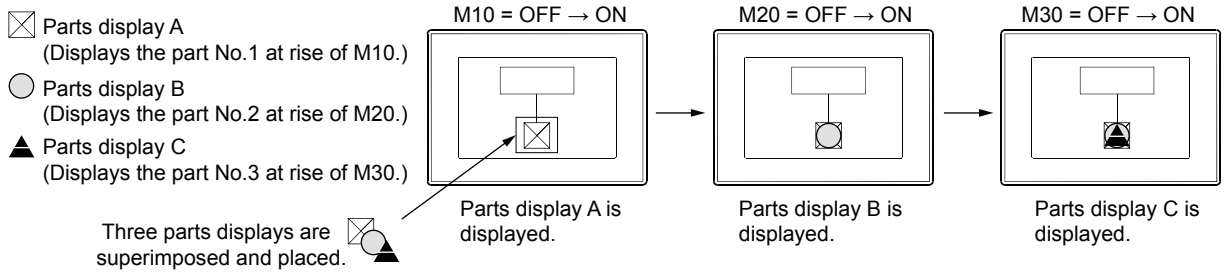
Example 2) When [Display Mode] is set to [XOR] for a numerical display, numerical input, or comment display
When the target object is superimposed on the fill color portion of the level object, the color of the overlapping portion is inverted in the target object.
However, inputting a value on the numerical input does not apply the fill color of the level object to the overlapping portion of the numerical input.
The new value is not reflected to the display until you touch the numerical input again.



(c) Superimposition of parts displays

GOT Graphic Ver.1

Two or more parts can be displayed in superimposition.
Select [Overwrite] for [Display Mode] of parts displays.



(4) Special superimposition

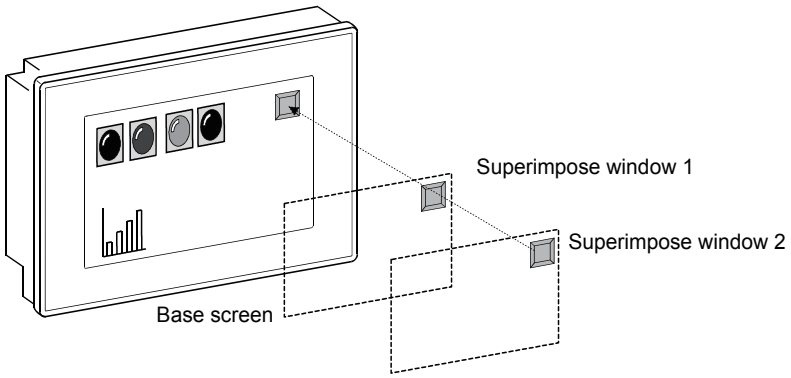
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

By using superimpose windows and the set overlay screen function, and multiple placements on the same screen, up to eight objects including touch switches, numerical inputs, and character string inputs set for each window can be superimposed.

(a) Special method for superimposing touch switches, numerical inputs, and character string inputs

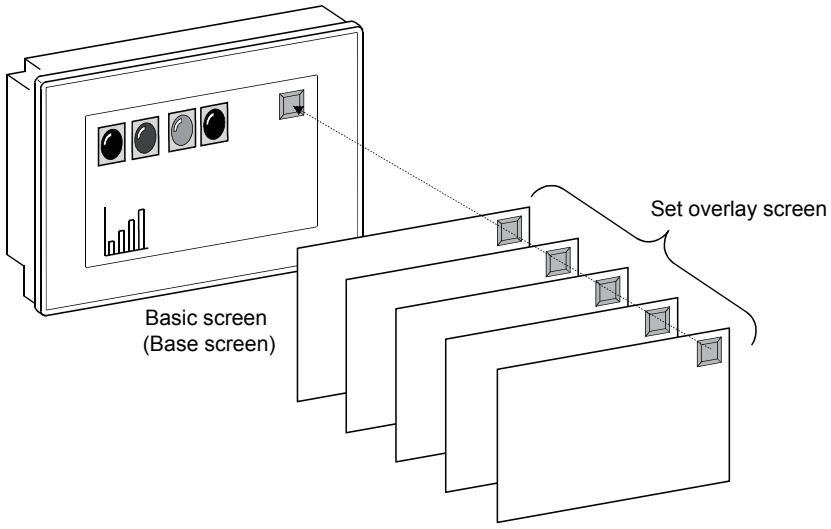
- Superimposition with superimpose windows
  Superimpose windows are superimposed in front of the base screen, and displayed as a single window.
  For the specifications of the superimpose window, refer to the following.

➟1.2.3 Screen types and the specifications

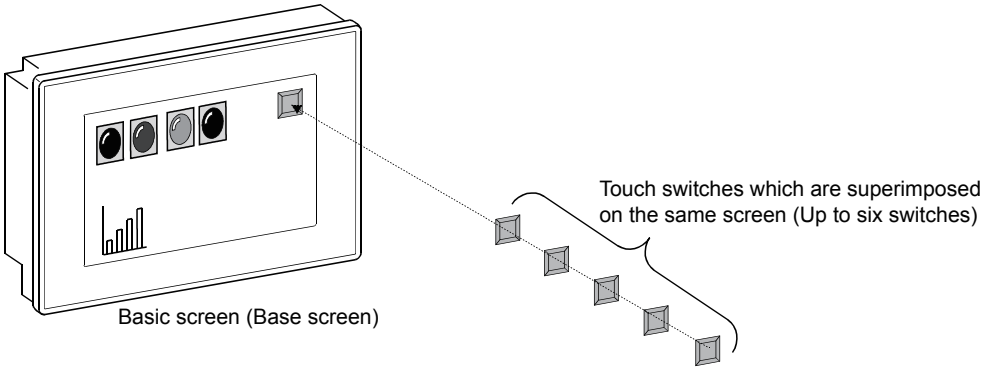


• Superimposition with the set overlay screen function
Calling base screens and window screens on basic screens (base screens and superimpose windows), this function displays them as a single screen.
For how to set the set overlay screen function, refer to the following.

➟8.29 Placing Another Screen on a Screen



• Superimposition by multiple placements on the same screen (for touch switches only)
Up to six touch switches on the front layer and back layer of a screen can be superimposed.



Point

Setting two or more actions for a single touch switch

If switches are used, a set of actions arranged when two or more touch switches are superimposed can be imposed on a single touch switch.
For how to set touch switches, refer to the following.

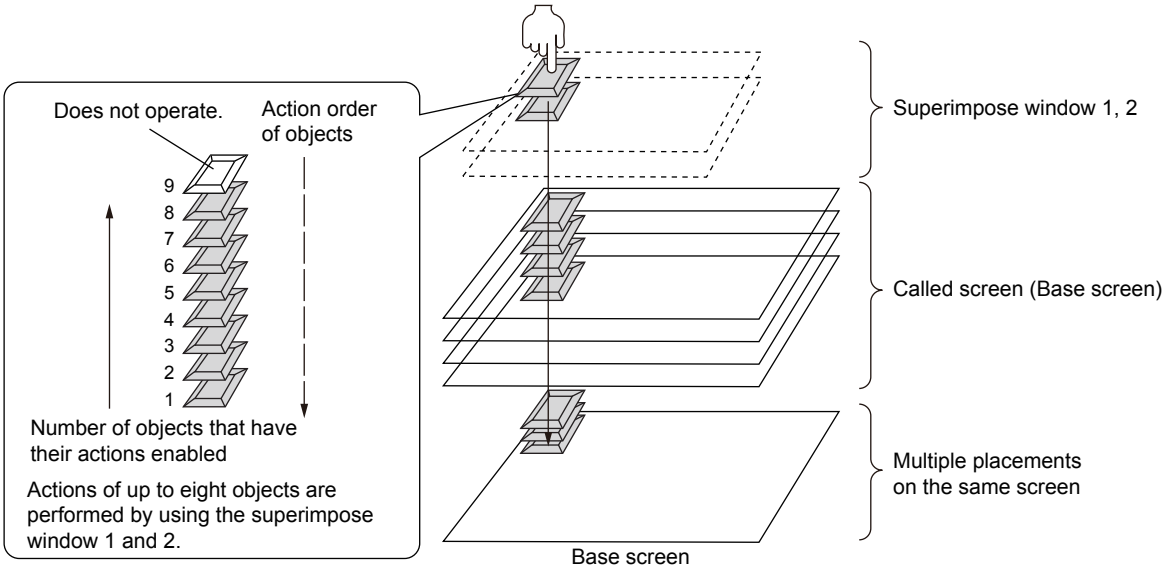
➟8.2 Placing a Touch Switch

(b) **Actions for superimposed touch switches, numerical inputs, and character string inputs**

• Number of objects that have their actions enabled

Actions for up to six objects including superimposed touch switches, numerical inputs, and character string inputs are enabled by multiple placements, and if superimpose window 1 and 2 are displayed, actions for up to eight objects are enabled.

Actions for touch switches, numerical inputs, and character string inputs coming after eighth are not enabled.



• Key window actions in superimposition

Of two or more superimposed numerical inputs or character string inputs, only the first enabled numerical input or character string input opens the touch key window if [Display when touched] has been selected for the key window action in the [Key Window Advanced Setting] tab of the [Screen Property] dialog.

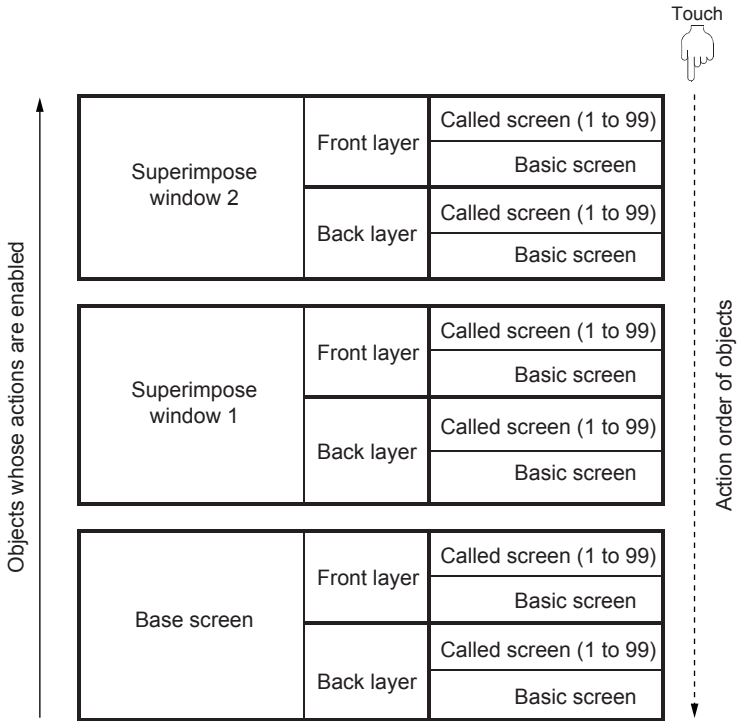
The other objects do not work.

• Actions of the overlapping key code switches

When different key codes are set for the overlapping key code switches, some of the switches may not function depending on the key code type.

(c) **Order of priority according to the combination of superimposition**

The following shows the order of priority given to actions for touch switches, numerical inputs, and character string inputs, according to the combination of superimposed windows.



- Order of actions for called screens

  Actions for called screens are enabled in order of the set overlay screen function displaying the called screens. For the display order with set overlay screen function, refer to the following.

  ➟8.29 Placing Another Screen on a Screen

- The number of called screens that can have the objects on them enabled

  Superimposed objects including touch switches, numerical inputs, and character string inputs on a maximum of 99 called screens are enabled.

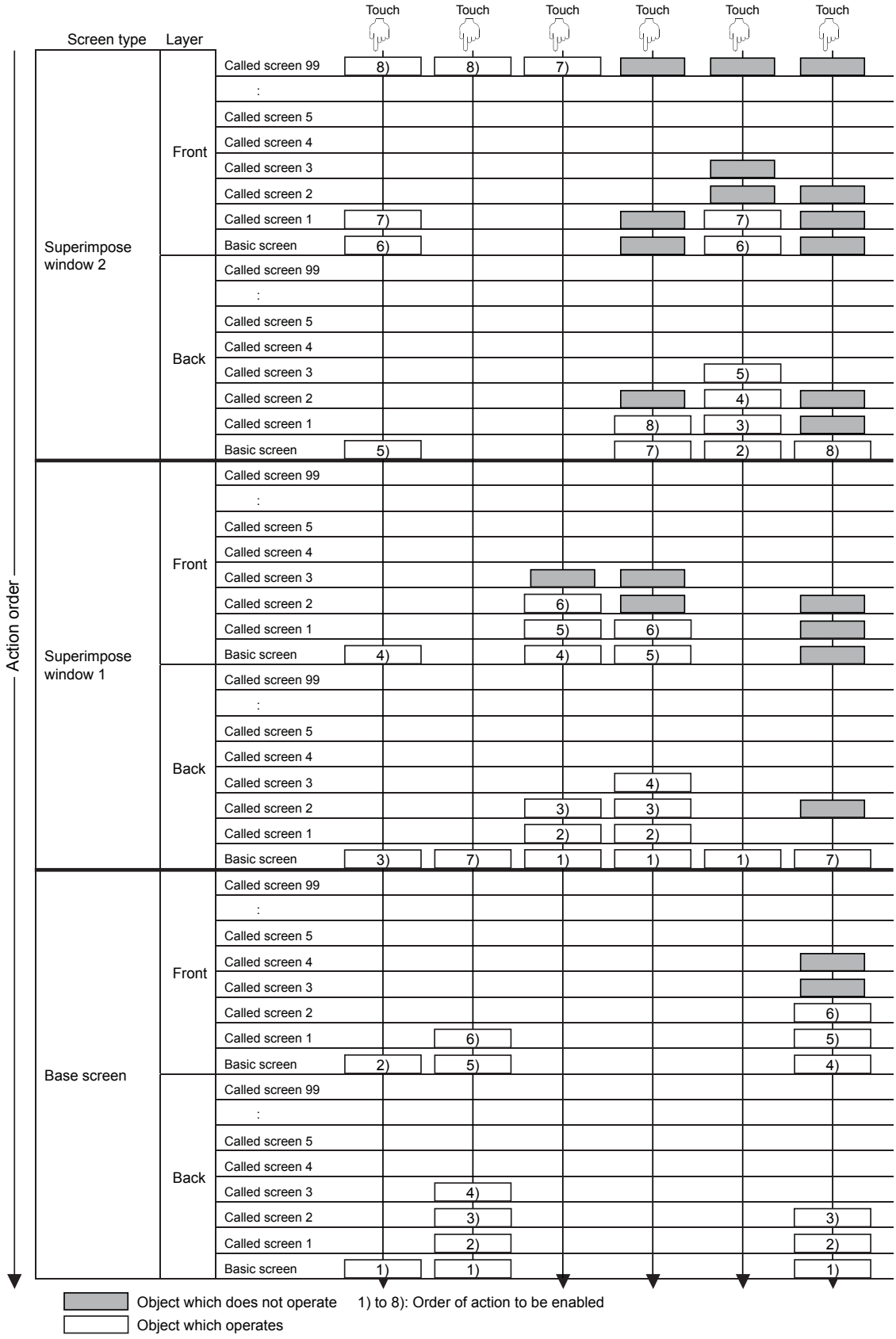
  If 100 or more screens have been called, the touch switches, numerical inputs, and character string inputs on the screens called after the hundredth do not work.

- Operation when the key window is displayed

  When a numerical input object or a text input object calls the key window, the objects (touch switch, numerical input, and text input) behind this object and overlapping the key window do not operate.

(d) **Application examples**

The following shows enabled touch switches, numerical inputs, or character string inputs set on two or more screens. The numbers 1 to 99 added to "Called window" indicate the order in which windows are called on base screens or window screens.



(5) Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) **Superimposing in the same layer the figures and objects that are always displayed in the topmost position in the layers.**

If the following figures and objects are superimposed on the same layer, they may not be displayed normally depending on the settings made for them.

- Alarms: If [Display Type] is set to [Flow]
- Scatter graphs: If [Store Memory] is set
- Figures drawn by the free figure drawing function of the object scripts

To superimpose the objects of each type listed above, place them in the separate layers.

(b) **Displaying objects with the XOR synthesis**

GOT Graphic Ver.1

- If neither figure nor object has been placed behind objects that have been placed in the front layer
  If neither figure nor object has been placed behind the objects for the XOR synthesis, the objects integrate into the XOR synthesis with the transparent color of the front layer.
- Integrating into the XOR synthesis with figures
  Place objects in the back layer.

(c) **Superimposing objects with [Simultaneous Press] set for them**

If keys with simultaneous presses disabled are superimposed, the keys do not work even if they are touched.

(d) **Placing a PNG image**

GOT Graphic Ver.1

When you place a semi-transparent PNG image (with alpha channel) or an object using such an image as its shape on a layer, the semi-transparent area may appear differently depending on the layer.

- Front layer
  The semi-transparent area displays the color specified for [Front Layer Transparent Color], appearing opaque.
  To display the area transparent, place another image or figure between the PNG image or object and the front layer.
- Back layer
  The semi-transparent area appears transparent.

For the semi-transparent PNG image file (with alpha channel), refer to the following.

➟7.13 (3) PNG file

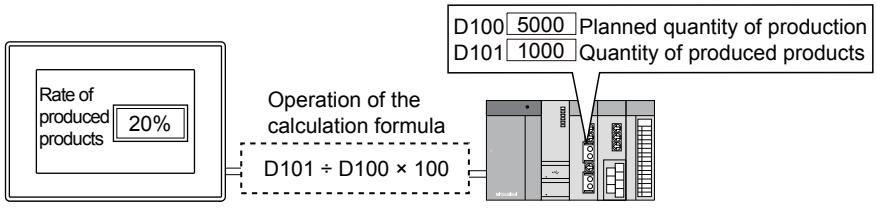
■4 Setting data operations

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If data operations are set for each object, set values of word devices are operated and monitored using the values after the operations.

Example) Using a data operation for a numerical display

- Monitored device: D101



Rate of produced products is displayed.

(1) Specifications of the data operation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The data operation can be set for the following objects.

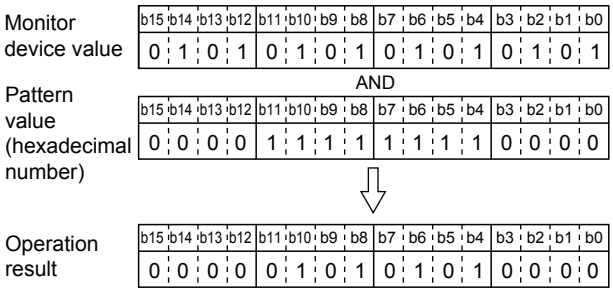
- Bit lamp
- Word lamp
- Numerical display
- Numerical input (only the logical AND operation is available for bit mask processing)

• Comment display
• Parts display
• Parts movement
• Historical data list display
• Line graph
• Trend graph
• Bar graph
• Statistics bar graph
• Statistics pie graph
• Scatter graph
• Historical trend graph
• Graphical meter
• Level object
• Panelmeter

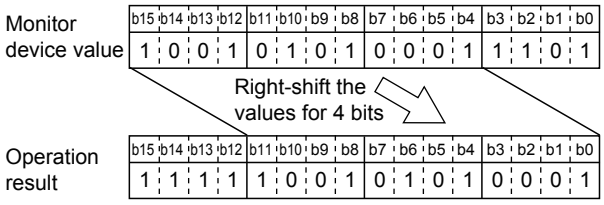
(a) **Bitwise operations**

Data are operated and determined in bitwise operation.
The bitwise operation is the function that operates each bit of the value of a word device.

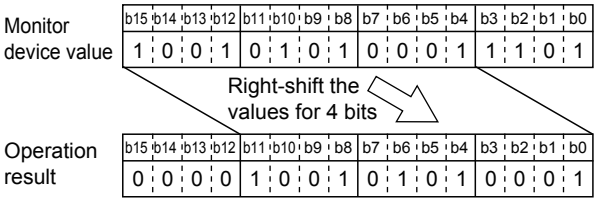
• Mask processing
Performs a logical operation on the value of a word device using a set pattern value.
· Logical AND
If the corresponding bits of a device value and a pattern value are both 1, the result is 1.
Otherwise the result is 0.
· Logical OR
If the corresponding bits of a device value and a pattern value are both 0, the result is 0.
Otherwise the result is 1.
· Exclusive OR
If the corresponding bits of a device value and a pattern value are equal, the result is 0, otherwise 1.
Example) When using the logical AND



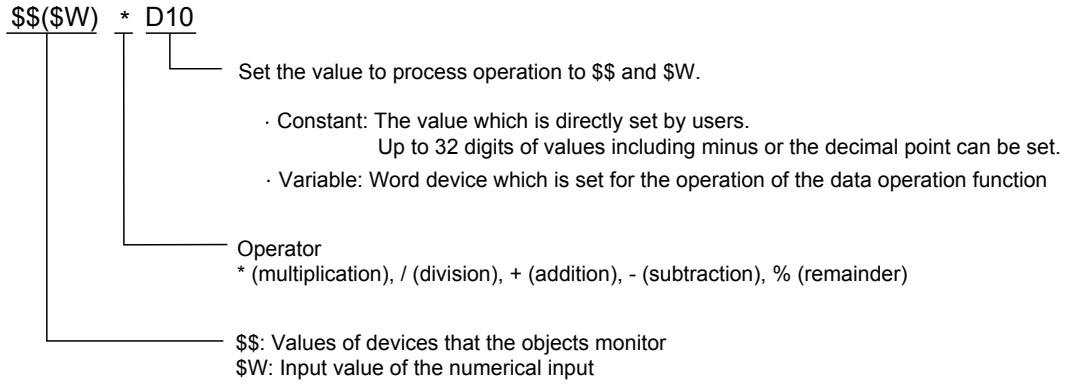
• Shift processing
Operates the value of a word device shifting each bit to right or left.
If a device of a signed data type is monitored, an arithmetic sift operation is performed.
Example) Operation with right shift by 4 bits
· If signed data is monitored



· If unsigned data is monitored



• Data operation
Operates the value of a word device applying a data operating expression.
Select the format of the data operating expression from among nine types.
The following shows an example of the data operating expression.



(b) **Order of priority given to the operating processes**

The following shows the order of priority given to the operating processes for device monitoring and numerical input

• When monitoring a device

Priority	Operating process
High ↓ Low	Mask processing
	Shift processing
	Data operation

• When using a numerical input
Writing the value after the operating process to a word device

Priority	Operating process
High ↓ Low	Data operation
	Shift processing
	Mask processing

Reading the value of a word device after the operating process

Priority	Operating process
High ↓ Low	Mask processing
	Shift processing
	Data operation

(2) How to use data operations

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) **Procedure for setting a data operation**

The following shows the procedure for setting a data operation for an object.
For details of the setting items, refer to the setting dialog of each object.

Step 1 Place an object to the screen editor and display the setting dialog.

Step 2 Select [Data Operation] for [Operation Type] in the [Operation/Script] tab.

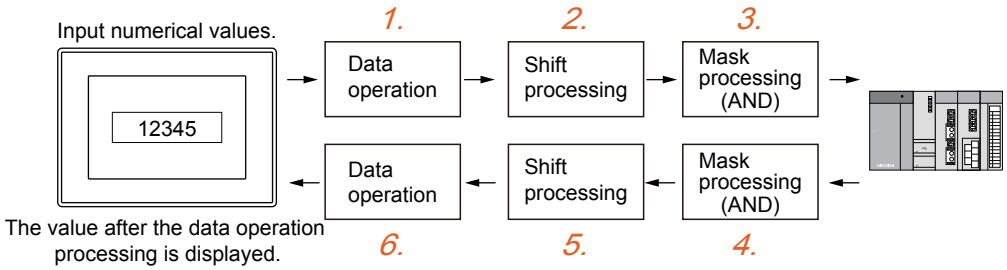
Step 3 Select the operation to be used from [Bit Mask], [Bit Shift], and [Data Operation].
When selecting [Data Operation], click the [Exp] button to display the [Edit Data Expression] dialog.
➟(3) [Edit Data Expression] dialog

Step 4 Click the [OK] button in the setting dialog to complete setting the operating processes.

(b) **Order of priority given to two or more set operating processes in numerical input, and the operations to be performed.**

The following shows the order of priority given to operating processes in writing to and reading from a word device with a numerical input, and the operations to be performed.
In writing and reading, the numbers in ascending order corresponds to the order of decreasing precedence.

• Writing the value after the operating processes to the word device: Step 1 to 3
• Reading the value of the word device after the operating processes: Step 4 to 6



Step 1 Data operation

Operates the input value in the operating expression for the write operation on the device value.

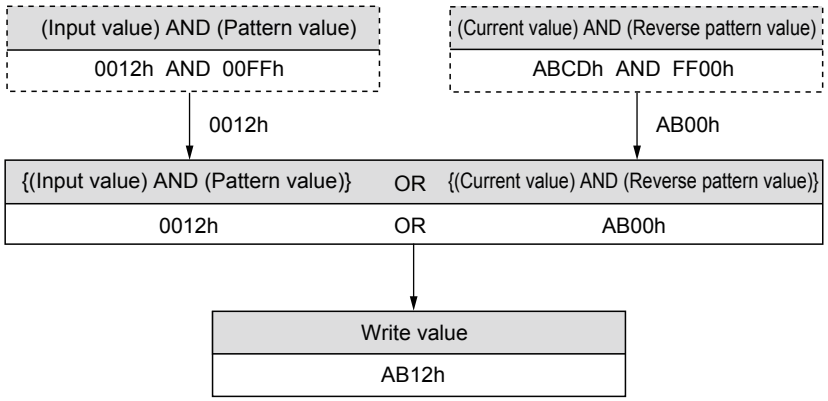
Step 2 Shift processing

Sifts the bits of the input value to the set direction.

Step 3 Mask processing (AND)

Puts the input value through the mask processing with a set pattern value.
Performs the following operation so that the value is written with the bits on which mask processing was executed removed.
(Written value) = ((Input value) AND (Pattern value)) OR ((Current value) AND (Reverse pattern value))
Example) Overwriting the rightmost 2 bits of the current value ABCDh with 12h

- Input value (value the user inputted): 0012h
- Current value (value before overwriting): ABCDh
- Pattern value (value the user set): 00FFh
- Reverse pattern value (value the GOT creates for operation)



Step 4 Mask processing

Puts the device value through the mask processing with a set pattern value.

Step 5 Shift processing

Sifts the bits of the device value to the direction opposite to that in writing.

Step 6 Data operation

Operates the written value in the operating expression for the read operation on the device value, and displays it.

(3) [Edit Data Expression] dialog

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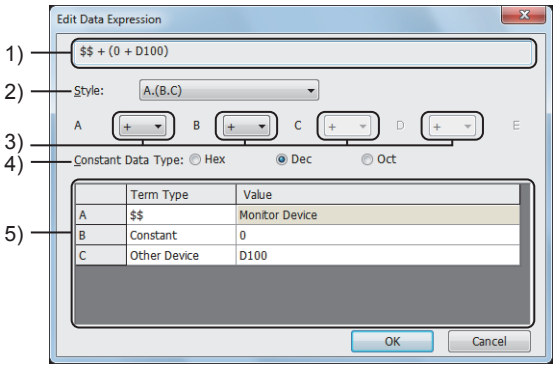
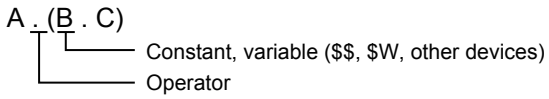
Displayed when the [Exp] button in [Data Expression] is clicked.
Depending on the type of the object, the setting items in the setting dialog differ.
Refer to the setting items explained in this section that are provided for the object to be used.



1) **Operating expression**
Displays a set operating expression.

2) **[Style]**
Select the format of the expression.



The following shows the items to be selected.

- [None]
- [A.B]
- [A.(B.C)]
- [(A.B).C]
- [A.((B.C).D)]
- [A.(B.(C.D))]
- [((A.B).C).(D.E)]
- [(A.B).((C.D).E)]
- [((A.B).(C.D)).E]

3) **Operators**
Select operators to be used in the operating expression.
The following shows the items to be selected.

- [+]: Addition
- [-]: Subtraction
- [*]: Multiplication
- [/]: Division
- [%]: Remainder

If [%] is selected, the left side is divided by the right side, and the operation result is the remainder.
Example) 100 % 3 = 1(100 ÷ 3 = 33 and the remainder is 1)

4) **[Constant Data Type]**
Select the data type if [Constant] has been selected for [Term Type] of the range expressing setting.
The following shows the items to be selected.

- [Hex]
- [Dec]
- [Oct]

5) **Range expression setting**

Item	Description
[Term Type]	Select the type and value of each side (A to E) of the range expression. The following shows the items to be selected. • [Constant]: Operates with constants. • [$$], [$W]: Operates the value of the target word device for monitoring or writing. Set this item in the range expression as it is compulsory. • [Other Device]: Operates the value of a word device. The data type is the same as the device to be monitored ([$$], [$W]).
[Value]	Select the value of each side (A to E) of the range expression. Depending on the [Term Type], the setting item differs. • When [Constant] is selected: Set a numerical value. • When [$$] or [$W] is selected: The target device for monitoring is displayed. • When [Other Device] is selected: Set a device.

6.6 Editing Operations

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➟6.6.1 [Undo], [Redo]
6.6.2 [Cut], [Copy], [Paste]
6.6.3 [Duplicate]
6.6.4 [Consecutive Copy]
6.6.5 [Select All]
6.6.6 [Delete]
6.6.7 [Object of Selection]
6.6.8 [Group], [Ungroup]
6.6.9 [Stacking Order]
6.6.10 [Align]
6.6.11 [Rotate/Flip]
6.6.12 [Edit Vertices]
6.6.13 [Edit Objects with Fixed Frame Width]
6.6.14 [Edit Touch Area]
6.6.15 [Adjust Direct Text Size]
6.6.16 [Template Registration]
6.6.17 [Edit Template Attribute]
6.6.18 [Set to Default]
6.6.19 [Add to Category]
6.6.20 [Shape Change]
6.6.21 [Display Template Property]
6.6.22 [Setting]

6.6.1 [Undo], [Redo]

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[Undo] and [Redo] are available only on the screen editors and the data view.

■1 [Undo]

Cancels the last operation.

Step 1 Select [Edit] → [Undo] from the menu.

Step 2 The last operation is canceled.

■2 [Redo]

Redoes the operation canceled by [Undo].

Step 1 Select [Edit] → [Redo] from the menu.

Step 2 The operation canceled by [Undo] is redone.

■3 Operation histories of [Undo] and [Redo]

(1) Number of storable operations

There is no limit to the number of storable operations to the operation histories.

(2) Unit of the operation histories

The operation history is held per screen.
Therefore, when creating multiple screens, display a screen to which you want to redo operations and perform [Undo] or [Redo].

(3) Timing when the operation history is deleted

The operation histories of [Undo] and [Redo] are deleted at the following timing.

(a) **Deletion of the operation histories of both [Undo] and [Redo]**

- Closing a project
- Deleting or cutting the target screen
- Pasting a copied or cut screen to a selected area
- Changing the controller type
- Executing the [Collective Edit] command on the [Edit Objects with Fixed Frame Width] submenu
- Changing the GOT type

(b) **Deletion of the operation history of [Redo] only**

- Performing other editing operations (such as placing an object) when [Redo] is available

6.6.2 [Cut], [Copy], [Paste]

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You can cut or copy a selected target and paste it onto an arbitrary area.
You can cut, copy, and paste the following targets.

- [Cut], [Copy]
  Select a target from the placed or set data (including figures, objects, and windows) in a screen editor, the [Screen] window, or the [Project] window.
- [Paste]
  Select an area where the cut or copied target is pasted in a screen editor, the [Screen] window, or the [Project] window.

■1 [Cut]

Cuts a selected target.

Step 1 Select a target data.
Step 2 Select [Edit] → [Cut] from the menu.
Step 3 The selected target is cut.

■2 [Copy]

Copies a selected target.

Step 1 Select a target data.
Step 2 Select [Edit] → [Copy] from the menu.
Step 3 The selected target is copied.

■3 [Paste]

Pastes the cut or copied data.

Step 1 Cut or copy a target data.
Step 2 Select [Edit] → [Paste] from the menu.
Step 3 The cut or copied data is pasted onto an arbitrary area.

■4 Holding the cut or copied data

The cut or copied data is overwritten when a new data is cut or copied.
The last cut or copied data is deleted at the following timing.

- When a figure, an object, or an image file is cut or copied
  The data is deleted when the project where the cut or copied target is used is closed.
- When character strings or data on the data browser are cut or copied
  The data is deleted when another target is cut or copied.

■5 Precautions

(1) Pasting a target from other projects

If the controller settings differ between in the copy source project and the copy destination project, the set devices may be displayed as [??].
Check if the pasted device has no problem and set the device again as required.

(2) Cutting, copying, and pasting data between projects created by GT Designer3(GOT2000) and GT Designer3(GOT1000)

Cutting, copying, and pasting data between projects created by GT Designer3(GOT2000) and GT Designer3(GOT1000) are unavailable.

6.6.3 [Duplicate]

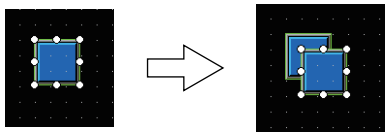
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Copies and pastes a selected figure or object at a time.
Select a figure or an object placed on the screen editor and use [Duplicate].

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Duplicate] from the menu.

Step 3 The selected figure or object is copied and pasted with a certain interval.



■1 Intervals between the pasted targets

You cannot change the intervals for pasting figures or objects.

6.6.4 [Consecutive Copy]

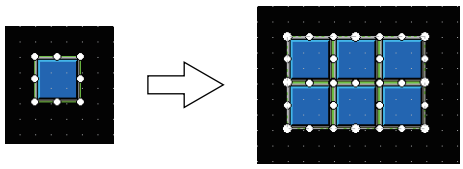
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Copies and pastes a selected figure or object at a time based on the settings.
Select a figure or an object placed on the screen editor and use [Consecutive Copy].

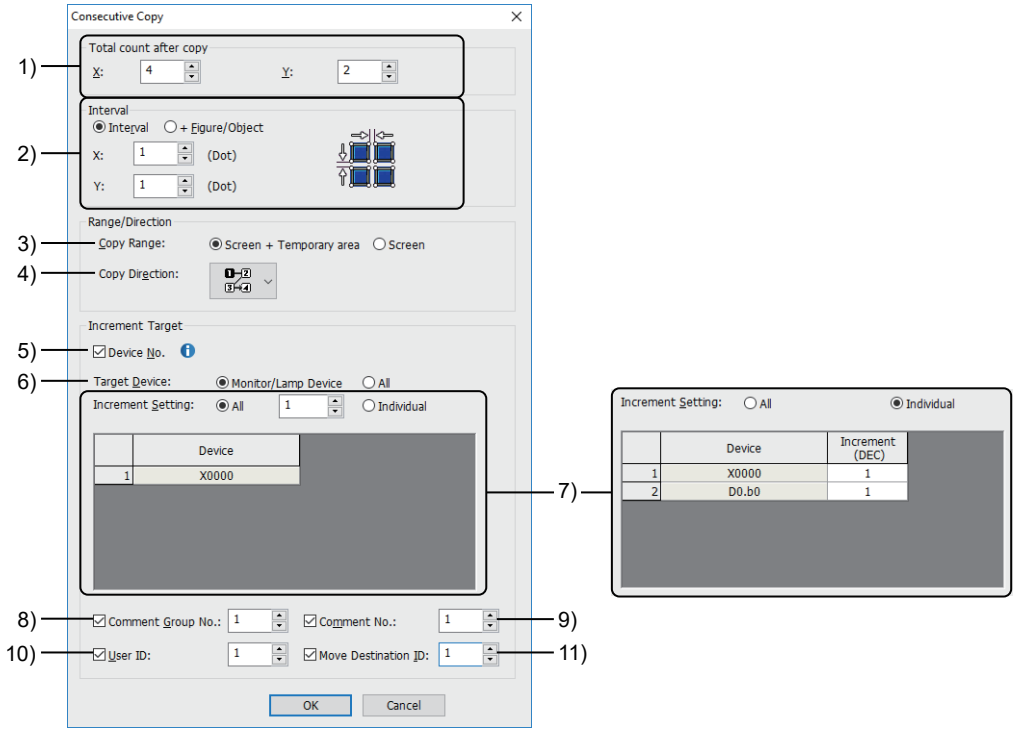
Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Consecutive Copy] from the menu to display the [Consecutive Copy] dialog.

Step 3 Configure the settings and click the [OK] button. The figure or object is pasted based on the settings.



■1 [Consecutive Copy] dialog

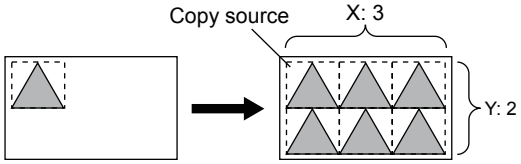


1) **[Total count after copy]**

Set the number of figures or objects to be pasted.

- [X]:
  Set the number of figures or objects to be horizontally pasted.
  The setting range is [1] to [100].
- [Y]:
  Set the number of figures or objects to be vertically pasted.
  The setting range is [1] to [100].

Example) When the following settings are configured
[X]: [3]
[Y]: [2]
[Copy Direction]:



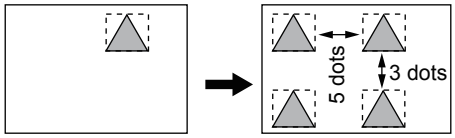
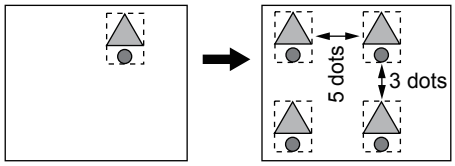
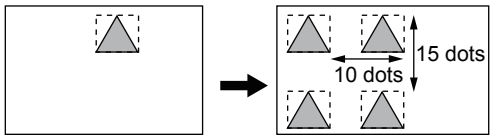
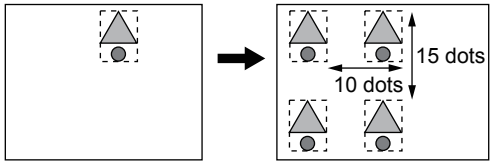
2) **[Interval]**

Set an interval between figures or objects to be pasted.

The following shows the items to be selected.

- [Interval]
- [+Figure/Object]

The setting ranges of [X] and [Y] differ depending on the selected item.

Item	Description
When [Interval] is selected	The following shows the setting range. • [X]: Set an interval between figures or objects to be horizontally pasted. The setting range is [0] to [300]. • [Y]: Set an interval between figures or objects to be vertically pasted. The setting range is [0] to [300]. Example) When the following settings are configured [X]: [5] [Y]: [3] [Copy Direction]:  For one figure  For multiple figures
When [+ Figure/Object] is selected	The following shows the setting range. • [X]: Set an interval between figures or objects to be horizontally pasted. The setting range is [0] to [300 + Horizontal size of the copy source figure or object (dots)]. • [Y]: Set an interval between figures or objects to be vertically pasted. The setting range is [0 + Vertical size of the copy source figure or object (dots)] to [300 + Vertical size of the copy source figure or object (dots)]. Example) When the following settings are configured [X]: [10] [Y]: [15] [Copy Direction]:  For one figure  For multiple figures

3) **[Copy Range]**

Set an area where figures or objects can be pasted.

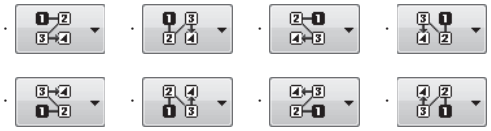
The following shows the items to be selected.

- [Screen + Temporary area]
- [Screen]

4) **[Copy Direction]**

Set a direction in which figures or objects are pasted.

The following shows the items to be selected.



5) **[Device No.]**

Select this item to increment the device number of the device set for a figure or object.

Labels and tags do not support the increment of device numbers.

The label of the source figure or object is set for the figures or objects pasted using the consecutive copy function.

6) **[Target Device]**

Set the target devices whose device numbers are to be incremented.

The following shows the items to be selected.

- [Monitor/Lamp Device]
- [All]

7) **[Increment Setting]**

Select whether to collectively or individually set the increment count of the device numbers of multiple devices set for a figure or object to be copied.

The following shows the items to be selected.

- [All]

  Set the increment count collectively.

  The setting range is [-10000] to [10000].
- [Individual]

  Set the increment count individually.

  The setting range is [-10000] to [10000].

8) **[Comment Group No.]**

Select this item to increment the comment group number set for an object.

The setting range of the increment count is [-100] to [100].

9) **[Comment No.]**

Select this item to increment the comment number set for an object.

The setting range is [-10000] to [10000].

When an object whose comment number is set to 0 is copied, the comment number is not incremented.

10) **[User ID]**

Select this item to increment the user ID set for an object.

The setting range is [-10000] to [10000].

11) **[Move Destination ID]**

Select this item to increment the move destination ID set for an object.

The setting range is [-10000] to [10000].

6.6.5 [Select All]

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Selects all the data placed or set on the selected screen editor or window.
Select a screen editor, the [Comment List] window, or other screens and use [Select All].

Step 1 Select a screen editor or a window on which the data you want to select is placed or set.
Step 2 Select [Edit] → [Select All] from the menu.
Step 3 All the targets that are placed or set on the screen editor or the window are selected.

6.6.6 [Delete]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Deletes a selected target.
Select a target data from the placed or set data in a screen editor, the [Screen] window, or the [Project] window and use [Delete].

Step 1 Select a target data.
Step 2 Select [Edit] → [Delete] from the menu.
Step 3 The selected target is deleted.

6.6.7 [Object of Selection]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the targets to be selected on a screen editor.
Select a screen editor or other screens and use [Object of Selection].
The settings are reflected to the whole project.

■1 [Figure]

Set this item to select only figures from figures and objects placed on the screen editor.

Step 1 Select a screen editor.
Step 2 Select [Edit] → [Object of Selection] → [Figure] from the menu.
Step 3 You can select only figures on the screen editor.

■2 [Object]

Set this item to select only objects from figures and objects placed on the screen editor.

Step 1 Select a screen editor.
Step 2 Select [Edit] → [Object of Selection] → [Object] from the menu.
Step 3 You can select only objects on the screen editor.

■3 [Figure + Object]

Set this item to select both figures and objects placed on the screen editor.

Step 1 Select a screen editor.
Step 2 Select [Edit] → [Object of Selection] → [Figure + Object] from the menu.
Step 3 You can select figures and objects on the screen editor.

■4 [Report Line]

Set this item to select lines on the screen editor of the report screen.

Step 1 Select the screen editor of the report screen.
Step 2 Select [Edit] → [Object of Selection] → [Report Line] from the menu.
Step 3 You can select lines on the screen editor of the report screen.

■5 [Overlay Screen]

Set this item to select called screens placed on the screen editor.

Step 1 Select a screen editor.

Step 2 Select [Edit] → [Object of Selection] → [Overlay Screen] from the menu.

Step 3 You can select called screens on the screen editor.

■6 Precautions

(1) Placing figures, objects, or called screens

You can newly place a figure, an object, or a called screen regardless of the selection of [Object of Selection].
When the figure, object, or called screen that was newly placed is out of the selection target, the setting of [Object of Selection] is changed to include it to the selection target.
Example) When [Figure] is selected for [Object of Selection] and an object is placed
The setting of [Object of Selection] is changed to [Figure + Object].

(2) Selecting grouped figures or objects

You can select grouped figures or objects when the selected target is included in the group.
Example) When [Figure] is selected for [Object of Selection]

- A group that includes figures only: Selectable
- A group that includes figures and objects: Selectable
- A group that includes objects only: Unselectable

(3) Selecting figures and objects in the [Data View] window

You can select only the target data selected in [Object of Selection].

6.6.8 [Group], [Ungroup]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

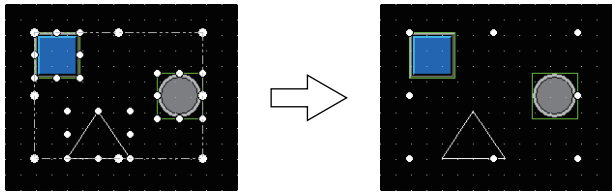
Groups multiple figures and objects into one.
Groups are treated as figures.
You can group and ungroup the following targets.

- [Group]
  Select multiple figures and objects placed on the screen editor.
  For the grouping of the template information, figures and objects that are registered to the template, refer to the following.
  ➟11.6 Efficient Drawing with Templates
- [Ungroup]
  Select a group that is placed on the screen editor.

■1 [Group]

Groups the selected figures and objects into one.

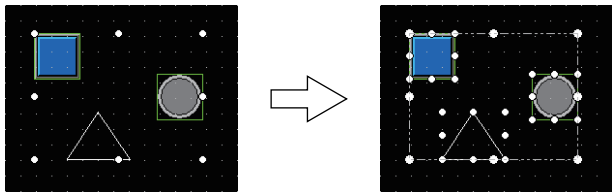
Step 1 Select multiple figures or objects.
Step 2 Select [Edit] → [Group] → [Group] from the menu.
Step 3 The selected figures or objects are grouped.



■2 [Ungroup]

Cancels the grouping of a selected group.

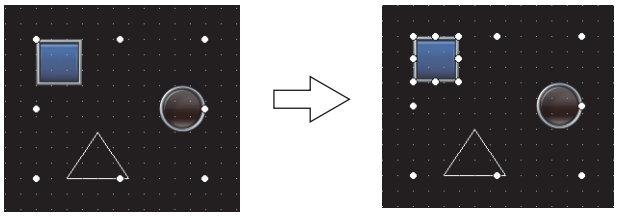
Step 1 Select a group.
Step 2 Select [Edit] → [Group] → [Ungroup] from the menu.
Step 3 The grouping of the selected group is canceled.



■3 Editing grouped figures and objects

You can individually select and edit grouped figures and objects without ungrouping them.
For a grouping of multiple groups of figures and objects, you can also select and edit each figure or object in the grouping by using the same procedure.

Step 1 Select a group.
Step 2 Select a figure or object to be edited in the group.



Step 3 Double-click the selected figure or object to display the setting dialog.

(1) Editing or operating each figure or object

When editing or operating grouped figures or objects individually, you cannot perform the following operations.

- Moving a figure or object
- Resizing a figure or object
- Resizing the touch area of a figure or object
- Deleting a figure or object

■4 Precautions

(1) Setting in the property sheet

You can change the set items common to all the figures and objects in the group in the property sheet.
The changed setting is reflected to all the figures and objects in the group.
In the property sheet, you cannot change the setting of a figure or object in a group.
To change the setting of a figure or object in a group, display the corresponding setting dialog and make changes.

(2) Changing the coordinates

When you select a grouping of figures or objects, the [Coordinate/Size] toolbar and the [Property] window display the coordinates of the upper-left corner of the grouping.
If you change the coordinates, the figures and objects in the grouping move accordingly while their intervals remain unchanged.
For information on how to change the coordinates, refer to the following.

➟2.2.2 ■15 [Coordinate/Size]
11.9.4 [Property] window

(3) Changing the size (width and height)

When you select a grouping of figures and objects, the [Coordinate/Size] toolbar and the [Property] window display the width and height of the grouping. The width and height are not changeable in the above toolbar and window.
To change the size of the grouping, use the size change handle on the screen editor.

6.6.9 [Stacking Order]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Changes the display order of figures and objects.
Select a figure or an object placed on the screen editor and use [Stacking Order].
For the layers, refer to the following.

➟6.5.5 ■3 Superimposition

■1 [Move to the Front of Front Layer]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the topmost position on the front layer.

Step 1 Select a figure or an object.
Step 2 Select [Edit] → [Stacking Order] → [Move to the Front of Front Layer] from the menu.
Step 3 The selected figure or object is moved to the topmost position on the front layer.

■2 [Move to the Back of Back Layer]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the back on the back layer.

Step 1 Select a figure or an object.
Step 2 Select [Edit] → [Stacking Order] → [Move to the Back of Back Layer] from the menu.
Step 3 The selected figure or object is moved to the back on the back layer.

■3 [Move to the Front of Layer]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the topmost position on the same layer.

Step 1 Select a figure or an object.
Step 2 Select [Edit] → [Stacking Order] → [Move to the Front of Layer] from the menu.
Step 3 The selected figure or object is moved to the topmost position on the same layer.

■4 [Move to the Back of Layer]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the back position on the same layer.

Step 1 Select a figure or an object.
Step 2 Select [Edit] → [Stacking Order] → [Move to the Back of Layer] from the menu.
Step 3 The selected figure or object is moved to the back on the same layer.

■5 [Move to the Foreground]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the topmost position.

Step 1 Select a figure or an object.
Step 2 Select [Edit] → [Stacking Order] → [Move to the Foreground] from the menu.
Step 3 The selected figure or object is moved to the topmost position.

■6 [Move to the Background]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the back.

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Stacking Order] → [Move to the Background] from the menu.

Step 3 The selected figure or object is moved to the back.

■7 [Move to the Front]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the front of the figure or object on the selected one in the same layer.

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Stacking Order] → [Move to the Front] from the menu.

Step 3 The selected figure or object is moved to the front of the figure or object on the selected one in the same layer.

■8 [Move to the Back]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Moves the selected figure or object to the back of the figure or object behind the selected one in the same layer.

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Stacking Order] → [Move to the Back] from the menu.

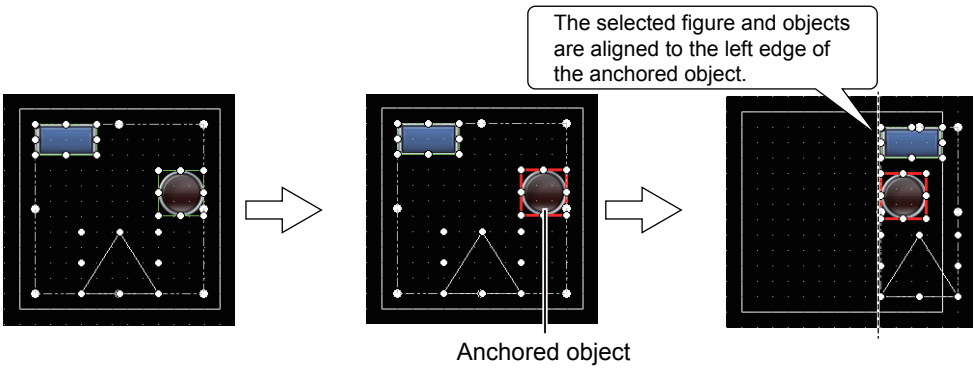
Step 3 The selected figure or object is moved to the back of the figure or object behind the selected one in the same layer.

6.6.10 [Align]

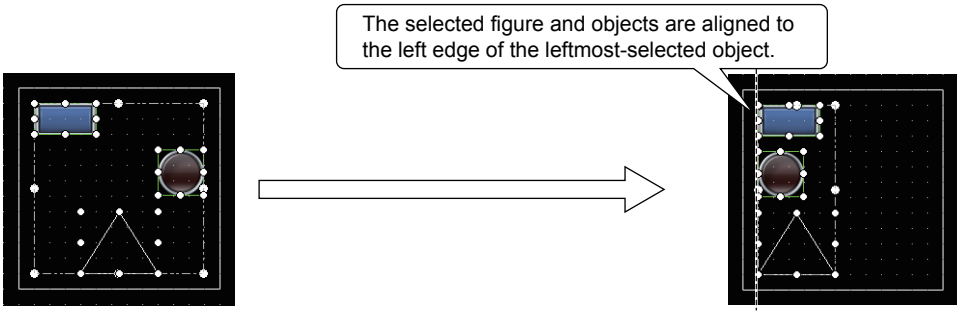
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Aligns multiple figures and objects.
Select multiple figures and objects that are placed on the screen editor and use [Align].
The alignment behavior differs according to whether a figure or object is anchored among selected figures and objects.

If you anchor a selected figure or object, the selected figures and objects are aligned to the anchored figure or object according to the specified alignment type.
(The anchored figure or object is framed in red.)
Example) When the left alignment is performed while a lamp object is anchored



If you do not anchor a selected figure or object, the selected figures and objects are aligned according to the specified alignment type.
Example) When the left alignment is performed while no figure or object is anchored



■1 [Left]

Aligns the selected figures and objects to the left.

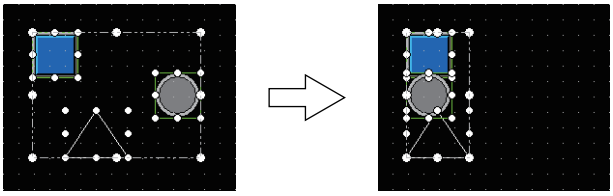
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Left] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the left edge of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned to the left edge of the leftmost-selected figure or object.



■2 [Center (Horizontal)]

Horizontally centers the selected figures and objects.

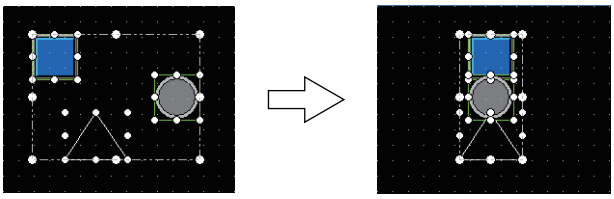
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Center (Horizontal)] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the center of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned through their centers.



■3 [Right]

Aligns the selected figures and objects to the right.

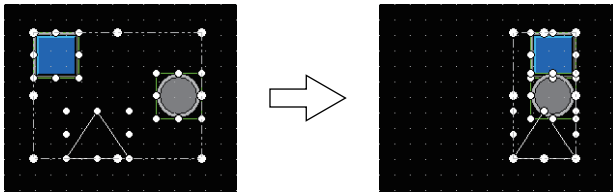
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Right] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the right edge of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned to the right edge of the rightmost-selected figure or object.



■4 [Top]

Aligns the selected figures and objects to the top.

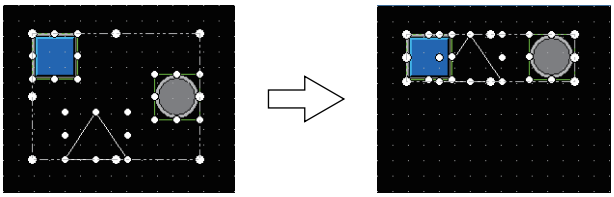
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Top] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the top edge of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned to the top edge of the highest-selected figure or object.



■5 [Center (Vertical)]

Vertically centers the selected figures and objects.

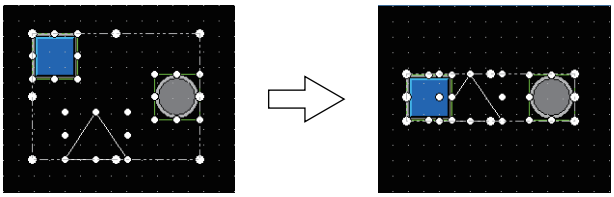
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Center (Vertical)] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the center of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned through their centers.



■6 [Bottom]

Aligns the selected figures and objects to the bottom.

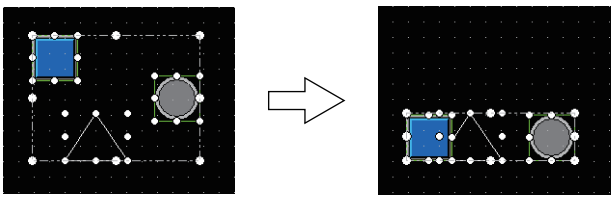
Step 1 Select figures and objects to be aligned.

Step 2 Select a figure or object to be anchored from among those already selected as necessary.

The anchored figure or object is framed in red.

Step 3 Select [Edit] → [Align] → [Bottom] from the menu.

If you have an anchored figure or object, the selected figures and objects are aligned to the bottom edge of the anchored figure or object.
If you do not have an anchored figure or object, the selected figures and objects are aligned to the bottom edge of the lowest-selected figure or object.



■7 [Align Sideways]

Aligns the selected figures and objects so that they are equally spaced horizontally.

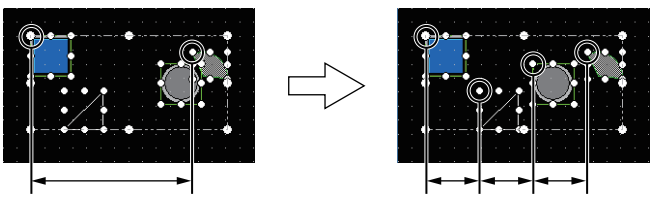
Step 1 Select figures and objects to be aligned.

Step 2 Select [Edit] → [Align] → [Align Sideways] from the menu.

The selected figures and objects are equally spaced horizontally between the following points (reference points).

- Upper-left corner of the leftmost-selected figure or object
- Upper-left corner of the rightmost-selected figure or object

(Anchoring of a selected figure or object is invalid.)



Reference points

The figures and objects are equally spaced between the reference points.

■8 [Align Lengthways]

Aligns the selected figures and objects so that they are equally spaced vertically.

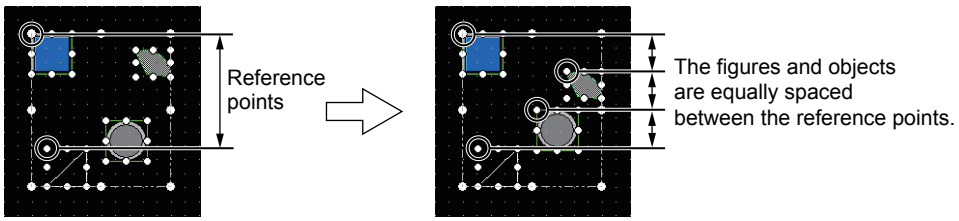
Step 1 Select figures and objects to be aligned.

Step 2 Select [Edit] → [Align] → [Align Lengthways] from the menu.

The selected figures and objects are equally spaced vertically between the following points (reference points).

- Upper-left corner of the highest-selected figure or object
- Upper-left corner of the lowest-selected figure or object

(Anchoring of a selected figure or object is invalid.)



■9 [Custom]

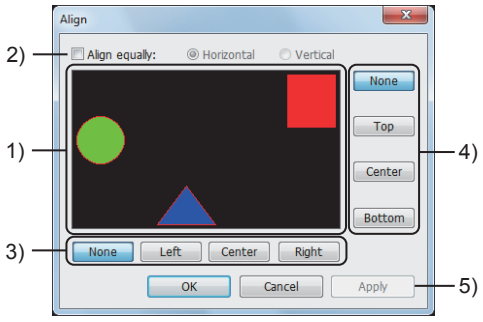
Aligns the selected figures and objects with multiple conditions.

Step 1 Select multiple figures and objects.

Step 2 Select [Edit] → [Align] → [Custom] from the menu to display the [Align] dialog.

Step 3 Configure the alignment settings and click the [OK] button to align the figures and objects.

(1) [Align] dialog



1) **Preview**

Previews the alignment of the figures and objects.

2) **[Align equally]**

Aligns figures and objects evenly and horizontally or vertically.

- [Horizontal]: Evenly and horizontally aligns figures and objects.
- [Vertical]: Evenly and vertically aligns figures and objects.

3) **Horizontal alignment**

Set the base position for evenly and horizontally aligning figures and objects.

Item	Description
[None] button	Does not align figures and objects.
[Left] button	Aligns figures and objects to the left.
[Center] button	Aligns figures and objects to the center.
[Right] button	Aligns figures and objects to the right.

4) **Vertical alignment**

Set the base position for evenly and vertically aligning figures and objects.

Item	Description
[None] button	Does not align figures and objects.
[Top] button	Aligns figures or objects to the top.
[Center] button	Aligns figures and objects to the center.
[Bottom] button	Aligns figures or objects to the bottom.

5) **[Apply] button**
Reflects the settings to the figures and objects on the screen editor.

6.6.11 [Rotate/Flip]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Rotates or flips a selected figure.
Select a figure placed on the screen editor and use [Rotate/Flip].

■1 [Flip Vertical]

Flips a selected figure vertically.

Step 1 Select a figure.
Step 2 Select [Edit] → [Rotate/Flip] → [Flip Vertical] from the menu.
Step 3 The selected figure is flipped vertically.

■2 [Flip Horizontal]

Flips a selected figure horizontally.

Step 1 Select a figure.
Step 2 Select [Edit] → [Rotate/Flip] → [Flip Horizontal] from the menu.
Step 3 The selected figure is flipped horizontally.

■3 [Rotate Left]

Rotates a selected figure 90 degrees counterclockwise.

Step 1 Select a figure.
Step 2 Select [Edit] → [Rotate/Flip] → [Rotate Left] from the menu.
Step 3 The selected figure is rotated 90 degrees counterclockwise.

■4 [Rotate Right]

Rotates a selected figure 90 decrees clockwise.

Step 1 Select a figure.
Step 2 Select [Edit] → [Rotate/Flip] → [Rotate Right] from the menu.
Step 3 The selected figure is rotated 90 degrees clockwise.

■5 Precautions

(1) Rotating or flipping a group
A group is rotated or flipped as one figure.

(2) Figures which cannot be rotated
If a figure after the rotation does not fit in the screen display area or the temporary area, the figure cannot be rotated.

6.6.12 [Edit Vertices]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Switches the handle of a selected figure to the size change handle or the vertex edit handle.

➟6.5.3 Editing figures and objects

Select a screen editor or others and use [Edit Vertices].

Step 1 Select a screen editor.

Step 2 Select [Edit] → [Edit Vertices] from the menu to switch the handle to the size change handle or the vertex edit handle.

■1 Editing a figure with the vertex edit handle

(1) Figures that can be edited with the vertex edit handle

The following shows the figures whose handles are changed when [Edit] → [Edit Vertices] is selected from the menu.

- [Line Freeform]
- [Piping]
- [Polygon]

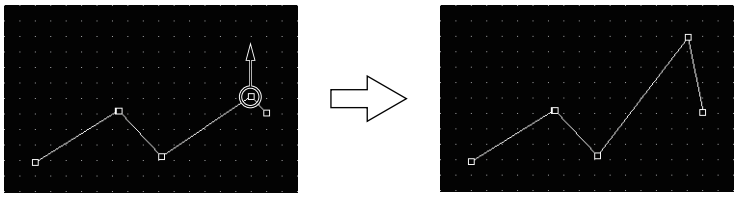
(2) Operation example of the vertex edit handle

The following shows the operation example for editing a freeform line with the vertex edit handle.

Step 1 Select a figure.

Step 2 Drag the handle to change the vertex position.

Step 3 Release the mouse button to determine the change of the vertex position of the figure.



■2 Precautions

(1) Editing vertexes of grouped figures

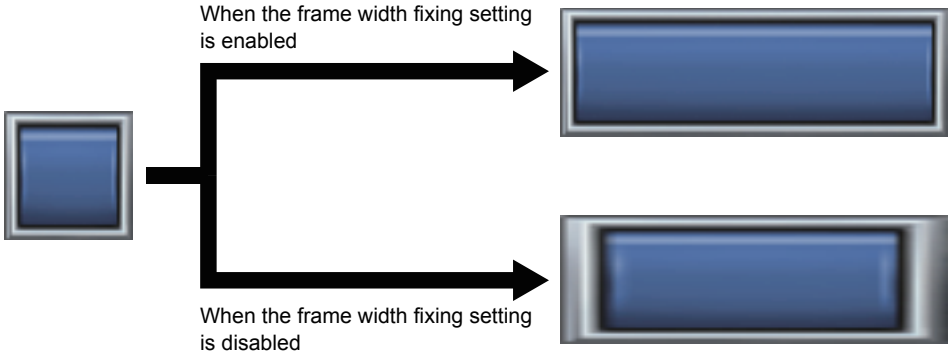
Editing vertexes of grouped figures is unavailable.

6.6.13 [Edit Objects with Fixed Frame Width]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Fixes or does not fix the frame width of the object shape when the object is resized.
When the frame width fixing setting is enabled, resizing an object does not change the frame width.
This setting is effective on the entire project.

Example) When an object is enlarged



The frame width fixing setting is applied when the following conditions are satisfied.

Condition	Details
The frame width fixing setting must be enabled.	The frame width fixing setting is enabled by default. This setting is disabled when you open a project created with GT Designer3 version earlier than 1.175H.
The resize target object must be one to which the frame width fixing setting is applicable.	For the applicable objects, refer to the following. ➟■3 Objects to which the frame width fixing setting is applicable
The target object shape must be one to which the frame width fixing setting is applicable.	The applicable shapes are included in the system library. For each shape, check the [Library data Property] dialog for applicability. If [Shape] is any other than [None], the frame width fixing setting is applicable to the shape. ➟8.1.4 [Library] window

■1 [Always Fix the Width]

Fixes or does not fix the shape frame width.

Step 1 Select [Edit] → [Edit Objects with Fixed Frame Width] → [Always Fix the Width] from the menu.

Step 2 The frame width is fixed or not fixed.

■2 [Collective Edit]

Changes the shape frame widths of all objects that satisfy the frame width fixing conditions.
After the change, the frame widths become fixed.
For the frame width fixing conditions, refer to the following.

➟6.6.13 [Edit Objects with Fixed Frame Width]

Step 1 Select [Edit] → [Edit Objects with Fixed Frame Width] → [Collective Edit] from the menu.

Step 2 The shape frame widths of all applicable objects are changed.
After the change, the frame widths become fixed.

■3 Objects to which the frame width fixing setting is applicable

The following shows the objects to which the frame width fixing setting is applicable.
○: Applicable, ×: Not applicable

Object		Applicability	Remarks
Touch Switch	Switch	○	-
	Bit Switch	○	-
	Word Switch	○	-
	Go To Screen Switch	○	-
	Change Station No. Switch	○	-
	Special Function Switch	○	-
	Key window display switch	○	-
	Key Code Switch	○	-
Lamp	Bit Lamp	○	-
	Word Lamp	○	-
	Lamp Area	×	No shape setting.
Numerical Display/Input	Numerical Display	○	-
	Numerical input	○	-
Text Display/Input	Text Display	○	-
	Text Input	○	-
Date/Time Display	Date Display	○	-
	Time Display	○	-
Comment Display	Bit Comment	○	-
	Word Comment	○	-
	Simple Comment	×	No shape setting.
Parts Display	Bit Parts	×	No shape setting.
	Word Parts	×	No shape setting.
	Fixed Parts	×	No shape setting.
Parts Movement	Bit Parts	×	No shape setting.
	Word Parts	×	No shape setting.
	Fixed Parts	×	No shape setting.
	Parts Move Route	×	No shape setting.
Historical Data List Display		○	-
Alarm Display	Alarm Display (User)	○	-
	Alarm Display (System)	○	-
	Simple Alarm Display	○	-
	System Alarm Display	○	-
Recipe Display (Record List)		○	-
Graph	Line Graph	○	-
	Trend Graph	○	-
	Bar Graph	○	-
	Statistics Bar Graph	○	-
	Statistics Pie Graph	○	-
	Scatter Graph	○	-
	Historical Trend Graph	○	-
Graphical Meter		○	The shape frame width is always fixed regardless of the frame width fixing setting.
Meter	Level	×	No shape setting.
	Panelmeter	×	-

Object		Applicability	Remarks
Slider		×	-
Document Display		×	No shape setting.
Video/RGB display object		×	No shape setting.
Script parts		×	No shape setting.
Set Overlay Screen		×	No shape setting.
Window Position		×	No shape setting.
Key Window Object	Input Value Area Setting	×	No shape setting.
	Input Range Area Setting	×	No shape setting.
	Input Maximum Value Area Setting	×	No shape setting.
	Input Minimum Value Area Setting	×	No shape setting.
	Previous Value Area Setting	×	No shape setting.
Print	Numerical Print	×	No shape setting.
	Text Print	×	No shape setting.
	Bit Comment Print	×	No shape setting.
	Word Comment Print	×	No shape setting.
Hyperlink		○	-

■4 Precautions

(1) Reducing an object

Even when the frame width fixing setting is enabled, if you reduce the object size (width or height) to less than its shape frame width, the frame width is reduced as well.

6.6.14 [Edit Touch Area]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select the editing method of the touch area.

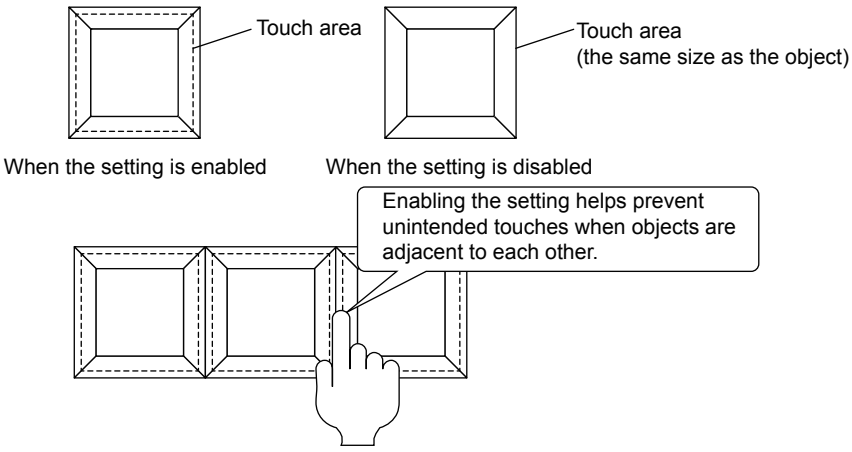
You can perform [Manual Edit], [Self-adjust], and [Constant Self-adjust] to the following targets.

- [Manual Edit], [Constant Self-adjust]
  Select a screen editor or others.
- [Self-adjust]
  Select a touch switch placed on the screen editor.

When [Adjust the touch area to be smaller than its object size by 1-dot at the time of touch area self-adjust] is selected on the [Edit] tab in the [Options] dialog, the touch area is reduced to be inside the object area. The edge of the touch area becomes 1 dot away from the edge of the object area.

➡11.10.4 Customizing the settings related to editing operations

This setting helps prevent unintended touches when objects are adjacent to each other.



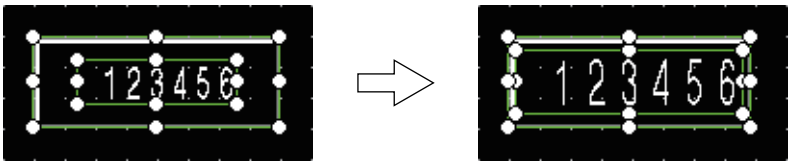
■1 [Manual Edit]

Allows you to edit the touch area manually.

Step 1 Select a screen editor.

Step 2 Select [Edit] → [Edit Touch Area] → [Manual Edit] from the menu.

Step 3 You can edit the touch area manually.



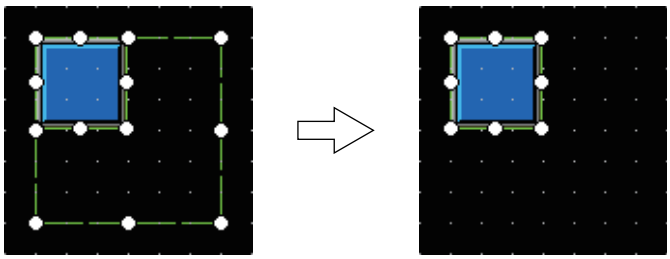
■2 [Self-adjust]

Adjusts the size of the touch area automatically according to the object size.
When [Constant Self-adjust] is set, this setting is unavailable.

Step 1 Select a touch switch.

Step 2 Select [Edit] → [Edit Touch Area] → [Self-adjust] from the menu.

Step 3 The size of the touch area of the selected touch switch is adjusted automatically.



■3 [Constant Self-adjust]

Always adjusts the size of the touch area automatically according to the object size.

Step 1 Select a screen editor.

Step 2 Select [Edit] → [Edit Touch Area] → [Constant Self-adjust] from the menu.

Step 3 The touch areas of placed touch switches and newly placed touch switches are always adjusted automatically.

6.6.15 [Adjust Direct Text Size]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Scales the size of the direct input text according to the object size.

➟6.5.3 Editing figures and objects

Select a screen editor or others and use [Adjust Direct Text Size].

Step 1 Select a screen editor.

Step 2 Select [Edit] → [Adjust Direct Text Size] from the menu.

Step 3 When [Adjust Direct Text Size] is active, text size is changed by scaling the object size and when not active, not changed.

■1 Precautions

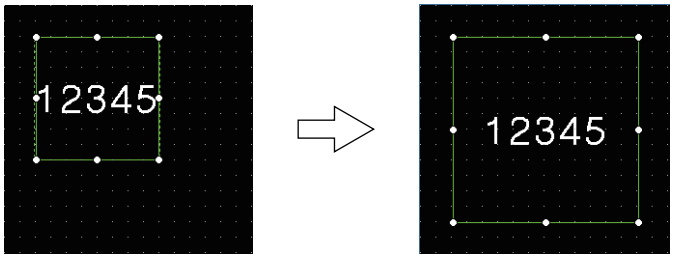
(1) Maximum and minimum sizes of texts

When the objects are scaled beyond the maximum or minimum size of texts, the texts hold the maximum or minimum size.

Objects can be scaled regardless of the maximum or minimum size of the texts.

Example 1) Enlarging an object beyond the maximum size of the texts

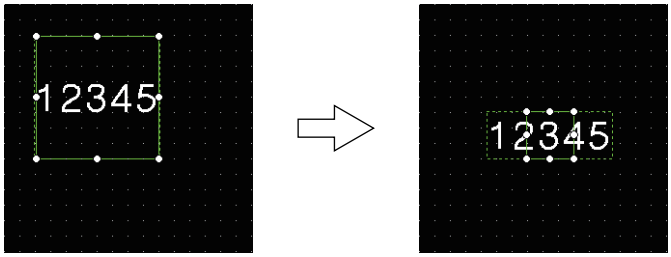
The texts hold the maximum size. Only the object size is enlarged.



Example 2) Reducing the object size beyond the minimum size of the texts

The texts hold the minimum size. Only the object size is reduced.

When the object size is reduced beyond the minimum size of the texts, the texts are displayed beyond the object.



6.6.16 [Template Registration]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Registers a selected figure or object to the template or deletes the registration of a figure or an object from the template.

For figures and objects that can be registered to the template, refer to the following.

➟11.6 Efficient Drawing with Templates

You can perform [Register to Template] or [Deregister from Template] to the following targets.

- [Register to Template]
  Select a figure or an object placed on the screen editor.
- [Deregister from Template]
  Select a figure or an object that is registered to the template and placed on the screen editor.

■1 [Register to Template]

Registers a selected figure or object to the template.

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Template Registration] → [Register to Template] from the menu to display the setting dialog.

For how to set the setting dialog, refer to the following.

➟11.6 Efficient Drawing with Templates

■2 [Deregister from Template]

Deletes the registration of a selected figure or object from the template.

Step 1 Select a figure of object that is registered to the template.

Step 2 Select [Edit] → [Template Registration] → [Deregister from Template] from the menu.

Step 3 The selected figure or object is deleted from the template.

6.6.17 [Edit Template Attribute]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the setting dialog to edit a template attribute.
Select a figure, an object, and a template information box placed on the screen editor and use [Edit Template Attribute].

Step 1 Select a figure, an object, or a template information box.

Step 2 Select [Edit] → [Edit Template Attribute] from the menu to display the setting dialog.

For how to set the setting dialog, refer to the following.

➟11.6 Efficient Drawing with Templates

6.6.18 [Set to Default]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configures the settings of a selected figure or an object as the default values.
For the default values, refer to the following.

➟11.10.6 Customizing the default value

Select a figure or an object placed on the screen editor and use [Set to Default].

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Set to Default] from the menu to configure the settings of the selected figure or object as the default value.

6.6.19 [Add to Category]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Sets a category of a selected figure or an object.
For the categories, refer to the following.

➟11.7 Managing figures and objects by category

Select a figure or an object placed on the screen editor and use [Add to Category].

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Add to Category] from the menu.

Step 3 Select an item to be set for [Category] of the selected figure or an object from the following.

- [Switch]
- [Lamp]
- [Other]
- [User-defined Category]

Step 4 When you select [User-defined Category], the [Category] dialog is displayed.

In the [Category] dialog, you can select the user-created categories as well as [Switch], [Lamp], and [Other].
For how to create a category, refer to the following.

➟11.7.4 [Category List] window

Step 5 The selected content is set to [Category] of the selected figure or object.

6.6.20 [Shape Change]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the shape of a selected object.
Select an object that is placed on the screen editor to which a shape can be set and use [Shape Change].

Step 1 Select an object.

Step 2 Select [Edit] → [Shape Change] from the menu to display the [Image List] dialog.
For how to configure the settings in the [Image List] dialog, refer to the following.
➟6.5.5 ■1 Setting object shapes

■1 Precautions

(1) Setting shapes of multiple objects

When multiple objects are selected and if the settings of shapes of each object are different, [Shape Change] is not available.

6.6.21 [Display Template Property]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the settings of the template.
For how to set the [Property] window, refer to the following.
➟11.6 Efficient Drawing with Templates
Select a figure, an object, or a template information box placed on the screen editor and use [Display Template Property].

Step 1 Select a figure, an object, or a template information box.

Step 2 Select [Edit] → [Display Template Property] from the menu to display the [Property] window.

6.6.22 [Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the setting dialog of a selected figure or an object.
Select a figure or an object placed on the screen editor and use [Setting].

Step 1 Select a figure or an object.

Step 2 Select [Edit] → [Setting] from the menu to display the setting dialog of the selected figure or object.

■1 Operation target

Select a figure or an object placed on the screen editor.

7. FIGURES

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7.1 Drawing a Text

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a text.

■1 How to draw

Step 1 Select [Figure]→[Text] from the menu.

Step 2 Place the cursor on the position where you draw the text, and click on it.
The [Text] dialog appears.

Step 3 Configure the settings in the [Text] dialog.
➟7.1.1 [Text] dialog

Step 4 After the setting, click the [OK] button.
The text is placed.

■2 Similar functions

The following shows other functions which enables the text to be displayed on the GOT screen.

(1) [Logo Text]

Draws the text with outline or gradation.
The logo text is effective to make the text highly visible.
➟7.2 Drawing a Logo Text
The logo text can be converted from the text in the [Text] dialog.

(2) [Text Display]

Uses the values stored in the word device as the text code to display the text on the object.
➟8.5 Placing a Text Display and Text Input

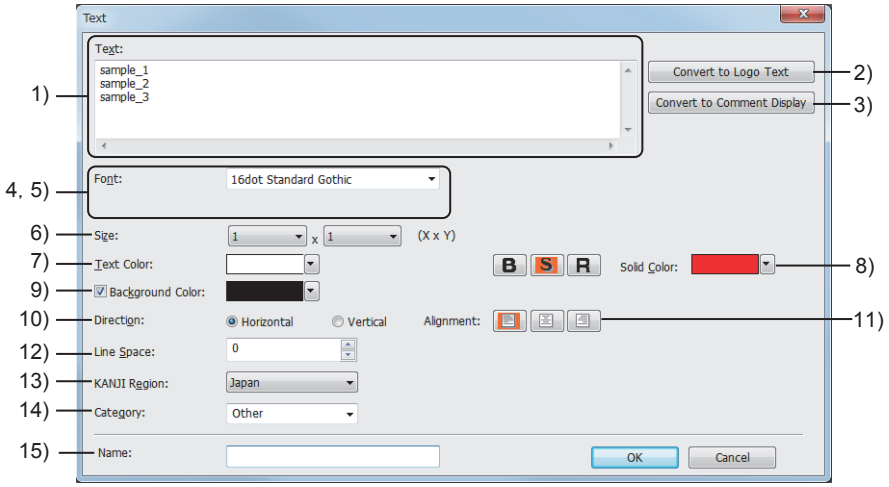
(3) [Comment Display]

Displays the text registered in the project on the object.
The comment display is used to display the same text on multiple objects or to display the messages corresponding to the device values.
➟5.8 Comment Setting ([Comment])
8.7 Placing a Comment Display

7.1.1 [Text] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

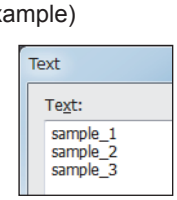
For mobile screens, some setting items are not available.
➟10.19.2 ■2 Usable functions



1) **[Text]**

Set the text to be displayed.
The input text is displayed on the screen.

Example)



[Text] dialog

Screen

Up to 512 characters can be set.
To display the text in multiple lines, press the [Enter] key at the end of the text in each line.
(When a line feed is inserted, two characters per line feed are added to the number of characters.)

2) **[Convert to Logo Text] button**
Converts the text to the logo text.
The [Text] dialog changes to the [Logo Text] dialog.

➟7.2.1 [Logo Text] dialog

3) **[Convert to Comment Display] button**
Registers text to a comment group and converts the text figure to a simple comment display object.
For the conversion method, refer to the following.

➟5.8.4 ■12 (1) Registering the characters of a text figure to a comment group

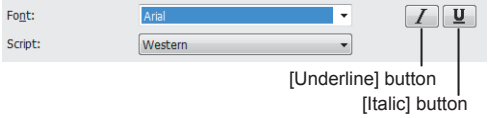
4) **[Font]**
Select the font.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [6x8dot]
- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [TrueType Mincho]
- [TrueType Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)
- Windows fonts

When selecting a Windows font, set the font style as necessary.



- **[Italic] button**
  Italicizes the text.
- **[Underline] button**
  Underlines the text.

5) **[Character Set]**
Set the language.
Set this item when a Windows font is selected for [Font].

6) **[Size]**
Set the text size (width × height magnification or dots).
The setting range differs depending on the font type.

➟1.2.5 Font specifications

When [6x8dot] is selected for [Font], the text size cannot be set.

7) **[Text Color]**
Select the text color.

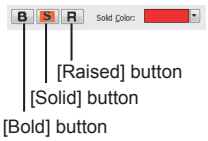
For the details of the color, refer to the following.

➟6.4 Color Settings

8) **Text style**

Set the style of the text to be displayed.

One style ([Bold], [Solid], or [Raised]) is settable only.



- **[Bold] button**
  Displays the text in bold.
- **[Solid] button**
  Displays the text with a shadow.
- **[Raised] button**
  Displays the text embossed.
- **[Solid Color]**
  When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

9) **[Background Color]**

Select this item to color the background of the text.

10) **[Direction]**

Select the direction of the text.

The following shows the items to be selected.

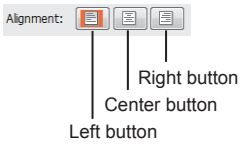
- [Horizontal]
- [Vertical]

When [TrueType Mincho], [TrueType Gothic], [Outline Kaisho], [Outline Gothic], [Outline], or a Windows font is selected for [Font], this setting is fixed to [Horizontal].

11) **[Alignment]**

Set the horizontal position of the text.

This item is applied when the text is entered in two or more lines.



- **Left button**
  Aligns the text to the left.
- **Center button**
  Aligns the text to the center.
- **Right button**
  Aligns the text to the right.

12) **[Line Space]**

Set the space between lines.

The setting range is [0] to [128] dot(s).

13) **[KANJI Region]**

Select the KANJI region.

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

Example)
Difference between [Japan] and [China(GB)-Mincho]

[Japan] [China(GB)-Mincho]

When [TrueType Mincho], [TrueType Gothic], or a Windows font is selected for [Font], this setting is not available.

14) **[Category]**

Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

15) **[Name]**

Set the figure name.

The name is displayed in the [Data View] window, property sheet, and others.

Up to 100 characters can be set.

Point

(1) Displaying the text in the vertical direction

The following shows the text displayed in the vertical direction.

Example 1) In the case of "-"
Horizontal direction: Terminal
Vertical direction: T
e
r
m
i
n
a
l

Example 2) In the case of "()"
Horizontal direction: (Caution)
Vertical direction: (
C
a
u
t
i
o
n
)

(2) Text supported by the GOT

(a) Text supported by the 6x8dot font

The 6x8dot font supports ASCII characters 20h to 7Eh.
When unsupported texts are used, the text is displayed differently between GT Designer3 and the GOT.

- For GT Designer3: The unsupported text is displayed as "■".
- For the GOT: The unsupported text and all subsequent texts cannot be displayed.

Example) |A|B|C|ア|D|イ|1|2|3|

Display on GT Designer3
ABC■D■123

Display on GOT
ABC
Not displayed

* Alphanumeric: A to Z, a to z, 0 to 9
Symbol: !,",#,$,%,&,',(,),*,+,-,.,.,/,:,;,
<,=,>,?,@,[,\,],^,_,`,{,|,},,space

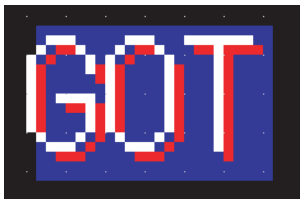
(b) Font for the GOT and GT Designer3

The GOT and GT Designer3 support the common Unicode 2.1-compliant fonts.
Thus, the GOT can display the languages used in various countries, including Japanese, Korean, Chinese (Pekingese), English, German, and French.
When using multiple languages, refer to the following section.

➟1.2.5 Font specifications

(3) Setting of the background color

[Background Color] and either of [Bold], [Solid], or [Raised] are selected for one setting, the text may be run off the left edge or top edge.



7.2 Drawing a Logo Text

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a logo text.

■1 How to draw

Step 1 Select [Figure]→[Logo Text] from the menu.

Step 2 Place the cursor on the position where you draw the text, and click on it.
The [Logo Text] dialog appears.

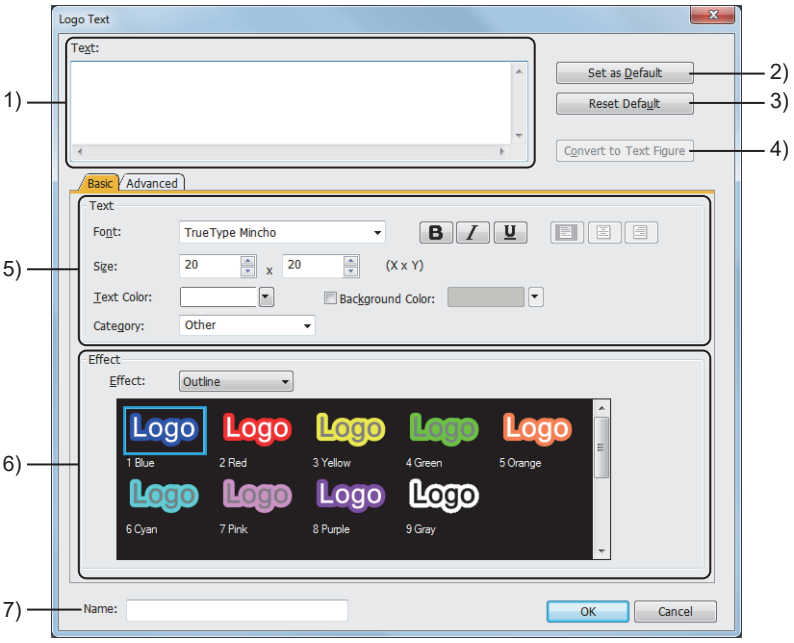
Step 3 Configure the settings in the [Logo Text] dialog.
➟7.2.1 [Logo Text] dialog

Step 4 After the setting, click the [OK] button.
The logo text is placed.

7.2.1 [Logo Text] dialog

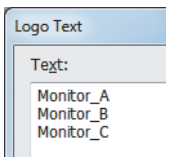
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 [Basic] tab



1) **[Text]**
Set the text to be displayed.
The input text is displayed on the screen.

Example)



[Logo Text] dialog

Screen

Up to 512 characters can be set.
To display the text in multiple lines, press the [Enter] key at the end of the text in each line.
(When a line feed is inserted, two characters per line feed are added to the number of characters.)

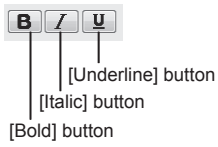
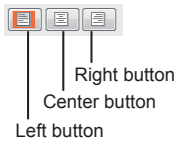
2) **[Set as Default] button**

Sets the currently configured setting in the dialog as a default.
The default setting is applied at the next startup.

3) **[Reset Default] button**
Resets the default setting configured by the [Set as Default] button.

4) **[Convert to Text Figure] button**
Converts the logo text to the text.
The [Logo Text] dialog changes to the [Text] dialog.
➟7.1.1 [Text] dialog

5) **[Text]**

Item	Description
[Font]	Select the font. ➟1.2.5 Font specifications The following shows the items to be selected. • [TrueType Mincho] • [TrueType Gothic] • Windows fonts
Text Style	Set the decoration of the text.  • **[Bold] button** Boldifies the text. • **[Italic] button** Italicizes the text. • **[Underline] button** Underlines the text.
Alignment	Set the horizontal position of the text. This item is applied when the text is entered in two or more lines.  • **Left button** Aligns the text to the left. • **Center button** Aligns the text to the center. • **Right button** Aligns the text to the right.
[Size]	Set the text size. • [Horizontal]: Set the width of the text. The setting range is [1] to [800] dot(s). • [Vertical]: Set the height of the text. The setting range is [1] to [800] dot(s).
[Text Color]	Select the text color. For the details of the color, refer to the following. ➟6.4.2 Color settings When [Fill Effects] is selected, the text can be displayed with gradation or pattern.
[Background Color]	To make the background of the text transparent, do not select this item. To color the background of the text, select this item. For the details of the color, refer to the following. ➟6.4.2 Color settings
[Category]	Select the category to which the figure belongs. ➟11.7 Managing figures and objects by category

6) **[Effect]**

Item	Description
[Effect]	Select the effect type. The following shows the items to be selected. • [Outline] • [Solid] • [3D] • [Stamp] • [Neon] Example) [Ontline] [Solid] [3D] [Stamp] [Neon]
Preset list	Select the effect color from the 16 color shades. The selectable color shades differs depending on each effect type in [Effect]. After selecting the color, configure the detail setting in [Effect] in the [Advanced] tab.

7) **[Name]**

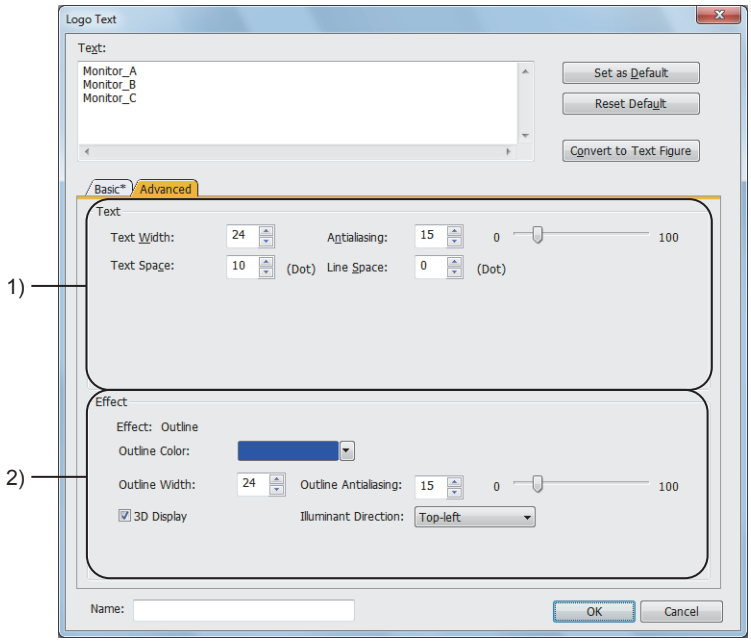
Set the figure name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Advanced] tab



1) **[Text]**

Item	Description
[Text Width]	Set the width of the text. The setting range is [0] to [100] dot(s).
[Antialiasing]	Set the value of the anti-aliasing (which eliminates the aliasing of pixels) for the text. The setting range is [0] to [100] dot(s).
[Text Space]	Set the space between the texts. The setting range is [0] to [128] dot(s).
[Line Space]	Set the space between lines. The setting range is [0] to [128] dot(s).

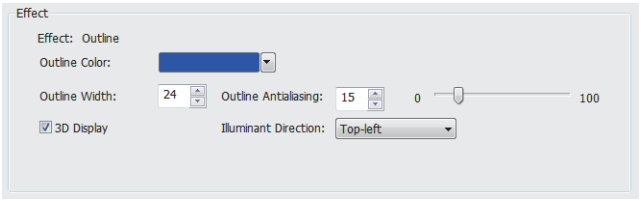
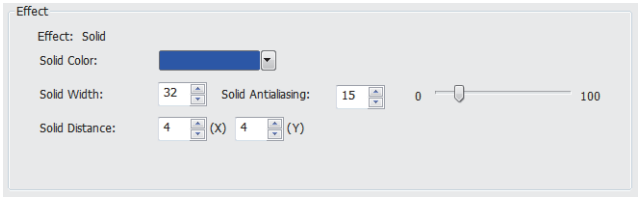
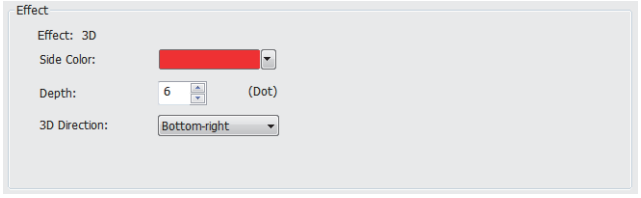
2) **[Effect]**

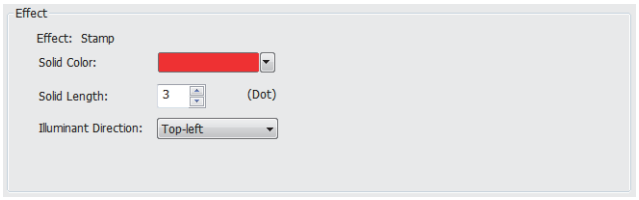
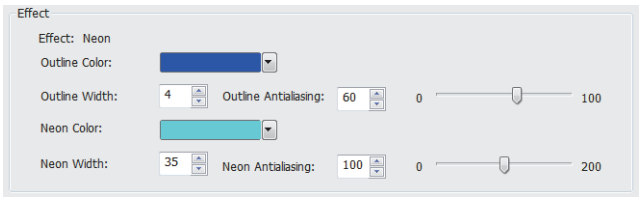
Configure the setting for the effect.

The setting range differs depending on each effect type in [Effect] in the [Basic] tab.

If you set the effect in the [Advanced] tab, and then select the effect color from the preset list in the [Basic] tab, the advanced setting is reset and cannot be restored.
For information on how to set colors, refer to the following.

➟6.4 Color Settings

Item	Description
For [Outline]	 • [Outline Color] Select the color of the outline. • [Outline Width] Set the width of the outline. The setting range is [0] to [100] dot(s). • [Outline Antialiasing] Set the value of the anti-aliasing (which eliminates the aliasing of pixels) for the outline. The setting range is [0] to [100] dot(s). • [3D Display] Select this item to display the logo text in three dimensions. • [Illuminant Direction] Set the illuminant direction in 3D display. The following shows the items to be selected. ·[Top-left] ·[Bottom-left] ·[Top-right] ·[Bottom-right]
For [Solid]	 • [Solid Color] Set the color of the shade. • [Solid Width] Set the width of the shade. The setting range is [0] to [100] dot(s). • [Solid Antialiasing] Set the value of the anti-aliasing (which eliminates the aliasing of pixels) for the shade. The setting range is [0] to [100] dot(s). • [Solid Distance] Set the position of the shade against the text by using the X-axis and Y-axis relative coordinates. The setting range is [-20] to [20] dot(s).
For [3D]	 • [Side Color] Select the color of the three dimensional side. • [Depth] Select the depth of the three dimensional side. The setting range is [0] to [20] dot(s). • [3D Direction] Set the direction of the three dimensions. The following shows the items to be selected. ·[Top-left] ·[Bottom-left] ·[Top-right] ·[Bottom-right]

Item	Description
For [Stamp]	 • [Solid Color] Set the color of the shade. • [Solid Length] Set the length of the shade. The setting range is [0] to [20] dot(s). • [Illuminant Direction] Set the illuminant direction. The following shows the items to be selected. ·[Top-left] ·[Bottom-left] ·[Top-right] ·[Bottom-right]
For [Neon]	 • [Outline Color] Select the color of the outline. • [Outline Width] Set the width of the outline. The setting range is [0] to [100] dot(s). • [Outline Antialiasing] Set the value of the anti-aliasing (which eliminates the aliasing of pixels) for the outline. The setting range is [0] to [100] dot(s). • [Neon Color] Select the color of the neon. • [Neon Width] Select the width of the neon. The setting range is [0] to [100] dot(s). • [Neon Antialiasing] Set the value of the anti-aliasing (which eliminates the aliasing of pixels) for the neon. The setting range is [0] to [200] dot(s).

7.3 Drawing a Line

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a line.

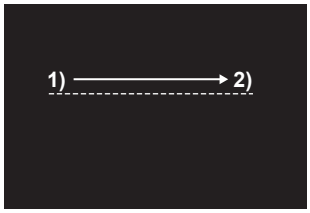
■1 How to draw

Step 1 Select [Figure]→[Line] from the menu.

Step 2 Draw the line on the screen.

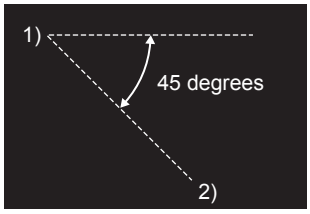
• Basic drawing

Drag the pointer from the start point to the end point.



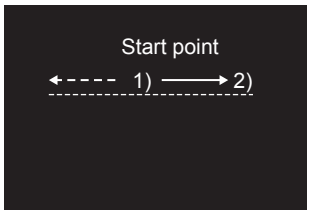
• Drawing with the [Shift] key pressed

The direction of the end point can be changed at every 45 degrees.



• Drawing with the [Ctrl] key pressed

The line is drawn with the start point as a center.



Step 3 Double-click the drawn line to display the [Line] dialog.

➟7.3.1 [Line] dialog

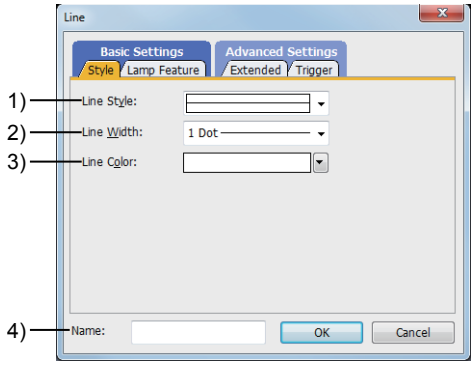
7.3.1 [Line] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style]**
Select the style of the line.
The following shows the items to be selected.
- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

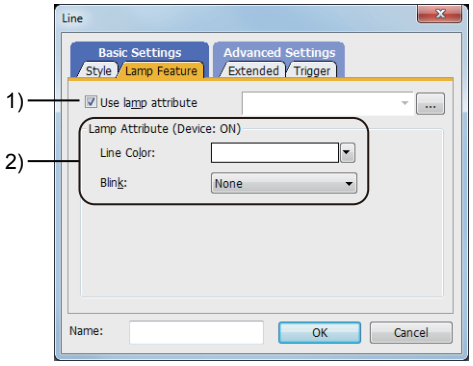
2) **[Line Width]**
Select the width of the line.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

3) **[Line Color]**
Select the color of the line.
For the details of the color, refer to the following.
➥6.4.2 Color settings

4) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Use lamp attribute]**
Changes the color of the line by turning on and off the bit device.

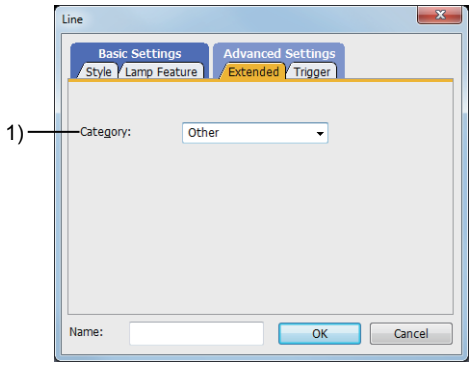
➟6.5.4 ■1 Lamp attribute setting

2) **[Lamp Attribute]**
Set each item in the lamp attribute.

Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the line when the bit device is on. • [Line Color] Select the color of the line. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

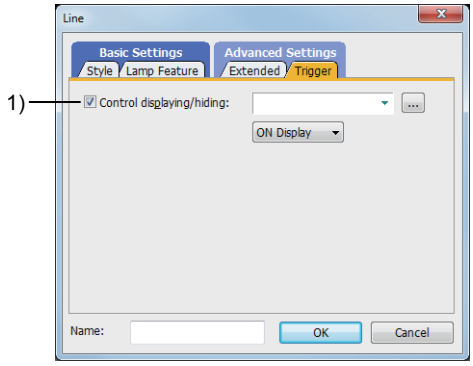


1) **[Category]**
Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide the object.

Select the ON/OFF status of the set device on which the object is displayed.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.4 Drawing a Line Freeform

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

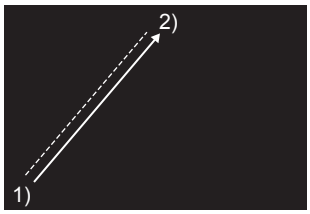
Draw a freeform line.

■1 How to draw

Step 1 Select [Figure]→[Line Freeform] from the menu.

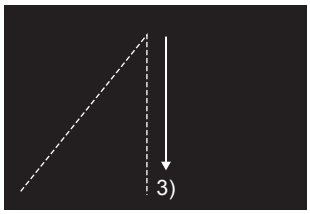
Step 2 Draw the line on the screen.

Drag the pointer from the start point to the end point to draw the first line.



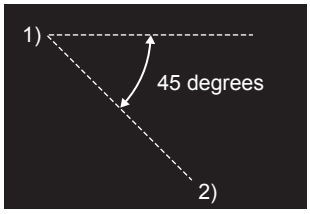
Step 3 To draw the next line, click the end point of the previous line.

• Basic drawing

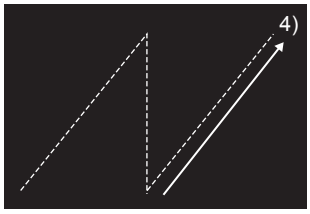


• Drawing with the [Shift] key pressed

The direction of the vertex can be changed at every 45 degrees.



Step 4 To finish the drawing, double-click the last vertex.



Step 5 Double-click the drawn freeform line to display the [Line Freeform] dialog.

➟7.4.1 [Line Freeform] dialog

Point

Editing the vertex

Select [Edit]→[Edit Vertices] from the menu to switch the size editing handle to the vertex editing handle.
The vertex editing handle enables the position of the vertex to be modified.
For details, refer to the following.

➟6.6.12 [Edit Vertices]

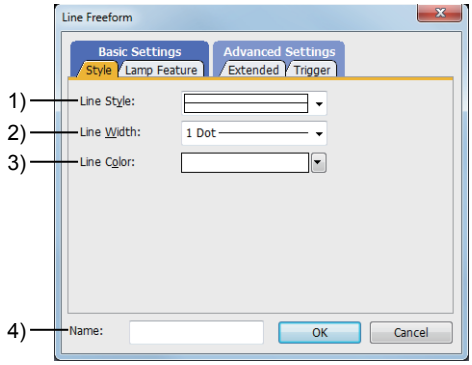
7.4.1 [Line Freeform] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style]**
Select the style of the line.
The following shows the items to be selected.
- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

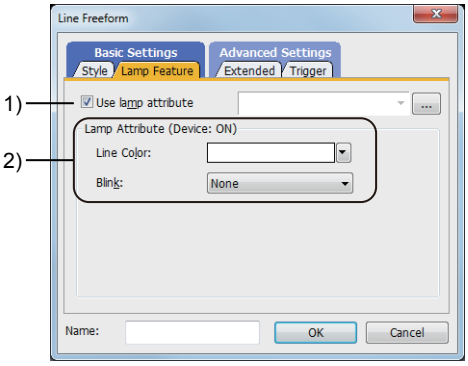
2) **[Line Width]**
Select the width of the line.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

3) **[Line Color]**
Select the color of the line.
For the details of the color, refer to the following.
➥6.4.2 Color settings

4) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Lamp Attribute]**

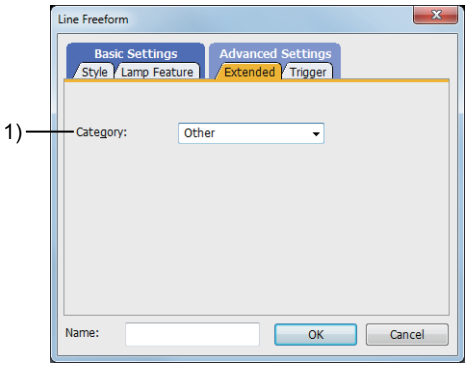
Changes the color of the freeform line by turning on and off the bit device.

➟6.5.4 ■1 Lamp attribute setting

Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the freeform line when the bit device is on. • [Line Color] Select the color of the line. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



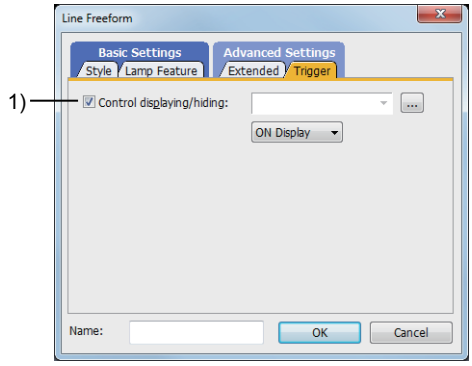
1) **[Category]**

Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide the object.

Select the ON/OFF status of the set device on which the object is displayed.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.5 Drawing a Rectangle

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a rectangle and square.

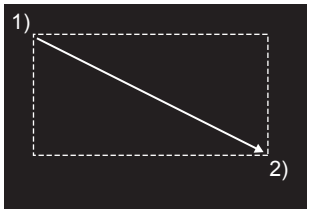
■1 How to draw

Step 1 Select [Figure]→[Rectangle] from the menu.

Step 2 Draw the rectangle on the screen.

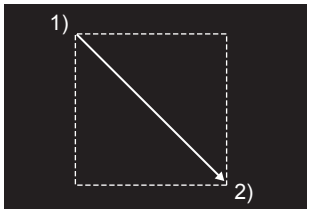
Drag the pointer from the start point to the end point.

• Basic drawing



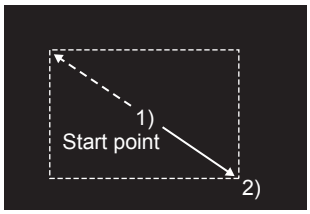
• Drawing with the [Shift] key pressed

Draw the square.



• Drawing with the [Ctrl] key pressed

The rectangle is drawn with the start point as a center.



Step 3 Double-click the drawn rectangle to display the [Rectangle] dialog.

➟7.5.1 [Rectangle] dialog

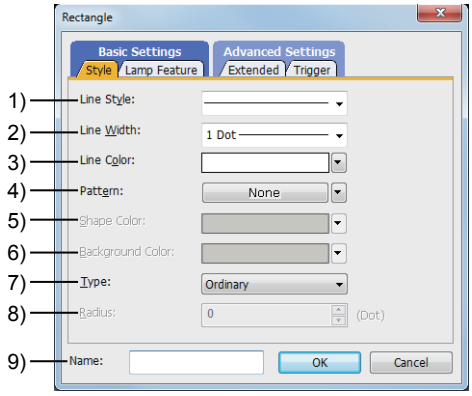
7.5.1 [Rectangle] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style]**
Select the style of the frame.
The following shows the items to be selected.
- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

2) **[Line Width]**
Select the width of the frame.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

3) **[Line Color]**
Select the color of the frame.
For the details of the color, refer to the following.
➥6.4.2 Color settings

4) **[Pattern]**
Select the pattern.
The following shows the items to be selected.
- [None]:
  Set no pattern.
  Only the frame line of the rectangle is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.

1: , 2: , 3: , 4: , 5: , 6: , 7:
8: , 9: , 10: , 11: , 12: , 13: , 14:
15: , 16: , 17: , 18: , 19: , 20: , 21:
22: , 23: , 24: , 25: , 26: , 27: , 28:
29: , 30: , 31: , 32: , 33: , 34: , 35:
36: , 37:

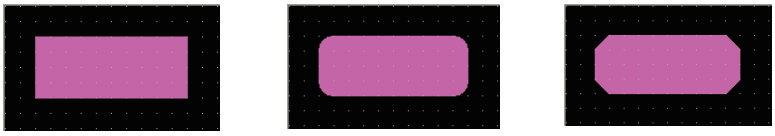
5) **[Shape Color]**
Select the pattern color.

6) **[Background Color]**
Select the background color.

7) **[Type]**
Select the type of the corner.
The following shows the items to be selected.

- [Ordinary]
- [Rounded]
- [Octagonal]

Example)



[Ordinary] [Rounded] [Octagonal]

For [Rounded], when the value other than [1 Dot] is selected for [Line Width], the line style is automatically changed to the straight line.
For [Rounded], when the style other than the straight line is selected for [Line Style], the line width is automatically changed to [1 Dot].

8) **[Radius]**
Set the radius of the corner.
Set this item when [Rounded] or [Octagonal] is selected for [Type].
The radius can be set from [0] dot.
The maximum value is the value calculated by dividing either of the vertical and horizontal sides of a rectangle, whichever is shorter, by 2. The value is rounded down after the decimal point. (Unit: dot)

9) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

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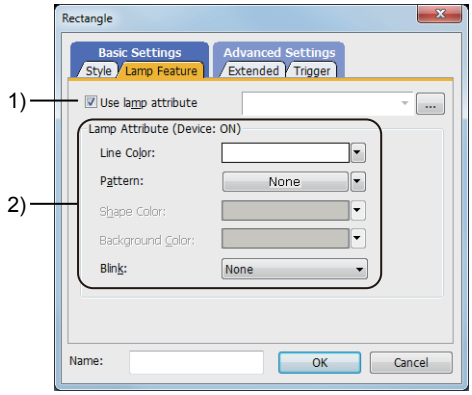


1) **[Use lamp attribute]**
Changes the color of the rectangle by turning on and off the bit device.

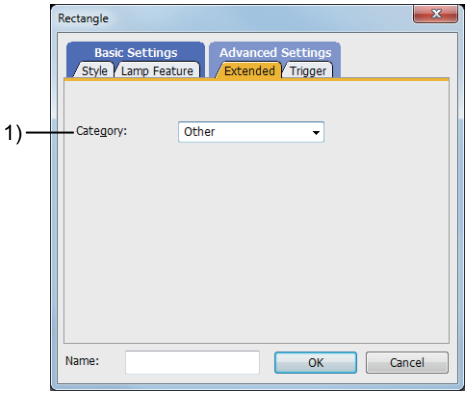
➟6.5.4 ■1 Lamp attribute setting

2) **[Lamp Attribute]**
Set each item in the lamp attribute.

Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the rectangle when the bit device is on. • [Line Color] Select the color of the frame. • [Pattern] Select the pattern. • [Shape Color] Select the pattern color. • [Background Color] Select the background color. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

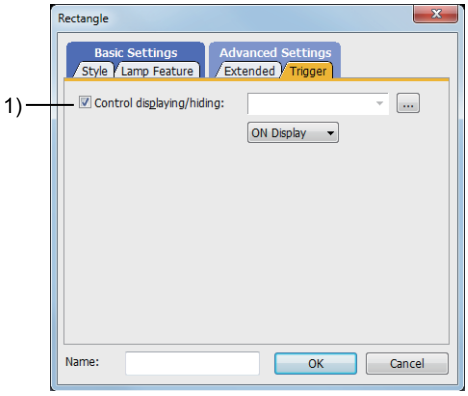


1) **[Category]**
Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide the object.
Select the ON/OFF status of the set device on which the object is displayed.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.6 Drawing a Polygon

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

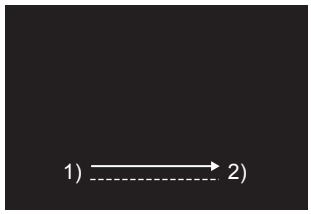
Draw a polygon.

■1 How to draw

Step 1 Select [Figure]→[Polygon] from the menu.

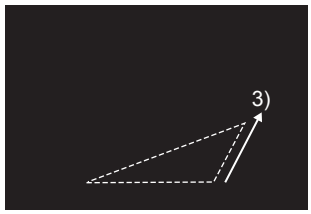
Step 2 Draw the polygon on the screen.

Drag the pointer from the start point to the end point to draw the first line.



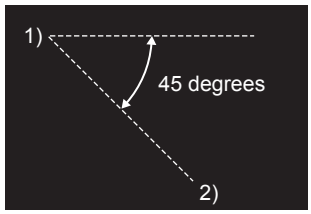
Step 3 To draw the next line, click the end point of the previous line.

• Basic drawing

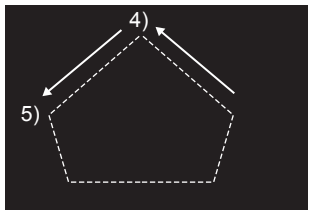


• Drawing with the [Shift] key pressed

The direction of the vertex can be changed at every 45 degrees.



Step 4 To finish the drawing, double-click the last vertex.



Step 5 Double-click the drawn polygon to display the [Polygon] dialog.

➟7.6.1 [Polygon] dialog

Point

Editing the vertex

Select [Edit]→[Edit Vertices] from the menu to switch the size editing handle to the vertex editing handle.
The vertex editing handle enables the position of the vertex to be modified.
For details, refer to the following.

➟6.6.12 [Edit Vertices]

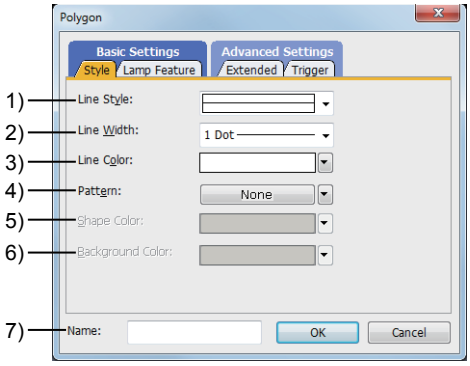
7.6.1 [Polygon] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style]**
Select the style of the frame.
The following shows the items to be selected.
- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

2) **[Line Width]**
Select the width of the frame.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

3) **[Line Color]**
Select the color of the frame.
For the details of the color, refer to the following.
➟6.4.2 Color settings

4) **[Pattern]**
Select the pattern.
The following shows the items to be selected.
- [None]:
  Set no pattern.
  Only the frame line of the polygon is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.

1: , 2: , 3: , 4: , 5: , 6: , 7:
8: , 9: , 10: , 11: , 12: , 13: , 14:
15: , 16: , 17: , 18: , 19: , 20: , 21:
22: , 23: , 24: , 25: , 26: , 27: , 28:
29: , 30: , 31: , 32: , 33: , 34: , 35:
36: , 37:

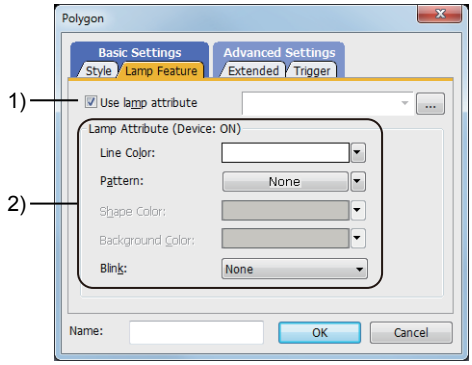
5) **[Shape Color]**
Select the pattern color.

6) **[Background Color]**
Select the background color.

7) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



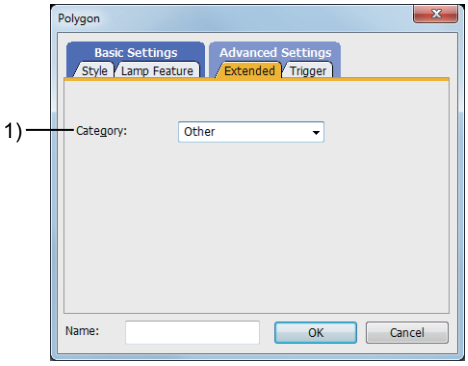
1) **[Use lamp attribute]**
Changes the color of the polygon by turning on and off the bit device.
➟6.5.4 ■1 Lamp attribute setting

2) **[Lamp Attribute]**
Set each item in the lamp attribute.

Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the polygon when the bit device is on. • [Line Color] Select the color of the frame. • [Pattern] Select the pattern. • [Shape Color] Select the pattern color. • [Background Color] Select the background color. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

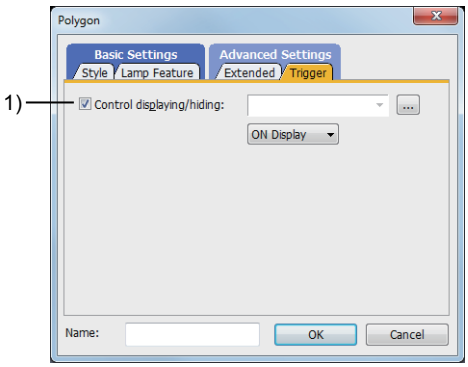


1) **[Category]**
Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide the object.
Select the ON/OFF status of the set device on which the object is displayed.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.7 Drawing a Circle

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a circle.

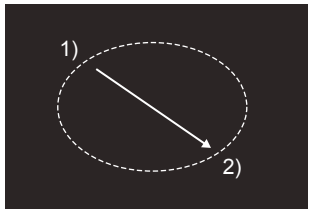
■1 How to draw

Step 1 Select [Figure]→[Circle] from the menu.

Step 2 Draw the circle on the screen.

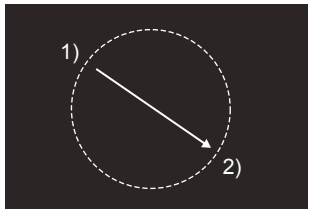
Drag the pointer from the start point to the end point.

• Basic drawing



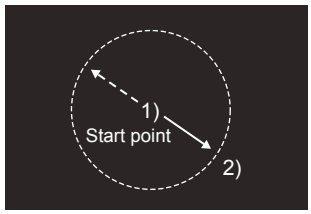
• Drawing with the [Shift] key pressed

A precise circle is drawn.



• Drawing with the [Ctrl] key pressed

The circle is drawn with the start point as a center.



Step 3 Double-click the drawn circle to display the [Circle] dialog.

➟7.7.1 [Circle] dialog

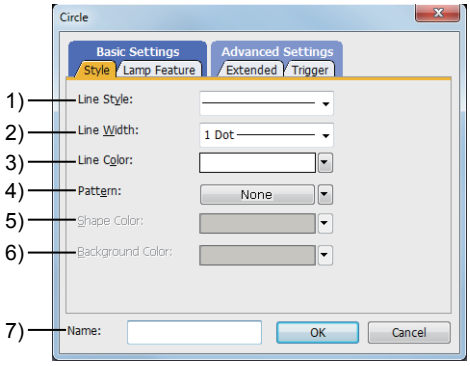
7.7.1 [Circle] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Line Style]**
Select the style of the frame.
The following shows the items to be selected.
- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

2) **[Line Width]**
Select the width of the frame.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

3) **[Line Color]**
Select the color of the frame.
For the details of the color, refer to the following.
➟6.4.2 Color settings

4) **[Pattern]**
Select the pattern.
The following shows the items to be selected.
- [None]:
  Set no pattern.
  Only the frame line of the circle is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.

1: , 2: , 3: , 4: , 5: , 6: , 7:
8: , 9: , 10: , 11: , 12: , 13: , 14:
15: , 16: , 17: , 18: , 19: , 20: , 21:
22: , 23: , 24: , 25: , 26: , 27: , 28:
29: , 30: , 31: , 32: , 33: , 34: , 35:
36: , 37:

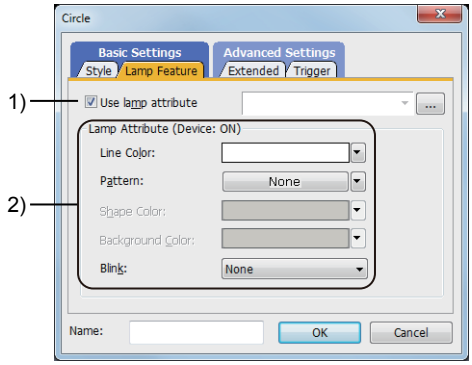
5) **[Shape Color]**
Select the pattern color.

6) **[Background Color]**
Select the background color.

7) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



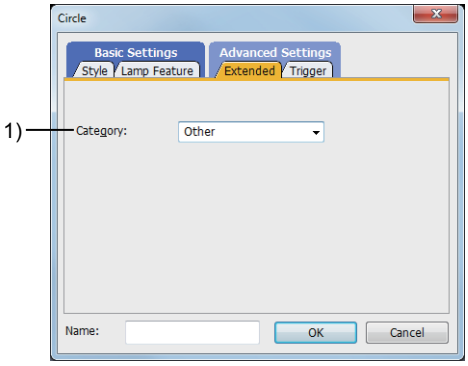
1) **[Use lamp attribute]**
Changes the color of the circle by turning on and off the bit device.
➟6.5.4 ■1 Lamp attribute setting

2) **[Lamp Attribute]**
Set each item in the lamp attribute.

Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the circle when the bit device is on. • [Line Color] Select the color of the frame. • [Pattern] Select the pattern. • [Shape Color] Select the pattern color. • [Background Color] Select the background color. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

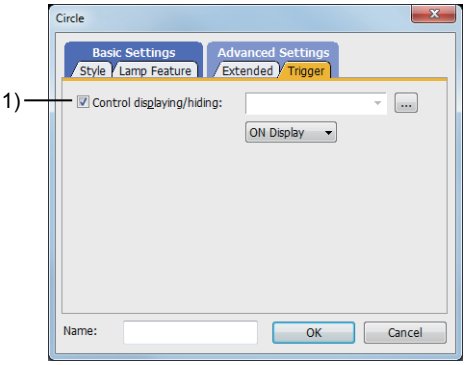


1) **[Category]**
Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide the object.
Select the ON/OFF status of the set device on which the object is displayed.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.8 Drawing an Arc or a Sector

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 [Arc], [Sector]

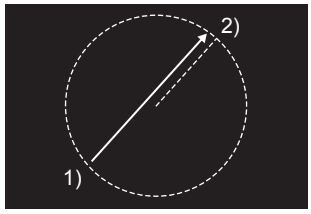
Draw an arc or a sector.

■2 How to draw

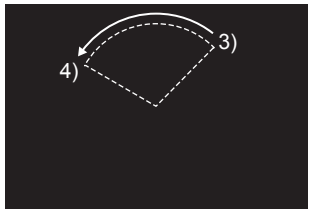
Step 1 To draw the arc, select [Figure]→[Arc] from the menu.
To draw the sector, select [Figure]→[Sector] from the menu.

Step 2 First of all, draw a precise circle on the screen.
Drag the pointer from the start point to the end point.

Step 3 The fine broken line is displayed inside the circle.
Click the start point of the arc.



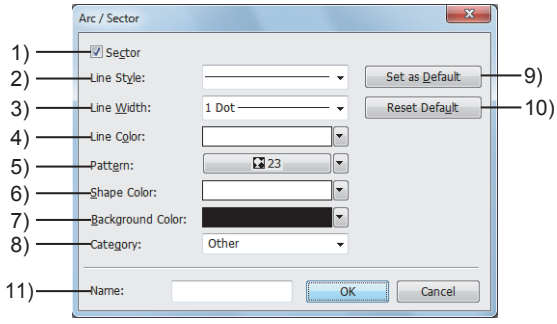
Step 4 Click the end point of the arc.
Drawing the arc or sector is completed.



Step 5 Double-click the drawn arc or sector to display the [Arc/Sector] dialog.
➟7.8.1 [Arc/Sector] dialog

7.8.1 [Arc/Sector] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Sector]**
Select this item to use the sector.
Do not select this item when using the arc.

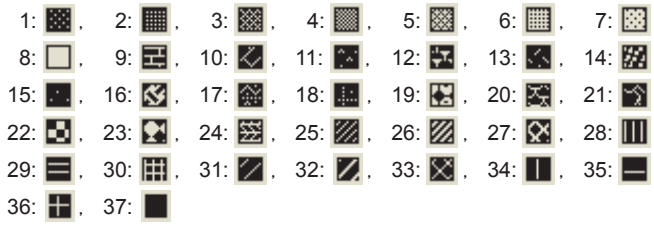
2) **[Line Style]**
Select the style of the frame.
The following shows the items to be selected.

- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

3) **[Line Width]**
Select the width of the frame.
The following shows the items to be selected.
- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

4) **[Line Color]**
Select the color of the frame.
For the details of the color, refer to the following.
➟6.4.2 Color settings

5) **[Pattern]**
Select the pattern.
The following shows the items to be selected.
- [None]:
  Set no pattern.
  Only the frame line of the arc or sector is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.



6) **[Shape Color]**
Select the pattern color.

7) **[Background Color]**
Select the background color.

8) **[Category]**
Select the category to which the figure belongs.
➟11.7 Managing figures and objects by category

9) **[Set as Default] button**
Sets the currently configured setting in the dialog as a default.
The default setting is applied at the next startup.

10) **[Reset Default] button**
Resets the default setting configured by the [Set as Default] button.

11) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

7.9 Drawing a Table

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

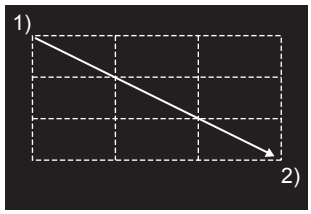
Draw a table.

■1 How to draw

Step 1 Select [Figure] → [Table] from the menu.

Step 2 Draw a table on the screen.

Drag the pointer from the start point to the end point.



Step 3 Double-click the table to display the [Table] dialog.

➟7.9.1 [Table] dialog

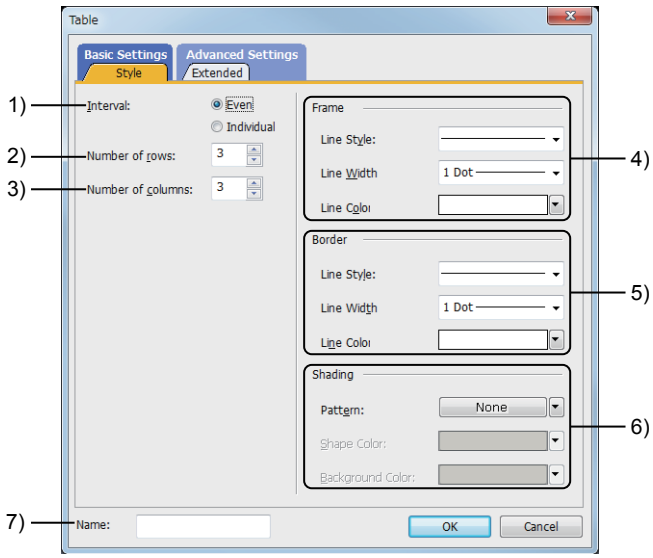
7.9.1 [Table] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Style] tab
■2 [Extended] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Interval]**

Select the row height and column width.

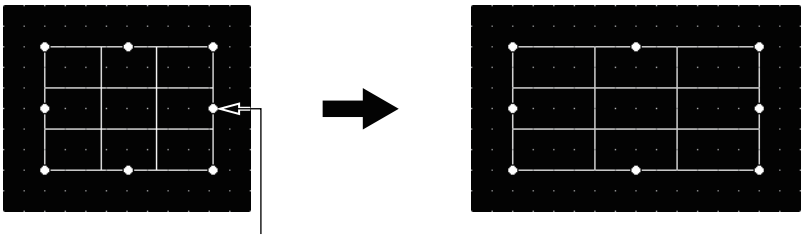
The following shows the items to be selected.

- [Even]

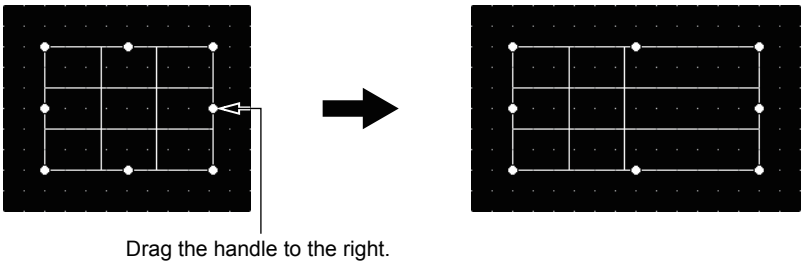
  Distributes rows and columns evenly.

  Dragging a handle on the table frame or a border automatically resizes rows and/or columns and distributes them evenly according to the table size.

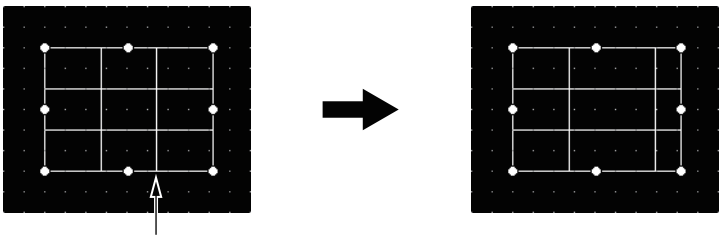
  Example) Changing the table width with the columns spaced evenly



• [Individual]
Set the height of a row or the width of a column.
Dragging a handle on the table frame resizes the table with the locations of borders unchanged.
Example) Changing the table width with the locations of borders unchanged



Dragging a border only moves this border.
Example) Moving a border to change the width of a column



2) **[Number of rows]**
Set the number of rows in the table.
The setting range depends on the setting of [Interval] or the table height.
- When [Interval] is set to [Even] (with the table height 31 dots or more): [1] to [30]
- When [Interval] is set to [Even] (with the table height 30 dots or less): [1] to the table height - 1
- When [Interval] is set to [Individual]: [1] to [30]

3) **[Number of columns]**
Set the number of columns in the table.
The setting range depends on the setting of [Interval] or the table width.
- When [Interval] is set to [Even] (with the table width 31 dots or more): [1] to [30]
- When [Interval] is set to [Even] (with the table width 30 dots or less): [1] to the table width - 1
- When [Interval] is set to [Individual]: [1] to [30]

4) **[Frame]**

Item	Description
[Line Style]	Select the style of the frame. The following shows the items to be selected. • Straight line • Fine broken line • Coarse broken line • Speck chain line • Two-dot long and two short dashes line

Item	Description
[Line Width]	Select the width of the frame. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Line Color]	Select the color of the frame. For the frame color, refer to the following. ➟6.4.2 Color settings

5) **[Border]**

Item	Description
[Line Style]	Select the style of the border. The following shows the items to be selected. • Straight line • Fine broken line • Coarse broken line • Speck chain line • Two-dot long and two short dashes line
[Line Width]	Select the width of the border. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Line Color]	Select the color of the border. For the border color, refer to the following. ➟6.4.2 Color settings

6) **[Shading]**

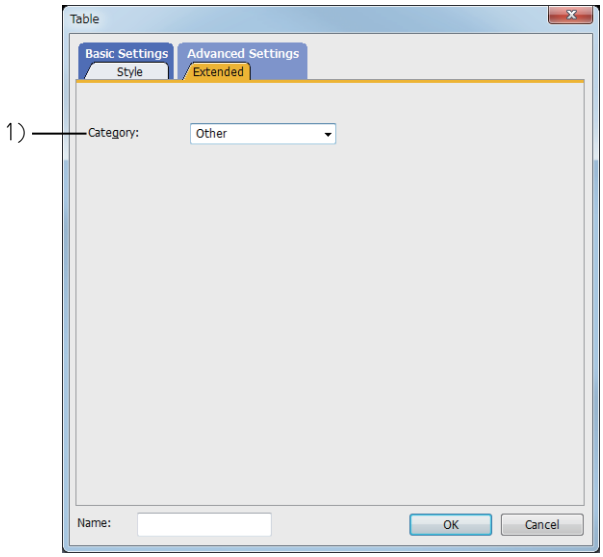
Item	Description
[Pattern]	Select the pattern. The following shows the items to be selected. • [None]: Set no pattern. The table frame and borders are displayed. • Other than [None]: Select a pattern. The following shows the items to be selected. 1: , 2: , 3: , 4: , 5: , 6: , 7: 8: , 9: , 10: , 11: , 12: , 13: , 14: 15: , 16: , 17: , 18: , 19: , 20: , 21: 22: , 23: , 24: , 25: , 26: , 27: , 28: 29: , 30: , 31: , 32: , 33: , 34: , 35: 36: , 37:
[Shape Color]	Select the color of the pattern. For the pattern color, refer to the following. ➟6.4.2 Color settings
[Background Color]	Select the background color. For the background color, refer to the following. ➟6.4.2 Color settings

7) **[Name]**

Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Category]**
Select the category to which the figure belongs.

➟11.7.1 Specifications of the category

7.10 Drawing a Scale

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Draw a scale.

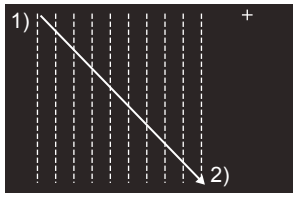
■1 How to draw

Step 1 Select [Figure]→[Scale] from the menu.

Step 2 Draw the scale on the screen.

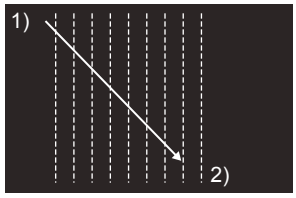
Drag the pointer from the start point to the end point.

• Basic drawing



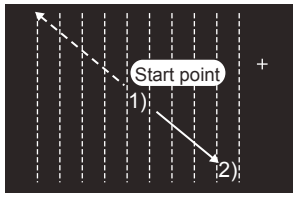
• Drawing with the [Shift] key pressed

The scale is drawn with same length in vertical and horizontal directions.



• Drawing with the [Ctrl] key pressed

The scale is drawn with the start point as a center.

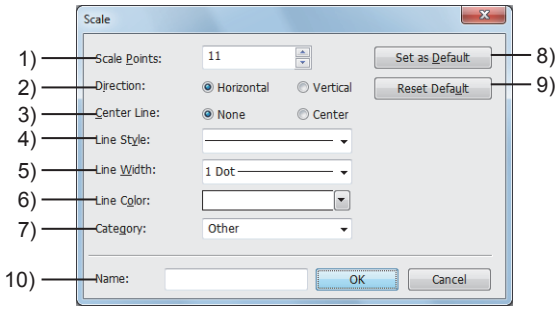


Step 3 Double-click the drawn scale to display the [Scale] dialog.

➟7.10.1 [Scale] dialog

7.10.1 [Scale] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Scale Points]**

Set the number of lines on the scale.

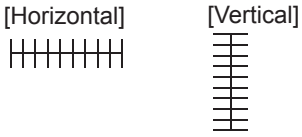
The setting range is [2] to [255].

2) **[Direction]**

Select the direction of the scale.

The following shows the items to be selected.

- [Horizontal]
- [Vertical]



3) **[Center Line]**

Select the center line which passes vertically through the scale.

The following shows the items to be selected.

- [None]
- [Center]

4) **[Line Style]**

Select the style of the line.

The following shows the items to be selected.

- Straight line
- Fine broken line
- Coarse broken line
- Speck chain line
- Two-dot long and two short dashes line

5) **[Line Width]**

Select the width of the line.

The following shows the items to be selected.

- [1 Dot]
- [2 Dot]
- [3 Dot]
- [4 Dot]
- [5 Dot]
- [7 Dot]

6) **[Line Color]**

Select the color of the line.

For the details of the color, refer to the following.

➟6.4.2 Color settings

7) **[Category]**

Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

8) **[Set as Default] button**

Sets the currently configured setting in the dialog as a default.

The default setting is applied at the next startup.

9) **[Reset Default] button**

Resets the default setting configured by the [Set as Default] button.

10) **[Name]**

Set the figure name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

7.11 Drawing a Piping

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

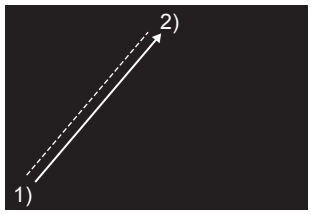
Draw a piping.

■1 How to draw

Step 1 Select [Figure]→[Piping] from the menu.

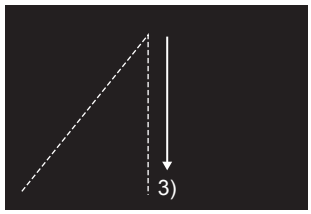
Step 2 Draw the line to become the piping on the screen.

Drag the pointer from the start point to the end point to draw the first line.



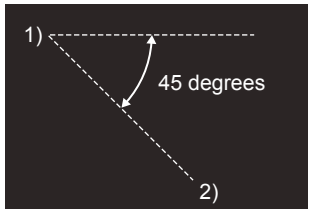
Step 3 To draw the next line, click the end point of the previous line.

• Basic drawing



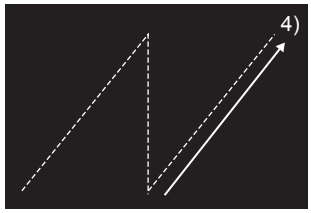
• Drawing with the [Shift] key pressed

The direction of the vertex can be changed at every 45 degrees.



Step 4 To finish the drawing, double-click the last vertex.

When 100 vertices are drawn, the drawing automatically ends.



Step 5 Double-click the drawn piping to display the [Piping] dialog.

➟7.11.1 [Piping] dialog

Point

Editing the vertex

Select [Edit]→[Edit Vertices] from the menu to switch the size editing handle to the vertex editing handle.
The vertex editing handle enables the position of the vertex to be modified.
For details, refer to the following.

➟6.6.12 [Edit Vertices]

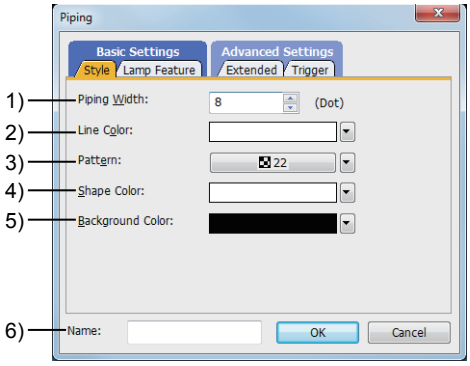
7.11.1 [Piping] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Style] tab
■2 [Lamp Feature] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



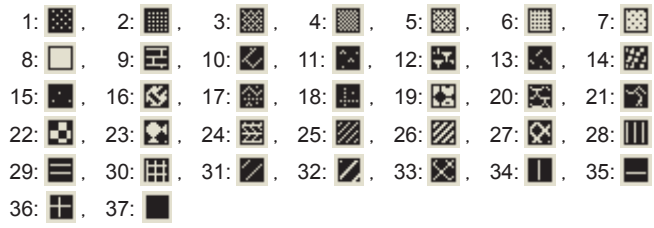
1) **[Piping Width]**
Set the width of the piping.
The setting range is [3] to [100] dots.

2) **[Line Color]**
Select the color of the frame.
For the details of the color, refer to the following.

➟6.4.2 Color settings

3) **[Pattern]**
Select the pattern.
The following shows the items to be selected.

- [None]:
  Set no pattern.
  Only the frame line of the piping is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.



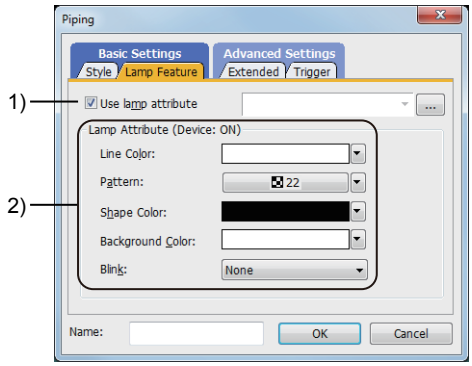
4) **[Shape Color]**
Select the pattern color.

5) **[Background Color]**
Select the background color.

6) **[Name]**
Set the figure name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Lamp Feature] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Use lamp attribute]**
Changes the color of the piping by turning on and off the bit device.

➟6.5.4 ■1 Lamp attribute setting

2) **[Lamp Attribute]**
Set each item in the lamp attribute.

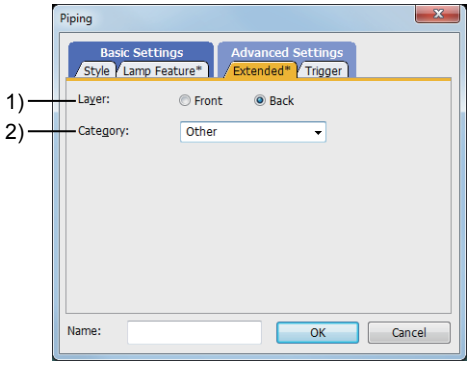
Item	Description
[Device]	Specify the bit device.
[ON Setting]	Set the attribute of the piping when the bit device is on. • [Line Color] Select the color of the frame. • [Pattern] Select the pattern. • [Shape Color] Select the pattern color. • [Background Color] Select the background color. • [Blink] Select the blinking speed. The following shows the items to be selected. ·[None] ·[Low] ·[Medium] ·[High]

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Layer]**

Not available to GT21 and GS21.

Select the layer to place the figure.

The following shows the items to be selected.

- [Front]
- [Back]

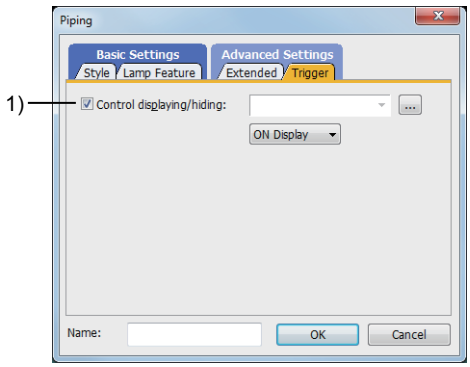
2) **[Category]**

Select the category to which the figure belongs.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide the object.

Select the ON/OFF status of the set device on which the object is displayed.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

7.12 Painting Figures

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.1

Paint areas or figures enclosed by lines.

■1 How to paint

Step 1 Select [Figure]→[Paint] from the menu.

Step 2 Place the cursor inside the area to be painted, and click it.

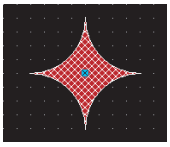
The [Paint] dialog appears.

Step 3 Configure the settings in the [Paint] dialog.

➟7.12.1 [Paint] dialog

Step 4 After the setting, click the [OK] button.

The paint mark is displayed in the painted area, and the painting is completed.



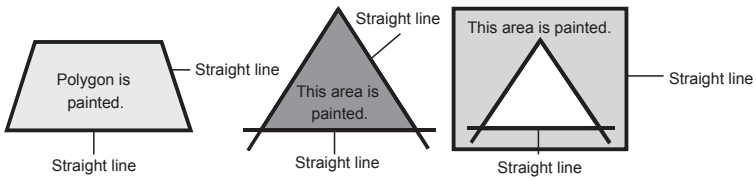
The paint mark is displayed on GT Desinger3 only.

Point

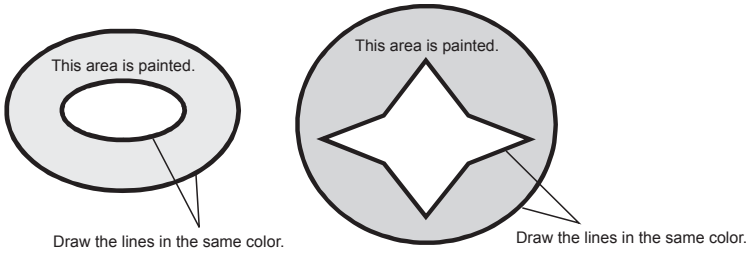
Before painting

Draw the area to be painted as follows:

(1) **Enclose the area with the straight lines**



(2) **Select the same color for all the lines enclosing the area.**



7.12.1 [Paint] dialog

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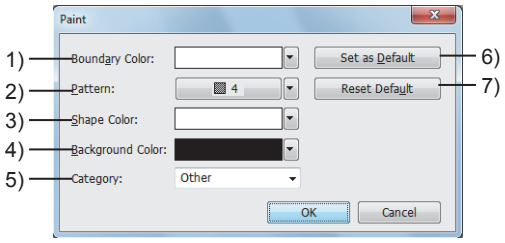


1) **[Boundary Color]**
Select the same color as the one for all the lines enclosing the area.
For the details of the color, refer to the following.
➟6.4.2 Color settings

2) **[Pattern]**
Select the pattern.
The following shows the items to be selected.
- [None]:
  Set no pattern.
  Only the frame line of the figure is displayed.
- Other than [None]:
  Select a pattern.
  The following shows the items to be selected.

1: , 2: , 3: , 4: , 5: , 6: , 7:
8: , 9: , 10: , 11: , 12: , 13: , 14:
15: , 16: , 17: , 18: , 19: , 20: , 21:
22: , 23: , 24: , 25: , 26: , 27: , 28:
29: , 30: , 31: , 32: , 33: , 34: , 35:
36: , 37:

3) **[Shape Color]**
Select the pattern color.

4) **[Background Color]**
Select the background color.

5) **[Category]**
Select the category to which the figure belongs.
➟11.7 Managing figures and objects by category

6) **[Set as Default] button**
Sets the currently configured setting in the dialog as a default.
The default setting is applied at the next startup.

7) **[Reset Default] button**
Resets the default setting configured by the [Set as Default] button.

Point

(1) **Precautions**

- Place the area to be painted behind the paint mark.
  If the area is placed on the front of the paint mark, the area cannot be painted.
- Do not select the same color for the area as the one for the lines enclosing the area.
  If the same color is selected, the area cannot be painted.
- Enclose the area to be painted without any clearance between the lines.
  If there is any clearance between the lines, the paint is run off the lines.
- If the same color is selected for [Boundary Color] and either of [Shape Color] or [Background Color], the area may not be painted.
  In such a case, shift the position of the paint mark.

(2) **Display on the screen editor**

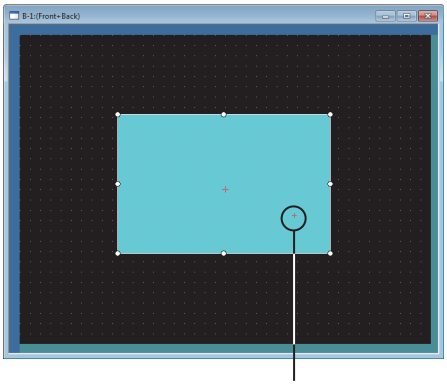
(a) **When a part of the area is unpainted**

In some cases, a part of the area is unpainted.
Redisplay the screen editor, and check whether the whole area is painted.

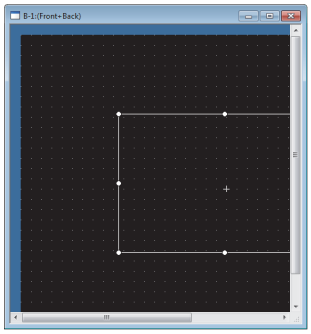
➟2.6.3 Redisplaying a selected screen editor

(b) **When the paint mark is not displayed**

When the paint mark is not displayed in the window, the area cannot be painted.
Display the paint mark in the window, and paint the area properly.



When the paint mark is displayed



When the paint mark is not displayed

7.13 Pasting an Image File

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Import an image file to GT Designer3, and paste it on the screen.

■1 Applicable image files

The following types of image files can be pasted.

(1) BMP file

Item	Description
Type of file	24-bit BMP, 256-color BMP, 16-color BMP, Monochrome BMP
Number of colors	65536 colors or less (The colors which cannot be displayed on the GOT are subtracted.)
Maximum size of images that can be pasted	Size of the temporary area of the screen editor on which an image is pasted ➟2.6 Basic Operations of the Drawing Screen If an image extends beyond the temporary area, the image is resized vertically and horizontally proportional to the original size to fit into the temporary area.

If an image extends to the temporary area, the extended part is not displayed on the GOT.
Resize or reposition the image to fit into the screen display area.
For details on the size of images displayable on the GOT when the base screen size expansion is enabled, refer to the following.

➟5.1.3 ■3 (4) Size of images displayable on the expanded base screens

(2) JPEG file

Item	Description
Format	RGB full color-compliant baseline JPEG (JFIF, EXIF)
Number of colors	65536 colors or less (The colors which cannot be displayed on the GOT are subtracted.)
Maximum size of images that can be pasted	Size of the temporary area of the screen editor on which an image is pasted ➟2.6 Basic Operations of the Drawing Screen If an image extends beyond the temporary area, the image is resized vertically and horizontally proportional to the original size to fit into the temporary area.

If an image extends to the temporary area, the extended part is not displayed on the GOT.
Resize or reposition the image to fit into the screen display area.
For details on the size of images displayable on the GOT when the base screen size expansion is enabled, refer to the following.

➟5.1.3 ■3 (4) Size of images displayable on the expanded base screens

(3) PNG file

Item	Description
Format	32-bit PNG data with RGB+αchannel α channel (transparency information) supported, RGB 24-bit PNG
Number of colors	65536 colors or less (The colors which cannot be displayed on the GOT are subtracted.)
Maximum size of images that can be pasted	Size of the temporary area of the screen editor on which an image is pasted ➟2.6 Basic Operations of the Drawing Screen If an image extends beyond the temporary area, the image is resized vertically and horizontally proportional to the original size to fit into the temporary area.

If an image extends to the temporary area, the extended part is not displayed on the GOT.
Resize or reposition the image to fit into the screen display area.
For details on the size of images displayable on the GOT when the base screen size expansion is enabled, refer to the following.

➟5.1.3 ■3 (4) Size of images displayable on the expanded base screens

Point

(1) Transparent area and semi-transparent area (α channel) of PNG file

The transparency of the transparent area and semi-transparent area of the PNG file differs according to the data before the PNG file is imported (the value of α channel).

- Transparent area (α=0)
  The transparent area displays the background color.
- Semi-transparent area (0<α<1)
  The color of the semi-transparent area is combined with the background color.

(2) Placing PNG files

When a PNG image with an α channel is placed on the front layer and there are no other images in the background, the translucent part of the image is superimposed on the transparent color of the screen.

Because the composite color is different from the transparent color of the screen, the back layer cannot be seen.

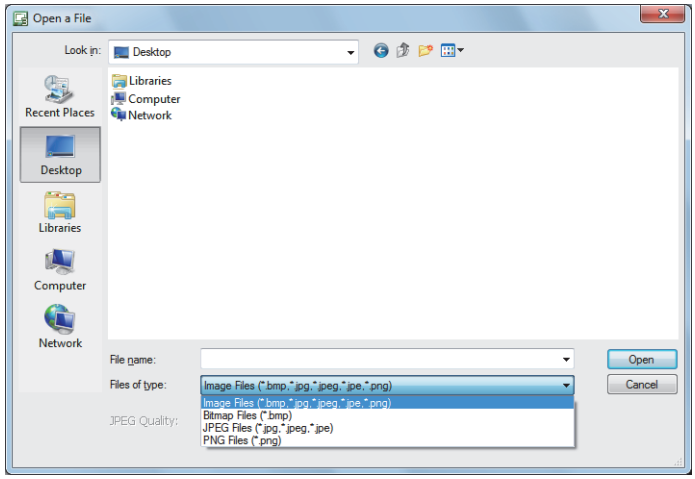
■2 How to paste

Step 1 Select [Figure]→[Import Image Data] from the menu.

The [Open] dialog appears.

Step 2 Select the image file to be pasted.

When you paste the JPEG file, set [JPEG Quality].
[Low]: The image quality deteriorates, and the file size becomes smaller.
[High]: The image quality improves, and the file size becomes larger.



Step 3 Click the [Open] button.

The imported image file is pasted on the screen editor.

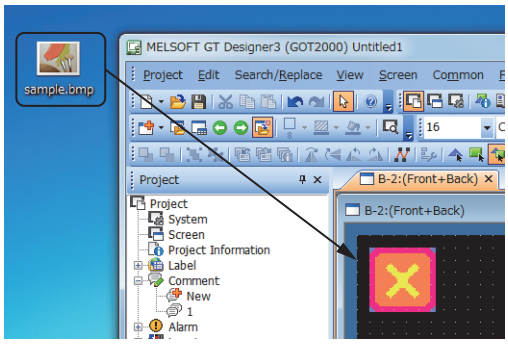
Step 4 Click the position where you paste it.

Pasting is completed.

Point

Pasting the image file by drag-and-drop

The image file can be pasted on GT Designer3 screen by drag-and-drop.

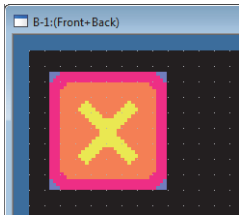


■3 Editing the image

The following shows how to edit the pasted image.

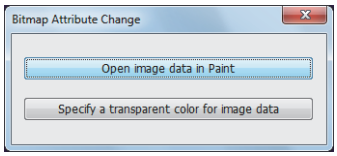
(1) Editing the image

Step 1 Double-click the image to be edited.

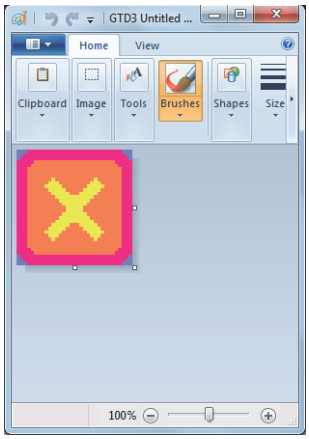


Step 2 When you edit the image of the BMP file, the [Bitmap Attribute Change] dialog appears.

Click the [Open image data in Paint] button.



Step 3 The paint window of Windows appears.
Edit the image on the paint window.

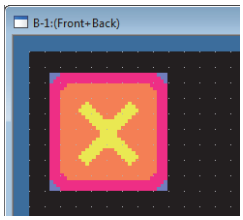


Step 4 After editing, select [File]→[Update document] from the menu.
The paint window is closed, and editing is completed.

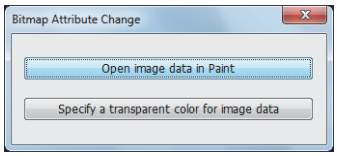
(2) Setting the transparent color

When the pasted image file is a BMP file, you can select a color for transparent setting.

Step 1 Double-click the image to be edited.

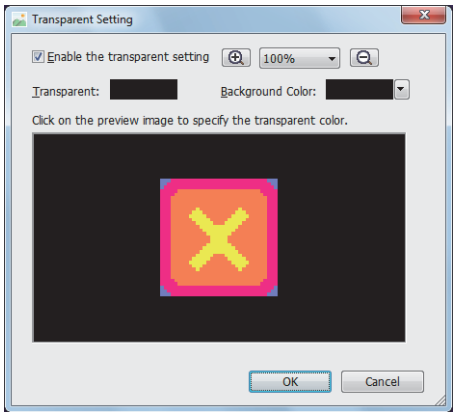


Step 2 The [Bitmap Attribute Change] dialog appears.
Click the [Specify a transparent color for image data] button.



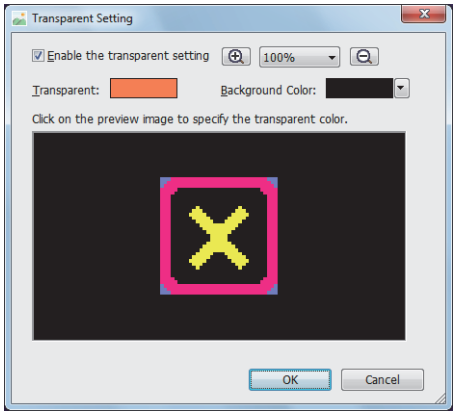
Step 3 The [Transparent Setting] dialog appears.

➟7.13.1 [Transparent Setting] dialog
Select [Enable the transparent setting].

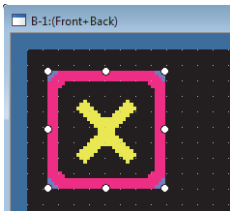


Step 4 Select the color to be transparent in the preview image.

Step 5 The selected color becomes transparent.
To save the image, click the [OK] button.



Step 6 Setting is completed.



■4 Precautions

(1) For BMP file

The color of the image displayed on GT Designer3 and the GOT may be slightly different from the color of the BMP file.

(2) For JPEG file

In the following cases, the image quality may deteriorate.

- When the pasted JPEG file is in the JFIF format, and not the baseline JPEG
- When the pasted image of the JPEG file is edited

To avoid the image quality deterioration, use the BMP file.

(3) For GT21 and GS21

The GOT may not display an image with dimensions larger than those of the screen display area on the screen editor.
Adjust the dimensions of the image to fit into the screen display area.

(4) For Windows 11

Paint in Windows does not open even when an image pasted to the screen is double-clicked.
When editing an image, edit it by using image editing software and paste the edited image to the screen.

7.13.1 [Transparent Setting] dialog

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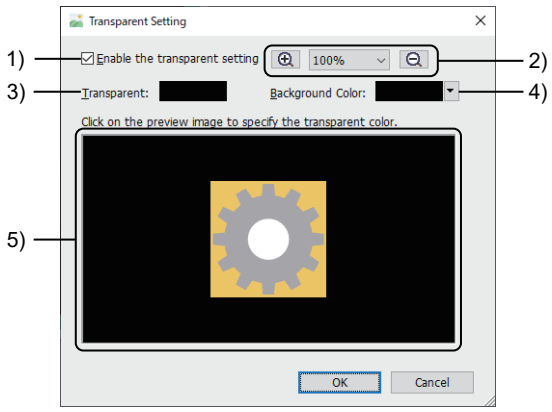
Transparent setting is available using the image file displayed in the preview.
Depending on how to display this dialog, either of the following images is displayed in the preview.

- Image file pasted on the screen editor
- Image file selected by clicking the [From image] button in the [Image File Setting] dialog



1) **[Enable the transparent setting]**
This option is displayed only when a transparent color is set for the image file pasted on the screen editor.
Select the checkbox to enable the setting.

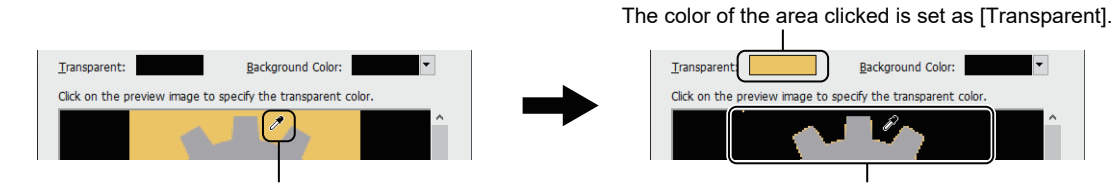
2) **Zooming in or out the preview**
Used to zoom in or out the preview.

3) **[Transparent]**
Displays a transparent color.

4) **[Background Color]**
Set a background color for the preview.

➟6.4.2 Color settings

5) **Preview**
Displays the image file.
The color of the area clicked is set as a transparent color.



Click the color you want to set as a transparent color.

The color of the area clicked is set as [Transparent].

The color becomes transparent and the color set as [Background Color] is displayed.

7.14 Pasting DXF Data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Import the data of the DXF file (AutoCAD Data Exchange Format file) to GT Designer3, convert the data into the figure data of GT Designer3, and paste it on the screen.

■1 Supported version of DXF file

The DXF files with the following versions are supported.

- R12
- R13
- R14

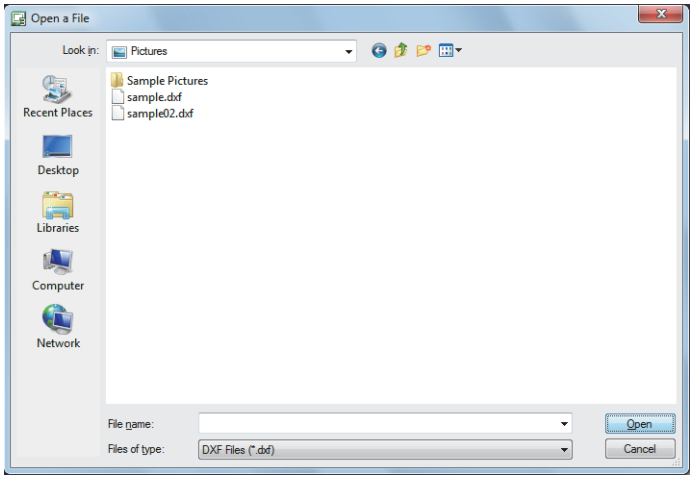
To use the DXF file with unsupported version, change to any of the above versions.

■2 How to paste

Step 1 Select [Figure]→[Import DXF Data] from the menu.

The [Open] dialog appears.

Step 2 Select the DXF file to be pasted.



Step 3 Click the [Open] button.

The figure data is pasted on the screen editor.

Step 4 Click the position where you paste it.

Pasting is completed.

Point

(1) **Editing the figure data**

The figure data of the DXF file is grouped.

For information on how to edit a grouping of figures, refer to the following.

➟6.6.8 [Group], [Ungroup]

(2) **Pasting the file by drag-and-drop**

A desktop file or a file in a folder can be directly pasted on the GT Designer3 screen by drag-and-drop.

■3 Convertible information

(1) Convertible data

The following data of the DXF file can be converted into the data of GT Designer3.

(a) Converting the figure data

The figure data is converted from the data of the DXF file as below.

DXF data (Before pasting)	GTD3 data (After pasting)	Remarks
ARC	Arc	-
ATTDEF	(Skipped)	-
ATTRIB	Text	• The text size is converted to the nearest one within the range of 0.5 to 8 dots. • The direction of the text is converted to the nearest one at every 90 degrees. • The text style and inclination angle are not converted.
CIRCLE	Circle	-
DIMENSION	Group	The color and line style are converted based on the definition of BLOCK instead of the layer of DIMENSION.
ELLIPSE	Circle or Arc	When the main axis is inclined, the figure is converted so that its main axis will be rotated to vertical or horizontal.
INSERT	Group	• The color and line style are converted based on the definition of BLOCK instead of the layer of INSERT. • The scale and rotation angle are not converted.
LEADER	Line Freeform*1	The figure is converted to the freeform line by connecting each vertex with the straight line.
LINE	Line	-
LWPOLYLINE	Line Freeform*1or Polygon*1	• The figure is converted to the freeform line or polygon by connecting each vertex with the straight line. • The figure with curved lines is not converted.
MLINE	Line Freeform*1	• MLINESTYLE is not converted. The color and line style of the freeform line are converted based on the layer definition. • Cap processing is not supported.
MTEXT	Text	• The text size is converted to the nearest one within the range of 0.5 to 8 dots. • The direction of the text is converted to the nearest one at every 90 degrees. • The format code and text style are not converted.
POINT	Circle, Rectangle, or Line	-
POLYLINE	Line Freeform*1or Polygon*1	• The figure is converted to the freeform line or polygon by connecting each vertex with the straight line. • The figure with curved lines is not converted.
SEQEND	(End of sequence data)	-
SOLID	Polygon	-
SPLINE	Line Freeform*1or Polygon*1	The figure is converted to the freeform line or polygon by connecting each fit point with the straight line.
TEXT	Text	• The text size is converted to the nearest one within the range of 0.5 to 8 dots. • The direction of the text is converted to the nearest one at every 90 degrees. • The text style and inclination angle are not converted.
TRACE	Polygon*1	-

*1 When the number of vertices of the freeform line or polygon is 1000 or more, 1000th or more vertices cannot be displayed on the GOT.
Draw the figure on GT Designer3 so that the number of vertices will be 999 or less.

(b) Converting the line

The line width is converted to 1 dot.

The line style is converted as below.

DXF data (Before pasting)	GTD3 data (After pasting)	Image
CONTINUOUS	Straight line	
DASHED	Coarse broken line	
HIDDEN	Coarse broken line	
CENTER	Speck chain line	
PHANTOM	Two-dot long and two short dashes line	
User definition	Straight line	
Others	Straight line	

(c) Converting the color

The color is converted as below.

DXF data (Before pasting)	GTD3 data (After pasting)
Red (0x01)	Red (0xE0)
Yellow (0x02)	Yellow (0xFC)
Green (0x03)	Green (0x1C)
Light blue (0x04)	Light blue (0x1F)
Blue (0x05)	Blue (0x03)
Purple (0x06)	Purple (0xE3)
White (0x07)	White (0xFF)
Black (0x08)	Black (0x00)
Dark red (0x09)	Dark red (0xC0)
Dark yellow (0x0A)	Dark yellow (0xF0)
Dark green (0x0B)	Dark green (0x18)
Dark-light blue (0x0C)	Dark-light blue (0x1E)
Dark blue (0x0D)	Dark blue (0x02)
Dark purple (0x0E)	Dark purple (0xC3)
Dark white (0x0F)	Dark white (0xFE)
Others	White (0xFF)

Point

Editing the figure data after pasted

Only the figure data of the DXF file which can be pasted on GT Designer3 is converted. Therefore, a part of the figure data may not be displayed as original data.

The following shows some of the examples.

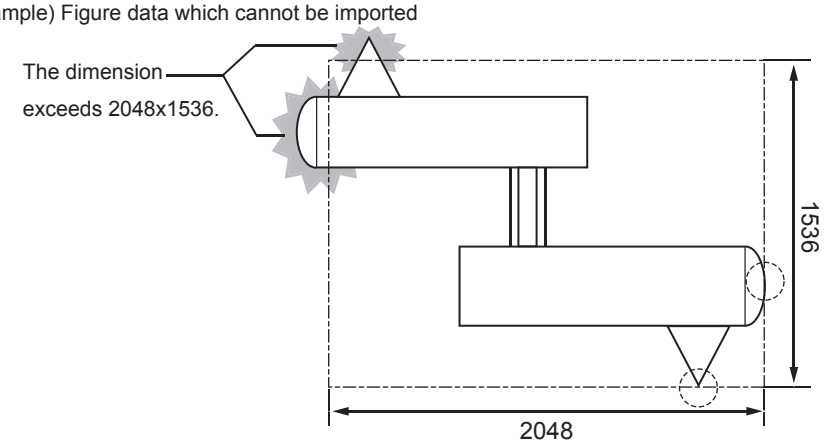
- φ cannot be displayed.
  →As φ in DXF file is not the shift JIS code, it cannot be converted.
- BLOCK consisting of line and circle is enlarge-displayed.
  →As the scale is set in INSERT, BLOCK cannot be displayed in the proper size.

Check the figure and adjust it as necessary.

(2) Precautions

- The data with the layer off cannot be converted.
- Only the shift JIS code text is compatible.
- Regardless of the unit, the dimension 1 on the DXF file is converted to 1 dot on GT Designer3.
- To import the figure data to GT Designer3, the dimension should be 2048×1536 or smaller.
  If the width or height exceeds the above size, the figure data cannot be imported.

Example) Figure data which cannot be imported



- Some DXF files may require 10 minutes or more for importing.
- The pasted figure data is registered in [Other] in [Category].

7.15 Pasting IGES Data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Import the data of the IGES (Data Exchange Format among CADs) to GT Designer3, convert the data into the figure data of GT Designer3, and paste it on the screen.

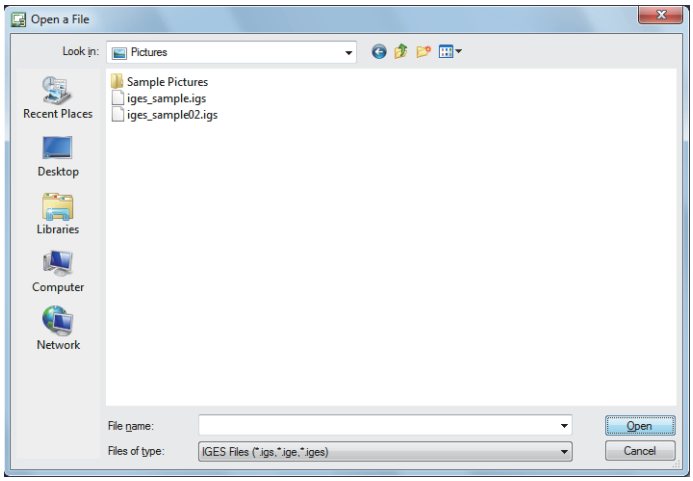
■1 Supported IGES file

The supported files are the wire frame format IGES files (*.igs, *.ige, *.iges) with Autodesk Inventor manufactured by Autodesk, Inc..

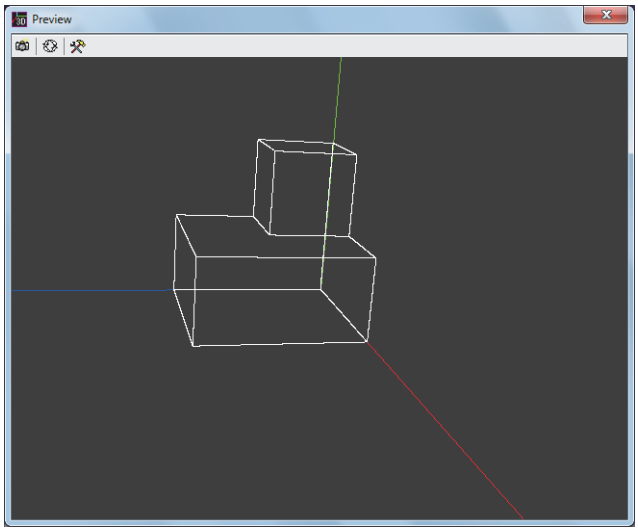
■2 How to paste

Step 1 Select [Figure]→[Import IGES Data] from the menu.
The [Open] dialog appears.

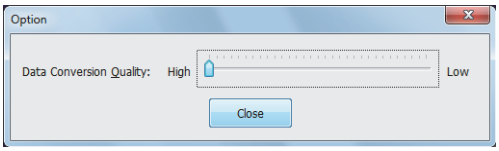
Step 2 Select the IGES file to be pasted.



Step 3 Click the [Open] button.
The [Preview] dialog appears, and the figure data is displayed.



Step 4 Click the [Option] button to display the [Option] dialog.
Set the optimization level for converting the curved line to freeform line.
[Low]: The image quality deteriorates, and the file size becomes smaller.
[High]: The image quality improves, and the file size becomes larger.



Step 5 Adjust the size and direction of the figure data.

- Left drag: Rotates the figure data to the direction in which it is dragged.
- Right drag: Moves the figure data to the direction in which it is dragged.
- Left and right drag to upward : Increases the size of the figure data.
- Left and right drag to downward: Decrease the size of the figure data.

The figure data is pasted on the screen in the size and direction displayed in the [Preview] dialog.

Step 6 After adjusting, click the [Save] button.

The figure data is pasted on the screen editor.

Step 7 Click the position where you paste it.

Pasting is completed.

Point

Editing the figure data

The figure data of the IGES file is grouped.

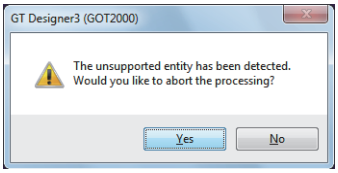
For information on how to edit a grouping of figures, refer to the following.

➟6.6.8 [Group], [Ungroup]

■3 Precautions

(1) Data which cannot be imported

When the IGES file has unsupported entity, the following dialog is displayed.



Clicking the [No] button displays the [Preview] dialog; however, the unsupported entity and subsequent ones are not imported.

The following shows the examples.

- Parent entity (importable)-child entity (importable)-grandchild entity (not importable)
  →Although the parent entity and child entity are imported, the grandchild entity is not imported.
- Parent entity (importable)-child entity (not importable)-grandchild entity (importable)
  →Although the parent entity is imported, the child entity and grandchild entity are not imported.
- Parent entity (not importable)-child entity (importable)-grandchild entity (importable)
  →As the parent entity is not importable, all the entities are not imported.

(2) Importable entities

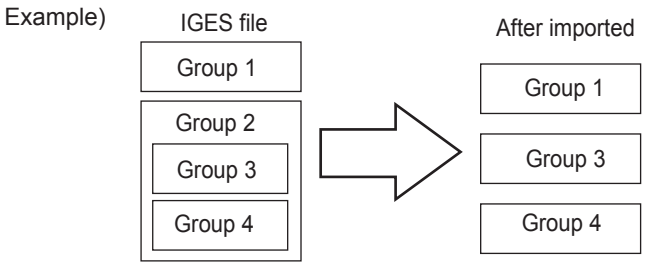
GT Designer3 supports the entities defined by JAMA-IGES.

The following shows the importable entities.

Entity name	Entity ID
Circle	100
Ellipse	104
Line	110
Transformation matrix	124
Rational B-spline curve	126
General note	212
Subfigure definition	308
Color definition	314
Subfigure entity	408

(3) Nested format groups

When some groups are nested in the IGES file, only the bottom level groups are imported.



(4) Displaying the figure data which cannot be imported on the GOT

To display the figure data which cannot be imported on the GOT, capture the screen image using the Windows screenshot function and paste the image file.

➟7.13 Pasting an Image File

8. OBJECT FUNCTION

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8.1 Using Objects in the Library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The library contains figures, objects, templates, and images.
You can place them on a screen.
They are preset or user-created.

8.1.1 Specifications of the library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Registerable library data types

(1) Figure
Figures drawn by the user.

(2) Object
Objects set by the user.

(3) Template
Templates set by the user.
For the details of the templates, refer to the following.

➟11.6 Efficient Drawing with Templates

(4) Image file
BMP files, JPEG files, and PNG files.

■2 Library classifications

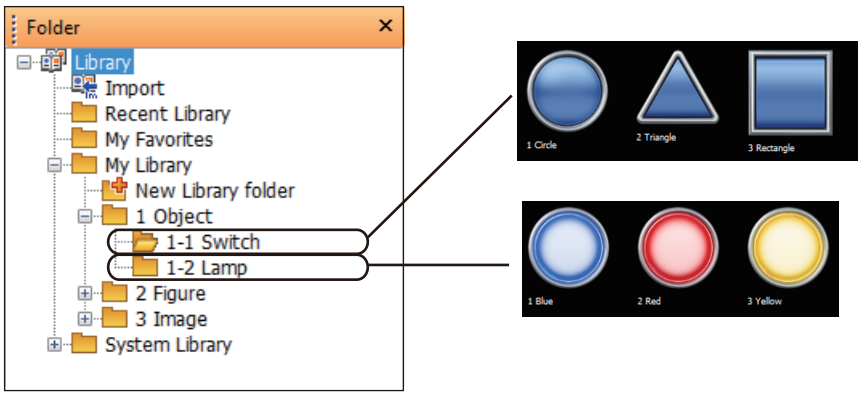
The following shows the library classifications.

(1) [System Library]
This folder stores the preset figures, objects, templates, and images.
You can select them from the subfolders below.

- [Search By Subject] folder: Data are classified by appearance.
- [Search By Function] folder: Data are classified by function.

The [Search By Subject] folder and the [Search By Function] folder store the same data.

(2) [My Library]
This folder stores the user-created figures, objects, templates, and imported images.
You can create library folders to store the library data in [My Library].
Create folders for each purpose.



Point

Library folder
Up to two hierarchies can be created in a library folder.

(3) [My Favorites]

Register library data that is used frequently.
The library data registered as [My Favorites] is displayed on the [My Favorites] tool bar.

(4) [Recently Used Library]

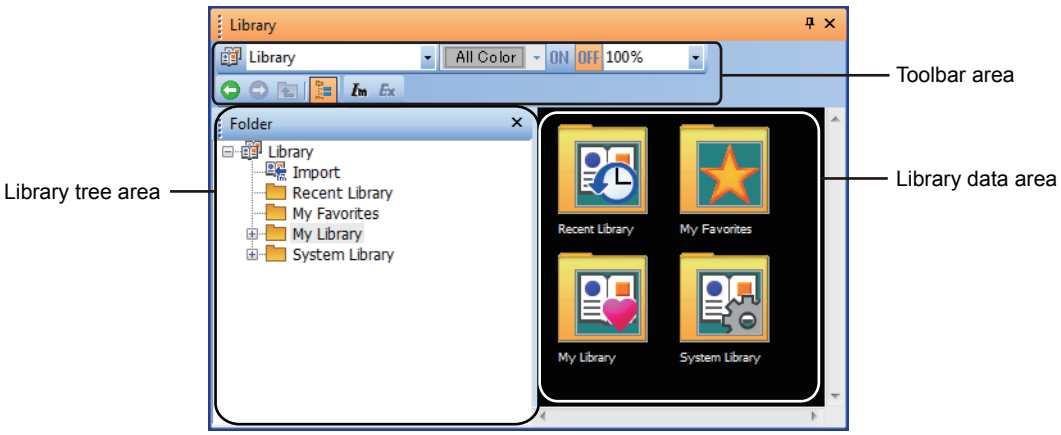
Up to 10 library data sets that are used by the user recently are recorded.
The data is not registered in this folder, and you cannot add, delete, or edit the library data in this folder.

■3 Screen configurations

The following shows the screen of the library.

(1) [Library] window

A window for operating the library data.



For the details of [Library] window, refer to the following.

➟8.1.4 [Library] window

8.1.2 How to use the library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows what you can do with libraries and each reference section.

- Using the data registered in the library
  ➟■1 Using the data in the library
- Registering figures, objects, or templates as the library data
  ➟■2 Registering the data in the library
- Copying and pasting the library data
  ➟■3 Copying the library data
- Deleting the library data
  ➟■4 Deleting the library data
- Editing the library data
  ➟■5 Editing the library data
- Changing the attribute of the library data
  ➟■6 Changing the attribute of the library data
- Saving my library
  ➟■7 Saving the library data
- Opening the saved my library
  ➟■8 Opening the library data
- Importing the library data or image files
  ➟■9 Importing the library data
- Saving library folders in my library

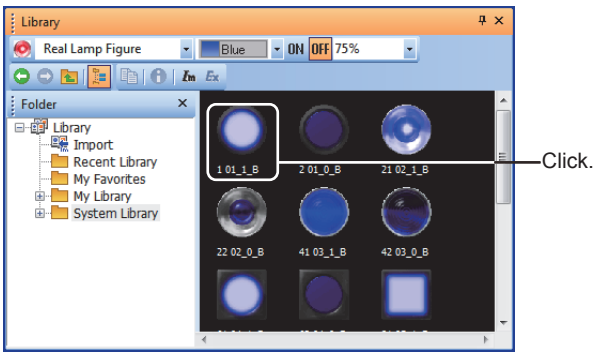
➟■10 Exporting the library data

■1 Using the data in the library

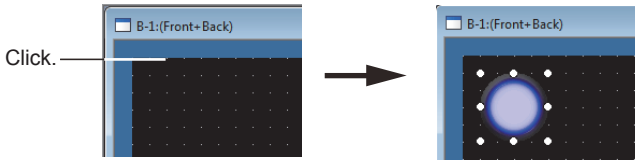
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select library data and place on the screen editor.

Step 1 Select the library data to be used from the library.



Step 2 Click a location on the screen editor where the library data is placed.
The library data is arranged.



Point

(1) **Using the data in [My Favorites]**

The library data registered in [My Favorites] can be selected from the My Favorites tool bar as well.

(2) **Using with changing size**

You can change the size of the library data placed on the screen data by dragging a mouse.

(3) **Using templates**

For the details of the templates, refer to the following.

➟11.6.2 How to use the template

■2 Registering the data in the library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

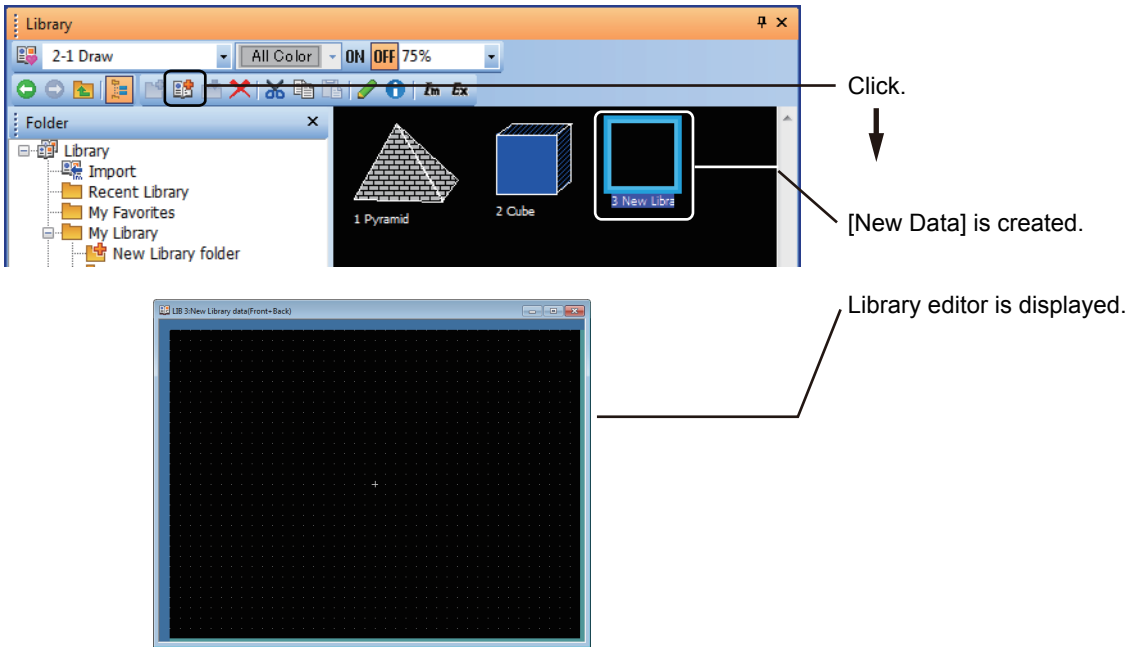
(1) Creating library data

Step 1 Set a location for registering the library data.

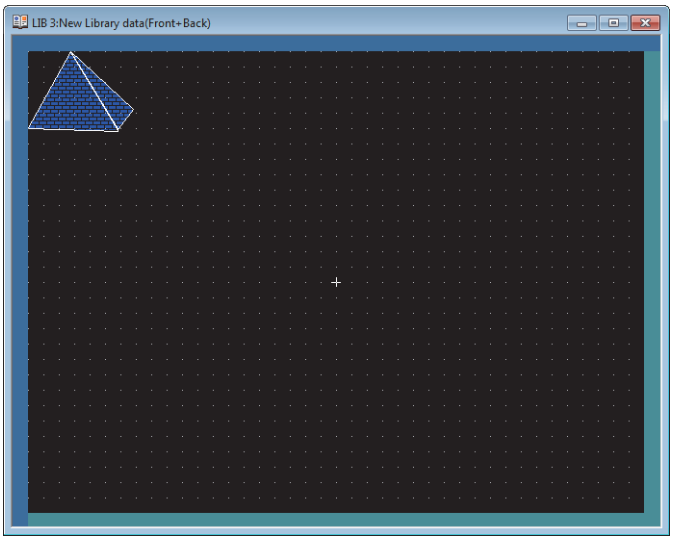
Select a folder to store the data from [My Library] and double-click.
To create a new folder, double-click the [Create New Folder] button.

Step 2 Click the [Create New Library Data] button.

New library data is displayed.



Step 3 Place a figure, object or template on the library editor to edit.



For how to edit the library data, refer to the following.

➟■5 Editing the library data

Step 4 When you complete the editing, click the [Close] button.

The library data closes.

Step 5 To change the library data number or the library data name, refer to the following.

➟■6 Changing the attribute of the library data

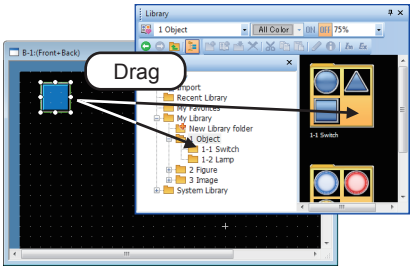
Point

Registering the data on the screen editor to the library

Figures, objects, templates on the screen editor can be registered to the library with the following method.

(1) **Dragging**

Drag a figure, object, or template on the screen editor to the library tree area or the library data area to register the data as the library data.



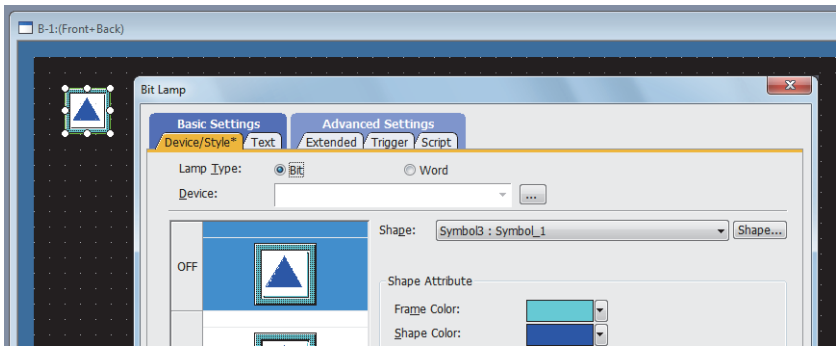
The data is registered in the library folder in [My Favorites] or [My Library].

(2) **Registering from the right-click menu**

Select a figure, object, or template on the screen editor and select [Register to My Favorites] from the right-click menu to register the data to [My Favorites].

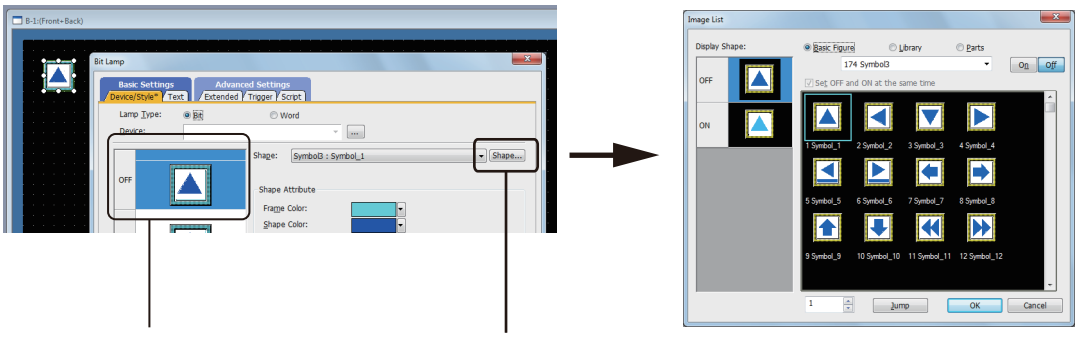
(2) Registering figure used as object

Step 1 Display the object setting dialog.



Step 2 Select a figure from the preview list and click the [Figure] button.

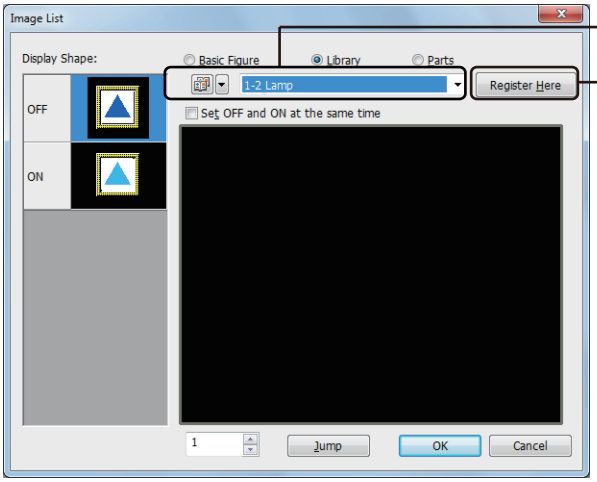
The [Image List] dialog is displayed.



Step 3 Select a library folder where figure is to be registered.

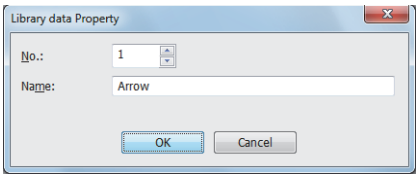
The data is registered in the library folder in [My Favorites] or [My Library].

Step 4 Click the [Register Here] button.

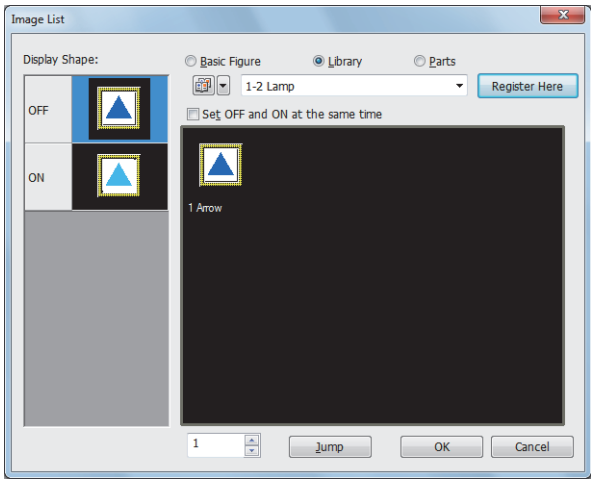


3. Select a library for registering the figure.
4. Click.

Step 5 The [Library data Property] dialog is displayed.
Set [Number] and [Name] of the library data and click the [OK] button.



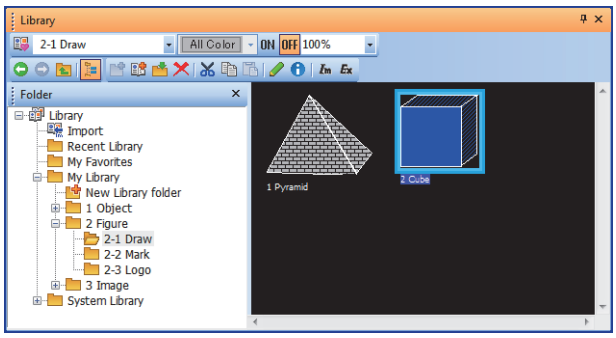
Step 6 A figure is registered to the library folder.



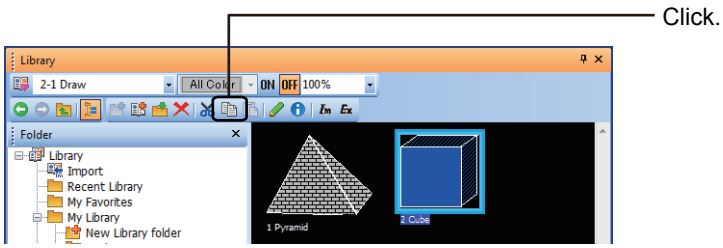
■3 Copying the library data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

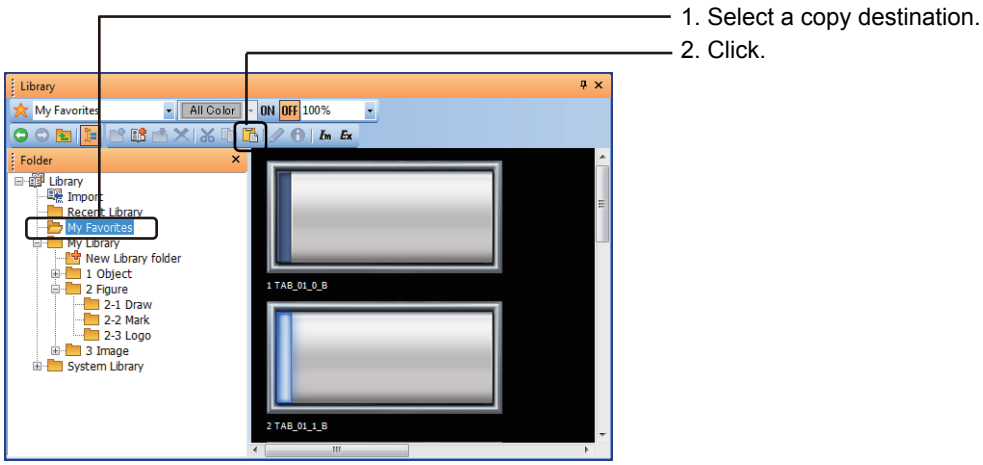
Step 1 Select a library folder or a library data to be copied from the library.



Step 2 Click the [Copy] button.

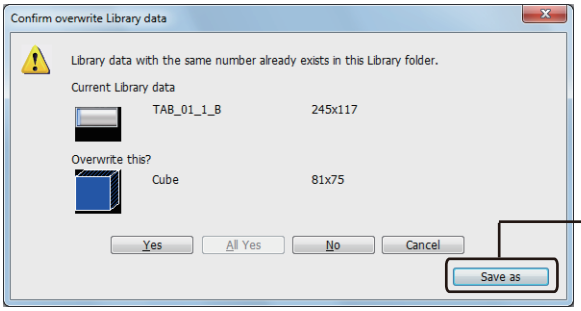


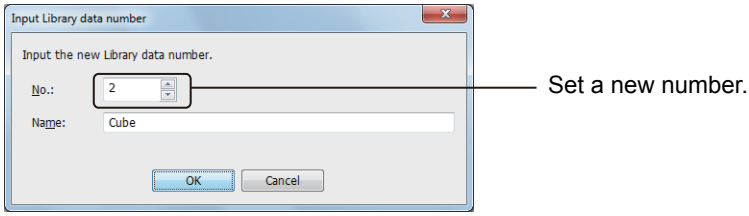
Step 3 Select the copy destination folder and click the [Paste] button.



Step 4 If library data having the same number as the copy source library data exists, the [Overwriting the Library Data Confirmation] dialog is displayed.

- To overwrite the library data, click the [Yes] button.
- To overwrite all the library data, click the [All Yes] button.
- To not to overwrite the library data, click the [Save as Different Number] button and set a new number.
- To cancel pasting, click the [No] button.
- To cancel the pasting of all the data, click the [Cancel] button.

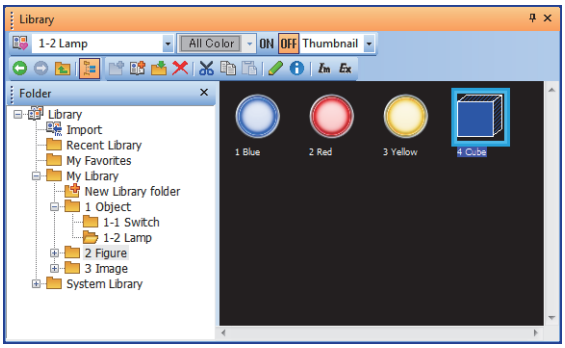




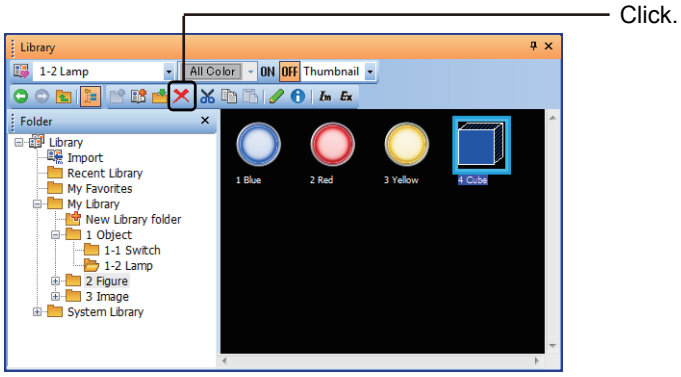
■4 Deleting the library data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

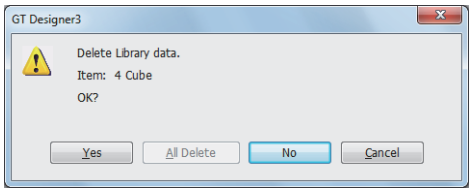
Step 1 Select a library folder or a library data to be deleted from the library.



Step 2 Click the [Delete] button.



Step 3 The following dialog appears.
Clicking the [Yes] button deletes selected library folder or the selected library data.



Point

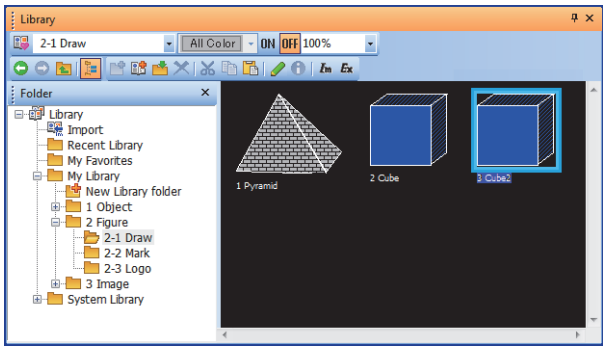
Deleting the library folder

Note that deleting the library folder deletes all the library data sets registered in the library folder as well.

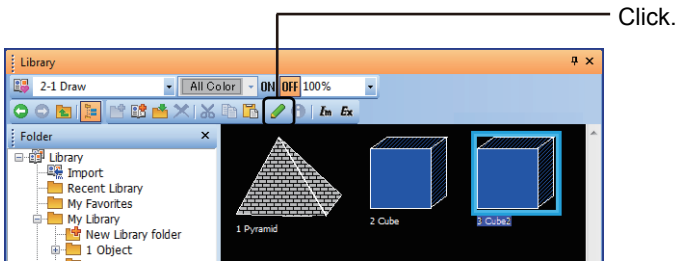
■5 Editing the library data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select a library folder to be edited.



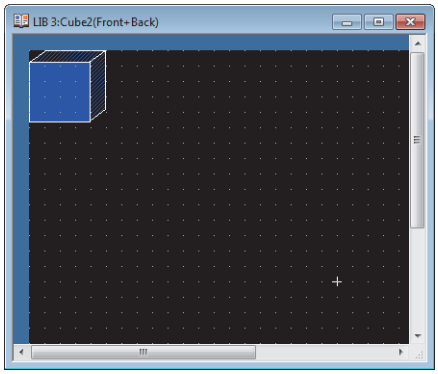
Step 2 Click the [Edit] button.



Step 3 The library data editor is displayed.

Edit the library data.

The edited contents are reflected to the library data immediately.



To cancel the wrong edited contents, click the [Undo] button before closing the library editor.

The edited contents are determined after the library editor is closed.

Step 4 When you completed editing the library data, close the screen.

Click the [Close] button on the top right of the screen.

Point

(1) **Utilizing another data to the library data**

Utilize the library data by the following methods.

(a) **Copying a figure, object, or template**

By copying data on the screen editor to the library editor, you can use the data on the library data.

(b) **Utilizing another data**

You can paste another library data on the library editor.

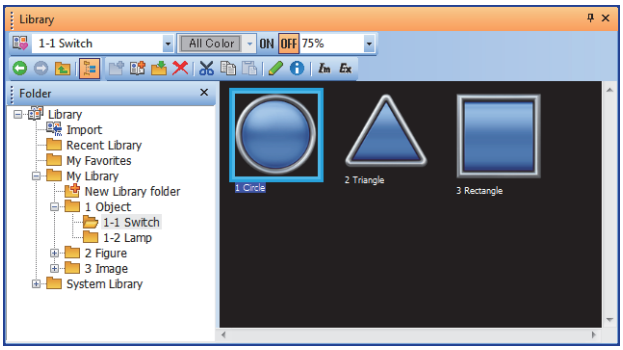
(2) **Displaying the library editor by the double-click operation**

You can display the library editor by double-clicking the library data on the library data area.

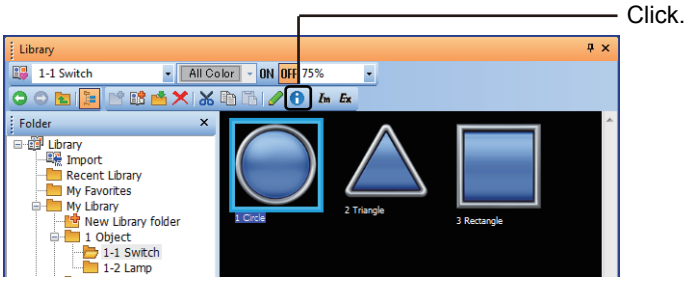
■6 Changing the attribute of the library data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select a library data for changing the attribute.



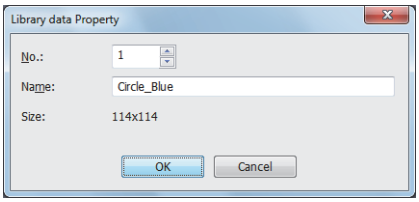
Step 2 Click the [Attribute Change] button.



Step 3 The [Library data Property] dialog is displayed.

Set the number and name of the library data.

After setting, click the [OK] button to determine the change of the attribute of the library data.



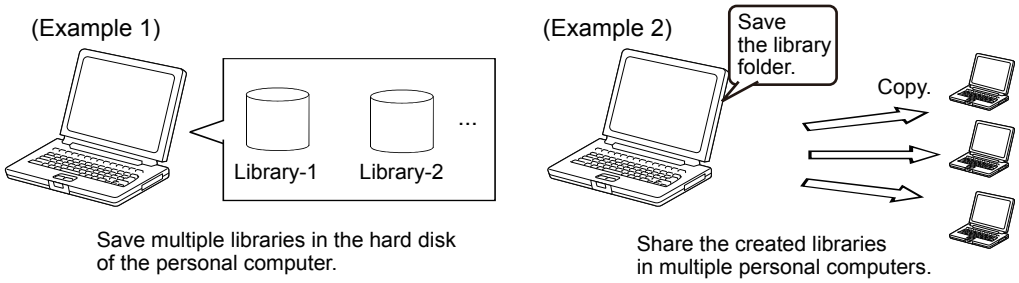
■7 Saving the library data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

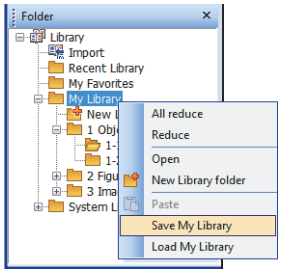
The library data in [My Library] and [My Favorites] can be saved as the different library from using library.
By saving multiple user-created libraries in the hard disk of the personal computer, you can use multiple user-created libraries at drawing.

➟8.1.2 ■8 Opening the library data

In addition, by copying a user-created library to other personal computers, you can use the same library in multiple personal computers.

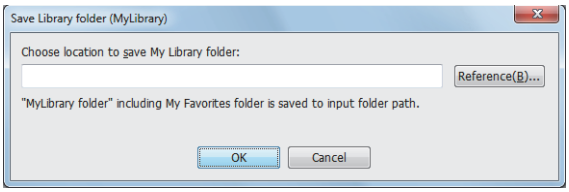


Step 1 Select [My Library] on the library tree and select [Save My Library] from the right-click menu.



Step 2 The [Save My Library] dialog is displayed.

Click the [Browse] button to specify the saving destination.
The folder name of saved library is fixed to [MyLibrary].
If the library has already saved in the specified saving destination, the data is overwritten.
When you do not overwrite the data, specify another saving destination.
After specifying, click the [OK] button.



Step 3 The [MyLibrary] folder is created in the specified folder and the library data registered in [My Library] and [My Favorites] are saved.

Point

(1) **Saved library file**

Do not execute operations such as add, delete, or change the name to saved [MyLibrary] folder of files in the folder.
The library may not be read properly.

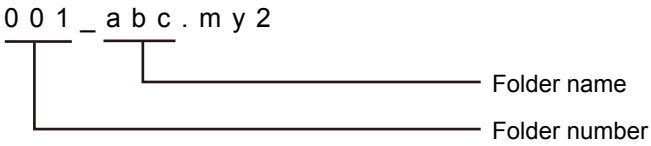
(2) **Saving multiple libraries**

If the library has already saved in the specified saving destination, the data is overwritten.
When you do not overwrite the data, specify another saving destination.

(3) **Name of saved library file**

[My Favorites] folder is saved as [000_My Favorites.my2].
The file name of [My Library] is determined according to the library folder number and name.

Example) When the library folder number is 1 and the name is abc



■8 Opening the library data

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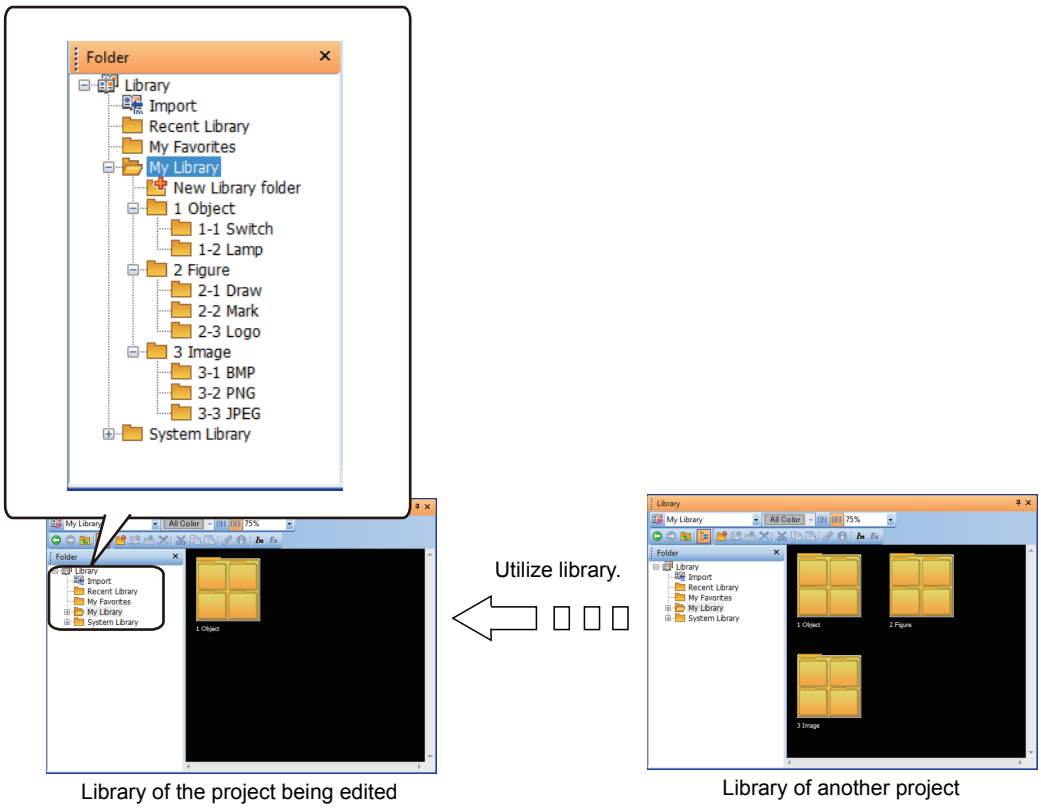
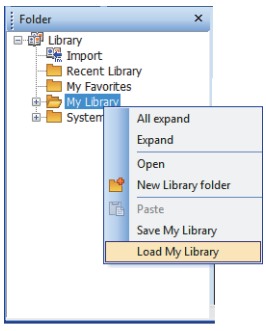
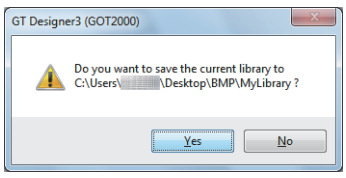
You can use [My Library] or [My Favorites] saved in other projects in the creating project.
The current library is replaced with the library saved in other projects.



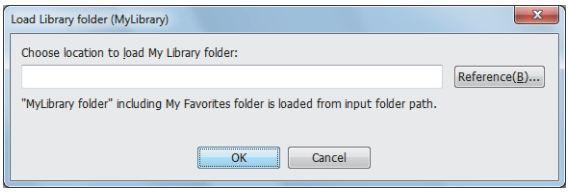
Step 1 Select [My Library] on the library tree and select [Open My Library] from the right-click menu.



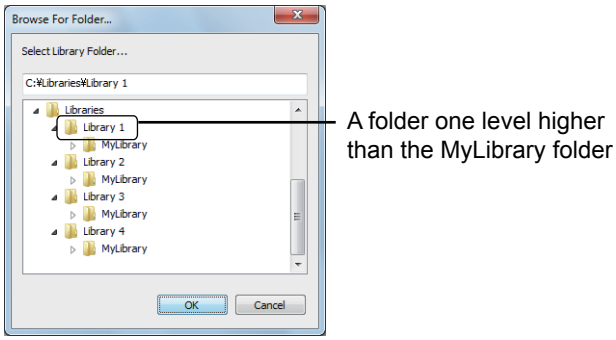
Step 2 When the library is being edited, the dialog for confirming whether to save the library is displayed. Click the [Yes] button to save the library, click the [No] button not to save the library.



Step 3 The [Open My Library] dialog is displayed.
Click the [Browse] button.



Step 4 Specify the folder where the library to be read is saved (the folder one level higher than [MyLibrary] folder).
After specifying the folder, click the [OK] button to replace the library.



■9 Importing the library data

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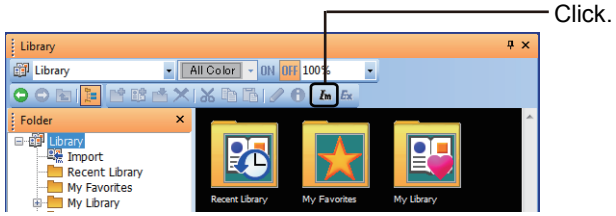
You can use the library data created in other projects by importing.
In addition, imported image files can be registered as the library data.
Up to 512 pieces of library data can be stored in one library folder.
The following shows importable file types.

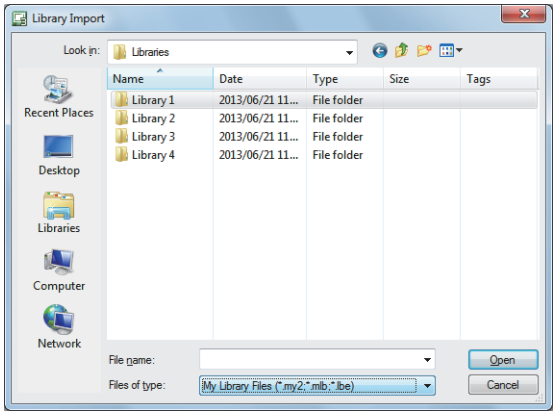
- [My Library File (*.my2,*.mlb,*.lbe)]
  Exported library data sets.
  my2 file: Library data exported from GT Designer3 (GOT2000).
  mlb file: Library data exported from GT Designer3 (GOT1000).
  lbe file: Library data exported from GT Designer2.
- [Import Library File (*.il2,*.ilb)]
  Library files to be imported to the system library.
  Obtain library files by one of the following methods.
  · Go to the following directory: [(Path to the installation location of GT Designer3)\GTD3_2000\App\LibraryData].
  · Contact your local distributor.
  The imported library files are deleted when you update the version of GT Designer3.
  Import the library files again as necessary.
- [Image File (*.bmp,*.jpg,*.jpeg,*.jpe,*.png)]
  Image files used as the library data.

(1) Importing the library data

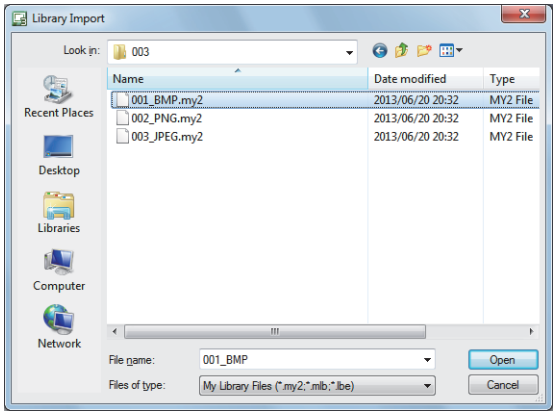
Step 1 Click the [Import] button.



Step 2 Select [Files of type].

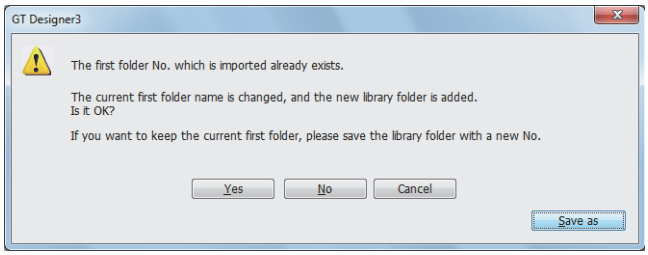


Step 3 Select the file to be imported and click the [Open] button.

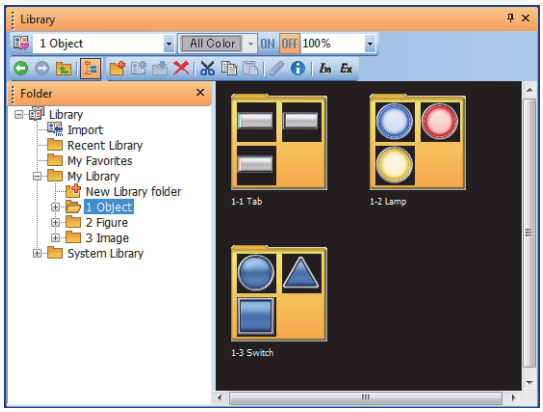


Step 4 When a library folder having the same number as the imported library exists, [Overwriting the Library Folder Confirmation] dialog is displayed.

- When you overwrite the library data, click the [Yes] button.
- When you do not overwrite the library data, click the [No] button.
  The library folder is not imported.
- To abort all imports when importing multiple library folders, click the [Cancel] button.
- To change the folder number to be imported, click the [Save as Another Number] button.



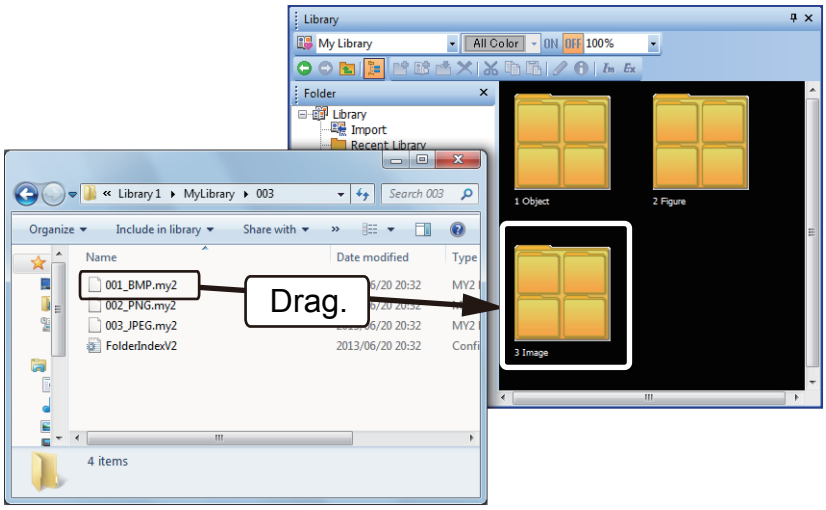
Step 5 The my library file is added to [My Library] and the imported library file is added to [System Library].
When you import [My Favorites], unused library number is assigned automatically.



Point

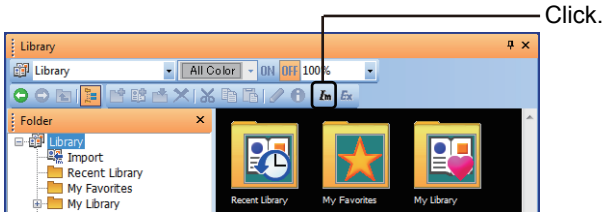
Importing by drag operation

You can import the library folder by dragging.

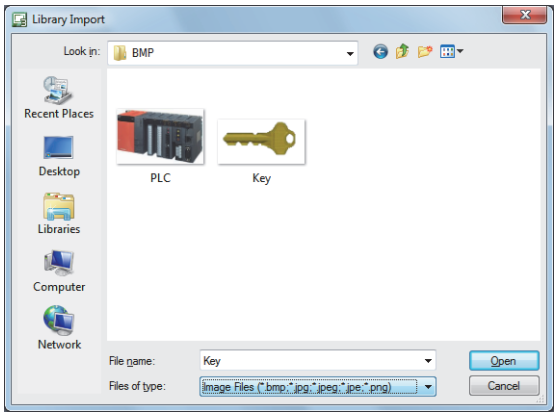


(2) Importing image data

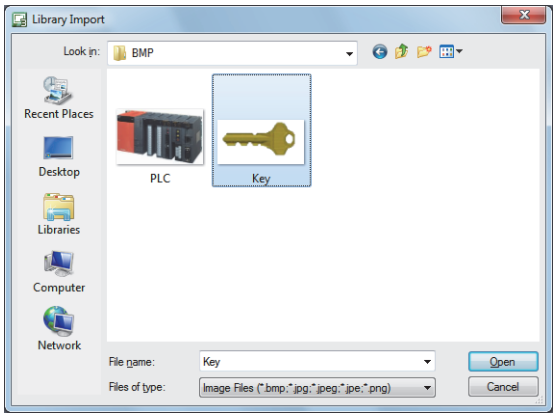
Step 1 Click the [Import] button.



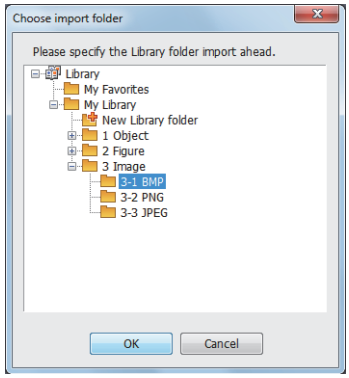
Step 2 In the [Import Library] dialog, select [Image File (*.bmp,*.jpg,*.jpeg,*.jpe,*.png)] for [Files of type].



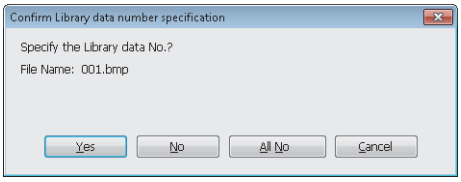
Step 3 Select the file to be imported and click the [Open] button.
Specifying multiple files is also available.



Step 4 In the [Choose import folder] dialog, select a library folder for saving the file, and click the [OK] button.



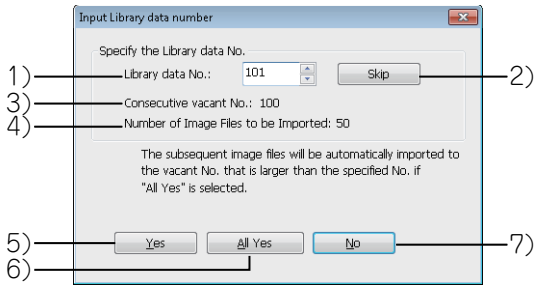
Step 5 In the [Confirm Library data number specification] dialog, perform one of the following operations.



- To display the [Input Library data number] dialog, click the [Yes] button.
  For specifying the library data number, refer to the following.
  ➟(a) [Input Library data number] dialog
- To save the file with a vacant library number assigned automatically, click the [No] button.
  When multiple files are selected, the [Confirm Library data number specification] dialog appears repeatedly for each file.
- To save all the files with vacant library numbers assigned automatically, click the [All No] button.
- To cancel the import process and close the [Confirm Library data number specification] dialog, click the [Cancel] button.

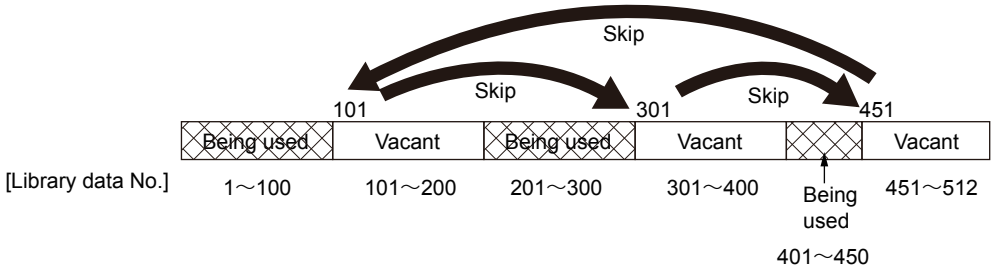
(a) **[Input Library data number] dialog**

Specify the library data number for the file to be imported.



1) **[Library data No.]**
Displays a vacant library data number.
The number is changeable.
The setting range is [1] to [512].

2) **[Skip] button**
Switches the library data number to the start number of the subsequent consecutive vacant numbers.



3) **[Consecutive vacant No.]**
Displays the number of consecutive vacant numbers, beginning with the current library data number.

4) **[Number of Image Files to be Imported]**
Displays the number of files to be imported.

5) **[Yes] button**
Saves the file with the vacant number specified in [Library data No.].

6) **[All Yes] button**
Saves the files with the consecutive vacant numbers, starting from the number specified in [Library data No.].
When the number of files to be imported exceeds that of the current consecutive vacant numbers, the subsequent vacant numbers are used to save all the files.
When [Library data No.] is set to 513 or larger, even if consecutive vacant numbers starting with a number less than 513 exist, the import process is stopped.

7) **[No] button**
Returns to the [Confirm Library data number specification] dialog.

■10 Exporting the library data

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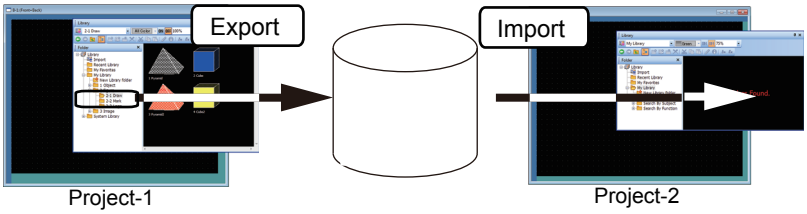
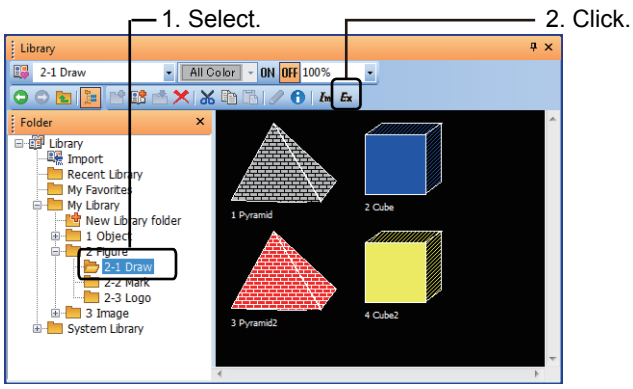
Export the library data registered in [My Library] in units of folder.
You can use the exported library data in other projects.
[My Favorites] and [System Library] cannot be exported.

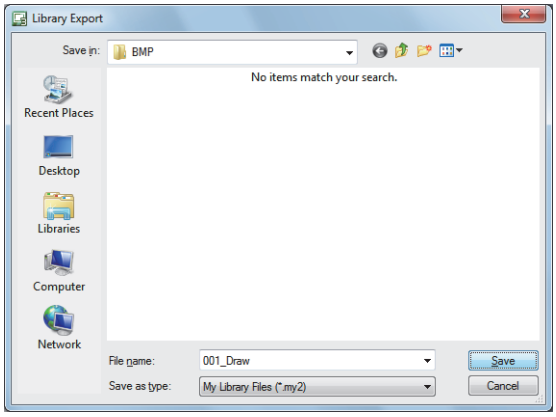


Step 1 Select the library folder to be exported from the library tree and click the [Export] button.



Step 2 The [Export Destination Specification] dialog is displayed.

Set [Save in] and [File Name] and click the [Save] button.
The export is completed.



8.1.3 Precautions for libraries

■1 Registering figures and objects on the screen editor

Figures and objects up to 2000 dots × 1600 dots can be registered in the library.
No figure or object whose vertical or horizontal size exceeds the above size can be registered.

8.1.4 [Library] window

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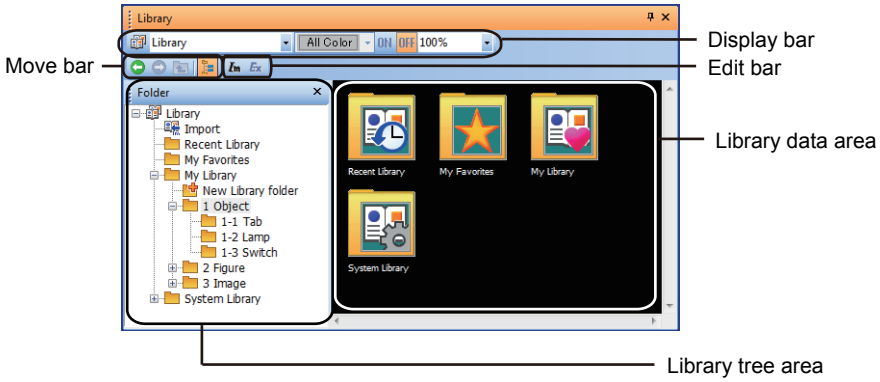
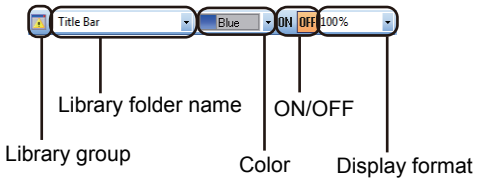
Figures, objects and image data are stored in the library.
Select [View] → [Docking Window] → [Library List] from the menu to display the [Library] window.



1) Display bar

The display statuses of the library data area are displayed.



- **[Library Group]**
  Switches the library type to be displayed on the library data area.
  The selected library contents are displayed on the library data area.
- **[Library Folder Name]**
  Select the library folder to be displayed on the library data area from the libraries selected in the library group.
- **[Color]**
  Switch the color system of figures to be displayed on the library data area.
  This item is available when selecting [System Library] folder.
  The following shows the items to be selected.
  - [All]
  - [Blue]
  - [Red]
  - [Yellow]
  - [Green]
  - [Orange]
  - [Light Blue]
  - [Purple]
  - [Pink]
  - [Gray]
  - [Gold]
  - [Silver]
  - [Black]
  - [White]
- **[ON], [OFF]**
  Switches display or non-display of figures displayed on the library data area.
- **[Display format]**
  Switches the display format of figures displayed on the library data area.
  The following shows the items to be selected.
  - [150%], [100%], [75%], [50%], [25%]: Displays the library data with selected scale.
  - [Thumbnail]: Displays the library data with a certain size.
  - [Detail]: Displays the library data and attribute value with a certain size.

2) Move bar

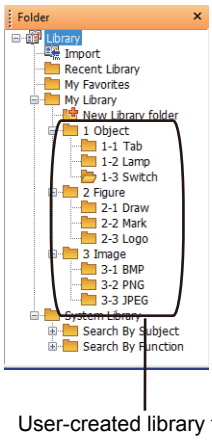
- **[Back]**
  Moves to the previous library folder.
- **[Forward]**
  Moves to the next library folder.
- **[Upper]**
  Moves to a one level higher library folder.
- **[Tree View]**
  Switches display or non-display of a library tree.

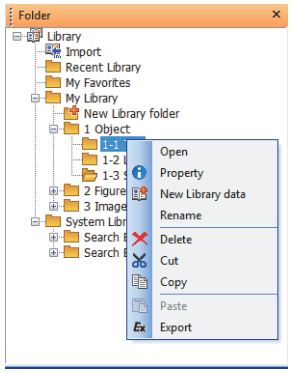
3) **Edit bar**

- **[Create Library Folder]**
  Creates a library folder.
- **[New Library Data]**
  Creates library data.
- **[Register Data]**
  Registers the data selected on the screen editor as the library data.
- **[Delete]**
  Deletes the selected library folder or library data.
- **[Cut]**
  Cuts the selected library folder or library data.
- **[Copy]**
  Copies the selected library folder or library data.
- **[Paste]**
  Pastes the copied library folder or library data.
- **[Edit]**
  Edits the selected library data.
- **[Edit Attribute]**
  Changes attributes of the library folder or the library data.
  When the library data in the system library is selected, the library data property is displayed.
- **[Import]**
  Imports library folders or image files.
- **[Export]**
  Exports the selected library folder.

4) **Library tree area**

Clicking the [Tree View] button on the toolbar switches display or non-display of trees.

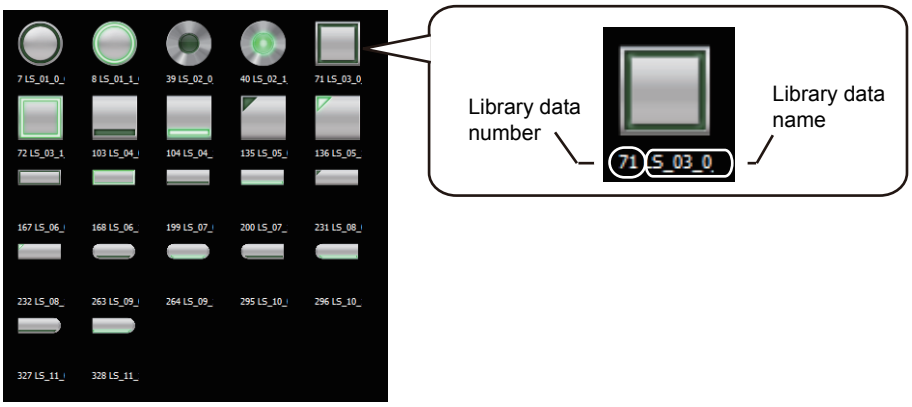
Item	Description
Library tree configurations	 • **[Import]** Imports library folders or image files. ➟8.1.2 ■9 Importing the library data • **[Recently Used Library]** Displays the library data that is used by the user recently on the library data area. • **[My Favorites]** A folder where library data that is used frequently is registered. When you open the folder, registered library data is displayed on the library data area. • **[My Library]** A folder where user-created library folders are stored. • [Create Folder] Creates a library folder. • User-created library folder A folder where the library data is registered. • **[System Library]** A folder where figures, objects, templates that are registered in advance are stored. • [Search by Appearance] A folder where library data that is classified by appearance is stored. The same library data is stored in the [Search by Function] folder as well. • [Search by Function] A folder where library data that is classified by functions is stored. The same library data is stored in the [Search by Appearance] folder as well.
Operation by buttons on the move bar and the edit bar	Operate the library tree by buttons on the move bar and the edit bar. ➟2) Move bar 3) Edit bar

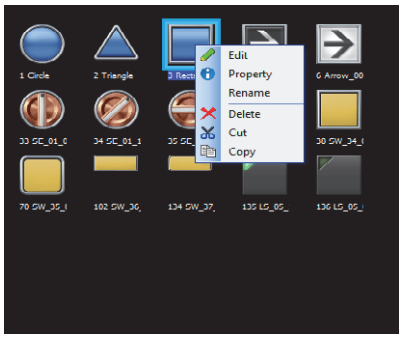
Item	Description
Right-click operation	The library tree can be selected from the right-click menu.  • **[Open]** Displays the contents in the library folder to the library data area. • **[Unfold]** Displays the one hierarchy of contents in the library folder to the library data area. • **[Unfold All]** Displays the all hierarchies of contents in the library folder to the library data area. • **[Fold]** Folds the one hierarchy of library folder displayed in the library tree. Subfolders are not folded. • **[Fold All]** Folds the all hierarchies of library folder displayed in the library tree. Subfolders are folded. • **[Create Library Folder]** Creates a library folder in [My Library]. A deed-number is assigned to the created library folder automatically, and the name of the folder is [New Folder]. • **[Save My Library]** Saves the library data registered to [My Favorites] and [My Library]. ➟8.1.2 ■7 Saving the library data • **[Open My Library]** Displays a library created in another project. ➟8.1.2 ■8 Opening the library data • **[Edit Attribute]** Displays the [Library Data Property] dialog. (The number and name of the library folder can be changed.) ➟8.1.2 ■6 Changing the attribute of the library data • **[Create Library Data]** Creates library data in [My Favorites] and [My Library] folder. ➟8.1.2 ■7 Saving the library data • **[Rename]** Changes the number and name of the library folder. • **[Delete]** Deletes a library folder. ➟8.1.2 ■4 Deleting the library data • **[Cut]** Cuts a library folder. • **[Copy]** Copies a library folder. • **[Paste]** Pastes a library folder. • **[Export]** Exports a library folder.

5) **Library data area**

Displays the contents of the selected library data.

Figures are displayed or hidden by [ON] or [OFF] of the display bar.



Item	Description
Operation by buttons on the move bar and the edit bar	Operate the library data area by buttons on the move bar and the edit bar. ➟2) Move bar 3) Edit bar
Right-click operation	The library data area can be operated from the right-click menu.  • **[Edit]** Edits the library data. ➟8.1.2 ■5 Editing the library data • **[Edit Attribute]** Changes the number and name of the library data. • **[Rename]** Changes the name of the library data. • **[Delete]** Deletes library data. ➟8.1.2 ■4 Deleting the library data • **[Cut]** Cuts library data. • **[Copy]** Copies library data. • **[Create Library Data]** Creates library data. ➟8.1.2 ■2 Registering the data in the library • **[Paste]** Pastes the copied library data. • **[Export]** Exports a library folder.

8.2 Placing a Touch Switch

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■1 Switch

You can set multiple actions of touch switches.
Up to 147 actions can be set on a switch.

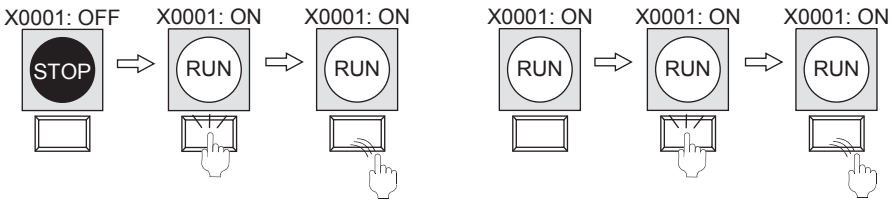
➟8.2.4 [Switch] dialog

■2 Bit switch

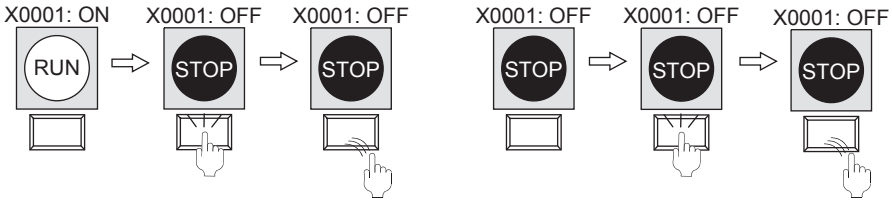
Turns on or off a bit device.

➟8.2.5 [Bit Switch] dialog

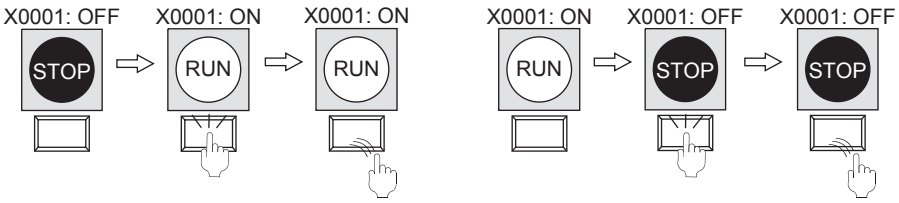
• Turning on a specified bit device (Set)



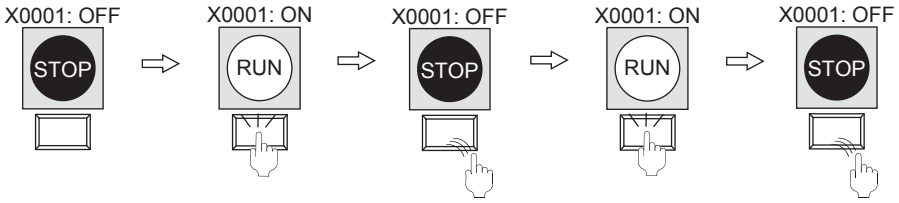
• Turning off the specified bit device (Reset)



• Alternating the current status of the specified bit device (ON←→OFF) (Alternate)



• Turning on the specified bit device only while the touch switch is touched (Momentary)

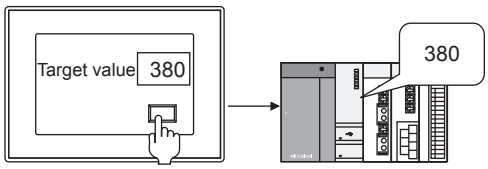


■3 Word switch

Changes the value of a word device.

➟8.2.6 [Word Switch] dialog

- Writing the set value to a specified word device (Constant)
- Writing the set word device value to the specified word device (Indirect device)
- Writing the set word device value and the constant to the specified word device (Constant + Indirect device)

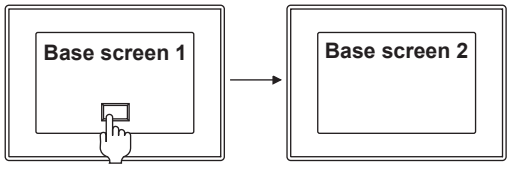


■4 Go To Screen switch

Switches base screens and window screens.

➟8.2.7 [Go To Screen Switch] dialog

- Switching to the screen with the base screen number previously displayed
- Switching to the screen with a specified screen number
- Switching to the screen with the specified screen number by turning on or off the specified bit device
- Switching to the screen with the specified screen number when the current value of the specified word device corresponds to the set conditional expression

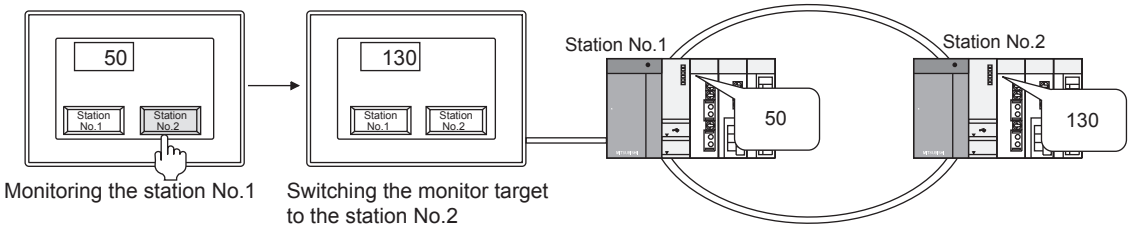


■5 Change Station No. switch

Switches the device of the currently monitored object to the same device with another station number.

➟8.2.8 [Change Station No. Switch] dialog

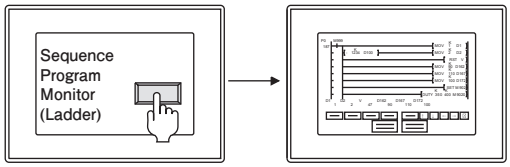
- Switching the monitor target to a specified station number
- Switching the monitor target to the specified station number by turning on or off the specified bit device
- Switching the monitor target to the specified station number when the current value of the specified word device corresponds to the set conditional expression



■6 Special function switch

Switches the screen to the utility screen, the extended function screen, or other screens.

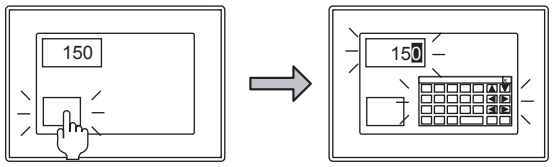
➟8.2.9 [Special Function Switch] dialog



■7 Key window display switch

Displays a specified key window at a specified position.
Displays a cursor on a specified object.

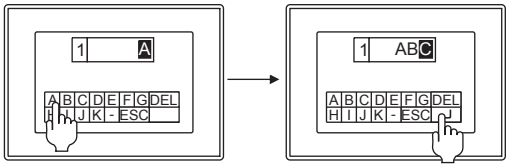
➟8.2.10 [Key Window Display Switch] dialog



■8 Key code switch

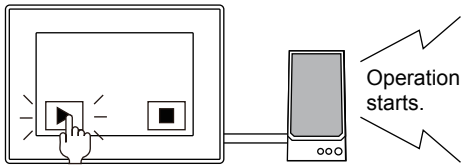
Enables key input into the numerical input and text input, alarm display, data list display, and alarm control.

➟8.2.11 [Key Code Switch] dialog



■9 Sound output

Plays or stops a sound.
Mutes or unmutes the sound.



Set the sound output in [Add Action] in the [Switch] dialog.

➟8.2.4 [Switch] dialog

Set a sound file used for the sound output in the [Sound File List] dialog.

➟10.12.6 [Sound File List] dialog

8.2.1 Specifications of touch switch

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the touch switch.

■1 Maximum number of objects arrangeable on one screen

Up to 1024 touch switches and other objects can be placed on one screen.

■2 Switch action

Multiple functions can be set on one switch. (If the special function switch is set, multiple-function setting is disabled.)

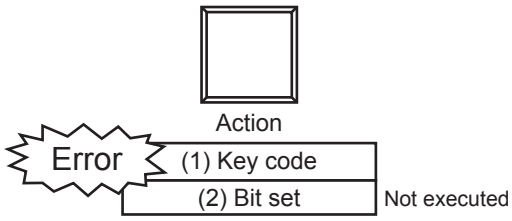
Action order	Action type	Maximum number of actions	Change of action order *1
Higher priority ↓ Lower priority	Key window display	1	Unavailable
	Key code	16	
	Sound output	1	
	Word set	20	Available
	Bit set	20	
	Bit reset	20	
	Bit alternate	20	
	Bit momentary	20	
	Base	1	
	Overlap window 1	1	
	Overlap window 2	1	
	Overlap window 3	1	
	Overlap window 4	1	
	Overlap window 5	1	
	Superimpose window 1	1	
	Superimpose window 2	1	
	Station No. Switching	21	
	Dialog window	1	Unavailable
Total		147	

*1 The action order (except for the key window display, key code, and dialog) can be changed in the [Action] tab.

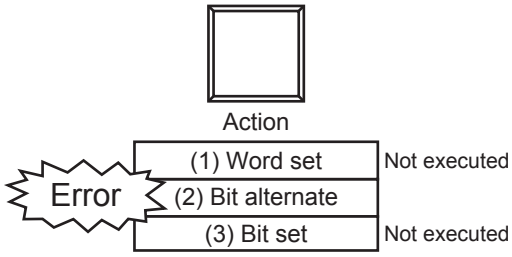
When multiple actions are set on one switch, the switch functions according to the above order by default.
Reading/writing data from/to devices are executed for all the set switch actions at once.
The order in which the bit, word, and double-word devices are handled in each controller is determined by the specifications of the controller.
Accordingly, the actions (word set, bit set, bit reset, bit alternate, and bit momentary) that are set for the switch may not be executed in the user-specified order.
If an error occurs while the GOT reads the data from the device, the GOT does not write the data to the device.
If an error occurs while the GOT writes the data to the device, the GOT writes the data to the device for the other assigned actions.

- Action example 1

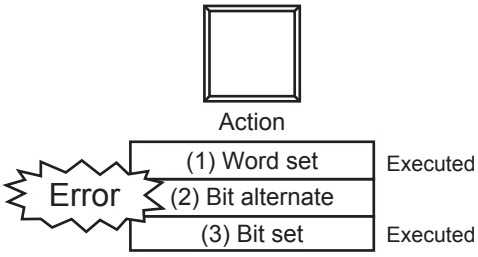
  When the following actions and action order are set, if an error occurs during the action of (1) Key code, the processing is interrupted.
  Thus, the action of (2) Bit set is not executed.
  (1)Key code: FFBBh (Save alarm contents to data storage)
  (2) Bit set



• Action example 2
When the following actions and action order are set, if an error occurs while the GOT reads the data (the previous value of the bit) from the device for the action of (2) Bit alternate, the processing is interrupted.
Thus, neither (1) Word set nor (3) Bit set is executed.
(1) Word set
(2) Bit alternate
(3) Bit set



• Action example 3
When the following actions and action order are set, if an error occurs while the GOT writes the data (the alternated value of the bit) to the device in the action of (2) Bit alternate, the processing is not interrupted.
Thus, both (1) Word set and (3) Bit set are executed.
(1) Word set
(2) Bit alternate
(3) Bit set



■3 Minimum size of touch switch

The minimum size of the touch switch is 2 dots (height) × 2 dots (width).

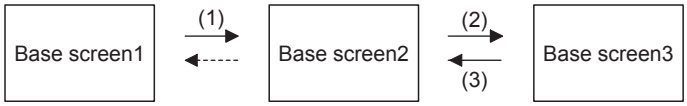
■4 Hierarchy mode and history mode of the Go To Screen switch

(1) Hierarchy mode and history mode

When using the previous screen display touch switch, select the hierarchy mode or history mode.

(a) Hierarchy mode

The screen returns to the base screen in the higher hierarchy when you touch the touch switch.
The screen can return to the base screen of up to the 10 level higher in the hierarchy.
Example)

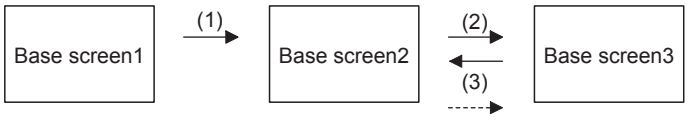


After the screen is switched in the order of (1) → (2) → (3), the screen returns to the base screen 1 in the higher hierarchy by touching the previous screen display touch switch on the base screen 2.

(b) History mode

The screen returns to the immediately previous base screen when you touch the touch switch.

The screen can return to up to 10 previous base screens.
Example)



After the screen is switched in the order of (1) → (2) → (3), the screen returns to the immediately previous base screen 3 by touching the previous screen display touch switch on the base screen 2. (The screen returns to the base screen 2 then base screen 1 at every touch on the previous screen display touch switch on each screen.)

(2) Hierarchy mode and history mode information

When the GOT is powered off, the hierarchy and history information becomes invalid.
When the GOT is powered off and on again, the screen does not return to the screen displayed before the power off even you touch the previous screen display touch switch.
For details of how to save the history information in a memory card, refer to the following.

➟8.2.1 ■4 (4) Saving the history information in the memory card

(3) How to switch the hierarchy mode and history mode

The default setting is the hierarchy mode.
The following shows how to use the previous screen display touch switch in the history mode.

(a) Selecting the history mode on GT Designer3

Step 1 Select [Common]→[GOT Environmental Setting]→[Screen Switching/Windows] from the menu.

Step 2 Select [History] in [Back Screen Switching].

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

(b) Switching to the history mode with the GOT internal device (GS450.b14)

Turn on the GOT internal device (GS450.b14).
Use the trigger action function to turn on the above device.
For application examples, refer to the following.

➟8.2.1 ■4 (4) (b) Example of settings configured to switch the modes with the GOT internal device

(4) Saving the history information in the memory card

In the history mode, the GOT can save a maximum of 10 screens in the history information to the memory card installed in the GOT.
Once the GOT saves the history information, the screen can return to the previous screen displayed before the power off even the GOT is powered off and on again.
The following shows how to save the history information in the memory card.

- Enabling the history information to be saved in the memory card in GT Designer3 settings.

Step 1 Select [Common]→[GOT Environmental Setting]→[Screen Switching/Windows] from the menu.

Step 2 Select [History] in [Back Screen Switching], and then select [Store history to the memory card].

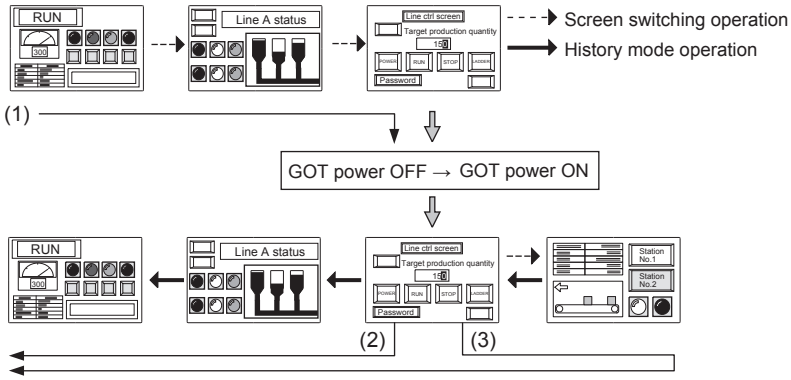
➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

- Enabling the history information to be saved in the memory card with the GOT internal device (GS450.b13).
  In the history mode (when GS450.b14 is on), turning on the GOT internal device (GS450.b13) enables the history information to be saved in the memory card.
  For application examples, refer to the following.

➟(b) Example of settings configured to switch the modes with the GOT internal device

(a) **Operation overview**

After the GOT is powered on, the GOT reads the history information in the memory card at the first screen switching.



(1) After the screen is switched to the next screen, the GOT is powered off.

(2) After the GOT is powered on, touch the previous screen display touch switch in the history mode, and then the screen returns to the previous screen displayed before the power off.

(3) When the screen is switched to the next screen after the GOT is powered on, the screen also returns to a maximum of 10 previous screens displayed before the power off.

(b) **Example of settings configured to switch the modes with the GOT internal device**

Set the history mode in the first row in the [Project] tab of the [Trigger Action] dialog.

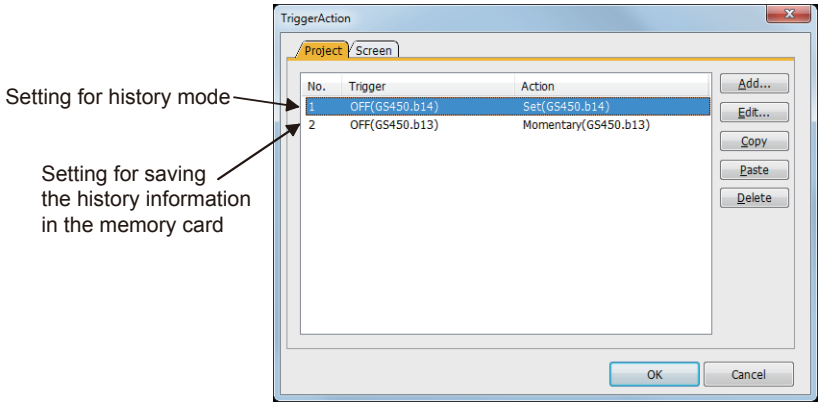
Immediately after the GOT is powered on, the mode is changed to the history mode.

For details of the trigger action, refer to the following.

➟9.5 Operating a Device as a Trigger ([Trigger Action])

After screen transition is performed and then the mode is changed from the hierarchy mode to the history mode, the GOT loses the screen information and thus the screen may not return according to the history.

If you use the history mode, set the history mode immediately after the GOT is powered on.



8.2.2 How to use touch switch

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use touch switches.

■1 Arranging touch switches

Arrange touch switches on a screen editor.

➟6.5.1 Placing figures and objects

■2 Editing touch switches

Edit touch switches arranged on the screen editor.

➟6.5.3 Editing figures and objects

■3 Setting touch switches

Configure the settings for touch switches arranged on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Settings of touch switches

➟8.2.4 [Switch] dialog
8.2.5 [Bit Switch] dialog
8.2.6 [Word Switch] dialog
8.2.7 [Go To Screen Switch] dialog
8.2.8 [Change Station No. Switch] dialog
8.2.9 [Special Function Switch] dialog
8.2.10 [Key Window Display Switch] dialog
8.2.11 [Key Code Switch] dialog

■4 Disabling the simultaneous press for a touch switch

When the simultaneous press is disabled for a touch switch, touching any areas on the GOT screen is disabled while the switch is being touched.
Configure the setting for disabling the simultaneous press in the setting dialog for each touch switch.
Select [Simultaneous Press] in the [Extended] tab, and select [ON Priority] or [OFF Priority].

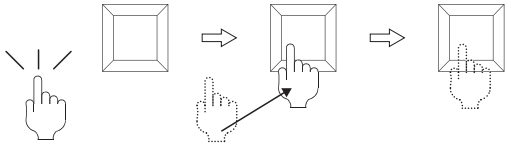
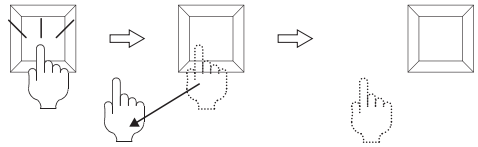
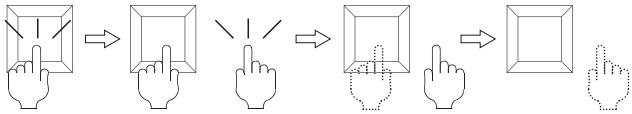
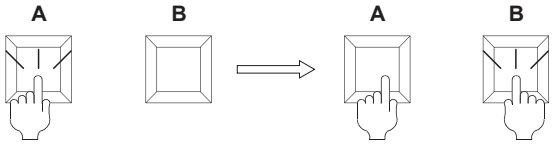
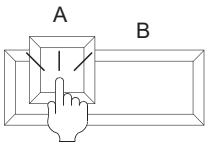
➟(2) Action for [ON Priority] and [OFF Priority]

(1) Touch switches that support disabling the simultaneous press

All touch switches support disabling the simultaneous press.
In the following cases, [Simultaneous Press] is selected, and the on/off priority is fixed to [ON Priority].

Touch switch type	Description
Special function switch	The setting is always fixed. The setting is also applied to a switch to which [SP Function] is added as a switch action.
Key code switch	The setting is fixed when [Alarm Display] is selected for [Key Code Type] in the [Key Code] tab, and one of the following is selected for [Action]. • [Display ladder] • [Display ladder (Sequence Program Monitor (Ladder))] • [Display ladder (Sequence Program Monitor (iQ-R/iQ-L Ladder))] • [Display ladder (Sequence Program Monitor (iQ-F Ladder))] The setting is also applied to a switch to which [Key Code] is added as a switch action.

(2) Action for [ON Priority] and [OFF Priority]

Touch switch operation	Touch switch action	
	[ON priority]	[OFF priority]
1. Touch the touch invalid area of the touch switch. 2. Slide the finger to the touch valid area of the touch switch. 3. Release the finger from the touch switch. 	At operation 1.: Remains off. At operation 2.: Turns on. At operation 3.: Turns off.	At operation 1.: Remains off. At operation 2.: Remains off. At operation 3.: Remains off. For GT21 and GS21, the action is the same as [ON Priority].
1.Touch the touch valid area of the touch switch. 2. Slide the finger to the touch invalid area of the touch switch. 3. Release the finger from the GOT screen. 	At operation 1.: Turns on. At operation 2.: Remains on. At operation 3.: Turns off. For GT21 and GS21, the action is the same as [OFF Priority].	At operation 1.: Turns on. At operation 2.: Turns off. At operation 3.: Remains off.
1. Touch the touch switch. 2. Touch the area where no object is arranged. 3. Release the finger from the touch switch. 4. Release the finger from the area where no object is arranged. 	At operation 1.: Turns on. At operation 2.: Remains on. At operation 3.: Remains on. At operation 4.: Turns off.	At operation 1.: Turns on. At operation 2.: Turns off. At operation 3.: Remains off. At operation 4.: Remains off. For GT21 and GS21, the action is the same as [ON Priority].
1. Press touch switch A for which the simultaneous press is disabled. 2. Touch the touch switch B. (The touch switch action is the same whether the simultaneous press is enabled or disabled for touch switch B.) 	Action of touch switch A At operation 1.: Turns on. At operation 2.: Remains on. Action of touch switch B At operation 1.: Remains off. At operation 2.: Remains off.	Action of touch switch A At operation 1.: Turns on. At operation 2.: Turns off. Action of touch switch B At operation 1.: Remains off. At operation 2.: Remains off. For GT21 and GS21, the action is the same as [ON Priority].
Place touch switch A for which the simultaneous press is disabled on the front layer and touch switch B for which the simultaneous press is enabled on the back layer. Then, press the area where the touch switches overlap with each other. 	Action of touch switch A At operation 1.: Remains off. Action of touch switch B At operation 1.: Turns on.	

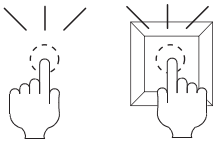
(3) Slide operation and simultaneous press

When you slide your finger from the invalid area to the valid area of the touch switch, the GOT recognizes the operation as pressing multiple areas simultaneously.

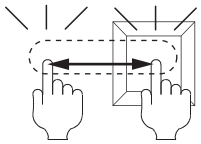
The GOT cannot distinguish between sliding the finger across multiple areas and touching multiple areas simultaneously using two fingers.

Therefore, this operation is recognized as a simultaneous press.

For the same reason, when you slide your finger from the valid area to the invalid area of the touch switch, the GOT recognizes it as a simultaneous press.



Touch the valid area
and invalid area
of the touch switch separately



Slide your finger across the valid area
to/from the invalid area of the touch switch

8.2.3 Precautions for a touch switch

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the touch switch.

■1 Precautions for drawing

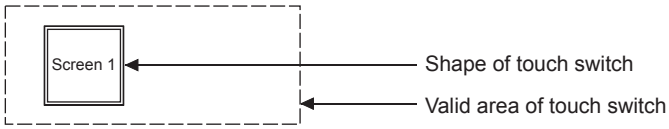
(1) Reducing basic figures in size

When a basic figure is set on the touch switch, reducing the touch switch in size may not display the figure properly.

(2) Valid range of the touch switch

The unit for the valid area of the touch switch is one dot.
Right-click the mouse on the object, then [Edit Touch Area] appears. You can set the shape and valid area of the touch switch individually.
Also, the valid area of the touch switch fits in the object frame by executing [Self-adjust].

➟6.6.14 [Edit Touch Area]



(3) Superimposing the touch switch and the object

(a) Touch switches that cannot be superimposed

Do not superimpose the following touch switches on another touch switch.
Simultaneous press is prohibited (ON priority) for the following touch switches even if [Simultaneous Press] is not set.
The following touch switches do not function when superimposed on other touch switches or objects for which touch operation is available.

Key code	Description	Key code type
FFBCh	Display ladder	Alarm Display
FFBDh	Display ladder (Sequence Program Monitor (Ladder))	Alarm Display
FFBAh	Display ladder (Sequence Program Monitor (iQ-R/iQ-L Ladder))	Alarm Display
FFC3h	Displaying ladder (Sequence Program Monitor (iQ-F Ladder))	Alarm Display
-	Special function switch	-

(b) Superimposing the key window display switch and other touch switches

In the following cases, other touch switches superimposed with the key window display switch do not function.

- When another touch switch is arranged under the key window display switch by using the superimpose window or the set overlay screen
- When the object ID of the superimposed touch switch is larger than that of the key window display switch

If the touch switch does not function, arrange it on the key window display switch by using the superimpose window or the set overlay screen.
For superposition by using the superimpose window or the set overlay screen, refer to the following.

➟6.5.5 ■3 Superimposition

(c) Go To Screen switch or switches for which the screen switching function is set

For superposition on the following objects, when [When a finger is touched (ON synchronous)] is set for [Action of Go To Screen Switch] in GOT Environmental Setting, arrange the objects so that the screen switching is functioned last.
Even if the following objects are arranged so that they function after the screen switching, they do not function.

- Touch switch

• Numerical input
• Text input

For the action order of the superimposed objects, refer to the following.

➟6.5.5 ■3 Superimposition

(4) Using parts as touch switch shapes

For the GOT to which the project has been written, when editing only parts data or deleting the parts data which has been written to the GOT, check the setting of the touch switch shape again.
If the size of the parts is changed, the touch switch may not be displayed properly.
If the parts data is deleted, only the text is displayed but not the touch switch shape.
If the parts data has been updated, the data of all the touch switches and lamps which uses the updated parts needs to be updated. Therefore,saving the project data or opening the communication dialog may need longer time than usual.

(5) Setting [Repeat the operation while the switch is pressed]

(a) Precautions for touch switches for which operation repeat is set

Touch switch type	Precaution
Switch	When the operation repeat is set for the switch, do not set the special function, the screen switching function, or the station No. switching function. If the special function, the screen switching function, or the station No. switching function is set, the operation repeat setting is invalid.
Bit switch	If bit momentary is set for the action, the operation repeat setting is invalid.
Word switch	None
Key window display switch	In the following cases, the operation repeat is aborted. • A key window is displayed while the operation is repeated. • A key window is already displayed.
Key code switch	If a dialog window is displayed while the operation is repeated, the operation repeat is aborted.

(b) Touching simultaneously multiple touch switches for which the operation repeat is set

When multiple touch switches are touched simultaneously for which the operation repeat is set, only the operation of the last touched switch is repeated.

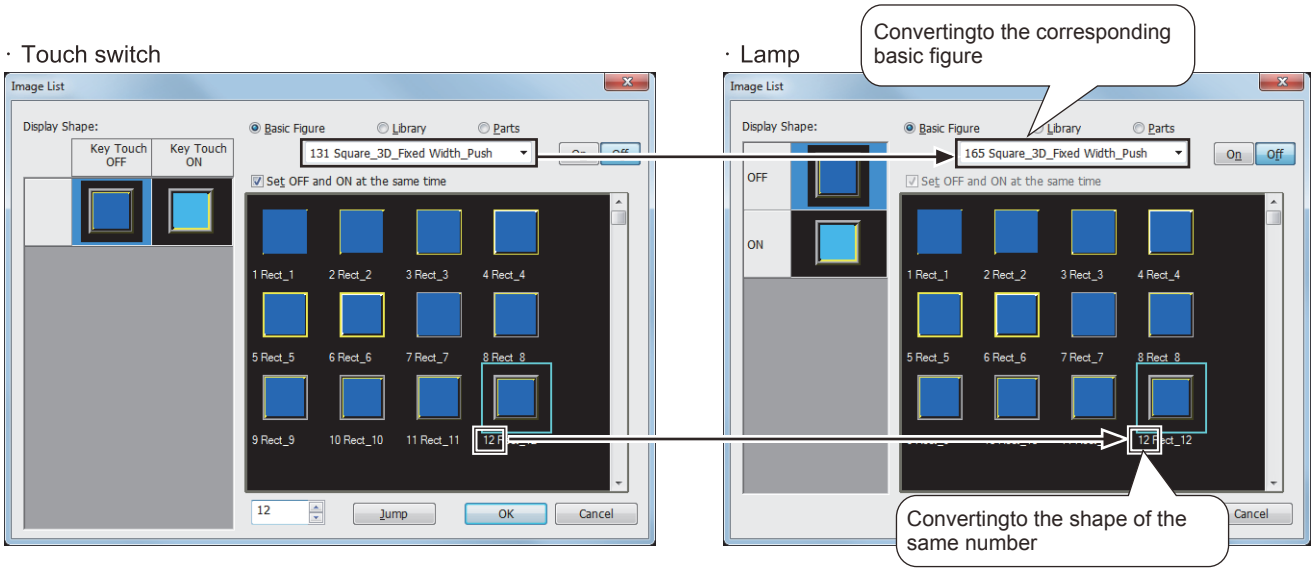
(6) Converting the touch switch to lamp

(a) Settings to be deleted

When the touch switch has been converted to a lamp, some of the settings are deleted.
The deleted settings are applied as the default setting for the lamp.

(b) Converting basic figures

For converting the basic figure from the touch switch to the lamp, the figure of the switch is converted to the corresponding figure with the same number on the lamp.
Example: Converting the touch switch to the lamp when the basic figure [Square_3D_Fixed Width _Push] is set for the touch switch



When the touch switch is converted to the lamp under the following conditions, the default basic figure is set.

- No basic figure on the lamp has the same number as the basic figure set for the touch switch.
- The basic figure [Toggle] is set for the touch switch.
- The basic figure [Selector] is set for the touch switch.

Even if the shapes have the same reference number, there may be difference between the touch switch and the lamp. Check the shape after the conversion to see if it can be properly used.

(c) Restoring the lamp to the touch switch after the conversion

To restore the lamp to the switch after conversion, select [Edit]→[Undo] from the menu.
Even if the lamp has been converted back to the touch switch, the previous settings cannot be restored.
If the [OK] button is not clicked, clicking the [Cancel] button cancels the conversion even after the [Convert to Lamp] button is clicked.

(d) Types of the lamp to be converted to

The type of the lamp to be converted to differs depending on the setting of [Lamp (Timing to change shape/text)].

- When [Key Touch State] or [Bit-ON/OFF] is selected
  The touch switch is converted to a bit lamp.
- When [Word Range] is selected
  The touch switch is converted to a word lamp.

If no setting item for [Lamp (Timing to change shape/text)] exists , the touch switch is converted to the bit lamp.

(7) Mode of the word switch

When [Data Addition] or [Data Subtraction] is set for [Mode] of the word switch, the GOT with an old basic system application may not operate.
In such a case, install the latest basic system application to the GOT.

(8) Channel No. setting of the special function switch

When the project data is saved or the GOT type is changed, if the channel No. set for the special function switch does not exist, the channel No. is automatically changed.

When either of the following functions is set for the special function switch, check the channel No. of the special function switch.

- Sequence program monitor (ladder)
- Sequence program monitor (SFC)

(9) Multiple key code settings

The following key codes must be set last, as the other key codes will not be executed if set after them.

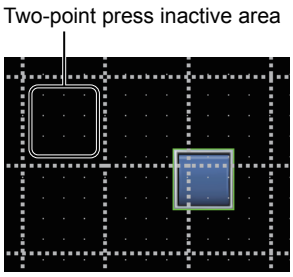
Key code	Description	Key code type
000Dh	Writes to the device and moves the cursor.	Numerical input/Text input
001Bh	Hides the cursor.	Numerical input/Text input
0080h	Moves the cursor to the right.	Numerical input/Text input
0081h	Moves the cursor to the left.	Numerical input/Text input
0082h	Moves the cursor upward.	Numerical input/Text input
0083h	Moves the cursor downward.	Numerical input/Text input
0084h	Convert the entry to kanji or Simplified Chinese characters.	Numerical input/Text input
0085h	Displays the previous option	Numerical input/Text input
0086h	Displays the next option	Numerical input/Text input
0087h	Select/Not convert	Numerical input/Text input
0092h	Moves the cursor in the user ID ascending order	Numerical input/Text input
0093h	Moves the cursor in the user ID descending order	Numerical input/Text input
FFB4h	Change the selected alarm status to "Checked" (Check)	Alarm Display
FFB5h	Change all the alarm statuses to "Checked" (Check all)	Alarm Display
FFB6h	Delete the selected restored alarm (Delete)	Alarm Display
FFB7h	Delete all the restored alarms (Delete all)	Alarm Display
FFB8h	Displays the detail/Moves to the lower hierarchy.	Alarm Display
FFB9h	Resets the selected alarm data.	Alarm Display
FFBBh	Saves the alarm details to the data storage.	Alarm Display
FFC2h	Moves to the upper hierarchy.	Alarm Display

■2 Precautions for use

(1) Simultaneous 2-point press

(a) For GT27

GT27 supports the simultaneous touch of up to two points.
For safety, you can create a screen that operates by touching two touch switches simultaneously.
The areas where the 2-point press is inactive are displayed with broken lines.

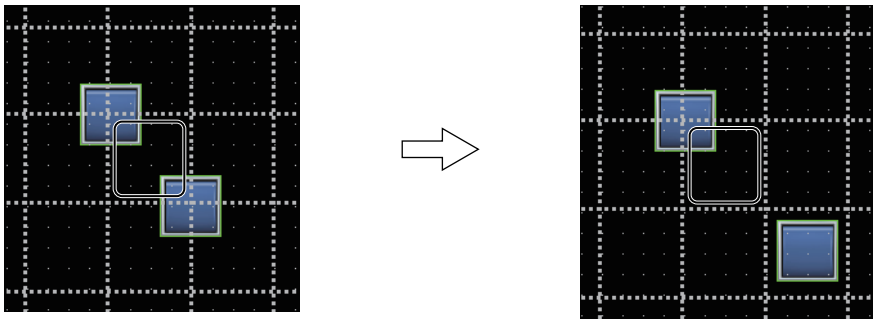


For the display method of the two-point press inactive area, refer to the following.

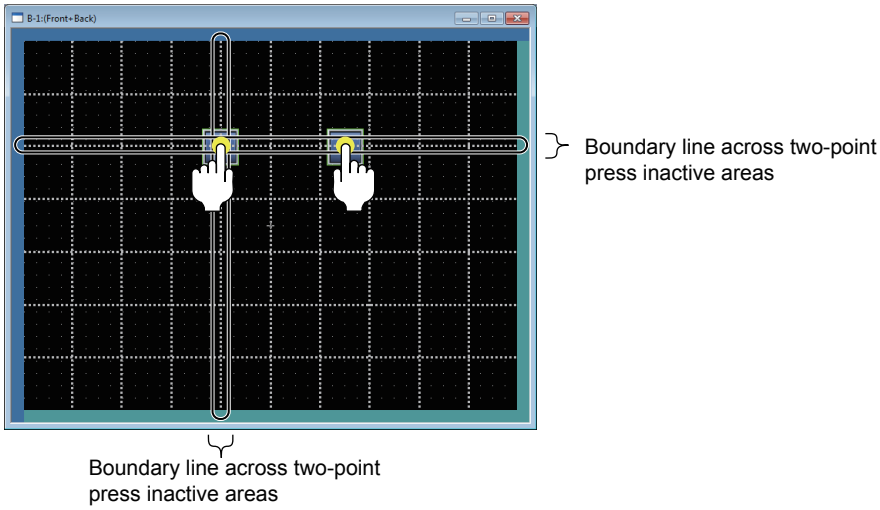
➟2.6.6 Displaying the two-point press inactive area
11.10.5 ■1 [Options] dialog ([View] tab)

When placing touch switches for the simultaneous 2-point press, note the following.

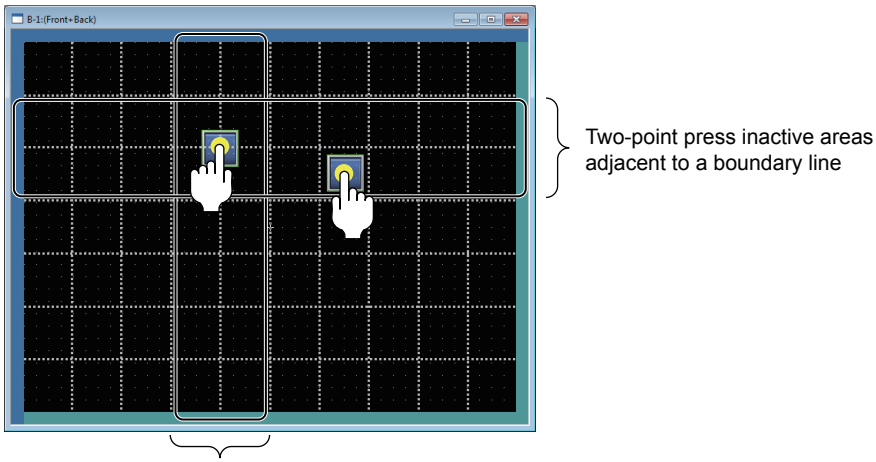
- Do not place touch switches for the simultaneous 2-point press in one two-point press inactive area.
  If you simultaneously touch two points in one two-point press inactive area, an untouched area may respond.



- If you simultaneously touch two points on a boundary line across two-point press inactive areas, the touch switches may not function.



- If you simultaneously touch one point on a boundary line across two-point press inactive areas, and another point in a two-point press inactive area adjacent to the line, the touch switches may not function.



(b) **For GT25, GT23, GT21, GS25, and GS21**

The simultaneous 2-point press is not available.
Do not touch two or more points on the GOT screen simultaneously.
The simultaneous touch of two or more points may cause the untouched area to respond.

(2) Setting a delay

(a) **When [Press Twice] is set**

If the touch switch has been touched only once and another monitor screen is operated, [Press Twice] does not function properly.

(b) **When [Press Twice] and the operation repeat are set**

The operation repeat is invalid at the first touch.
The operation repeat is valid at the second touch.

(3) Setting the bit set, bit reset, or bit alternate together with screen switching and station No. switching

When the bit set, bit reset, or bit alternate action is set together with the screen switching or station No. switching, the timing of the screen switching and station No. switching differs depending on the status of GS450.b12.
Set GS450.b12 before the first action of the touch switch.
This enables the status of the device after screen switching to be changed.

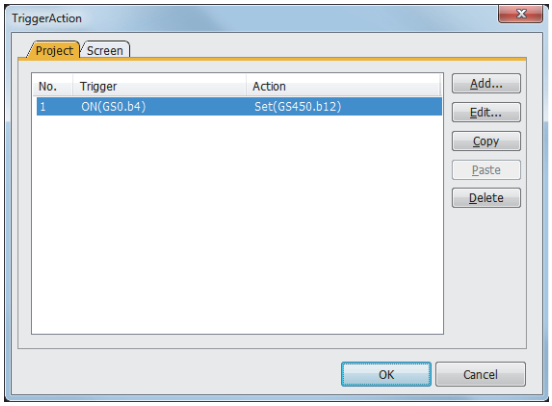
Setting item	GS450.b12	
	ON	OFF
Screen switching or Station No. switching + Bit set	When the finger is released from the touch switch	When the finger touches the touch switch
Screen switching or Station No. switching + Bit reset	When the finger is released from the touch switch	When the finger touches the touch switch
Screen switching or Station No. switching + Bit alternate	When the finger is released from the touch switch	When the finger touches the touch switch
Screen switching or Station No. switching + Bit momentary	When the finger is released from the touch switch	
Screen switching or Station No. switching + Word	When the finger touches the touch switch	When the finger touches the touch switch

The following shows an example in which GS450.b12 automatically turns on after the GOT is powered on by using the trigger action.

- Setting example of the trigger action

  Set the GOT internal device (Always ON device: GS0.b4) as a trigger in the first low in the [Project] tab of the [Trigger Action] dialog so that GS450.b12 is on when the trigger is on.
  After the GOT is powered on, the trigger action turns on GS450.b12.
  For the details of the trigger action, refer to the following.

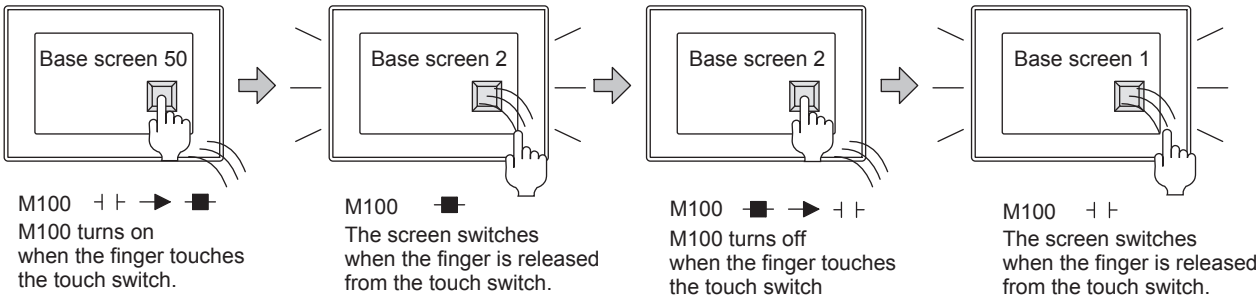
  ➟9.5 Operating a Device as a Trigger ([Trigger Action])



Example) The following actions are set simultaneously for the touch switch
Bit alternate: M100
Screen switching: The screen switches to base screen 2 when M100 is on.
Screen switching: The screen switches to base screen 1 when M100 is off.

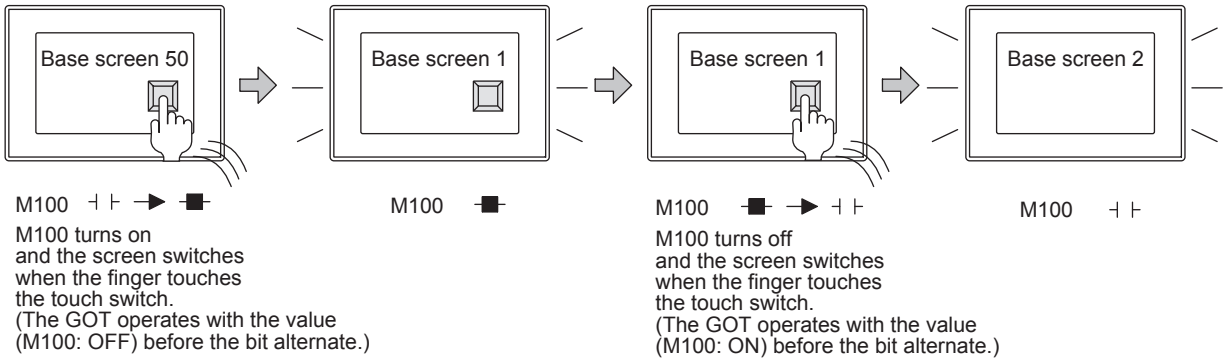
(a) **Switching action when GS450.b12 is on**

After the bit set, bit reset, or bit alternate action is executed, the screen or the station number is switched when you release the finger from the switch. The GOT operates with the value after the bit set, bit reset, or bit alternate action.



(b) **Switching action when GS450.b12 is off**

At the same timing as the bit set, bit reset, or bit alternate action, the screen or the station number is switched. The GOT operates with the value before the bit set, bit reset, or bit alternate action.



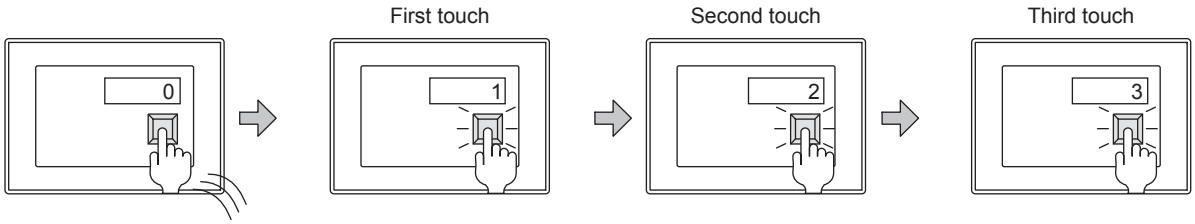
(4) When [Repeat the operation while the switch is pressed] is set

(a) Irregular operation repeat cycle

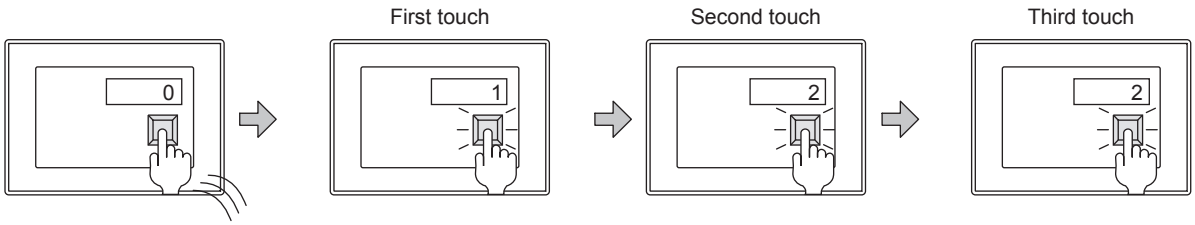
When communication time is longer than the preset operation repeat cycle, the cycle may be irregular.
To correct the cycle, take measures including setting a longer time for start delay or repeat cycle or reducing the number of monitor target devices.
Example) When the operation repeat is applied to the word switch that adds one to the device value

Setting item	Setting
Device	D100
Constant	0
Indirect device	D100

- When the operation is repeated normally
  Every time the touch switch is operated, one is added to the device value.



- When the operation repeat cycle is irregular
  Even if the touch switch is operated, the device value may not be increased.



(b) Abort of the operation repeat

If a dialog window is displayed while the operation is repeated, the operation repeat is aborted.

(c) Duration of touch on the touch switch and the process of writing to the device

While the value is written to the device, the GOT recognizes that the touch switch is touched.
Thus, even if the finger is released from the touch switch within the preset start delay time, a long device writing process may cause the GOT to recognize that the switch is touched longer than the start delay time, and which may repeat the operation.
In this case, set a longer start delay time.

(d) Switching action while the touch switch is touched

Security switching, language switching, or station No. switching is not executed while the touch switch is touched.
When the trigger device value for security switching, language switching, or station No. switching has been changed while the touch switch is touched, the switching is executed when the finger is released from the switch.

(5) Hierarchy mode and history mode of the Go To Screen switch

- When the history information is saved in the memory card, do not change the value of the screen switching device at the controller side while the GOT is powered off.
  While the GOT is powered off, the history information is not saved. Therefore, the screen does not return according to the screen transition controlled on the controller side.
- Once the mode is changed from the hierarchy mode to the history mode, the mode does not return to the hierarchy mode until the GOT is powered off even if GS450.b14 is turned off.
  This applies to GS450.b13.
- To change the mode from the hierarchy mode to the history mode using the GOT internal device (GS450.b14), select the hierarchy mode in GT Designer3 settings.
  When the history mode is selected in GT Designer3 settings, the on and off status of GS450.b14 is invalid.

8.2.4 [Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Multiple functions can be assigned to one touch switch.

Step 1 Select [Object] → [Switch] → [Switch] from the menu.

Step 2 Click the position where you arrange the switch.

Step 3 Double-click the arranged switch to display the setting dialog.

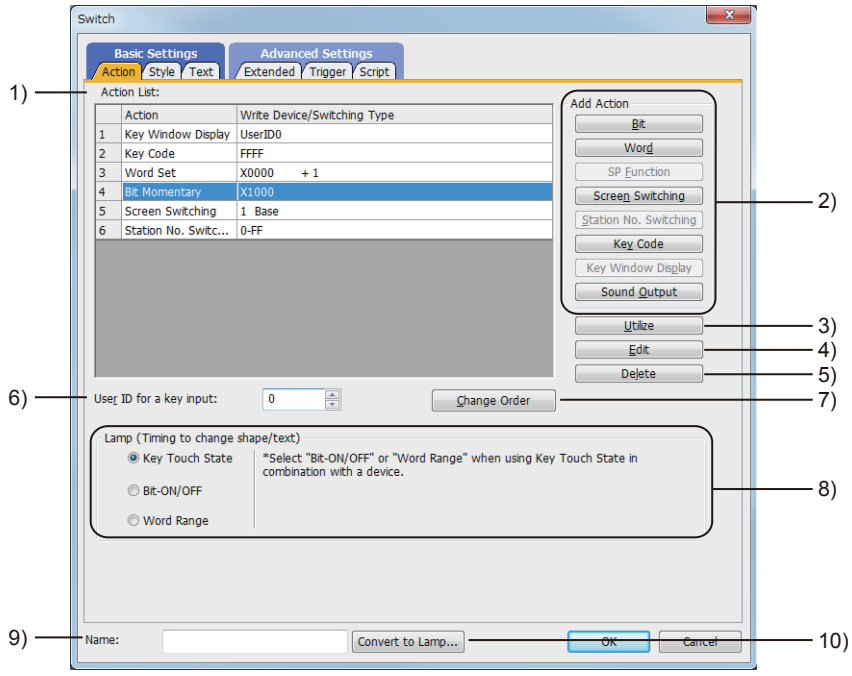
➟■1 [Action] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab
■6 [Script] tab

■1 [Action] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

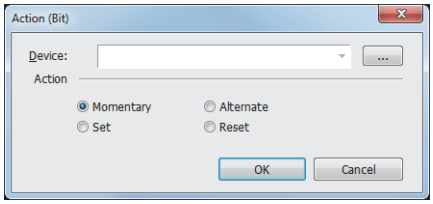
➟10.19.2 ■2 Usable functions

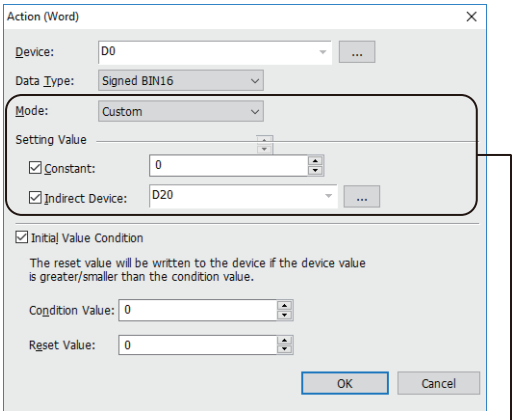
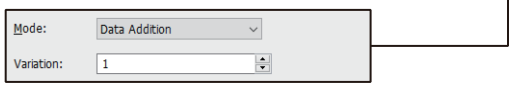


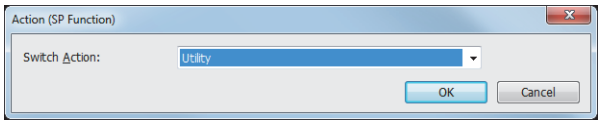
1) **[Action List]**
Displays the actions assigned to the switch in the list.

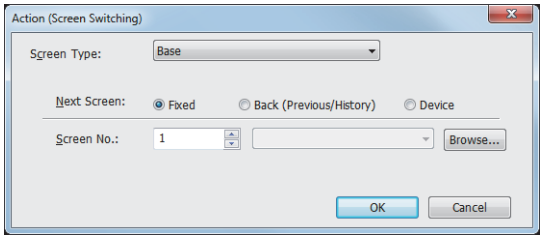
2) **[Add Action]**

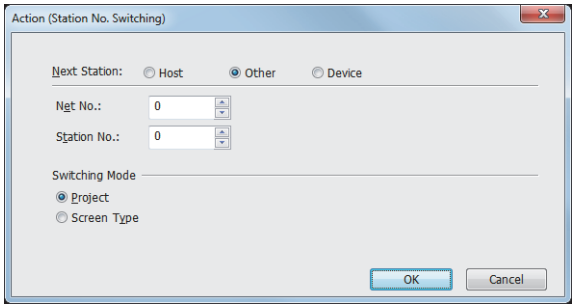
Select actions to be added to [Action List].

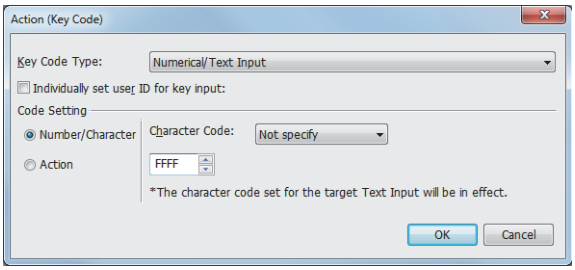
Item	Description
[Bit] button	Sets the on and off operation of the bit device for the switch in the [Action (Bit)] dialog. ➟8.2.5 [Bit Switch] dialog  • **[Device]** Set the device to which the value is written. ➟6.1.2 How to set devices • **[Action]** Select the function to be performed for the bit device as the destination when you touch the switch. • [Momentary]: Keeps the bit device on only while you touch the switch. • [Alternate]: Switches the on or off status of the bit device every time you touch the switch. • [Set]: Turns on the bit device when you touch the switch. • [Reset]: Turns off the bit device when you touch the switch.

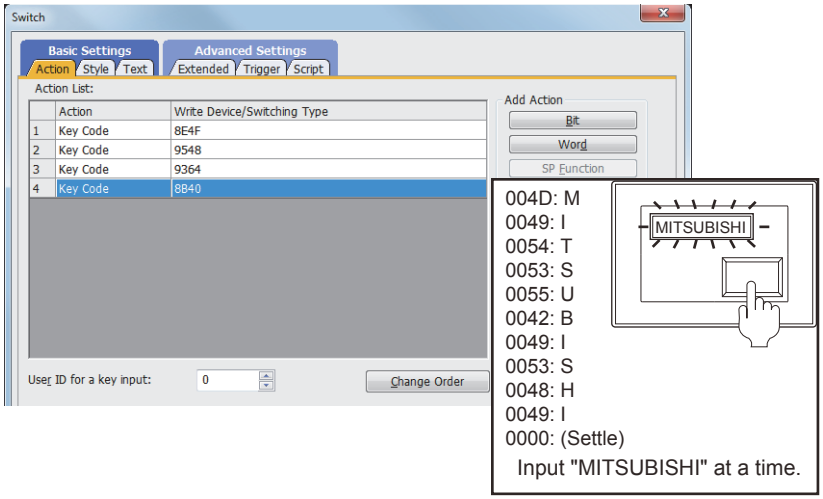
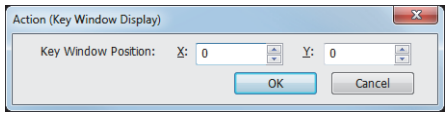
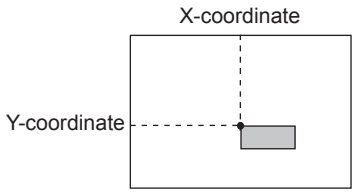
Item	Description
[Word] button	Sets how to change the value of the word device in the [Action (Word)] dialog. ➡8.2.6 [Word Switch] dialog  When [Mode] is set to [Custom]  When [Mode] is set to [Data Addition] or [Data Subtraction] • **[Device]** Set the device to which the value is written. ➡6.1.2 How to set devices • **[Data Type]** Select the data type of the values set in [Setting Value] and [Initial Value Condition]. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] ➡1.2.7 ■2 Data type of devices • **[Mode]** Set the writing mode for the specified word device. • [Custom]: Select this item to write the value set in [Setting Value] to the specified word device. • [Data Addition]: Select this item to add the value set in [Variation] to the value stored in the specified word device. • [Data Subtraction]: Select this item to subtract the value set in [Variation] from the value stored in the specified word device. • **[Setting Value]** Set a value to be written to the specified word device. The setting is required when [Mode] is set to [Custom]. • [Constant]: Set a constant for the specified word device. The setting range depends on the setting of [Data Type]. • [Indirect Device]: Set an indirect device for the specified word device. ➡6.1.2 How to set devices When [Constant] and [Indirect Device] are both selected, the value [Constant] + [Indirect Device] is written into the word device. • **[Variation]** Set this item when [Mode] is set to [Data Addition] or [Data Subtraction]. The setting range depends on the setting of [Data Type]. When [Mode] is set to [Data Addition], touching the word switch adds the set value to the value stored in the specified word device. When [Mode] is set to [Data Subtraction], touching the word switch subtracts the set value from the value stored in the specified word device.

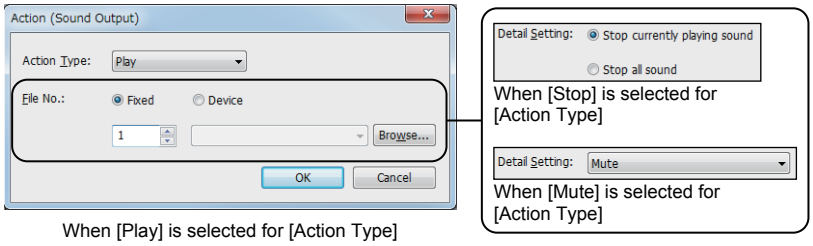
Item	Description
[Word] button	• **[Initial Value Condition]** When the value in the specified word device satisfies the value set in [Condition Value], the value set in [Reset] is written to the device. When [Mode] is set to [Custom], select both [Constant] and [Indirect Device] to enable this setting. • [Condition Value]: Set a condition value that is a trigger to write [Reset Value] to the specified word device. The setting range depends on the setting of [Data Type]. • [Reset Value]: Set a value to be written to the specified device when the value in the device satisfies the value set in [Condition Value]. The setting range depends on the setting of [Data Type].
[Extend] button	Sets a switching action, to screens such as the utility screen and the extended function screen, on a switch in the [Action (SP Function)] dialog. For the setting of switch actions and applicable models, refer to the following. ➟8.2.9 [Special Function Switch] dialog 

Item	Description
[Screen Switching] button	Sets the screen switching function for the switch in the [Action (Screen Switching)] dialog. ➟8.2.7 [Go To Screen Switch] dialog  • **[Screen Type]** Select the type of the screen to be switched to. The selectable items vary with the screen type. The following shows the selectable items for a base screen or window screen. • [Base] • [Overlap Window1] • [Overlap Window2] • [Overlap Window3] (GT27, GT25, GT SoftGOT2000, and GS25) • [Overlap Window4] (GT27, GT25, GT SoftGOT2000, and GS25) • [Overlap Window5] (GT27, GT25, GT SoftGOT2000, and GS25) • [Superimpose Window1] • [Superimpose Window2] • [Dialog Window] The following shows the selectable items for a mobile screen. • [Mobile] • [Overlap Window1] • [Overlap Window2] • [Superimpose Window1] • [Superimpose Window2] For [Overlap Window1] to [Overlap Window5], [Superimpose Window1], and [Superimpose Window2], the following setting is applicable. If [Close the window when switching base screens] is selected in [Screen Switching/Window] in the [Environmental Setting] dialog, [(*)] is appended to the name of the target screen type. • **[Next Screen]** Select an action for screen switching. • [Fixed]: Select this item to switch to the screen having the specified base screen number or window screen number. After selecting this item, set the base screen number or the window screen number. Clicking the [Fixed] button displays the [Image List(Screen)] dialog. Check the screen image on the dialog before setting. • [Back (Previous/History)]: Select this item to switch to the screen having the base screen number previously displayed. You can select this item only when the screen type is the base screen. The GOT stores the numbers of the previously displayed base screens. A maximum of 10 previous screens can be selected from the history. • [Device]: Select this item to switch to the base screen or the window screen having the specified screen number according to the on or off status or the current value of the specified device. Before specifying the device, select the data type of the device to be monitored. (Bit, Signed 16-bit binary data, or BCD16) After specifying the device, click the [Detail Setting] button and configure the action settings. • **[Screen No.]** Specify the screen number of the target screen to be switched. The setting range is [-1] to [32767]. You can set this item only when the screen type is the base screen.

Item	Description
[Station No. Switching] button	Sets the station No. switching function for the switch in the [Action (Station No. Switching)] dialog. ➟8.2.8 [Change Station No. Switch] dialog  • **[Next Screen]** Select an action for station No. switching. • [Host]: Select this item to monitor the station connected with the GOT. • [Other]: Select this item to switch the monitor target to another station. Set the destination network No. in [Net No.] and the station No. in [Station No.] in decimal. • [Device]: Select this item to switch to another station according to the on or off status or the current value of the specified device. Before specifying the device, select the data type of the device to be monitored. (Bit, Signed 16-bit binary data, or BCD16) After specifying the device, click the [Detail Setting] button and configure the action settings. • **[Switching Mode]** Set the target for switching. • [Project]: Select this item to switch the whole project by the station number. • [Screen Type]: Select this item to switch only the specified screen by the station number. When selecting [Screen Type], set the following. • [Screen Type]: Select the screen to be switched to.

Item	Description
[Key Code] button	Sets key codes to be input into the object in the [Action (Key Code)] dialog. ➟8.2.11 [Key Code Switch] dialog  • **[Key Code Type]** Specify the key code type. • [Numerical/Text Input]: Inputs a key code for the numerical input or text input. • [Alarm Display]: Inputs a key code for the alarm display (user), alarm display (system), or simple alarm display. ➟9.1.5 Viewing alarm events (Alarm display) 8.12.2 How to use the simple alarm display • [Recipe Display (Record List)]: Inputs a key code for the recipe display (record list). ➟8.14.1 Specifications of the recipe display (record list) • [Historical Trend Graph/Historical Data List]: Inputs a key code for the historical trend graph or historical data list display. ➟8.21.1 Specifications of the historical trend graph • [Document Display]: Inputs a key code for the document display. ➟8.26.3 How to use the document display (for Document Converter output files) • [Screen Gesture]: Inputs a key code for the screen gesture. For a single switch, only one of the above key code types can be set. • **[Individually set user ID for key input]** Set the user ID for the object on which the cursor is displayed when you touch the key code switch. The setting range is [0] to [65535]. If no object with the set user ID exists, a cursor is displayed on an object with the earliest object ID number. • **[Code Setting]** • [Number/Character] Select this item to input numeric values or characters using the key code. Select an item for [Character Code], enter a numerical value or character in the selected character code, and click the [Convert to Key Code] button. The entered value or character is automatically converted to its key code. The following shows the items to be selected for [Character Code]. · [ASCII] · [Unicode] · [S-JIS] · [GB] · [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25) · [Big5] · [Not specify] When [Not specify] is selected for [Character Code], no character code conversion is executed and the key code switch operates using the character code set in the linked text input. • [Action]: Select this item to set an action by the key code.

Item	Description
[Key Code] button	• Specifying multiple key codes Multiple key codes can be set to one switch. Setting multiple key codes can create the switch that the character string can be input with a single touch of the switch.  When you arrange the switch, to which multiple key codes are set, on a user-created key window, only the first key code can be executed. When multiple key codes are entered for alarms, only the first key code can be executed. • Reading or writing order for character code The reading or writing order of the character codes set in the switch can be selected according to the specifications of a controller to be monitored. ➟8.5 Placing a Text Display and Text Input
[Key Window Display] button	 Sets the key window display for the switch in the [Action (Key Window Display)] dialog. ➟8.2.10 [Key Window Display Switch] dialog • **[Key Window Position]** Specify the position (top-left coordinate) where the key window is displayed. The maximum settable value is one dot smaller than the vertical or horizontal size of the GOT screen. • [X]: Specify the coordinate value of the X axis. • [Y]: Specify the coordinate value of the Y axis.  • Specifying objects for the key window display and setting the key window The display target is the objects having the same user ID as the one specified in [User ID for a key input and data change] in the [Action] tab. The key window is displayed that is set in the key window setting for the corresponding project or screen unit. ➟8.2.10 [Key Window Display Switch] dialog

Item	Description
[Sound Output] button	Not available to GT2505-V and GT25HS-V. Set the sound output function for the switch in the [Action (Sound Output)] dialog.  When [Play] is selected for [Action Type] **• [Action Type]** Select an action of the sound output. The following shows the items to be selected. · [Play] · [Stop] · [Mute] **• [File No.]** Set this item when selecting [Play] for [Action Type]. Set the sound file to play. The following shows the items to be selected. · [Fixed]: Select this item to specify a sound file number. After selecting this item, specify the file number of a registered sound file in the [Sound File List] dialog. The setting range is [1] to [500]. · [Device] Select this item to specify a sound file number with the value of a specified device. After selecting this item, specify a device. **• [Detail Setting]** Set this item when selecting [Stop] or [Mute] for [Action Type]. The following shows the items to be selected. · [Stop currently playing sound]: Stops the current playback. The standby sound file plays subsequently. · [Stop all sound]: Stops the current playback and cancels all standby sound files. · [Mute] · [Unmute] · [Mute/unmute]

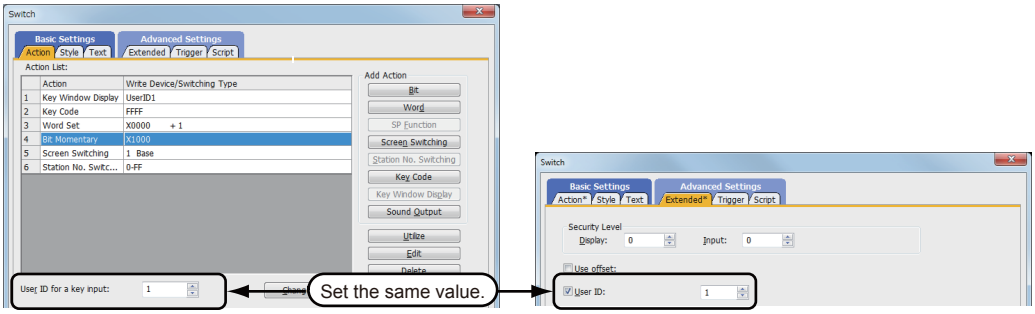
3) **[Utilize] button**
Select an action to be utilized from [Action List] and then click the [Utilize] button, the selected action is copied and added to [Action List].

4) **[Edit] button**
Select an action to be edited from [Action List] and then click the [Edit] button, the set action is edited.

5) **[Delete] button**
Select an action to be deleted from [Action List] and then click the [Delete] button, the set action is deleted.

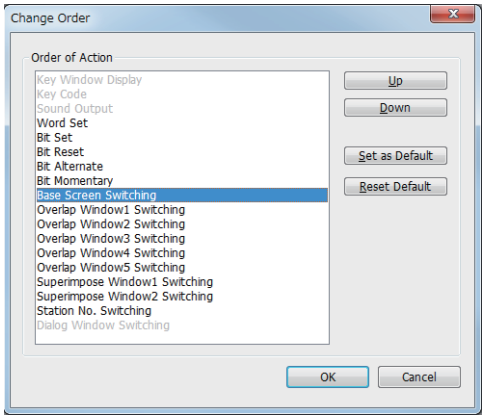
6) **[User ID for a key input]**
To operate the alarm or historical trend graph by the key code, set the ID to specify the object for the key code input.
The setting range is [0] to [65535].
Set [User ID for a key input] of the switch and [User ID] of each object to be the same.

Switch setting and alarm setting



7) **[Change Order] button**

Changes the action order in the [Change Order] dialog.



• [Order of Action]

The actions are executed in the order from the top.
The key code is executed first. Therefore the action order cannot be changed.
You can change the order of the third and subsequent actions.

• [Up] button:

Places the order of the selected action to one earlier.

• [Down] button:

Places the order of the selected action to one later.

• [Set as Default] button:

Sets the order changed by the [Up] button or the [Down] button as the default.
(This item cannot be used if an operation panel is set.)

• [Reset Default] button:

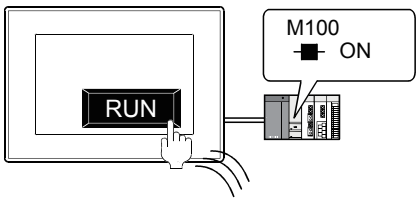
Returns the order changed by the [Up] button or [Down] button to the default.
(This item cannot be used if the operation panel is set.)

8) [Lamp (Timing to change shape/text)]

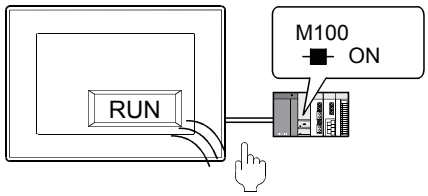
Select how to switch touch switch images (shapes of on status and off status).

• Switching the touch switch image according to the touch operation

Select [Key Touch State].



The shape of on status is displayed while you touch the touch switch.

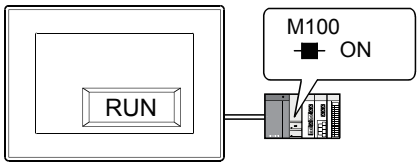


The shape of off status is displayed regardless of the device status while you do not touch the touch switch.

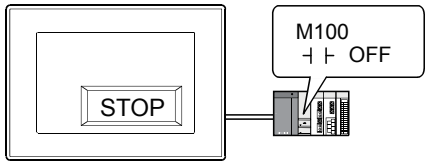
• Switching the touch switch image according to the status of the corresponding device

Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status is displayed when M100 is on.



The shape of off status is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices

Item	Description
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

9) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

10) **[Convert to Lamp] button**

Converts the object type to the lamp.

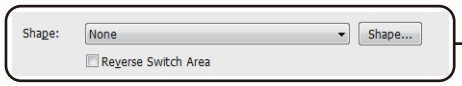
➟8.2.2 How to use touch switch

■2 [Style] tab

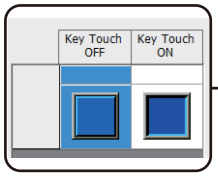
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

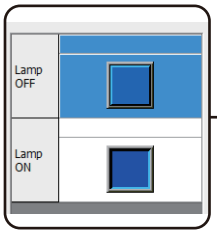
➟10.19.2 ■2 Usable functions



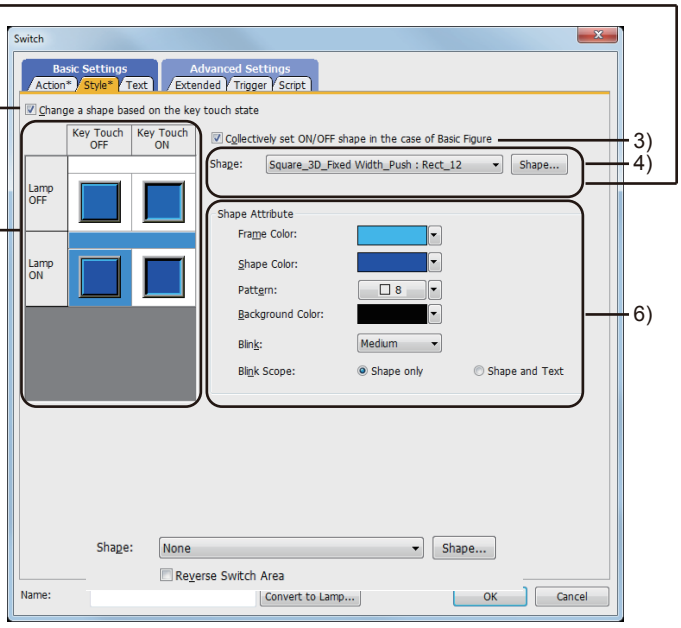
When [None] is selected for [Shape]



When [Key Touch State] is selected for [Lamp (Timing to change shape/text)]



When [Bit-ON/OFF]/[Word Range] is selected for [Lamp (Timing to change shape/text)] ([Change a shape based on the key touch state] is not selected)



When [Bit-ON/OFF]/[Word Range] is selected for [Lamp (Timing to change shape/text)] ([Change a shape based on the key touch state] is selected)

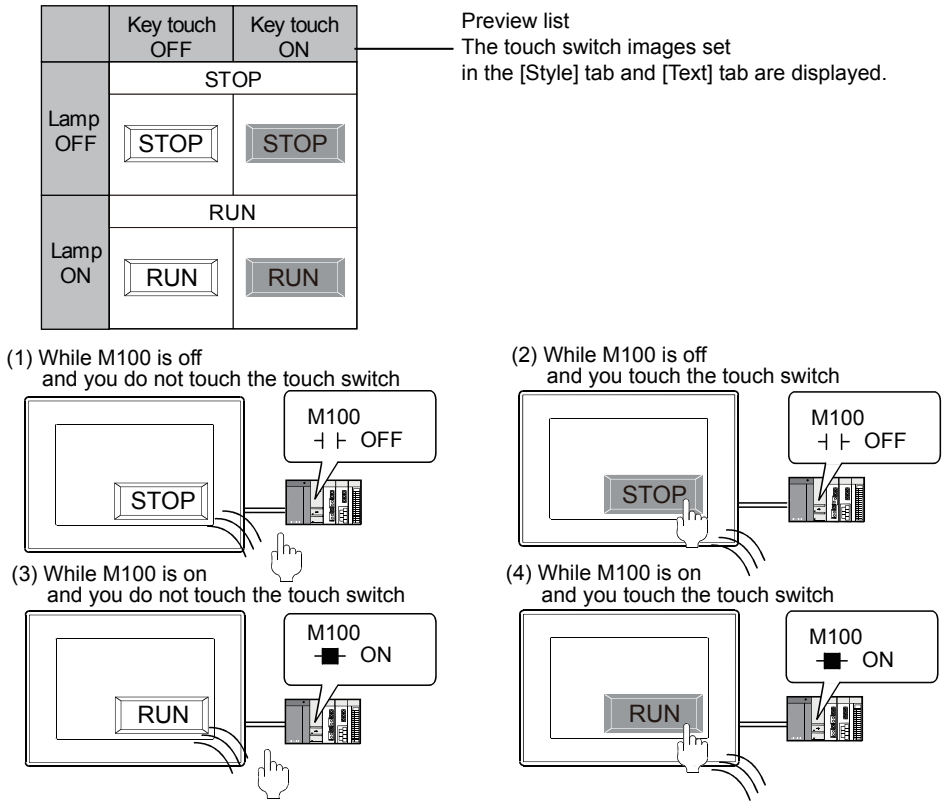
1) **[Change a shape based on the key touch state]**

This item is available when [Bit-ON/OFF] or [Word Range] is selected for [Lamp (Timing to change shape/text)].

You can set four different images using the lamp on and lamp off status in combination with the key touch on and key touch off status.

According to the key touch on and key touch off status, the shape can be switched. However, the text cannot be switched.

The following shows an example of the combination of image switching by the device status with shape switching by key touch status.



2) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.

The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extend] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extend] tab.

3) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].

Select this item to collectively change the shapes of the touch switches except [Press Twice].

4) **[Shape]**

Set the shape of the touch switch.

To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

5) **[Reverse switch area]**

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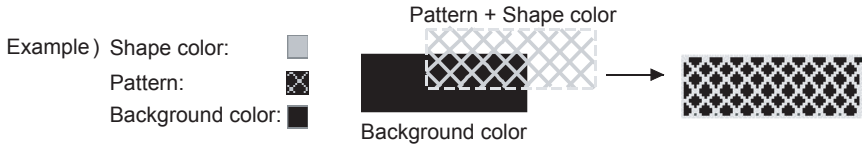
This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].

Inverts the color of the touch switch.

When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

6) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.

Item	Description
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. 
[Blink]	Select the blinking speed of the touch switch. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

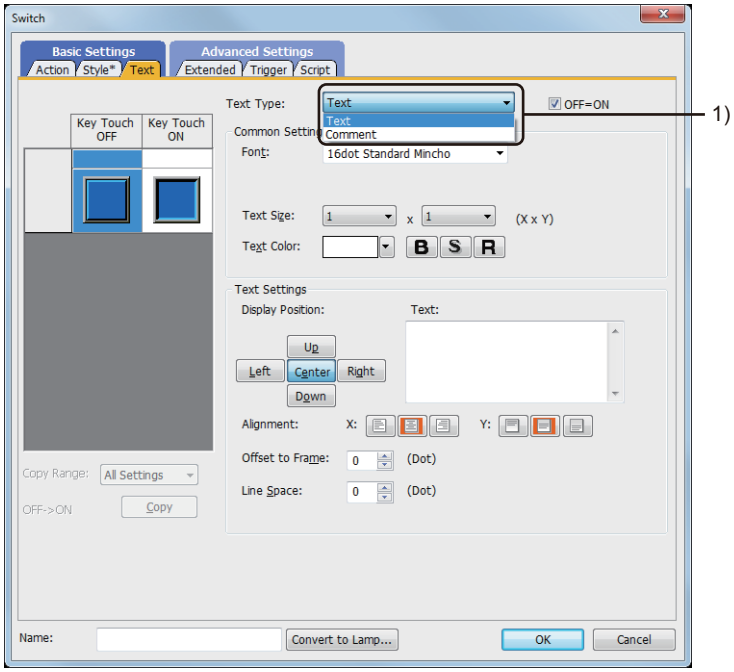
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

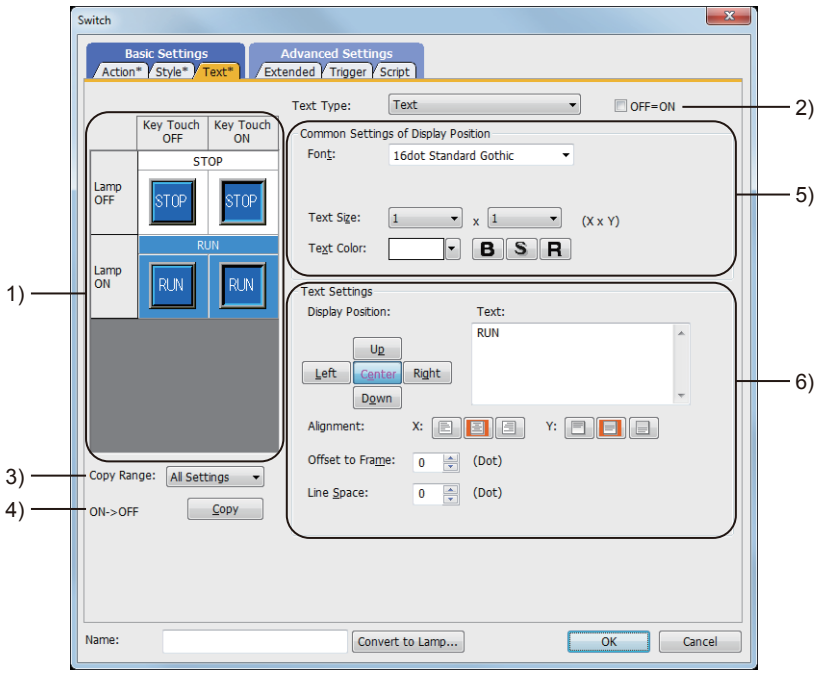
➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➡(1) [Text]
(2) [Comment]

(1) [Text]



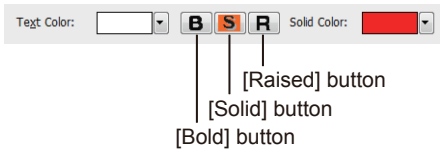
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

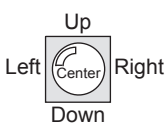
3) **[Copy Range]**
Set a range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

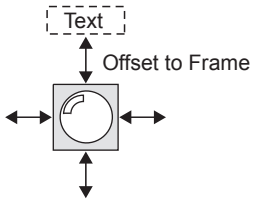
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Common Setting of Display Position]**

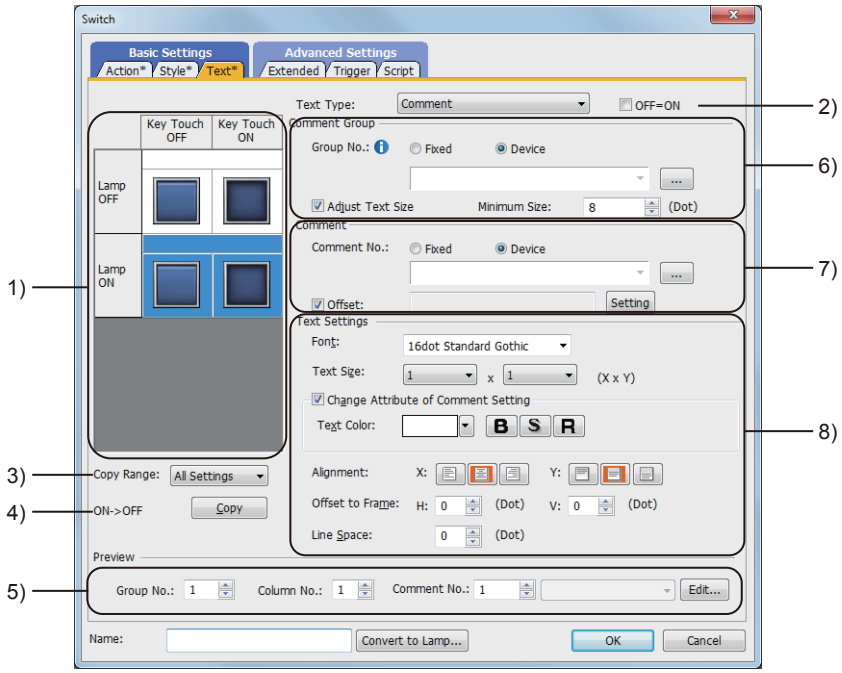
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) **[Text Settings]**

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set a vertical or horizontal position of the text.
[Offset to Frame]	Set an offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set a space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

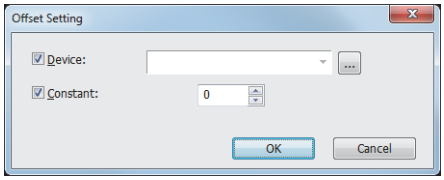
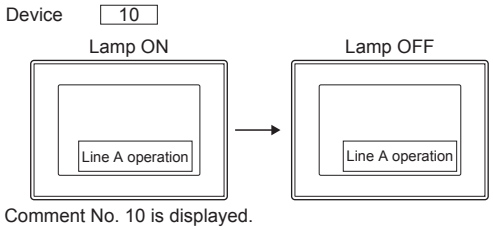
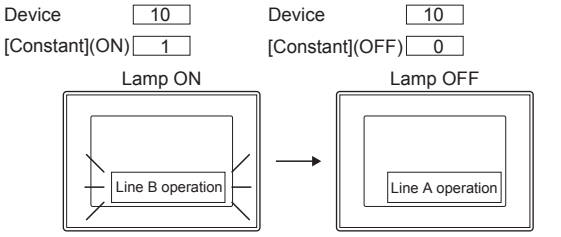
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

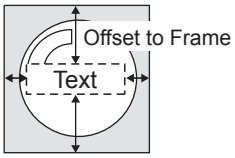
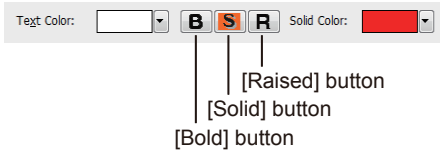
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • **[Device]** Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • **[Constant]** Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  Comment No. 10 is displayed. • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed.  Comment No. 11 is displayed. Comment No. 10 is displayed.

8) **[Text Settings]**

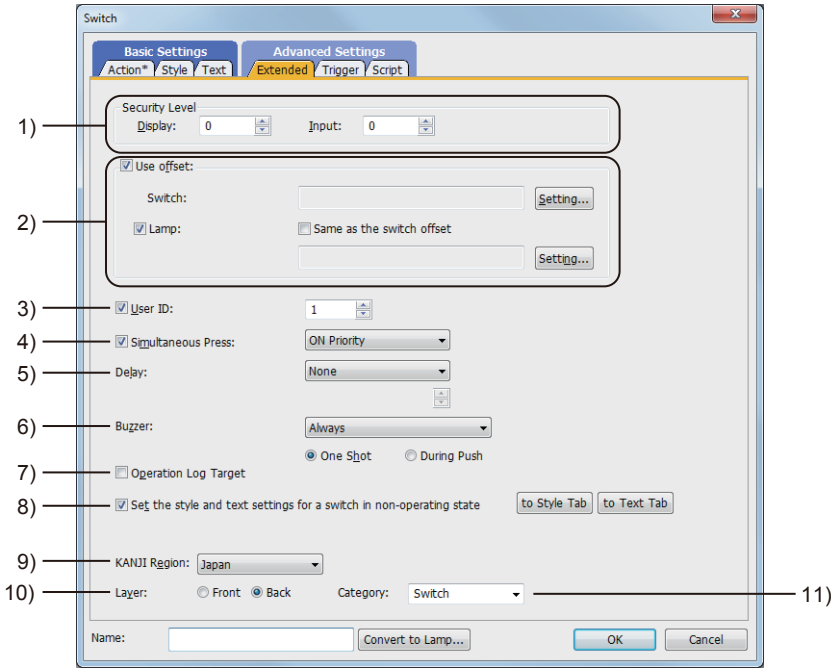
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[User ID]**

Select this item to set a user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

4) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

5) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time.
  This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.
- [Delay Time]: The setting range is [1] to [5].

6) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

- [Always]: The buzzer is sounded every time you touch the touch switch.
  In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
- [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
- [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

- [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
- [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

8) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.

- [To Style tab] button: Displays the [Style] tab.
  Set the shape displayed when the touch switch does not function.

  ➟8.2.4 ■2 [Style] tab
- [To Text tab] button: Displays the [Text] tab.
  Set the text displayed when the touch switch does not function.

  ➟8.2.4 ■3 [Text] tab

9) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
• [Outline] (GT2107-W and GS21-W-N)

10) **[Layer]**
Select the layer to arrange the object on.
The following shows the items to be selected.
• [Front]
• [Back]

➡6.5.5 ■3 Superimposition

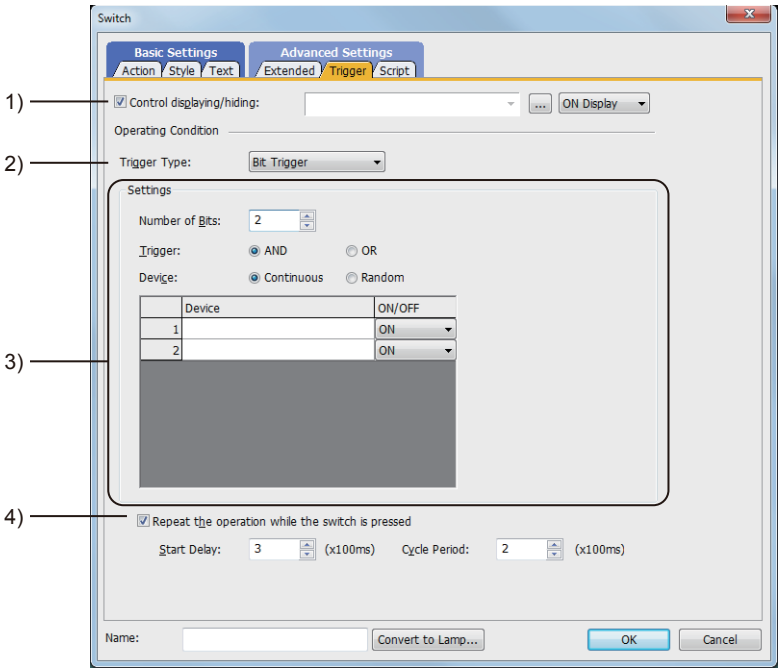
11) **[Category]**
Select the category to assign the object.

➡11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
• [ON Display]
• [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
• [Ordinary]
• [ON]
• [OFF]
• [Range]
• [Bit Trigger]

3) **[Setting]**
For details of each item, refer to the following.

➡6.2.2 Setting Trigger Types

4) **[Repeat the operation while the switch is pressed]**
Select this item to allow the switch to repeat the same operation while you touch the touch switch.
For operations for which [Repeat the operation while the switch is pressed] can be set, refer to the following.

➟8.2.3 Precautions for a touch switch

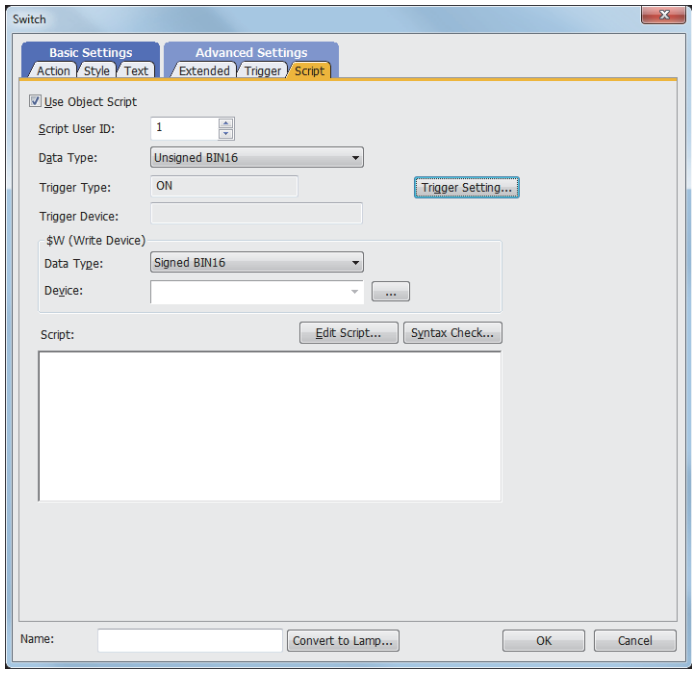
Item	Description
[Start Delay]	Set the time period from when you touch the touch switch to when the operation repeat starts. The setting range is [1] to [20].
[Cycle Period]	Set the cycle for the operation repeat. The setting range is [1] to [10].

■6 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
[Extended]	[Security Level] (display)	security	○	○	When the object is updated	When the screen is updated
	[Security Level] (input)	input_security	○	○	Upon the setting change	
	[Delay]	delay	○	○	When the screen is updated	
	[Buzzer](One Shot, During Push)	beep	○	○	Upon the setting change	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.2.5 [Bit Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A bit switch turns on and off a bit device.

Step 1 Select [Object]→[Switch]→[Bit Switch] from the menu.

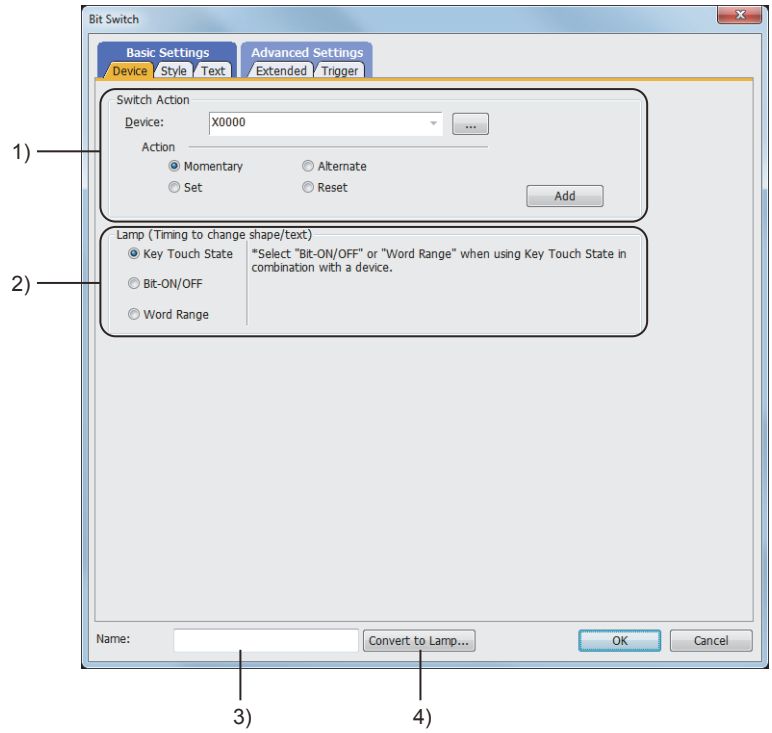
Step 2 Click the position where you arrange the bit switch.

Step 3 Double-click the arranged bit switch to display the setting dialog.

➟■1 [Device] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [Device] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



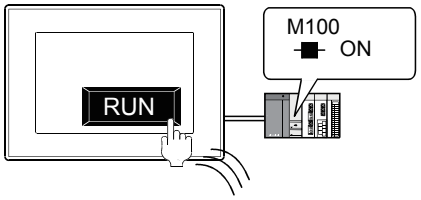
1) **[Switch Action]**

Item	Description
[Device]	Set the bit device to which the value is written. ➟6.1.2 How to set devices
[Action]	Select the function to be performed for the bit device as the destination when you touch the switch. • [Momentary]: Keeps the bit device on only while you touch the switch. • [Alternate]: Switches the on or off status of the bit device every time you touch the switch. • [Set]: Turns on the bit device when you touch the switch. • [Reset]: Turns off the bit device when you touch the switch.
[Add] button	Adds actions to the bit switch. ➟8.2.4 ■1 [Action] tab

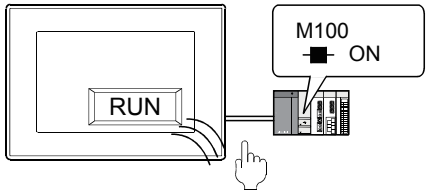
2) **[Lamp (Timing to change shape/text)]**

Select how to switch touch switch images (shapes of on status and off status).

• Switching the touch switch image according to the touch operation
Select [Key Touch State].



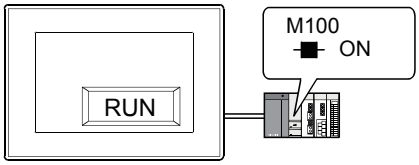
The shape of on status
is displayed while you touch the touch switch.



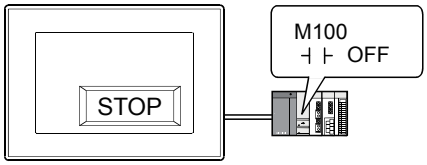
The shape of off status
is displayed regardless of the device status
while you do not touch the touch switch.

• Switching the touch switch image according to the status of the corresponding device
Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status
is displayed when M100 is on.



The shape of off status
is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices

Item	Description
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

3) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

4) **[Convert to Lamp] button**

Converts the object type to the lamp.

➟8.2.2 How to use touch switch

Point

Touch switch action with the bit momentary

(1) **The bit device remains on.**

If the following events occur while you touch the touch switch for which the bit momentary is set, the bit device may remain on even after you release the finger from the switch.

- Hardware failure of the GOT
- Power-off of the GOT
- Communication error with controllers

As appropriate, set the timeout period of the on-status duration for the bit device, and set the operating condition so that the controller forcibly turns off the bit device in the case of the timeout.

(2) **Switching to the base screen or window screen**

If the base screen switching is requested while you touch the touch switch for which the bit momentary is set, the currently displayed base screen is switched to another base screen or window screen when you release the finger from the switch.

(3) **When the operating condition of a touch switch being touched becomes unsatisfied**

If the following cases occur while a touch switch is being touched, the set bit device turns off upon releasing the switch.

- The touch switch operating condition specified using [Operating Condition] becomes unsatisfied.
- The touch switch operating condition specified using [Control displaying/hiding] becomes unsatisfied.

(4) **When the operating condition of a touch switch is unsatisfied**

While the set device of a touch switch is on, if you touch the switch when its operating condition is unsatisfied, the device turns off upon touching the switch.

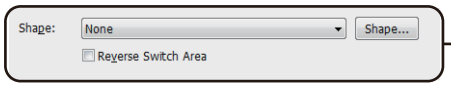
(Even if you select [Clear the input object] in the [Environmental Setting] window or the [Screen Property] dialog, touching the location of the hidden switch turns off the device.)

■2 [Style] tab

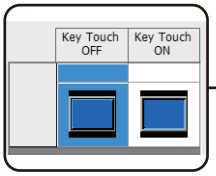
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

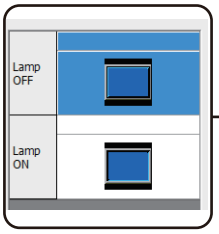
➟10.19.2 ■2 Usable functions



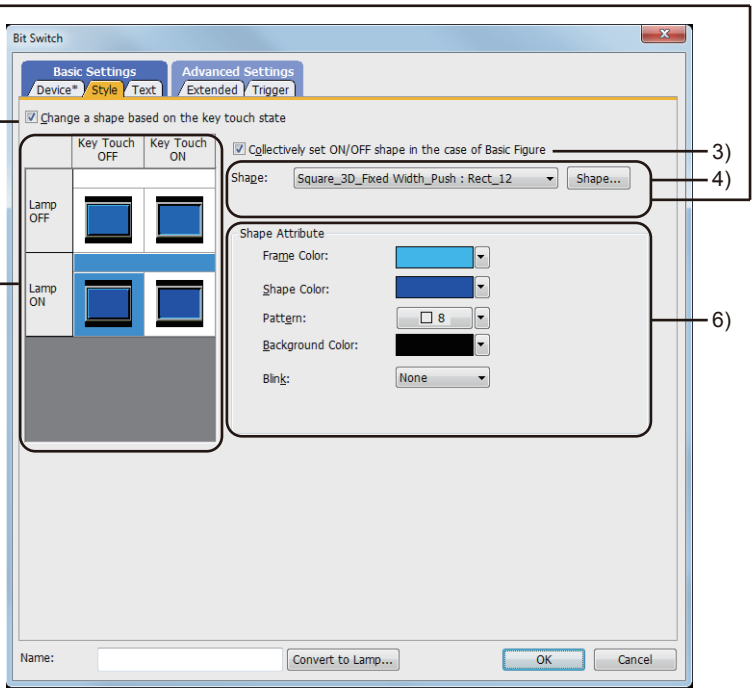
When [None] is selected for [Shape]



When [Key Touch State] is selected for
[Lamp (Timing to change shape/text)]



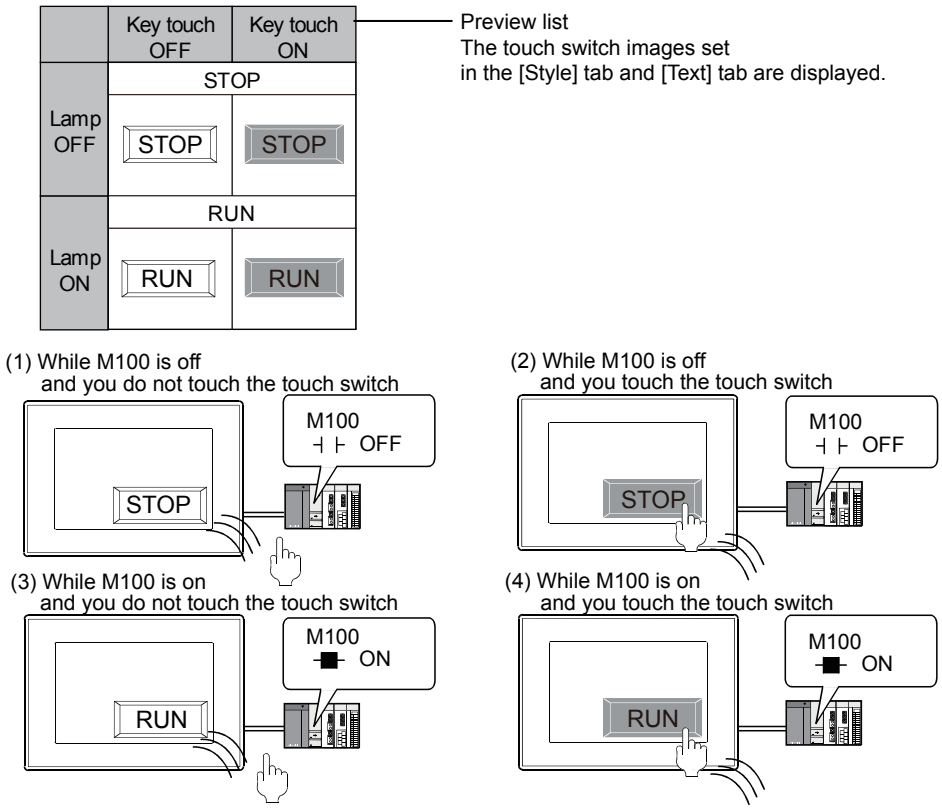
When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is not selected)



When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is selected)

1) **[Change a shape based on the key touch state]**

This item is available when [Bit-ON/OFF] or [Word Range] is selected for [Lamp (Timing to change shape/text)].
You can set four different images using the lamp on and lamp off status in combination with the key touch on and key touch off status.
According to the key touch on and key touch off status, the shape can be switched. However, the text cannot be switched.
The following shows an example of the combination of image switching by the device status with shape switching by key touch status.



2) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

3) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].

Select this item to collectively change the shapes of the touch switches except [Press Twice].

4) **[Shape]**

Set the shape of the touch switch.

To select a shape other than those in the list box, click the [Shape] button.

➥6.5.5 ■1 Setting object shapes

5) **[Reverse switch area]**

GOT Graphic Ver.1

This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].

Inverts the color of the touch switch.

When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

6) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

Item	Description
[Blink]	Select the blinking speed of the touch switch. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

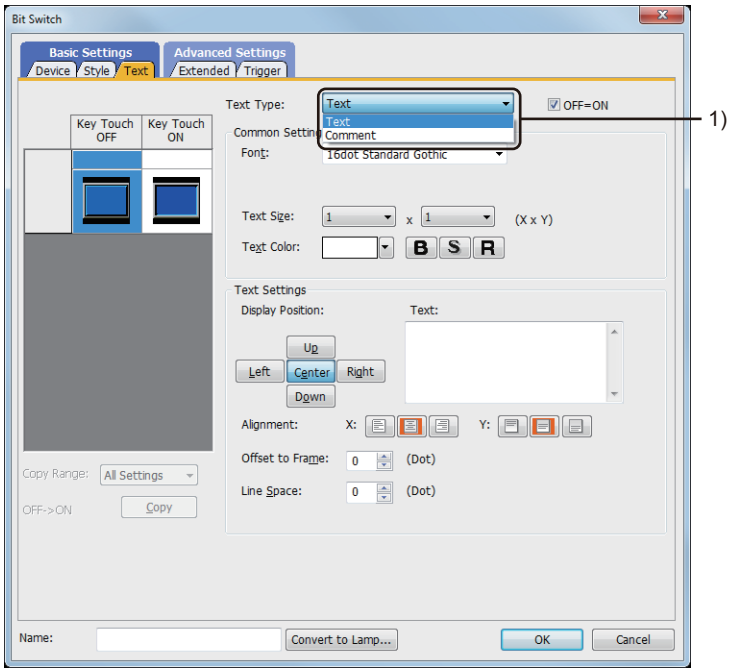
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

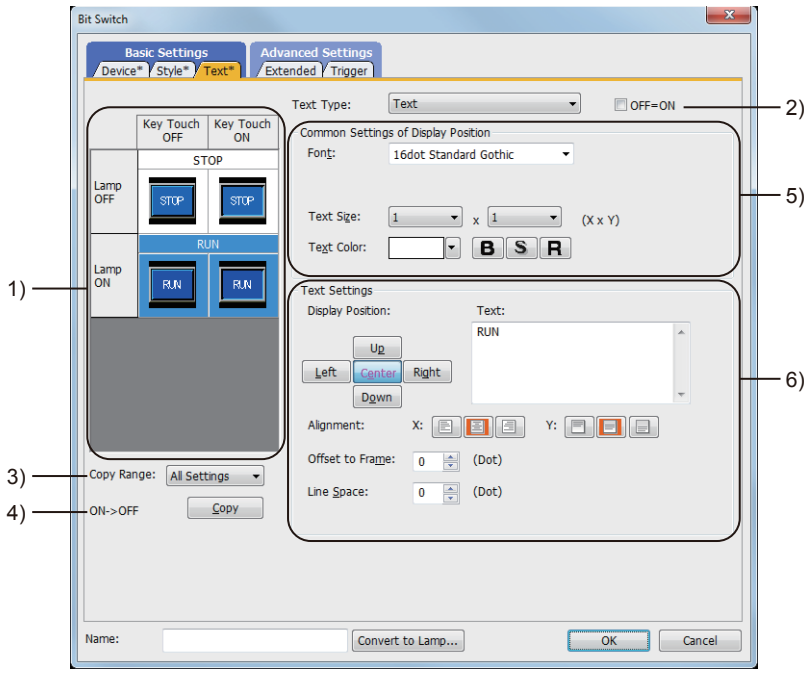
➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]



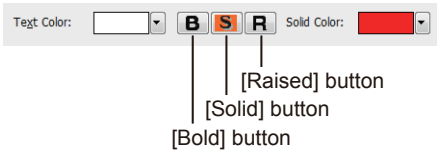
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

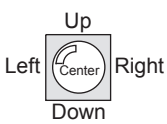
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

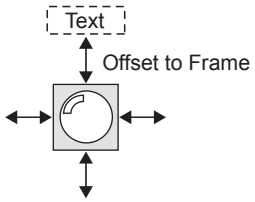
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Common Setting of Display Position]**

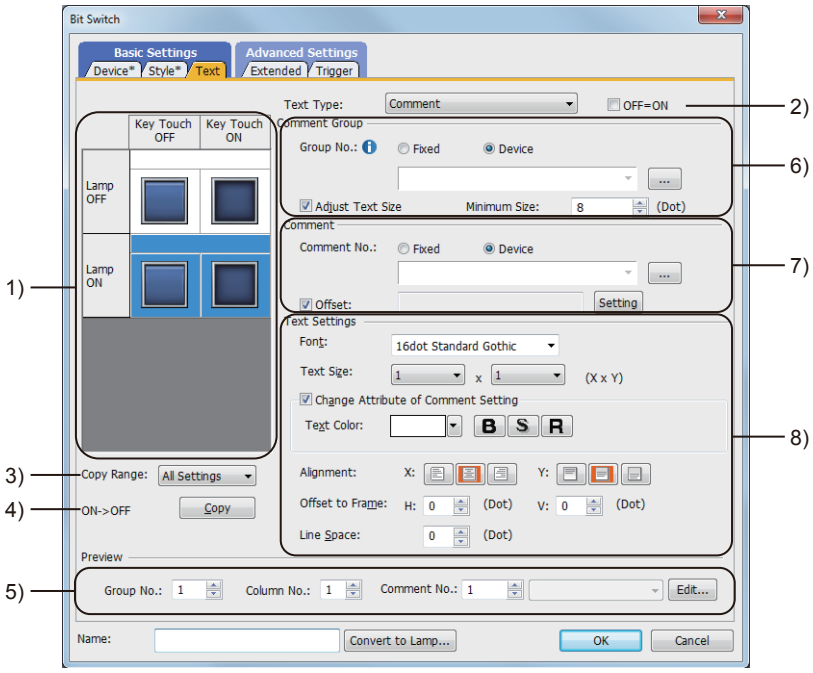
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) **[Text Settings]**

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

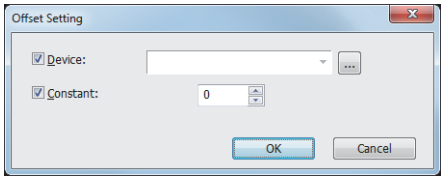
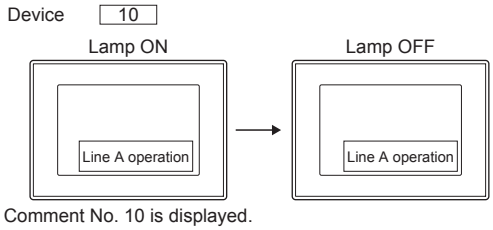
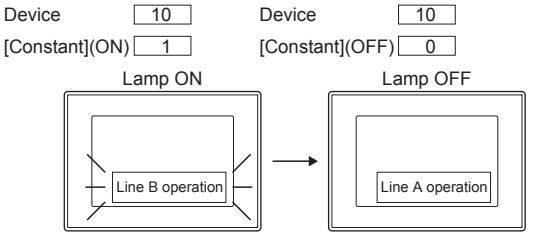
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

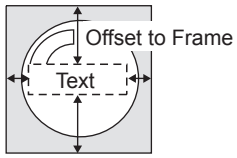
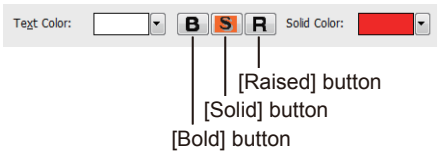
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • **[Device]** Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • **[Constant]** Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  Comment No. 10 is displayed. • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed.  Comment No. 11 is displayed. Comment No. 10 is displayed.

8) **[Text Settings]**

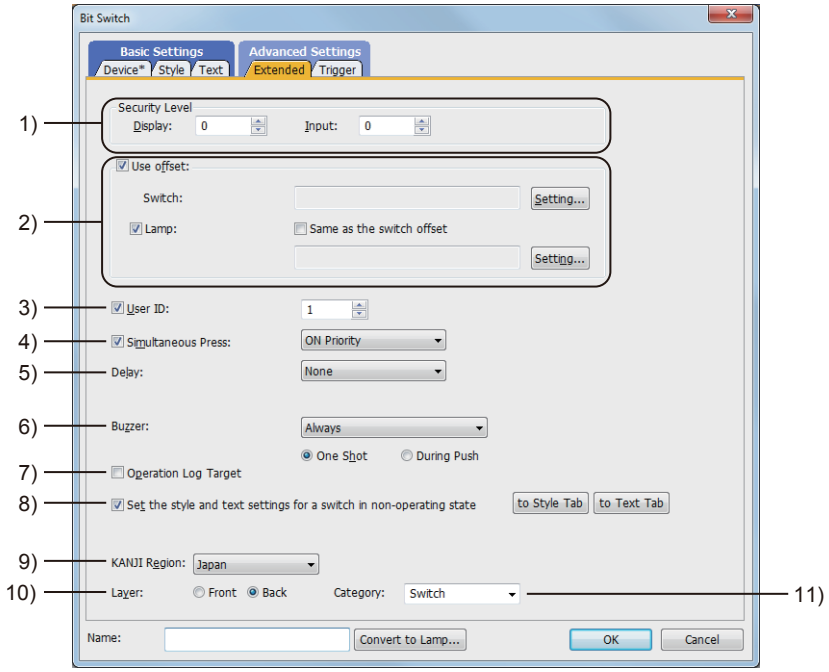
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ⇒5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ⇒1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ⇒6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[User ID]**

Select this item to set a user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

4) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

5) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time. This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.
- [Delay Time]: The setting range is [1] to [5].

6) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

- [Always]: The buzzer is sounded every time you touch the touch switch.
  In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
- [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
- [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

- [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
- [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

8) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

9) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

10) **[Layer]**

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

11) **[Category]**

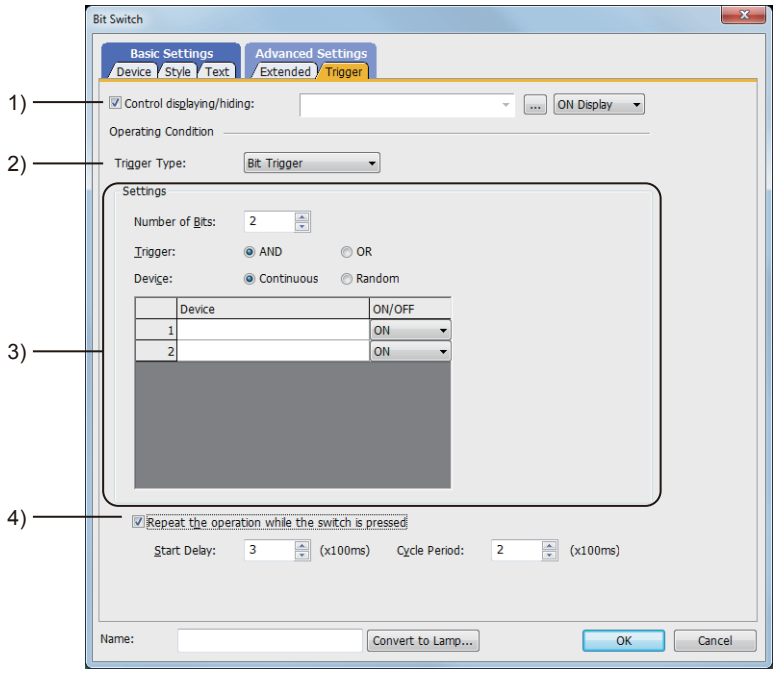
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the device that controls display/hide of the object.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

4) **[Repeat the operation while the switch is pressed]**

Select this item to allow the switch to repeat the same operation while you touch the touch switch.

For operations for which [Repeat the operation while the switch is pressed] can be set, refer to the following.

➟8.2.3 Precautions for a touch switch

Item	Description
[Start Delay]	Set the time period from when you touch the touch switch to when the operation repeat starts. The setting range is [1] to [20].
[Cycle Period]	Set the cycle for the operation repeat. The setting range is [1] to [10].

8.2.6 [Word Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A word switch changes the value of a word device.

Step 1 Select [Object] → [Switch] → [Word Switch] from the menu.

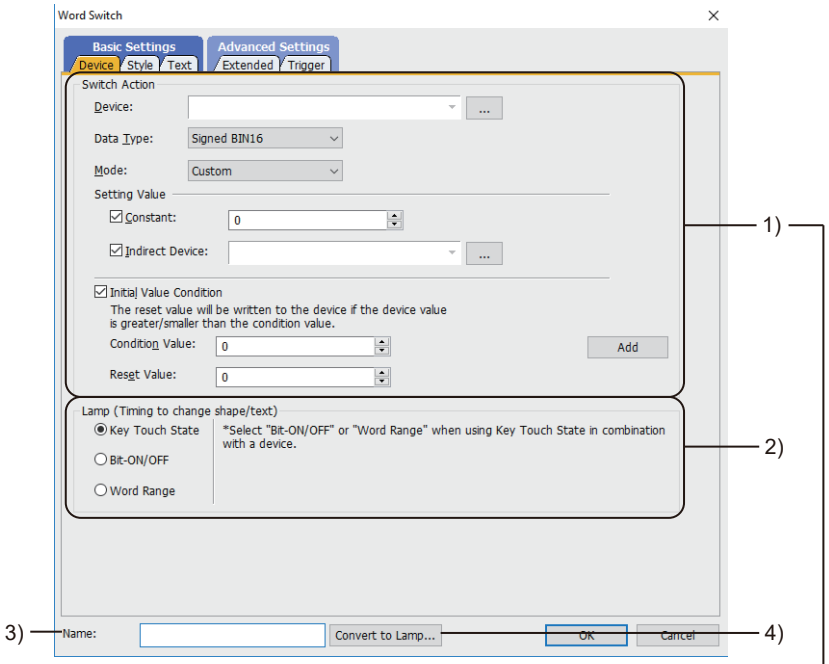
Step 2 Click the position where you arrange the word switch.

Step 3 Double-click the arranged word switch to display the setting dialog.

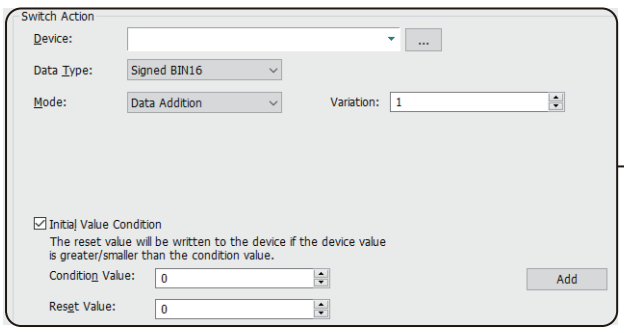
➟■1 [Device] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [Device] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Mode] is set to [Custom]



When [Mode] is set to [Data Addition] or [Data Subtraction]

1) **[Switch Action]**

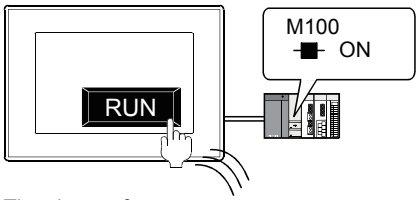
Item	Description
[Device]	Set the word device to which a value is written. ➟6.1.2 How to set devices
[Data Type]	Select the data type for the values set in [Setting Value]. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Mode]	Set the writing mode for the specified word device. • [Data Addition]: Select this item to add the value set in [Variation] to the value stored in the specified word device. • [Data Subtraction]: Select this item to subtract the value set in [Variation] from the value stored in the specified word device. • [Custom]: Select this item to write the value set in [Setting Value] to the specified word device.
[Variation]	Set this item when [Mode] is set to [Data Addition] or [Data Subtraction]. The setting range depends on the setting of [Data Type]. When [Mode] is set to [Data Addition], touching the word switch adds the set value to the value stored in the specified word device. When [Mode] is set to [Data Subtraction], touching the word switch subtracts the set value from the value stored in the specified word device.
[Setting Value]	Set the value to be written to the specified word device. The setting is required when [Mode] is set to [Custom]. • [Constant]: Set the constant for the specified word device. The setting range depends on the setting of [Data Type]. • [Indirect Device]: Set the indirect device for the specified word device. ➟6.1.2 How to set devices When [Constant] and [Indirect Device] are both selected, the value [Constant] + [Indirect Device] is written into the word device.
[Initial Value Condition]	When the value in the specified word device satisfies the value set in [Condition Value], the value set in [Reset] is written to the device. When [Mode] is set to [Custom], select both [Constant] and [Indirect Device] to enable this setting. • [Condition Value]: Set the condition value that is the trigger to write [Reset Value] to the specified word device. The setting range depends on the setting of [Data Type]. • [Reset Value]: Set a value to be written to the specified device when the value in the device satisfies the value set in [Condition Value]. The setting range depends on the setting of [Data Type].
[Add] button	Adds actions to the word switch. ➟8.2.4 ■1 [Action] tab

2) **[Lamp (Timing to change shape/text)]**

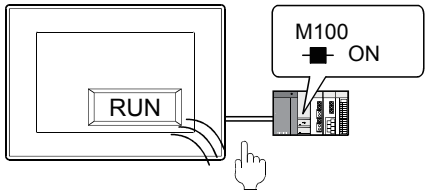
Select how to switch touch switch images (shapes of on status and off status).

• Switching the touch switch image according to the touch operation

Select [Key Touch State].



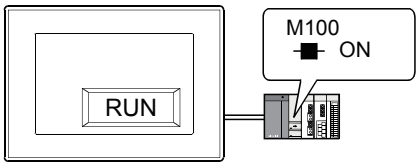
The shape of on status
is displayed while you touch the touch switch.



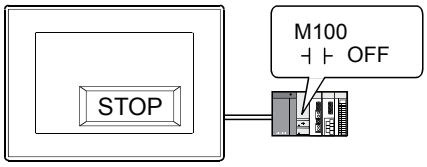
The shape of off status
is displayed regardless of the device status
while you do not touch the touch switch.

• Switching the touch switch image according to the status of the corresponding device
Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status
is displayed when M100 is on.



The shape of off status
is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

3) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

4) **[Convert to Lamp] button**
Converts the object type to the lamp.

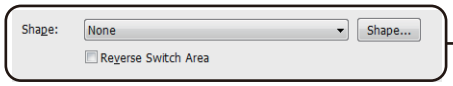
➟8.2.2 How to use touch switch

■2 [Style] tab

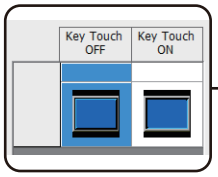
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

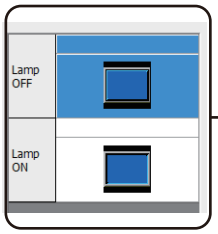
➟10.19.2 ■2 Usable functions



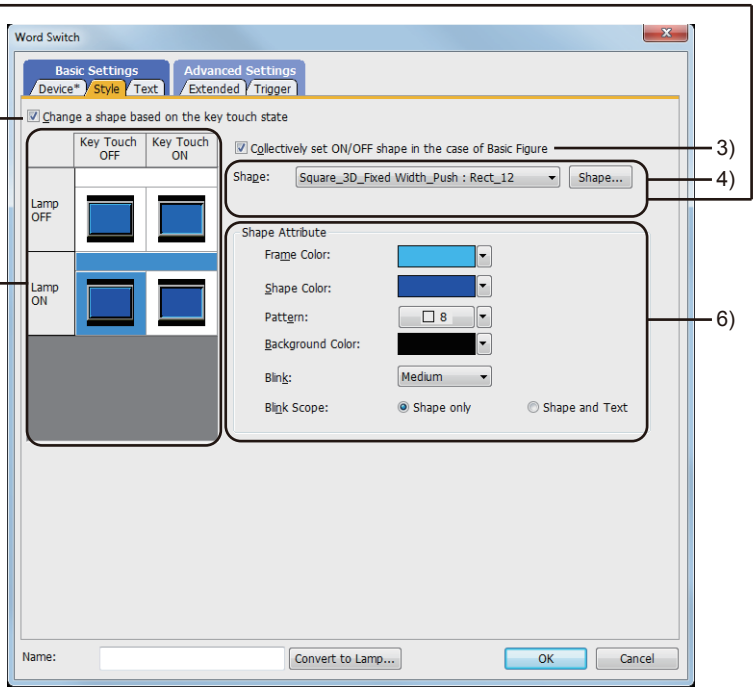
When [None] is selected for [Shape]



When [Key Touch State] is selected for
[Lamp (Timing to change shape/text)]



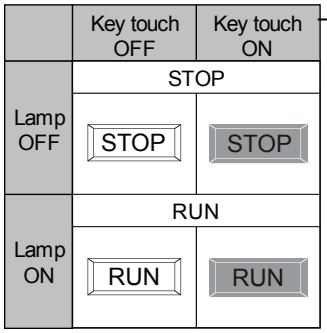
When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is not selected)



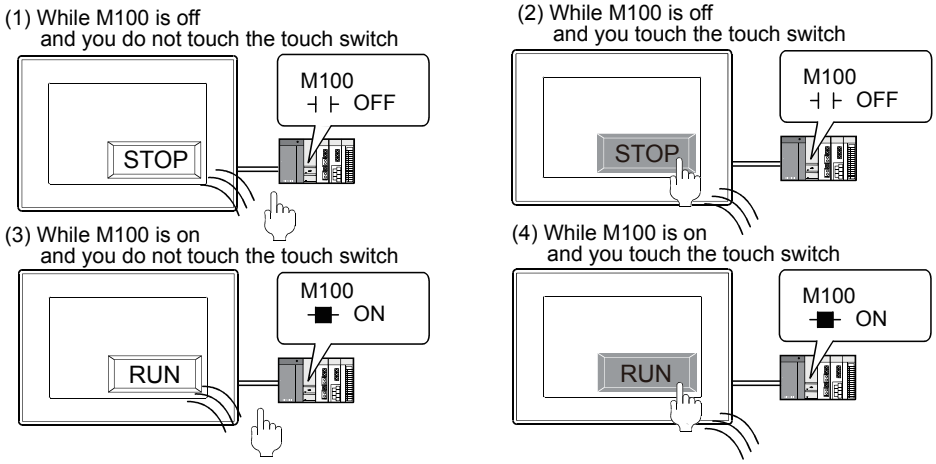
When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is selected)

1) **[Change a shape based on the key touch state]**

This item is available when [Bit-ON/OFF] or [Word Range] is selected for [Lamp (Timing to change shape/text)].
You can set four different images using the lamp on and lamp off status in combination with the key touch on and key touch off status.
According to the key touch on and key touch off status, the shape can be switched. However, the text cannot be switched.
The following shows an example of the combination of image switching by the device status with shape switching by key touch status.



Preview list
The touch switch images set in the [Style] tab and [Text] tab are displayed.



2) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

3) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].
Select this item to collectively change the shapes of the touch switches except [Press Twice].

4) **[Shape]**

Set the shape of the touch switch.
To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

5) **[Reverse switch area]**

GOT Graphic Ver.1

This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].
Inverts the color of the touch switch.
When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

6) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

Item	Description
[Blink]	Select the blinking speed of the touch switch. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

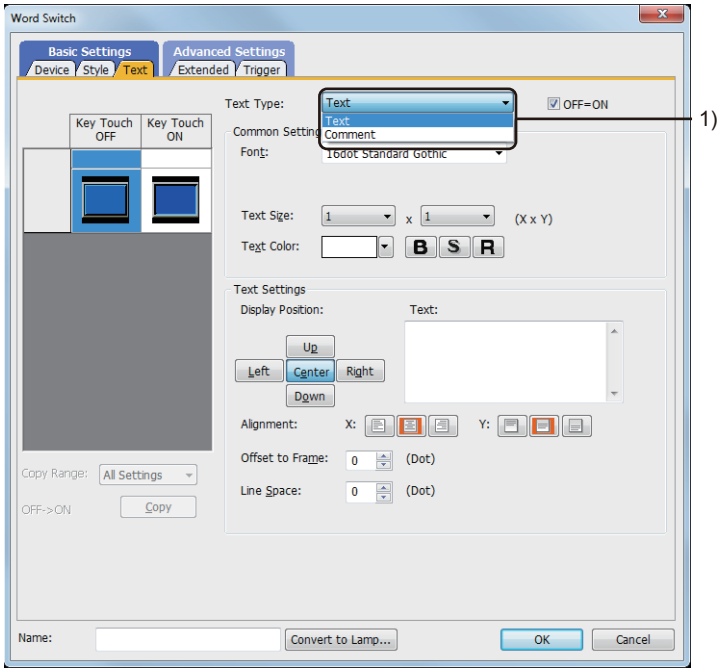
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

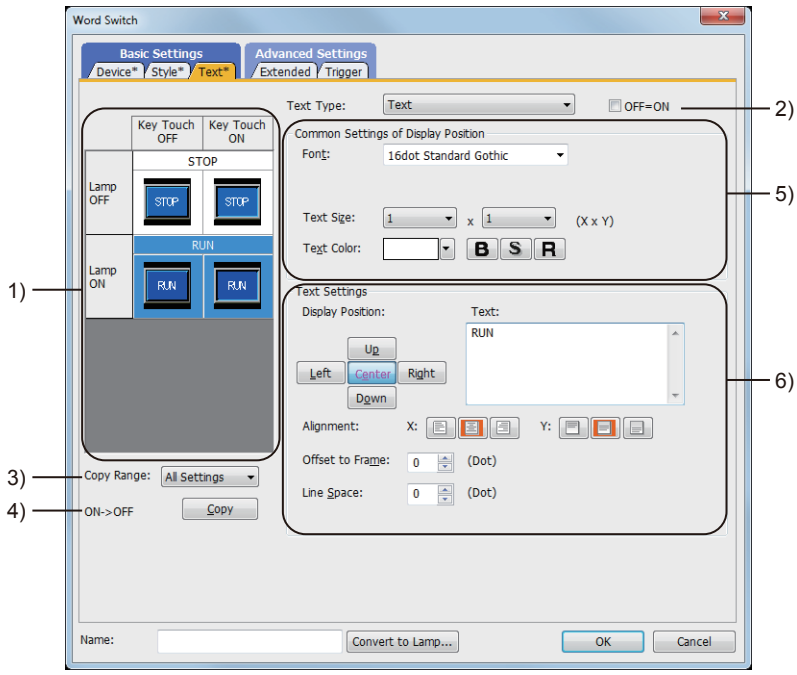
➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]



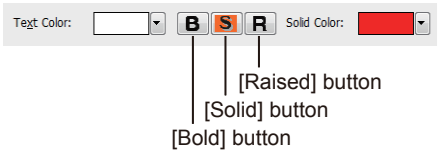
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

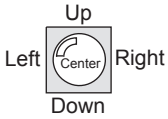
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

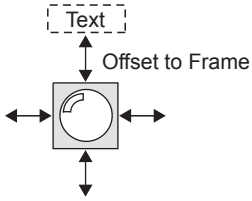
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) [Common Setting of Display Position]

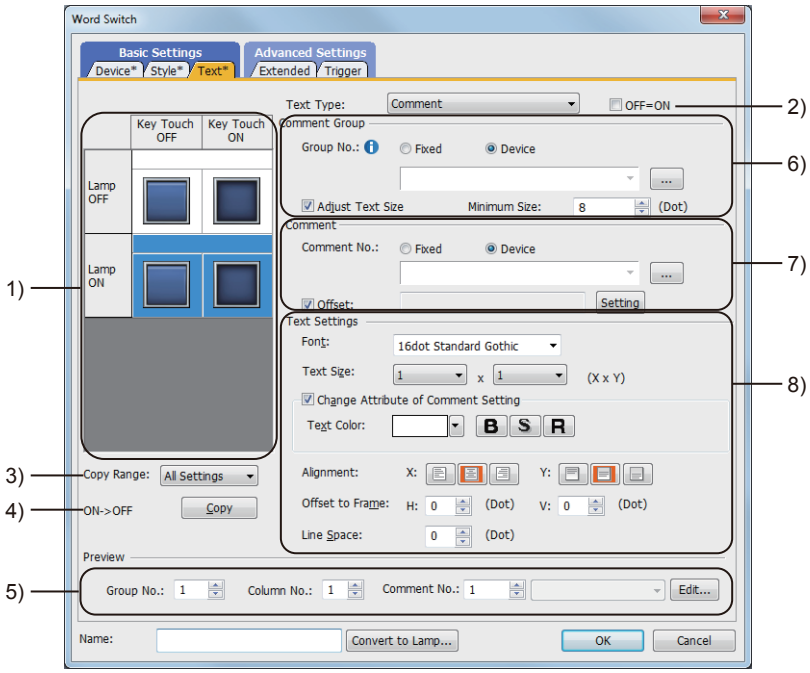
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

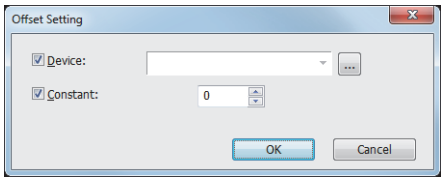
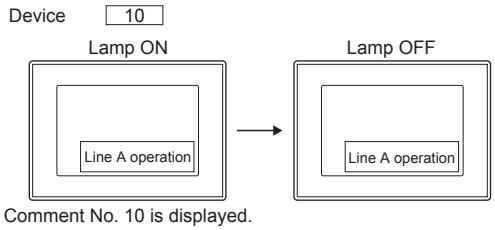
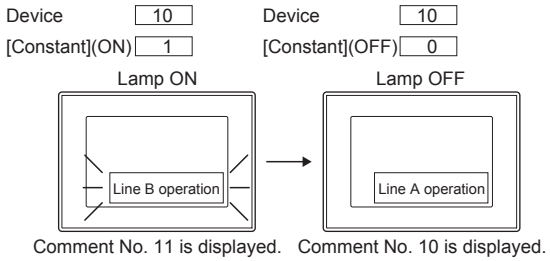
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

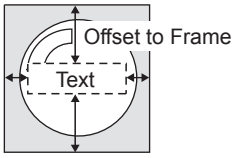
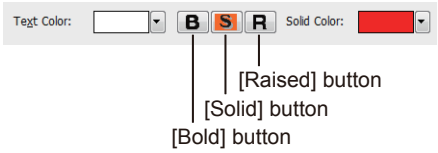
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➥6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➥12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➥6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • **[Device]** Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • **[Constant]** Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed. 

8) **[Text Settings]**

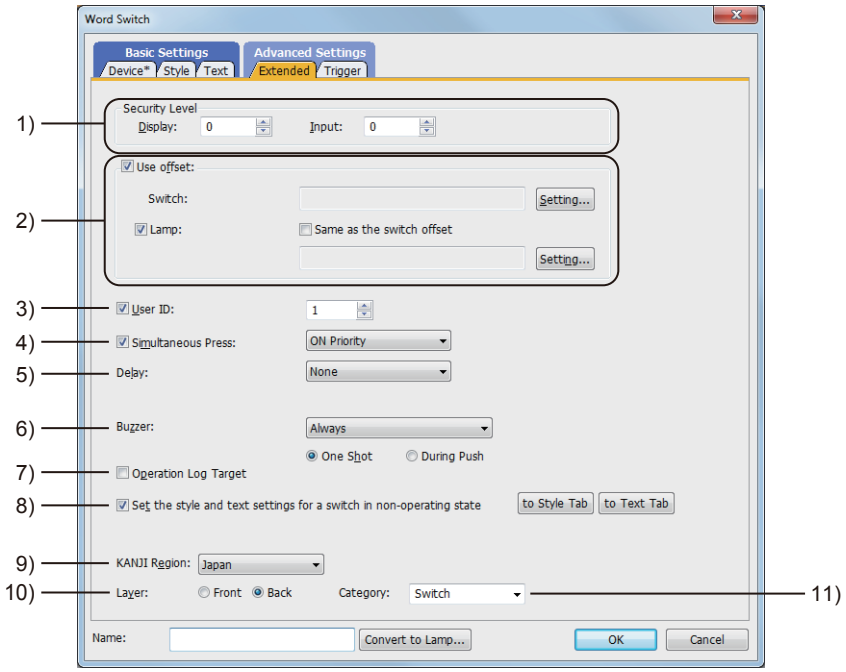
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

4) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

5) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time. This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.
- [Delay Time]: The setting range is [1] to [5].

6) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

- [Always]: The buzzer is sounded every time you touch the touch switch.
  In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
- [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
- [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

- [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
- [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

8) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

9) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

10) **[Layer]**

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

11) **[Category]**

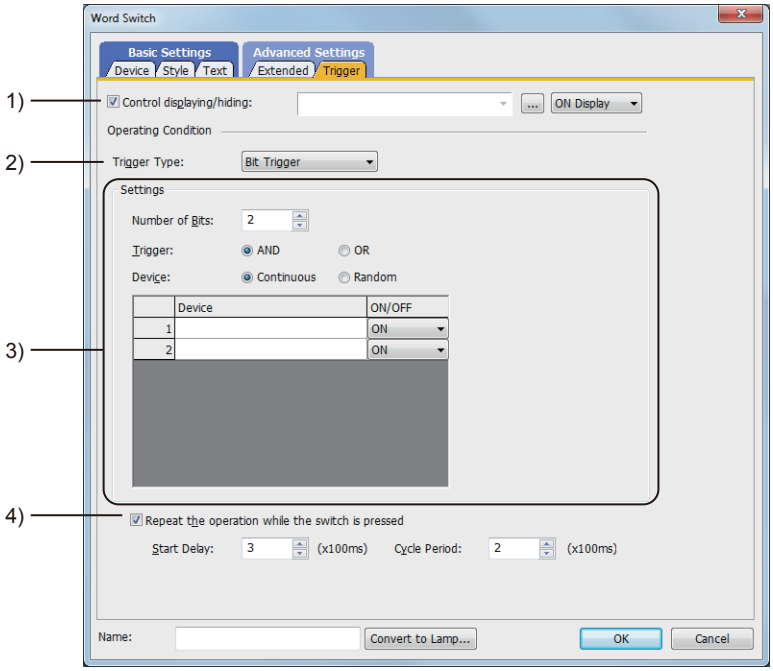
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the device that controls display/hide of the object.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

4) **[Repeat the operation while the switch is pressed]**

Select this item to allow the switch to repeat the same operation while you touch the touch switch.

For operations for which [Repeat the operation while the switch is pressed] can be set, refer to the following.

➟8.2.3 Precautions for a touch switch

Item	Description
[Start Delay]	Set the time period from when you touch the touch switch to when the operation repeat starts. The setting range is [1] to [20].
[Cycle Period]	Set the cycle for the operation repeat. The setting range is [1] to [10].

8.2.7 [Go To Screen Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A Go To Screen switch switches base screens and window screens.

Step 1 Select [Object]→[Switch]→[Go To Screen Switch] from the menu.

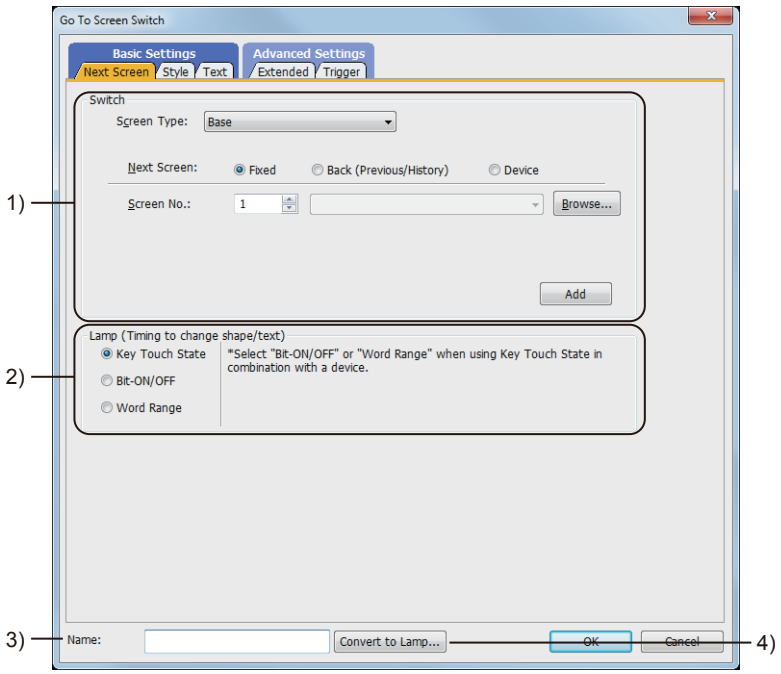
Step 2 Click the position where you arrange the Go To Screen switch.

Step 3 Double-click the arranged Go To Screen switch to display the setting dialog.

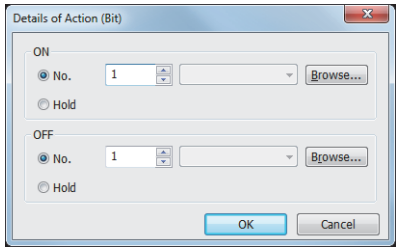
➟■1 [Next Screen] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

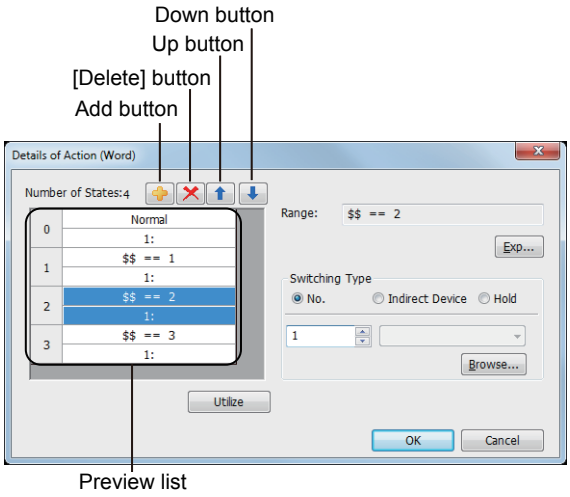
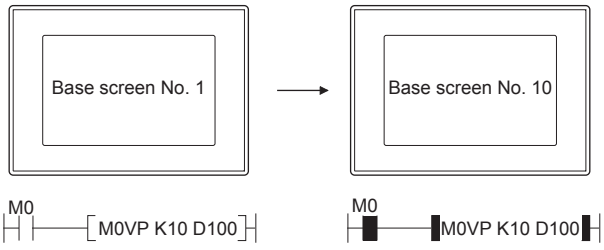
■1 [Next Screen] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Switch Action]**

Item	Description
[Screen Type]	Select the type of the screen to be switched to. The selectable items vary with the screen type. The following shows the selectable items for a base screen or window screen. • [Base Screen] • [Overlap Window1] • [Overlap Window2] • [Overlap Window3] • [Overlap Window4] • [Overlap Window5] • [Superimpose Window1] • [Superimpose Window2] • [Dialog Window] The following shows the selectable items for a mobile screen. • [Mobile] • [Overlap Window1] • [Overlap Window2] • [Superimpose Window1] • [Superimpose Window2] In either of the following cases, [(*)] is appended to the item selected for [Screen Type]. • [Close the window when switching base screens] is selected in the [Environmental Setting] window ([Screen Switching/Window]). • [Close the window when switching mobile screens] is selected in the [GOT Mobile Setting] window ([Screen Switching/Window]).
[Next Screen]	Select an action for screen switching. • [Fixed]: Select this item to switch to the screen having the specified base screen number or window screen number. After selecting this item, set the number of the base screen or window screen as the destination screen in [Screen No.]. Clicking the [Browse] button displays the [Image List(Screen)] dialog. Check the screen image on the dialog before setting. • [Back (Previous/History)]: Select this item to switch to the screen having the base screen number previously displayed. You can select this item only when the screen type is the base screen. The GOT stores the numbers of the previously displayed base screens. A maximum of 10 previous screens can be selected from the history. • [Device]: Select this item to switch to the base screen or window screen having the specified screen number according to the on status, off status, or the current value of the specified device. After selecting [Data Type], specify [Device]. After specifying [Device], click the [Detail Setting] button and configure the action settings for screen switching. Bit device  • [ON/OFF] • [No.]: Select this item to switch to the base screen or window screen having the specified screen number according to the on or off status of the specified bit device. Set the destination screen number. • [Hold]: Select this item so as not to switch the screens when the specified bit device is on or off.

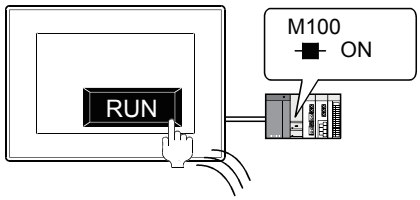
Item	Description
[Next Screen]	Word device  • Preview list Displays set conditions. • Add button Adds a new condition. • Delete button Deletes a selected condition. • Up button, down button Changes the order of priority of the selected condition. • [Utilize] button Creates a new condition utilizing the selected condition. • [Exp] button Set the range of the word device value for screen switching using a conditional expression. • [Switching Type] • [No.]: If the value of the specified word device satisfies the set conditional expression, the screen switches to the base screen or window screen having the specified screen number. Set the destination screen number in the spin box. [Clicking the [Browse] button displays the [Image List(Screen)] dialog. Check the image on the window, and set it as the screen image. • [Indirect Device]: If the value of the specified word device satisfies the set conditional expression, the screen switches to the screen having the number equal to the value of the word device. • [Hold]: Even if the value of the specified word device satisfies the set conditional expression, the screens are not switched. Switching screens with a sequence program In the sequence program, the value of the destination screen number is written as the value of the screen switching device. Base screens and window screens can be switched without using the screen switching function of the touch switch.  However, if the screen switching device for the base screen or window screen is the GOT internal device (GB, GD, GS), the screens cannot be switched with the sequence program.
[Screen No.]	Specify the screen number for the destination screen. You can set this item only when the screen type is the base screen.
[Add] button	Adds actions to the switch. ➟8.2.4 ■1 [Action] tab

2) **[Lamp (Timing to change shape/text)]**

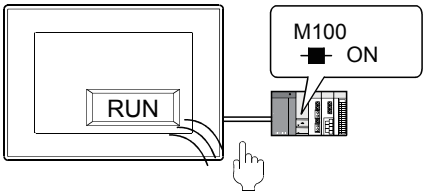
Select how to switch touch switch images (shapes of on status and off status).

• Switching the touch switch image according to the touch operation

Select [Key Touch State].



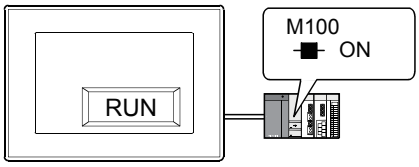
The shape of on status
is displayed while you touch the touch switch.



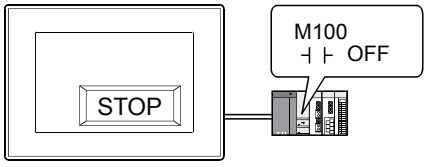
The shape of off status
is displayed regardless of the device status
while you do not touch the touch switch.

• Switching the touch switch image according to the status of the corresponding device
Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status
is displayed when M100 is on.



The shape of off status
is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

3) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

4) **[Convert to Lamp] button**
Converts the object type to the lamp.

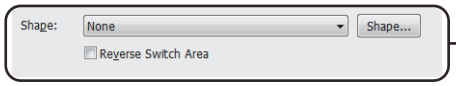
➟8.2.2 How to use touch switch

■2 [Style] tab

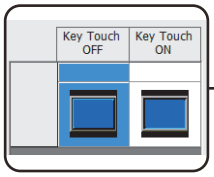
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

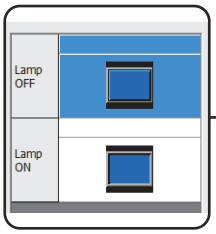
➟10.19.2 ■2 Usable functions



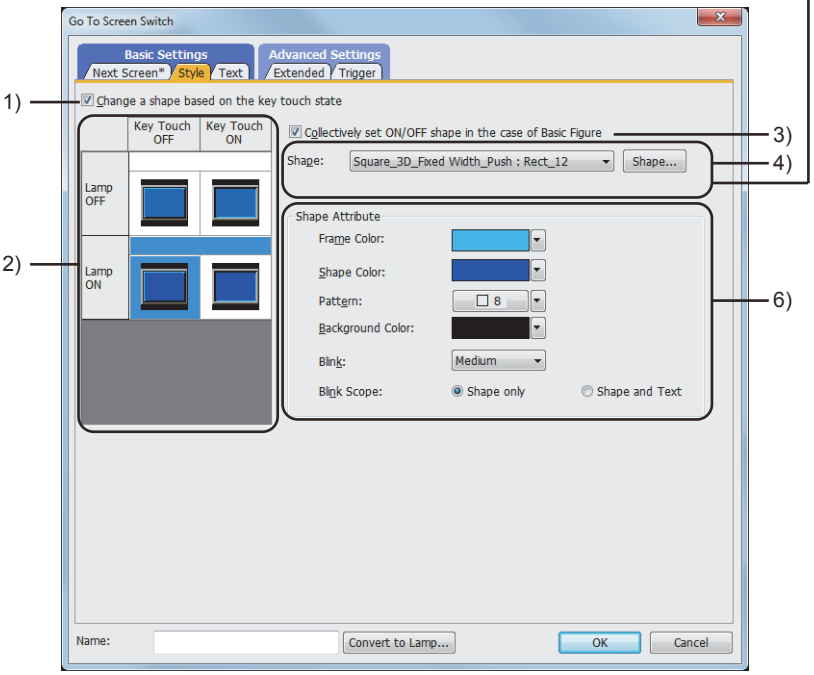
When [None] is selected for [Shape]



When [Key Touch State] is selected for [Lamp (Timing to change shape/text)]



When [Bit-ON/OFF]/[Word Range] is selected for [Lamp (Timing to change shape/text)] ([Change a shape based on the key touch state] is not selected)



When [Bit-ON/OFF]/[Word Range] is selected for [Lamp (Timing to change shape/text)] ([Change a shape based on the key touch state] is selected)

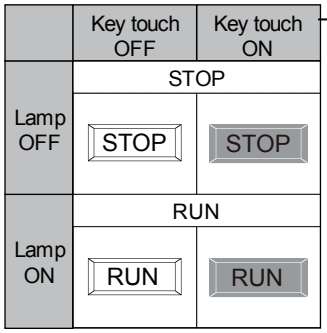
1) **[Change a shape based on the key touch state]**

This item is available when [Bit-ON/OFF] or [Word Range] is selected for [Lamp (Timing to change shape/text)].

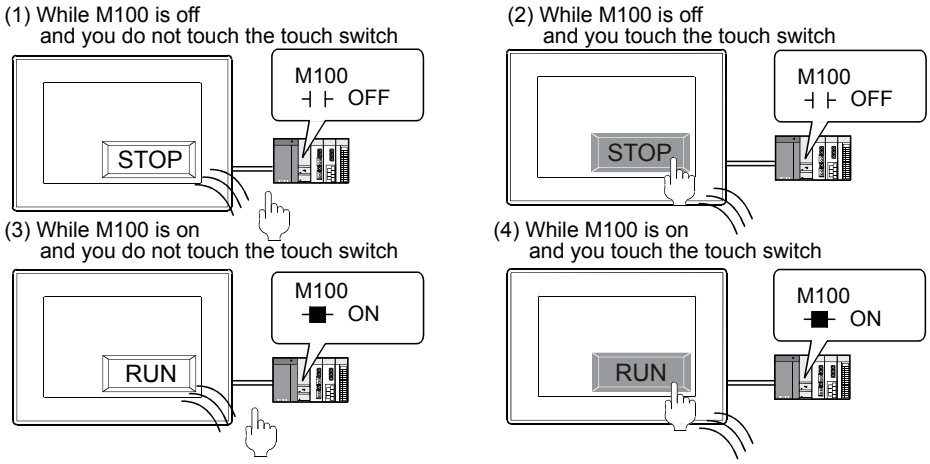
You can set four different images using the lamp on and lamp off status in combination with the key touch on and key touch off status.

According to the key touch on and key touch off status, the shape can be switched. However, the text cannot be switched.

The following shows an example of the combination of image switching by the device status with shape switching by key touch status.



Preview list
The touch switch images set in the [Style] tab and [Text] tab are displayed.



2) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

3) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].
Select this item to collectively change the shapes of the touch switches except [Press Twice].

4) **[Shape]**

Set the shape of the touch switch.
To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

5) **[Reverse switch area]**

GOT Graphic Ver.1

This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].
Inverts the color of the touch switch.
When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

6) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

Item	Description
[Blink]	Select the blinking speed of the touch switch. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

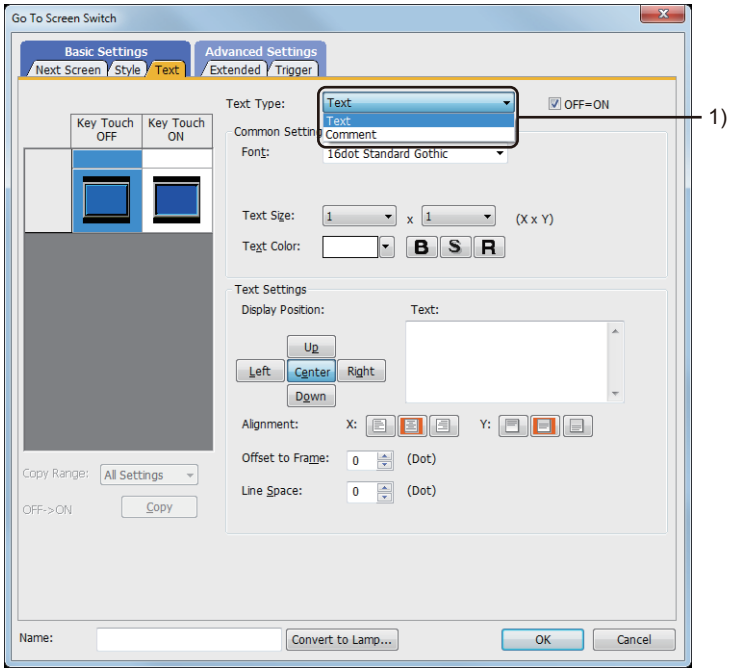
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

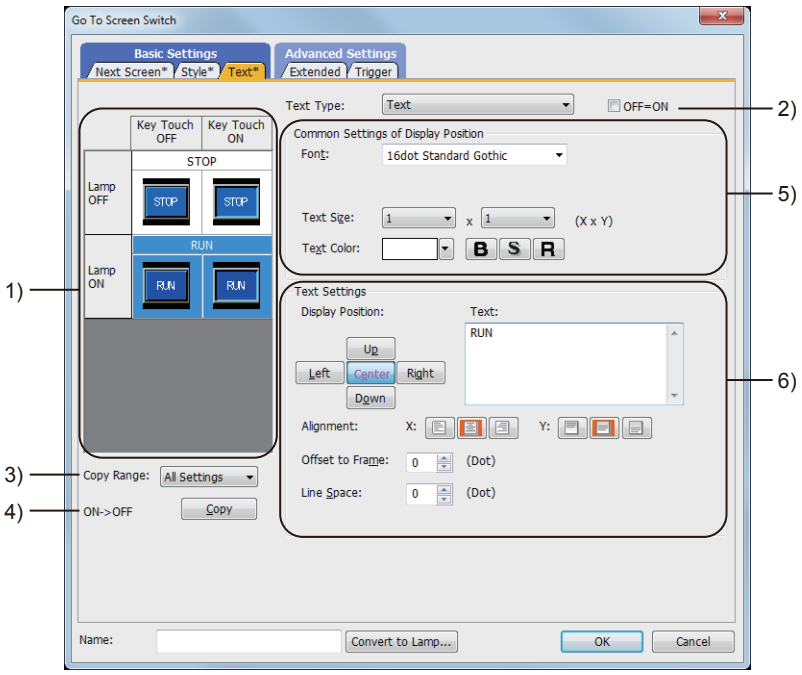
➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]



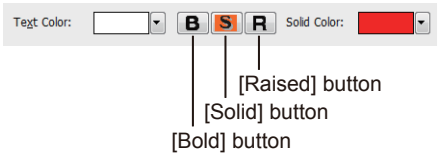
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

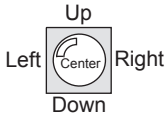
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

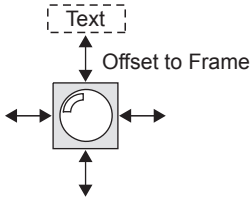
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) [Common Setting of Display Position]

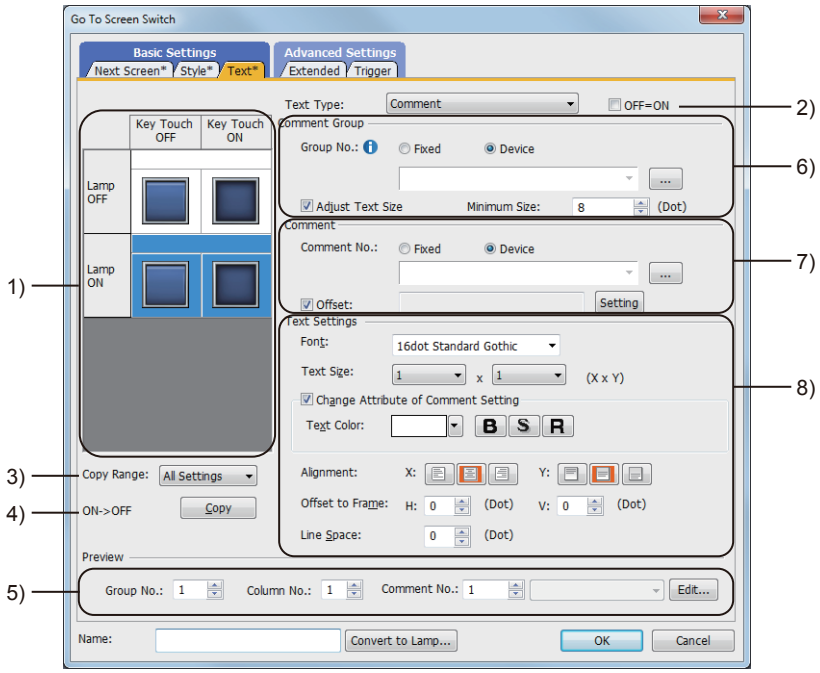
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

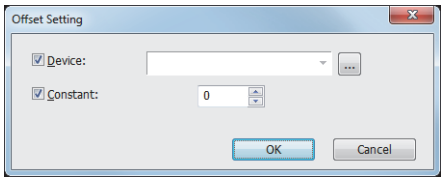
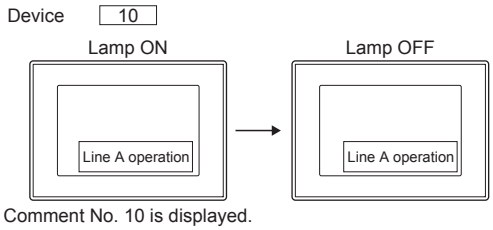
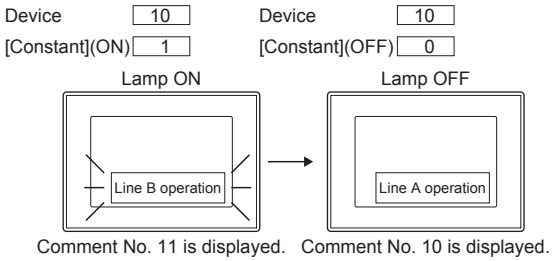
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

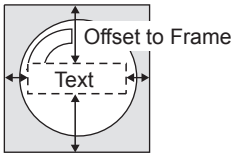
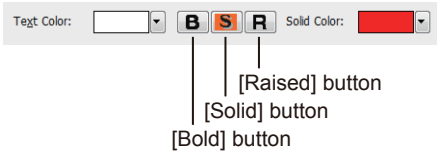
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➡6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➡12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➡6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • **[Device]** Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • **[Constant]** Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed. 

8) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  **• [Text Color]** Set the text color. ➟6.4 Color Settings **• [Bold] button** Displays the text in bold. **• [Solid] button** Displays the text with a shadow. **• [Raised] button** Displays the text embossed. **• [Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

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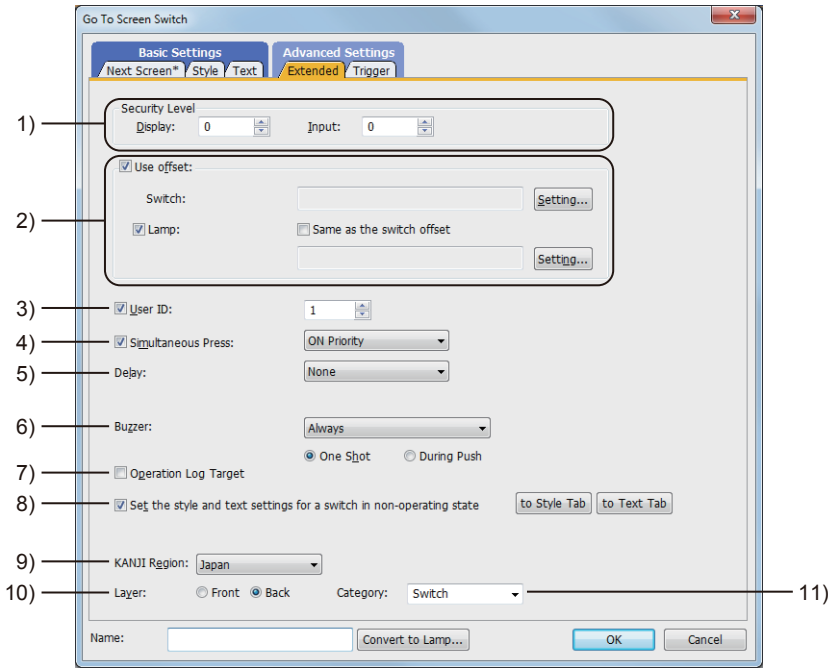
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

4) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

5) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time.
  This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.
- [Delay Time]: The setting range is [1] to [5].

6) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

- [Always]: The buzzer is sounded every time you touch the touch switch.
  In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
- [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
- [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

- [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
- [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

8) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

9) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

10) **[Layer]**

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

11) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

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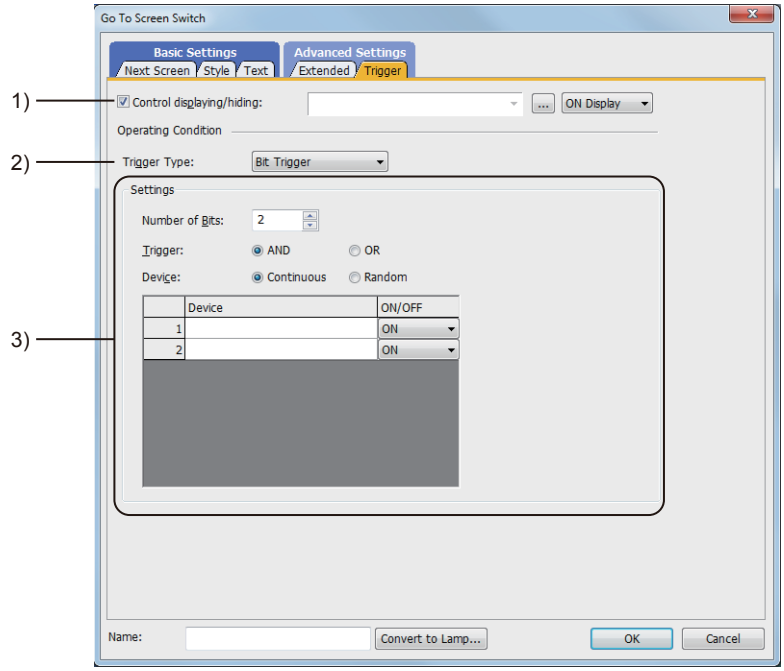
Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the device that controls display/hide of the object.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

8.2.8 [Change Station No. Switch] dialog

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The Change Station No. switch switches the device of the currently monitored object to the same device with another station number.

Step 1 Select [Object] → [Switch] → [Change Station No. Switch] from the menu.

Step 2 Click the position where you arrange the Change Station No. switch.

Step 3 Double-click the Change Station No. switch to display the setting dialog.

➥■1 [Next Station] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [Next Station] tab

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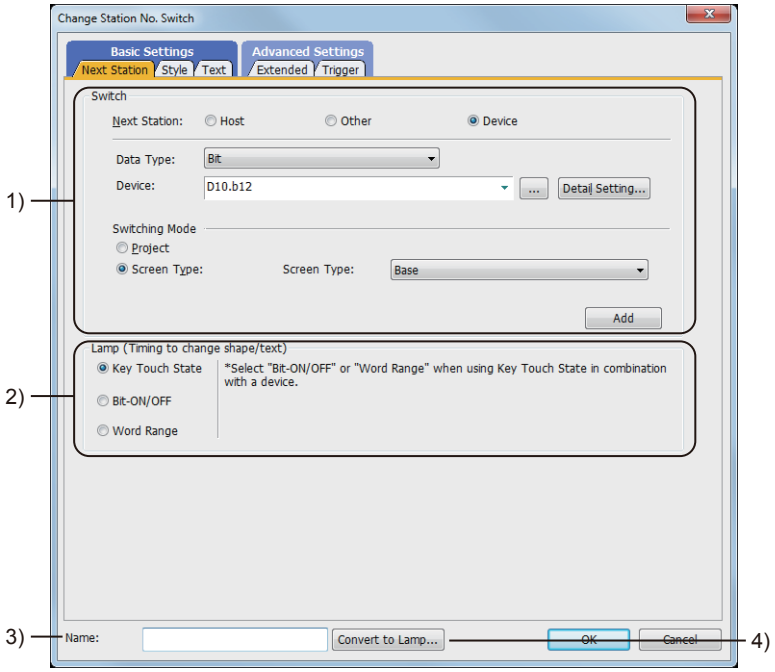
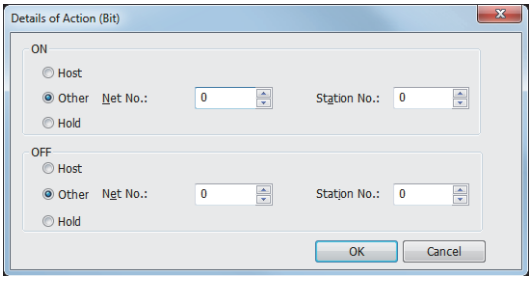


1) [Switch Action]

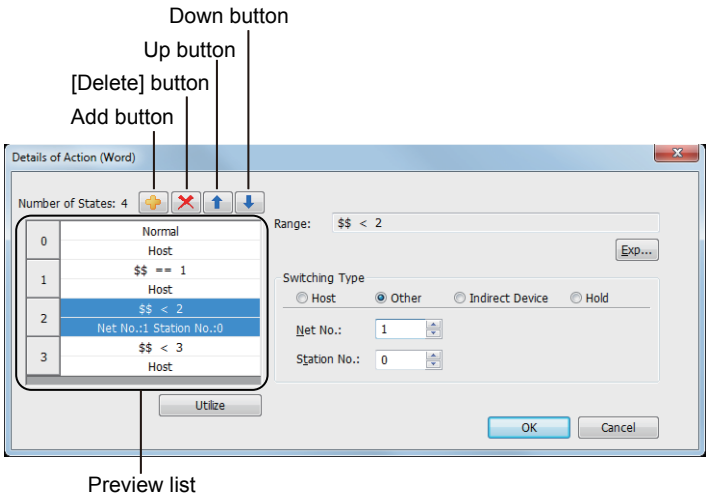
Item	Description
[Next Screen]	Select an action for station No. switching. • [Host]: Select this item to monitor the station connected with the GOT. • [Other]: Select this item to switch the monitor target to another station. Set the destination network No. in [Net No.] and the station No. in [Station No.] in decimal. • [Device]: Select this item to switch to the base screen or window screen having the specified screen number according to the on status, off status, or the current value of the specified device. After selecting [Data Type], specify [Device]. After specifying [Device], click the [Detail Setting] button and configure the action settings for screen switching.*1*2
[Switching Mode]	• [Project]: Select this item to switch the whole project by the station number. • [Screen Type]: Select this item to switch only the specified screen by the station number.
[Add] button	Adds actions to the switch. ➥8.2.4 ■1 [Action] tab

*1 Bit device



- **[ON/OFF]**
  - [Host]:
    Select this item to monitor the controller connected with the GOT according to the on or off status of the specified bit device.
  - [Other]:
    Select this item to switch the monitor target to another station according to the on or off status of the specified bit device.
    Set the destination network No. in [Net No.] and the station No. in [Station No.] in decimal.
  - [Hold]:
    Select this item so as not to switch the monitor target according to the on or off status of the specified bit device.

*2 Word device

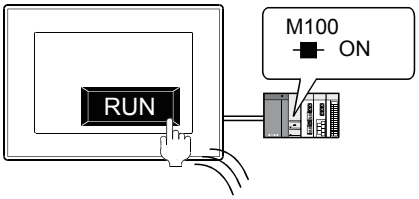


- **Preview list**
  Displays set conditions.
- **Add button**
  Adds a new condition.
- **Delete button**
  Deletes a selected condition.
- **Up button, down button**
  Changes the order of priority of the selected condition.
- **[Utilize] button**
  Creates a new condition utilizing the selected condition.
- **[Exp] button**
  Set the range of the word device value for screen switching using a conditional expression.
- **[Switching Type]**
  Select the switching type to switch the station number when the value of the specified word device satisfies the conditional expression set in [Exp].
  ➟6.1.2 How to set devices
  - [Host]:
    If the value of the specified word device satisfies the set conditional expression, the monitor target is the controller connected with the GOT.
  - [Other]:
    If the value of the specified word device satisfies the set conditional expression, the monitor target is switched to another station. Set the destination network number in [Net No.] and the station number in [Station No.] in decimal.
  - [Indirect Device]:
    If the value of the specified word device satisfies the set conditional expression, the monitor target is switched to the one having the number equal to the value of the word device.
  - [Hold]:
    Even if the value of the specified word device satisfies the set conditional expression, the monitor target is not switched.

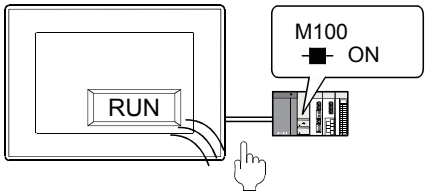
2) **[Lamp (Timing to change shape/text)]**

Select how to switch touch switch images (shapes of on status and off status).

- Switching the touch switch image according to the touch operation
  Select [Key Touch State].



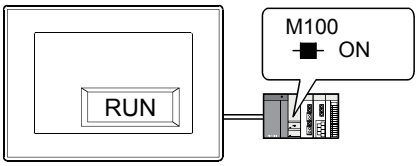
The shape of on status
is displayed while you touch the touch switch.



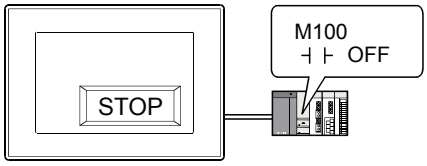
The shape of off status
is displayed regardless of the device status
while you do not touch the touch switch.

• Switching the touch switch image according to the status of the corresponding device
Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status
is displayed when M100 is on.



The shape of off status
is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. ➟6.1.2 How to set devices • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

3) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

4) **[Convert to Lamp] button**

Converts the object type to the lamp.

➟8.2.2 How to use touch switch

■2 [Style] tab

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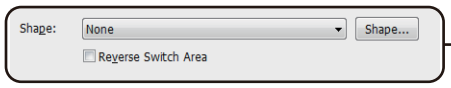
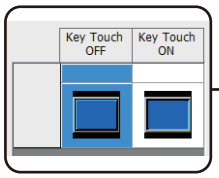
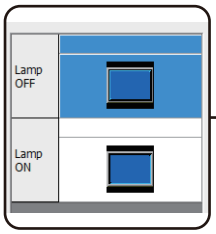


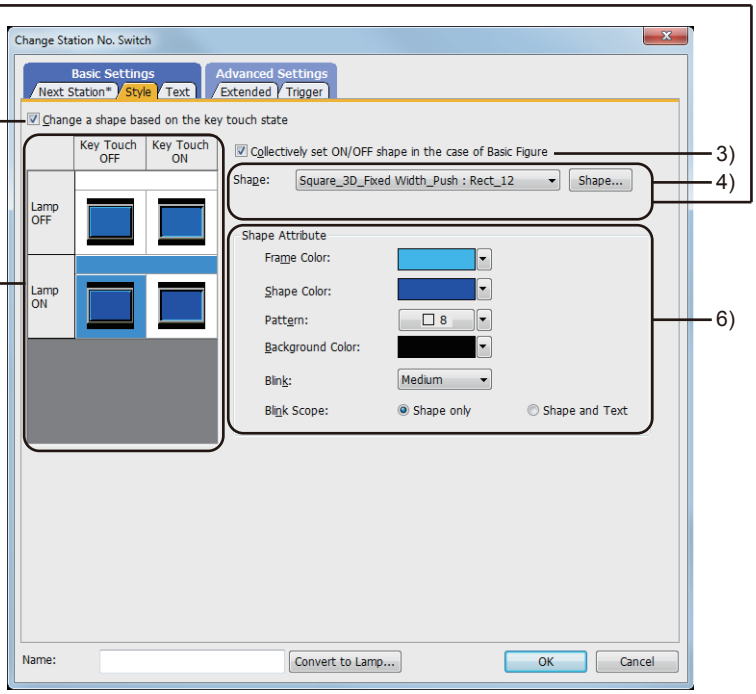
When [None] is selected for [Shape]



When [Key Touch State] is selected for
[Lamp (Timing to change shape/text)]



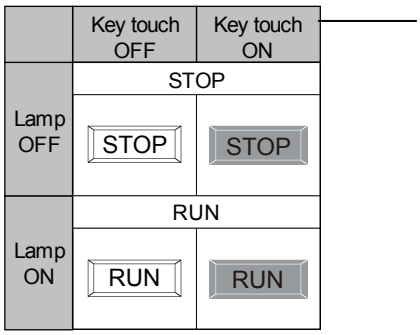
When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is not selected)



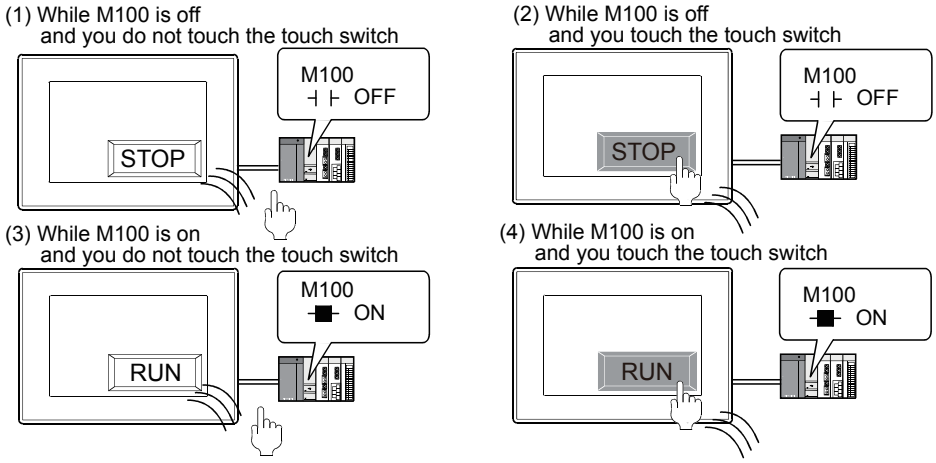
When [Bit-ON/OFF]/[Word Range] is selected for
[Lamp (Timing to change shape/text)]
([Change a shape based on the key touch state] is selected)

1) **[Change a shape based on the key touch state]**

This item is available when [Bit-ON/OFF] or [Word Range] is selected for [Lamp (Timing to change shape/text)].
You can set four different images using the lamp on and lamp off status in combination with the key touch on and key touch off status.
According to the key touch on and key touch off status, the shape can be switched. However, the text cannot be switched.
The following shows an example of the combination of image switching by the device status with shape switching by key touch status.



Preview list
The touch switch images set in the [Style] tab and [Text] tab are displayed.



2) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

3) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].
Select this item to collectively change the shapes of the touch switches except [Press Twice].

4) **[Shape]**

Set the shape of the touch switch.
To select a shape other than those in the list box, click the [Shape] button.

➥6.5.5 ■1 Setting object shapes

5) **[Reverse switch area]**

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This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].
Inverts the color of the touch switch.
When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

6) **[Shape Attribute]**

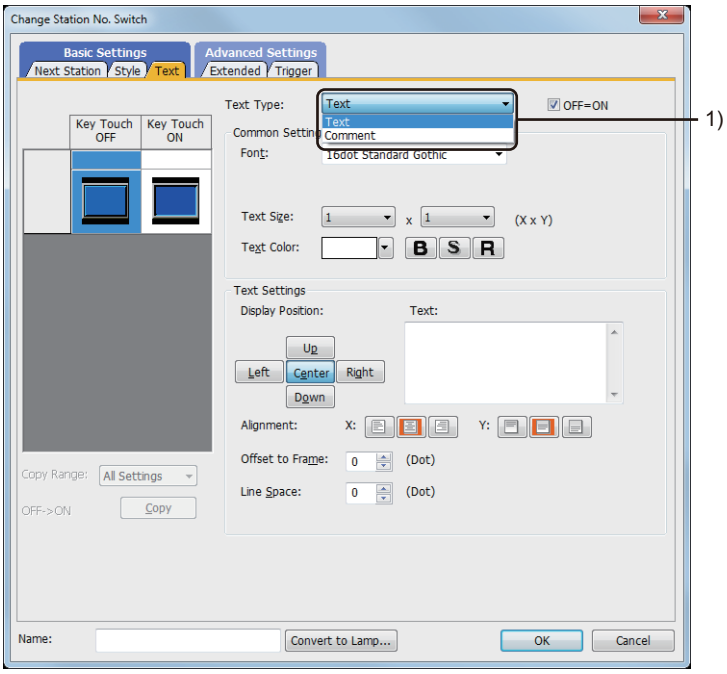
Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

Item	Description
[Blink]	Select the blinking speed of the touch switch. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

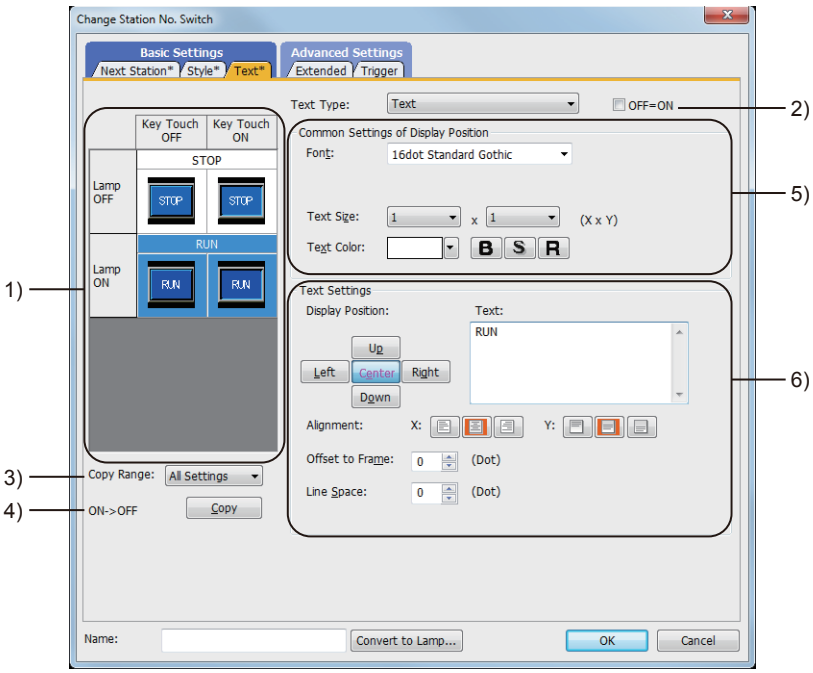
Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]

(2) [Comment]

(1) [Text]



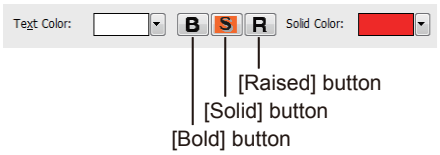
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

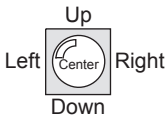
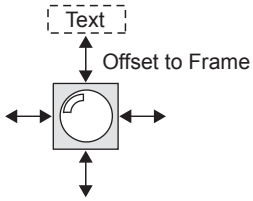
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

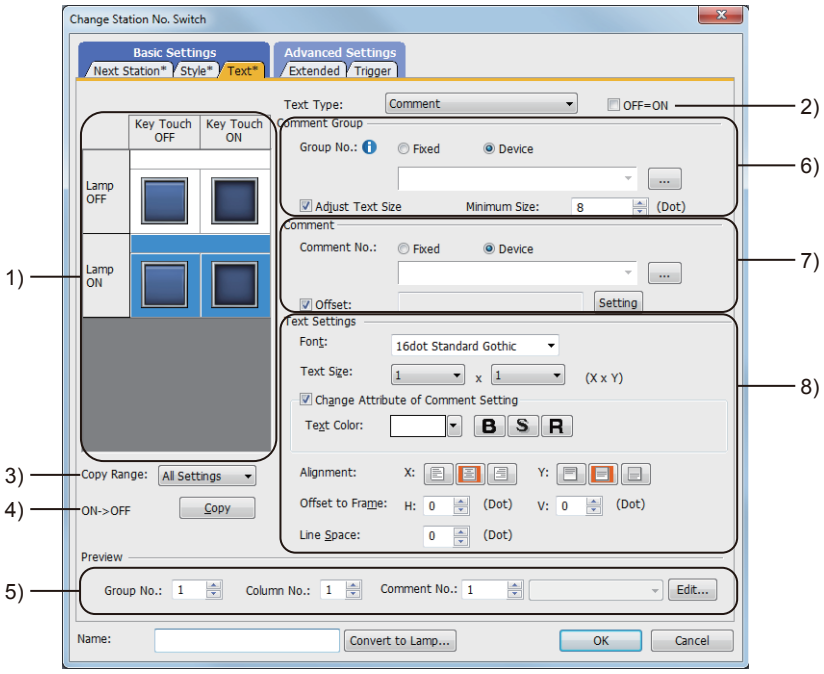
5) [Common Setting of Display Position]

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) **[Text Settings]**

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**

Set the range to be copied.

- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**

Copies the text setting.

- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

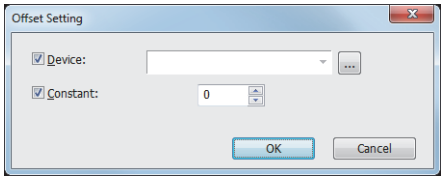
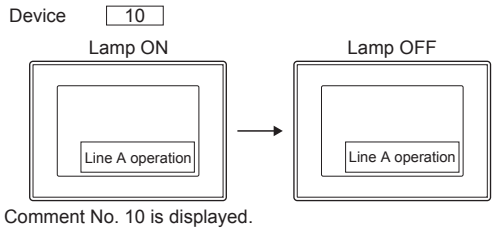
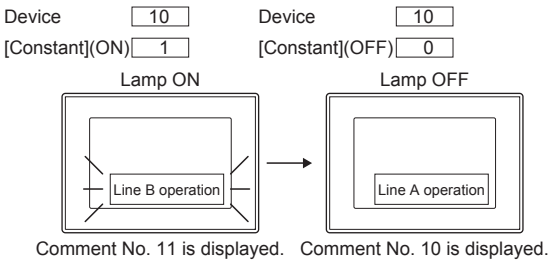
5) **[Preview]**

Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

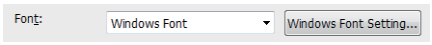
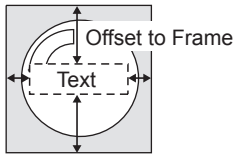
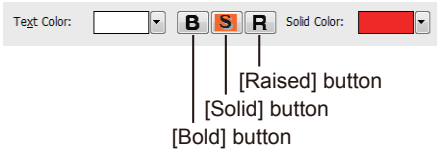
6) **[Comment Group]**

Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

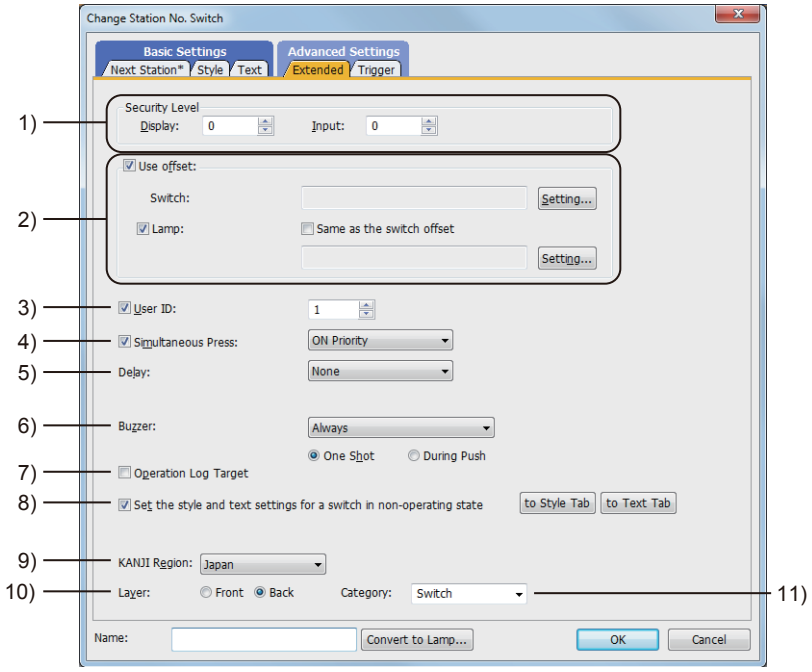
Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • [Device] Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • [Constant] Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  Comment No. 10 is displayed. • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed.  Comment No. 11 is displayed. Comment No. 10 is displayed.

8) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

4) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

5) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time.
  This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.
- [Delay Time]: The setting range is [1] to [5].

6) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

- [Always]: The buzzer is sounded every time you touch the touch switch.
  In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
- [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
- [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

- [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
- [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

8) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

9) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

10) **[Layer]**

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

11) **[Category]**

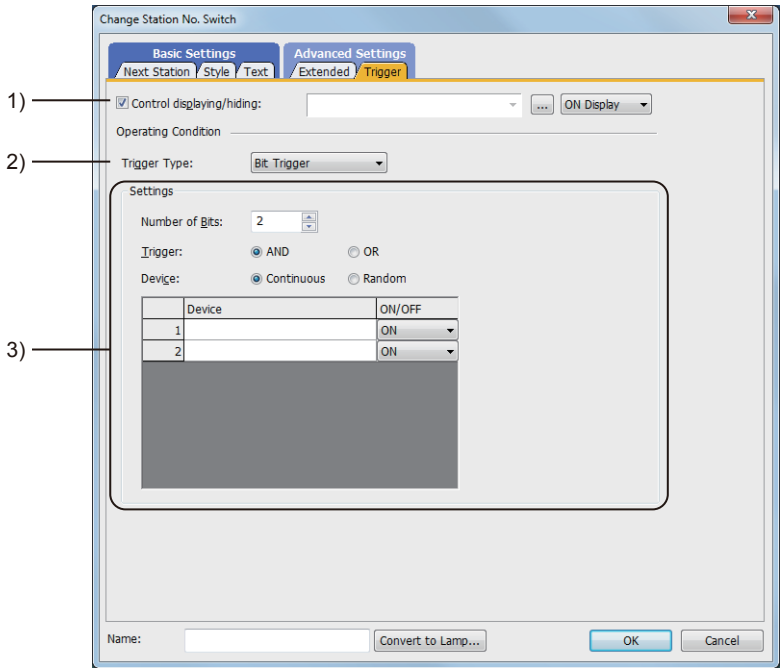
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the device that controls display/hide of the object.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

8.2.9 [Special Function Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The special function switch switches the screen to the utility screen, the extended function screen, or other screens.

Step 1 Select [Object] → [Switch] → [Special Function Switch] from the menu.

Step 2 Click the position where you arrange the special function switch.

Step 3 Double-click the arranged special function switch to display the setting dialog.

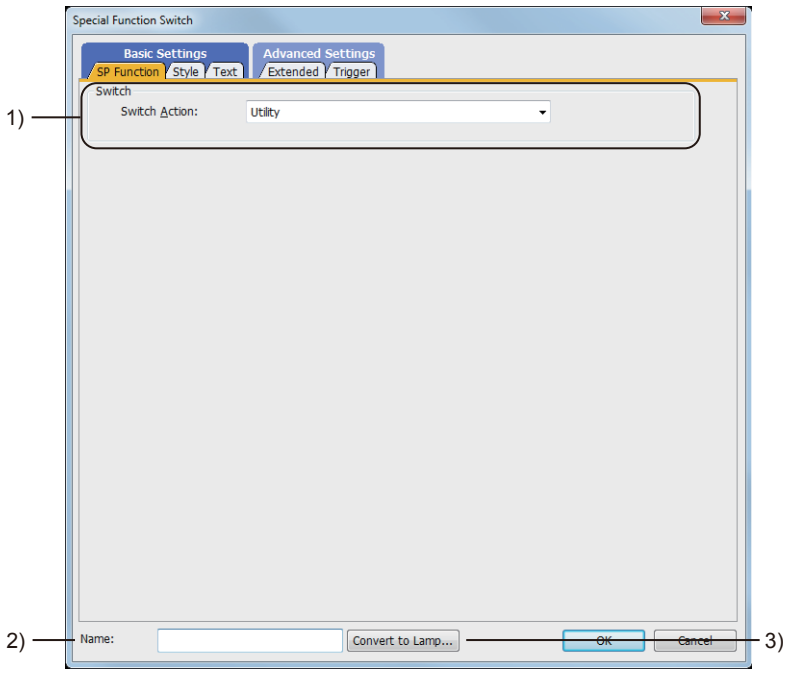
➟■1 [SP Function] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [SP Function] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) [Switch Action]

Item	Description
[Action]	Select the type of the extended function screen to be displayed. For the setting range, refer to the following. ➟8.2.9 ■1 (1) Operation settings Some functions are unavailable even those are set. For details, refer to the following manuals. ➟GT SoftGOT2000 Version1 Operating Manual GOT2000 Series User's Manual (Monitor)

2) [Name]

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

3) [Convert to Lamp] button

Converts the object type to the lamp.

➟8.2.2 How to use touch switch

(1) Operation settings

The following shows selectable items.

Operation setting	Description	Supported model
[Utility]	Displays the utility.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Key Windows]	Displays the key window used for the numerical input function and the text input function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Start Hard Copy]	Starts the hard copy function (starts collecting the screen data). ➟8.2.9 ■1 (2) (a) Setting for [Start Hard Copy]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Abort Hard Copy]	Aborts the hard copy function (aborts collecting the screen data).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Test Window]	Displays the screen for the test function.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[PX Developer Function Call]	Starts PX Developer. ➟8.2.9 ■1 (2) (b) Setting for [PX Developer Function Call]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Basic Setting Menu]	Displays the setup screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Brightness Adjustment]	Displays the intensity adjustment screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Password (Security Level)]	Displays the security level change screen. This setting is available only when the level authentication is selected. ➟2.13 Protecting a Project by Registering Users	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Time]	Displays the time setting screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Data Control]	Displays the data control screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Clean/Display Screen]	Displays the screen for cleaning the GOT screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Operation setting	Description	Supported model
[Multimedia]	Not available to GT2705-V. Displays the multimedia screen. ⇒8.2.9 ■1 (2) (c) Setting for [Multimedia]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Display]	Displays the [Display] screen of the utility.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Operation]	Displays the [Operation] screen of the utility.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Language]	Displays the [Language] screen of the utility.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Controller]	Displays the communication setting screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[PC Remote Operation (Ethernet)]	Displays the personal computer screen on the GOT. ⇒8.2.9 ■1 (2) (g) Setting for [PC Remote Operation (Ethernet)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Monitor Menu]	Displays the monitor menu screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[System Launcher]	Displays the system configuration screen of the system launcher. ⇒8.2.9 ■1 (2) (d) Setting for [System Launcher]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Device Monitor]	Displays the screen for the device monitor function. ⇒8.2.9 ■1 (2) (e) Setting for [Device Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Network Monitor]	Displays the network monitor screen. ⇒8.2.9 ■1 (2) (f) Setting for [Network Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Sequence Program Monitor (Ladder)]	Displays the sequence program monitor (ladder) screen. ⇒8.2.9 ■1 (2) (h) Setting for [Sequence Program Monitor (Ladder)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Sequence Program Monitor (iQ-R/iQ-L Ladder)]	Displays the screen of the sequence program monitor (iQ-R/iQ-L ladder). ⇒8.2.9 ■1 (2) (i) Setting for [Sequence Program Monitor (iQ-R/iQ-L Ladder)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Sequence Program Monitor (iQ-F Ladder)]	Displays the screen of the sequence program monitor (iQ-F ladder). ⇒8.2.9 ■1 (2) (j) Setting for [Sequence Program Monitor (iQ-F Ladder)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Operation setting	Description	Supported model
[Sequence Program Monitor(SFC)]	Displays the sequence program monitor (SFC) screen. ➟8.2.9 ■1 (2) (k) Setting for [Sequence Program Monitor (SFC)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[R Motion SFC Monitor]	Displays the R motion SFC monitor screen. ➟8.2.9 ■1 (2) (l) Setting for [R Motion SFC Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Q Motion SFC Monitor]	Displays the Q motion SFC monitor screen. ➟8.2.9 ■1 (2) (m) Setting for [Q Motion SFC Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Log Viewer]	Displays the log viewer screen. ➟8.2.9 ■1 (2) (n) Setting for [Log Viewer]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Intelligent Module Monitor]	Displays the intelligent module monitor screen. ➟8.2.9 ■1 (2) (o) Setting for [Intelligent Module Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Servo Amplifier Monitor]	Displays the servo amplifier monitor screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[R Motion Monitor]	Displays the R motion monitor screen. ➟8.2.9 ■1 (2) (p) Setting for [R Motion Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Q Motion Monitor]	Displays the Q motion monitor screen. ➟8.2.9 ■1 (2) (q) Setting for [Q Motion Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[FX List Editor]	Displays the screen for the FX list editor function. Not available to GT25-W and GT21-P.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[FX List Monitor]	Displays the FX list monitor screen. Not available to GT25-W and GT21-P.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[FX Ladder Monitor]	Displays the FX ladder monitor screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[CNC Monitor]	Displays the CNC monitor screen. Available to GT27-X , GT27-S and GT25-S. ➟8.2.9 ■1 (2) (r) Setting for [CNC Monitor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[CNC Data I/O]	Displays the CNC data I/O screen. Available to GT27-X , GT27-S and GT25-S. ➟8.2.9 ■1 (2) (s) Setting for [CNC Data I/O]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Operation setting	Description	Supported model
[CNC Machining Program Edit]	Displays the CNC machining program edit screen. Available to GT27-X , GT27-S and GT25-S. ➟8.2.9 ■1 (2) (t) Setting for [CNC Manufacturing Program Editor]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[CNC Monitor 2]	Displays the CNC monitor 2 screen. Not available to GT25-W, GT2505-V, and GT25HS-V. ➟8.2.9 ■1 (2) (u) Setting for [CNC Monitor 2]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Motion Program Editor]	Displays the motion program editor screen. Available to GT27-X, GT27-S, GT25-S, GT2512-WX, and GT2510-WX.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Motion Program Input/Output]	Displays the motion program input/output screen. Available to GT27-X, GT27-S, GT25-S, GT2512-WX, and GT2510-WX.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[iQSS Utility]	Displays the iQSS utility screen. ➟8.2.9 ■1 (2) (v) Setting for [iQSS Utility]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Drive Recorder]	Displays the drive recorder screen. ➟8.2.9 ■1 (2) (w) Setting for [Drive Recorder]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Servo Amp Graph]	Displays the servo amplifier graph screen. ➟8.2.9 ■1 (2) (x) Settings for [Servo Amp Graph]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Backup/Restoration]	Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000. Displays the screen for backup and restoration. ➟8.2.9 ■1 (2) (y) Setting for [Backup/Restoration]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[USB Device Control]	Only available to GT2107-W for GT21. Displays the USB device control screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[CC-Link IE TSN/CC-Link IE Field Network diagnostics]	Displays the screen for the CC-Link IE TSN/CC-Link IE Field Network diagnostics. ➟8.2.9 ■1 (2) (z) Settings for [CC-Link IE TSN/CC-Link IE Field Network diagnostics]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Vision Sensor Monitor]	Displays the vision sensor monitor screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Maintenance Menu]	Displays the maintenance menu screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Batch Self Check]	Displays the self check result menu screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

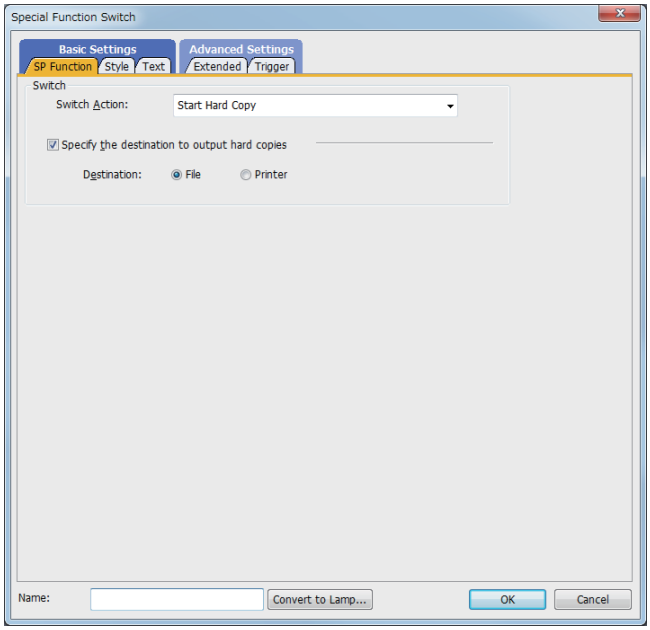
Operation setting	Description	Supported model
[Network Status Display]	Displays the network status display screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[System Alarm Display]	Displays the system alarms, and resets the GOT errors.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Recipe Information]	Displays the recipe operation window when [Enable recipe file operation on the monitor] is selected in the [Recipe Common Setting] dialog. Displays the recipe information when [Enable recipe file operation on the monitor] is deselected in the [Recipe Common Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Displays the recipe information.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Recipe Data Operation]	Imports or exports recipe data. ⇒8.2.9 ■1 (2) (aa) Settings for [Recipe Data Operation]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Logging Information]	Displays the logging information.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Operation Log Information]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Displays the operation log information.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Operator Information Management]	Displays the operator information management screen when the operator authentication is enabled. ⇒5.2.6 Configuring the security settings for the GOT screen ([Screen Security])	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Operator Management]	Displays the operator management screen when the operator authentication is enabled. ⇒5.2.6 Configuring the security settings for the GOT screen ([Screen Security])	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Log-in/Log-out (Operator Authentication)]	Displays the login and logout screen when the operator authentication is enabled. ⇒5.2.6 Configuring the security settings for the GOT screen ([Screen Security])	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Password Change (Operator Authentication)]	Displays the password change screen when the operator authentication is enabled. ⇒5.2.6 Configuring the security settings for the GOT screen ([Screen Security])	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[File Manager]	Displays the file manager screen.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[File Print]	Displays the print file list display screen for the file print function. ⇒(ab) Settings for [File Print]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(2) Detail setting for the actions whose setting must be configured

(a) Setting for [Start Hard Copy]

Set the hard copy output destination.
Configure the setting of the selected output destination in the [Hard Copy] dialog.
Otherwise, the hard copy cannot be output.
For the details of the hard copy function, refer to the following.

➟9.7 Capturing the GOT Screen and Outputting the Screen Image ([Hard Copy])



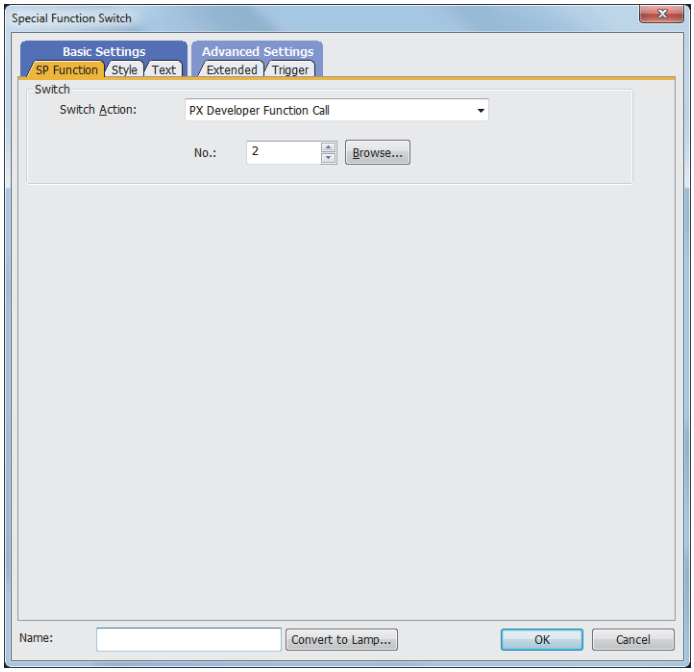
- **[Specify the destination to output hard copies]**
  - [Destination]

    Set the hard copy output destination.
    The following shows selectable items.
    [File]
    [Printer]

(b) Setting for [PX Developer Function Call]

Set the PX Developer function to be called by interaction with GT SoftGOT2000.
For the interaction between GT SoftGOT2000 and PX Developer, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual



- [No.]

  Set the number corresponding to the PX Developer function set in the [PX Developer Function Call Setting] dialog.
- [Browse] button

  Set the PX Developer function to be called in the [PX Developer Function Call Setting] dialog.

  For how to set the [PX Developer Function Call Setting] dialog, refer to the following manual.

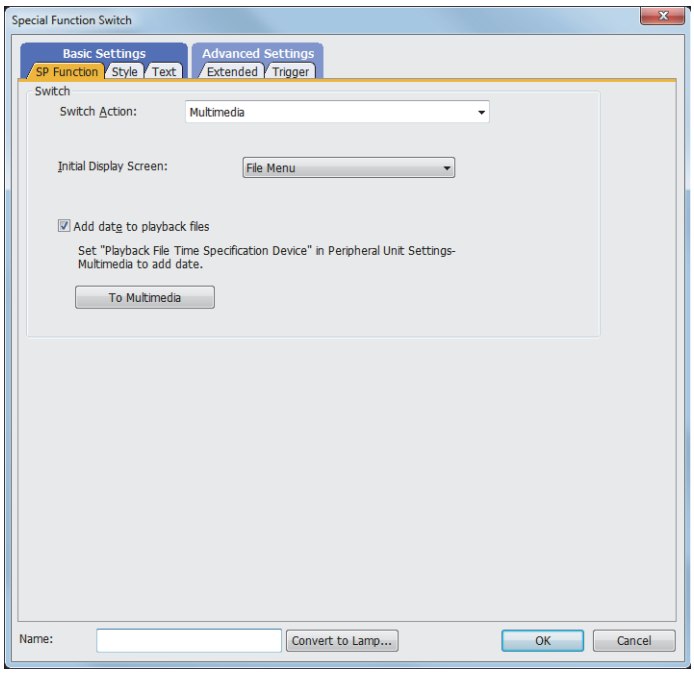
➟GT SoftGOT2000 Version1 Operating Manual

(c) **Setting for [Multimedia]**

Set the multimedia screen to be displayed.

For the details of the multimedia function, refer to the following.

➟10.8 Recording or Playing Images Taken by a Video Camera on the GOT (Multimedia Function)



- [Initial Display Screen]

  Select the multimedia screen to be displayed when you touch the switch.
  - [File Menu]: Select this item to display the file menu screen.
  - [Video Image]: Select this item to display the video image screen.
  - [Video Playback]: Select this item to display the video playback screen.
- [File Name]

  Set the name and the extension (3GP or MP4) of the video file to be played.

  Set them only when [Video Playback] is selected for [Initial Display Screen].

  Set the file name with 70 alphanumeric characters or less.
- [Add date to playback files]

  The device value set for [Playback File Time Specification Device] in the [Multimedia] dialog ([Playback/External Notification] tab) of [Peripheral Setting] is added to the name of the video file to be played as the date and time of recording.
- [To Multimedia] button

  Displays the [Multimedia] dialog.

  For how to set the [Multimedia] dialog, refer to the following.

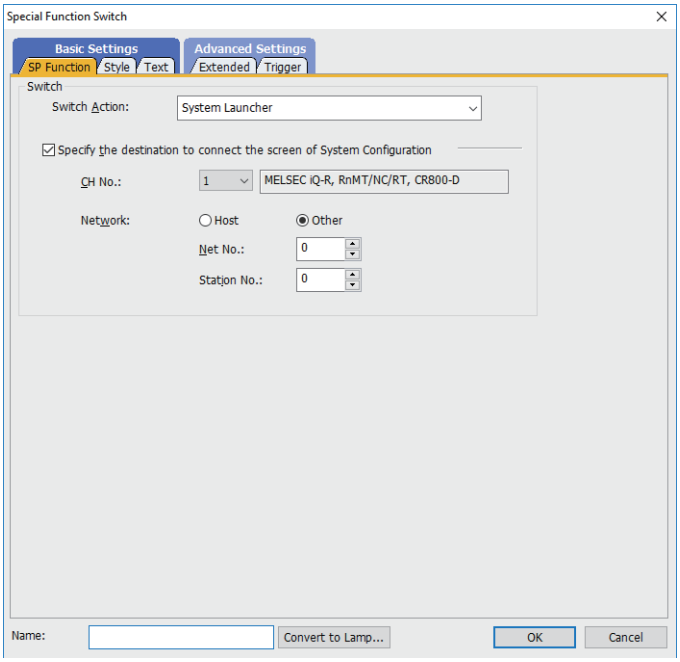
➟10.8.6 [Multimedia] dialog

(d) **Setting for [System Launcher]**

Set a controller connected when the system configuration screen of the system launcher is called up with a special function switch.

For the details of the system launcher function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Specify the destination to connect the screen of System Configuration]
  - [CH No.]:

    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-L]
    [MELIPC]
  - [Network]:

    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:

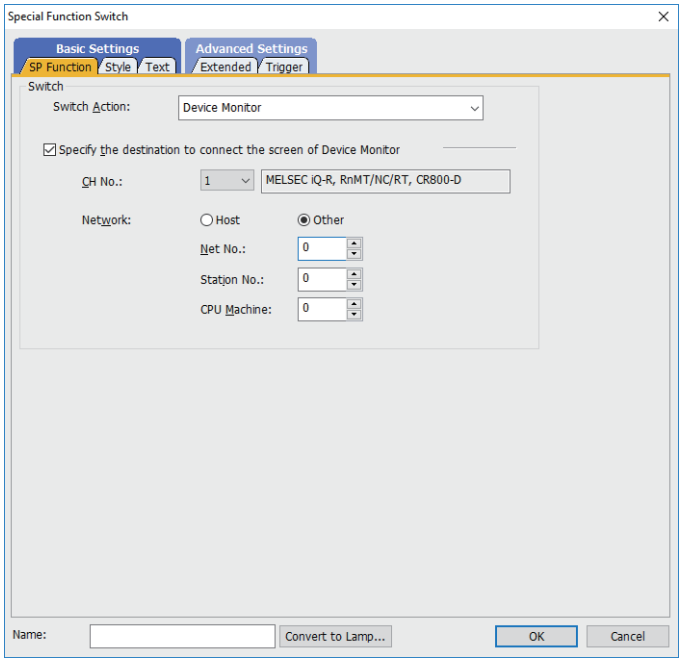
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]

    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].

(e) Setting for [Device Monitor]

Set a controller connected when the device monitor screen is called up with a special function switch.
For the details of the device monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Specify the destination to connect the screen of Device Monitor]
  - [CH No.]:

    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC iQ-R, RnMT/RT, CR800-D]
    [MELSEC iQ-L]
    [MELSEC iQ-F]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]
    [MELSEC-QnA, MELDAS C6*]
    [MELSEC-L]
    [MELSEC-FX]
    [MELIPC]
  - [Network]:

    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:

    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]

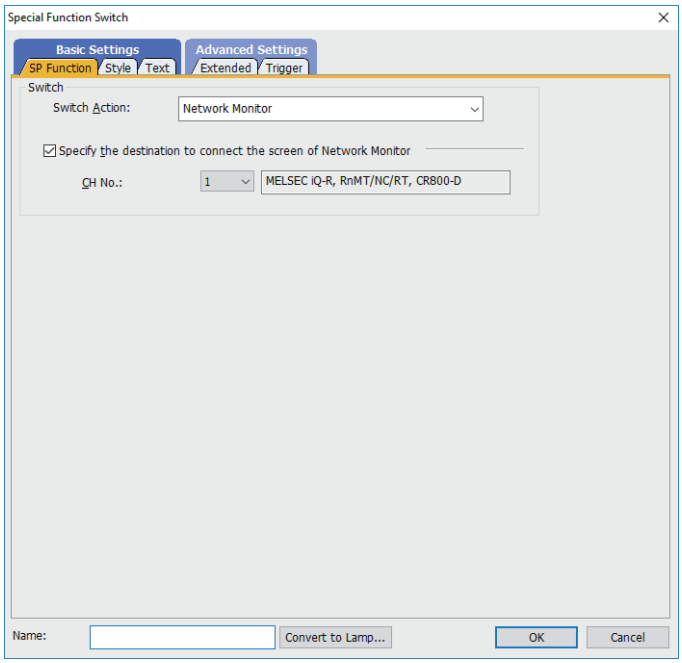
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:

    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

(f) Setting for [Network Monitor]

Set a controller connected when the network monitor screen is called up with a special function switch.
For the details of the network monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Specify the destination to connect the screen of Network Monitor]
  - [CH No.]:

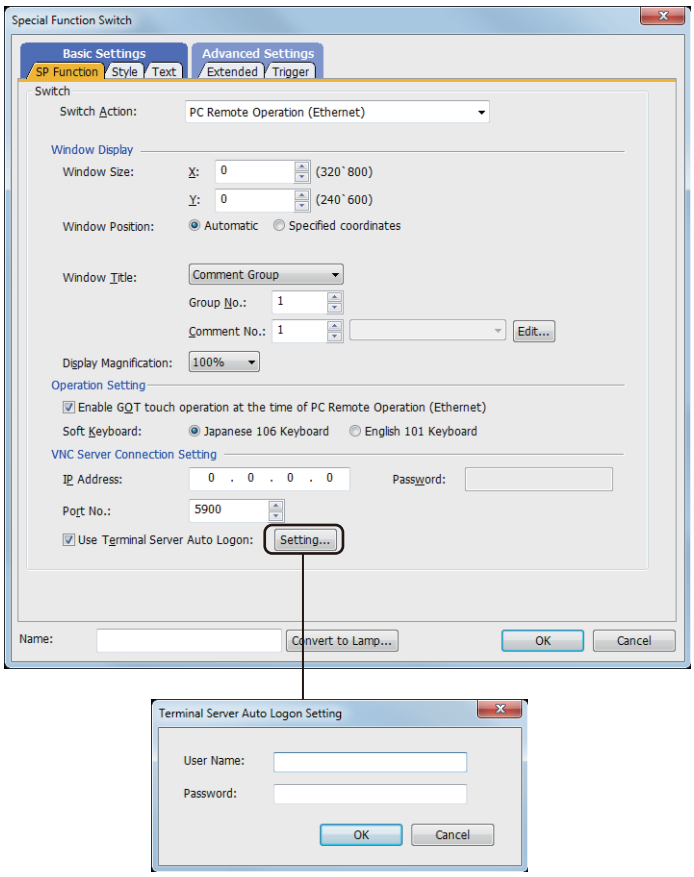
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-L]
    [MELIPC]

(g) **Setting for [PC Remote Operation (Ethernet)]**

Set the personal computer screen on the GOT to be displayed.

For the details of the remote personal computer operation function (Ethernet), refer to the following.

➟10.3 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Ethernet))



- [Window Display]
  - [Window Size]

    Set the display size of the personal computer screen on the GOT in the window display mode.
    [X]: The setting range is [320] to [Horizontal resolution of GOT].
    [Y]: The setting range is [240] to [Vertical resolution of GOT].
  - [Window Position]

    Select the display position of the personal computer screen on the GOT in the window display mode.
    Set the top-left coordinate of the window position of the remote personal computer operation (Ethernet) in [Specified coordinates].
    If the window is arranged beyond the screen, the coordinate is adjusted so that the whole window is displayed on the screen.
  - [Window Title]

    Select the title to be displayed in the title bar of the personal computer screen on the GOT.
    The following shows the items to be selected.
    [Standard]
    [IP Address]
    [Comment Group]
    The following shows the details of each setting.
    Select [Standard] to display [PC Remote Operation (Ethernet)].
    Select [IP Address] to display the IP address of the connected personal computer.
    Select [Comment Group] to display the comment with the specified comment number.
    Click the [Edit] button to edit the comment with the specified comment number.
  - [Display Magnification]:

    Select the display magnification of the personal computer screen on the GOT. The following shows the items to be selected.
    [100%]
    [50%]
    [33%]
    [25%]
- [Operation Setting]
  - [Enable GOT touch operation at the time of PC Remote Operation (Ethernet)]:

    Select this item to enable the touch operation on the GOT while the personal computer screen is displayed.
  - [Soft Keyboard]:

    Select the soft keyboard type used in the personal computer screen from [Japanese 106 Keyboard] or [English 101 Keyboard].
- [VNC Server Setting]
  - [IP Address]

    Set the IP address of the VNCserver. The setting range is [0.0.0.0] to [255.255.255.255].
  - [Password]:

    Set the password for connection with the VNC server.
    Set the password with 31 characters or less.
    One-byte alphanumeric characters, one-byte space, and the following symbols are available for the password.
    ! " # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | }
- [Port No.]

  Set the port number for connection with the VNC server.

  The setting range is [1024] to [65535]. Set the port number to 5923 to use the terminal server.
- [Use Terminal Server Auto Logon]

  Click the [Setting] button to display the [Use Terminal Server Auto Logon] dialog.

  Set the user name and password to log on to the terminal server automatically.

(h) **Setting for [Sequence Program Monitor (Ladder)]**

Set the ladder search method by the one-touch ladder jump function.

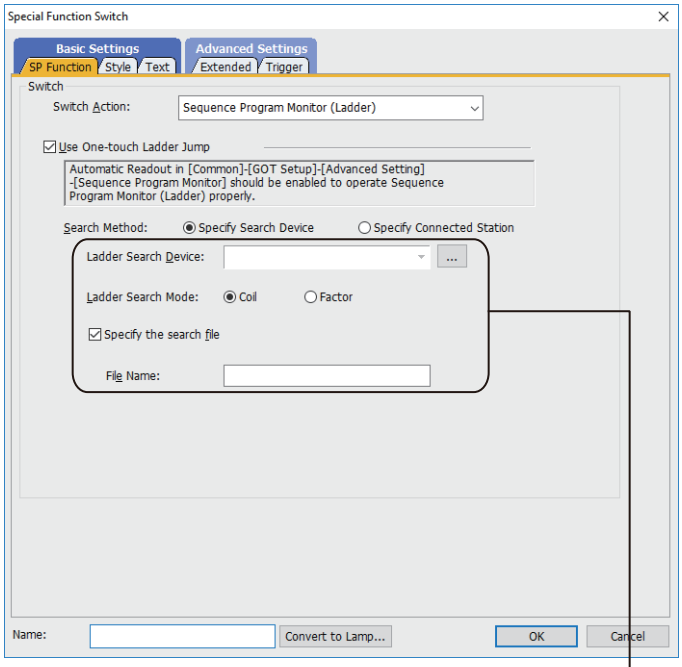
Before the ladder search setting, configure the following setting.

- Select [Common] → [GOT Setup] → [Advanced Setting] → [Sequence Program Monitor] from the menu.
- Select [Update the sequence program monitor setting], and then select [Automatically read out a sequence program] of [Display the operational state in a pop-up window].

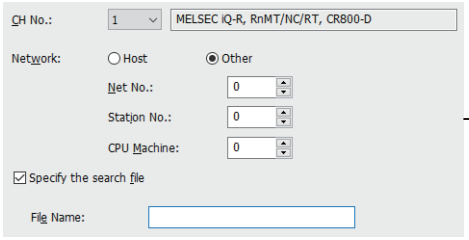
➟5.3.10 ■1 [Sequence Program Monitor]

For the details of the sequence program monitor (ladder) function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



Select [Specify Search Device] for the search method.



Select [Specify Connected Station] for the search method.

- [Use One-touch Ladder Jump]
  - [Search Method]

    Select the search method at the sequence program monitor (ladder) startup.
    Select [Specify Search Device] to search for files and devices.
    Select [Specify Connected Station] to search for controllers and files.
  - [Ladder Search Device]

    When [Specify Search Device] is selected for [Search Method], set a device to be searched for at the sequence program monitor (ladder) startup.

➟6.1.2 How to set devices

- [Ladder Search Mode]

  When [Specify Search Device] is selected for [Search Method], select the search mode from [Coil] or [Factor].
  - [CH No.]:

    When [Specify Connected Station] is selected for [Search Method], set a channel No. to be searched.
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-QnA, MELDAS C6*]
    [MELSEC-L]
    [MELSEC-A]
    [MELSEC-FX]
    [MELIPC]
  - [Network]:

    When [Specify Connected Station] is selected for [Search Method], set the controller to be searched.
    Select [Host] to search for the controller of the host station.
    Set the CPU No.
    Select [Other] to search for the controller of another station.
    Set the network No., PC station No., and the CPU No. of the station connected with the GOT.
- [Specify the search file]

  Select this item to specify the name of the program file to be searched.

  Up to 8 characters can be set for the file name.

  A file whose name includes both two-byte and one-byte characters can also be searched for.

(i) **Setting for [Sequence Program Monitor (iQ-R/iQ-L Ladder)]**

Set the ladder search method by the one-touch ladder jump function.

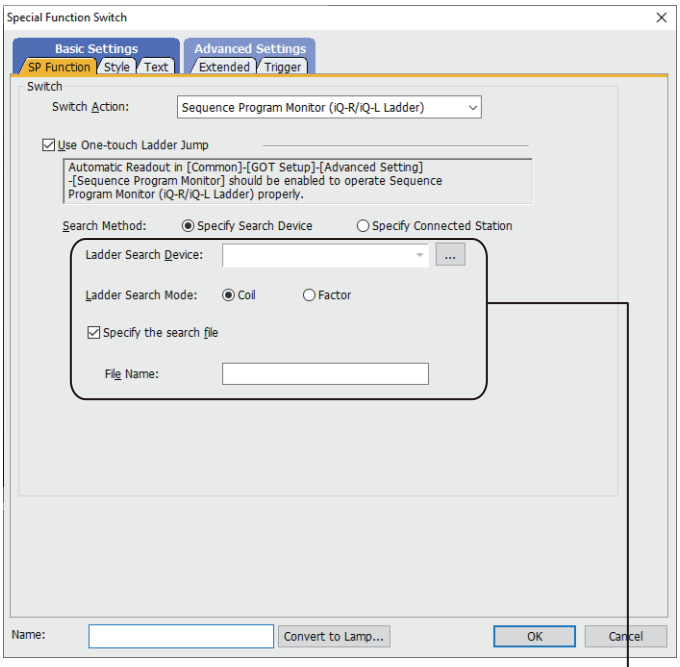
Before the ladder search setting, configure the following setting.

- Select [Common] → [GOT Setup] → [Advanced Setting] → [Sequence Program Monitor] from the menu.
- Select [Update the sequence program monitor setting], and then select [Automatically read out a sequence program] of [Display the operational state in a pop-up window].

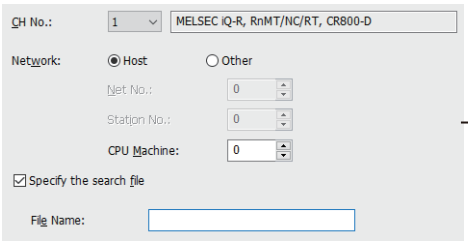
➟5.3.10 ■1 [Sequence Program Monitor]

For details on the sequence program monitor (iQ-R/iQ-L ladder) function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



Select [Specify Search Device] for the search method.



Select [Specify Connected Station] for the search method.

- [Use One-touch Ladder Jump]
  - [Search Method]

    Select a search method used at the sequence program monitor (iQ-R/iQ-L ladder) startup.
    Select [Specify Search Device] to search for files and devices.
    Select [Specify Connected Station] to search for controllers and files.
  - [Ladder Search Device]

    When [Specify Search Device] is selected for [Search Method], set a device to be searched for at the sequence program monitor (iQ-R/iQ-L ladder) startup.

    ➟6.1.2 How to set devices
  - [Ladder Search Mode]

    When [Specify Search Device] is selected for [Search Method], select the search mode from [Coil] or [Factor].
    - [CH No.]:

      When [Specify Connected Station] is selected for [Search Method], set a channel No. to be searched.
      Only the channel No. whose controller is any of the following models can be selected.
      [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
      [MELSEC iQ-L]
      [MELIPC]
    - [Network]:

      When [Specify Connected Station] is selected for [Search Method], set the controller to be searched.
      Select [Host] to search for the controller of the host station.
      Set the CPU No.
      Select [Other] to search for the controller of another station.
      Set the network No., PC station No., and the CPU No. of the station connected with the GOT.
  - [Specify the search file]

    Select this item to specify the name of the program file to be searched.
    A file whose name is up to 60 characters long can be searched for.
    A file whose name includes both two-byte and one-byte characters can also be searched for.
    A file whose name includes one-byte spaces or any symbol below cannot be searched for.
    (" \ / ; : ? < > ¦ + = [ ] . ,)

(j) Setting for [Sequence Program Monitor (iQ-F Ladder)]

Set the ladder search method by the one-touch ladder jump function.

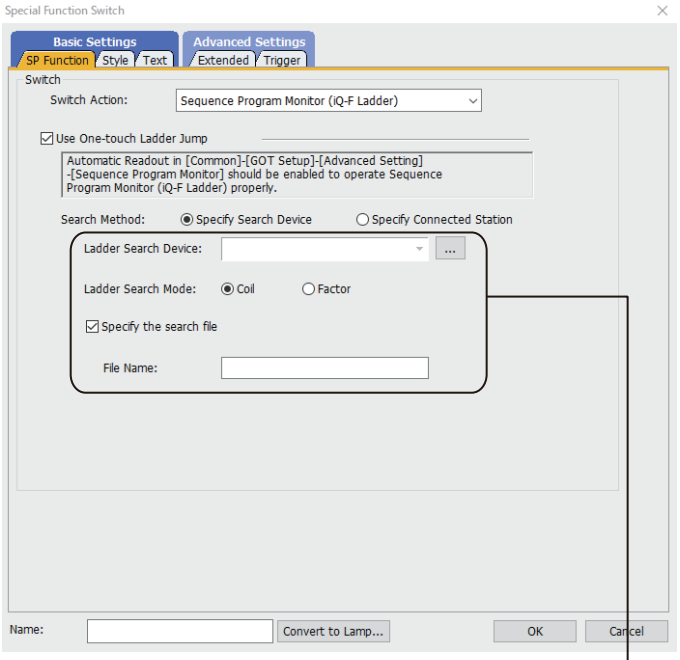
Before the ladder search setting, configure the following setting.

- Select [Common] → [GOT Setup] → [Advanced Setting] → [Sequence Program Monitor] from the menu.
- Select [Update the sequence program monitor setting], and then select [Automatically read out a sequence program] of [Display the operational state in a pop-up window].

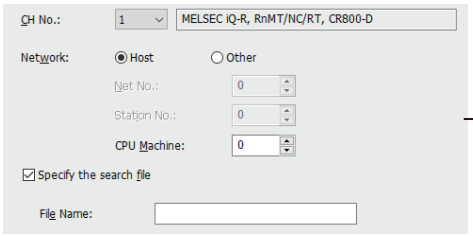
➟5.3.10 ■1 [Sequence Program Monitor]

For details on the sequence program monitor (iQ-F ladder) function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



Select [Specify Search Device] for the search method.



Select [Specify Connected Station] for the search method.

- [Use One-touch Ladder Jump]
  - [Search Method]

    Select a search method used at the sequence program monitor (iQ-F ladder) startup.
    Select [Specify Search Device] to search for files and devices.
    Select [Specify Connected Station] to search for controllers and files.
  - [Ladder Search Device]

    When [Specify Search Device] is selected for [Search Method], set a device to be searched for at the sequence program monitor (iQ-F ladder) startup.

    ➟6.1.2 How to set devices
  - [Ladder Search Mode]

    When [Specify Search Device] is selected for [Search Method], select the search mode from [Coil] or [Factor].
    - [CH No.]:

      When [Specify Connected Station] is selected for [Search Method], set a channel No. to be searched.
      Only the channel No. whose controller is any of the following models can be selected.
      [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
      [MELSEC iQ-L]
      [MELIPC]
      [MELSEC iQ-F]
    - [Network]:

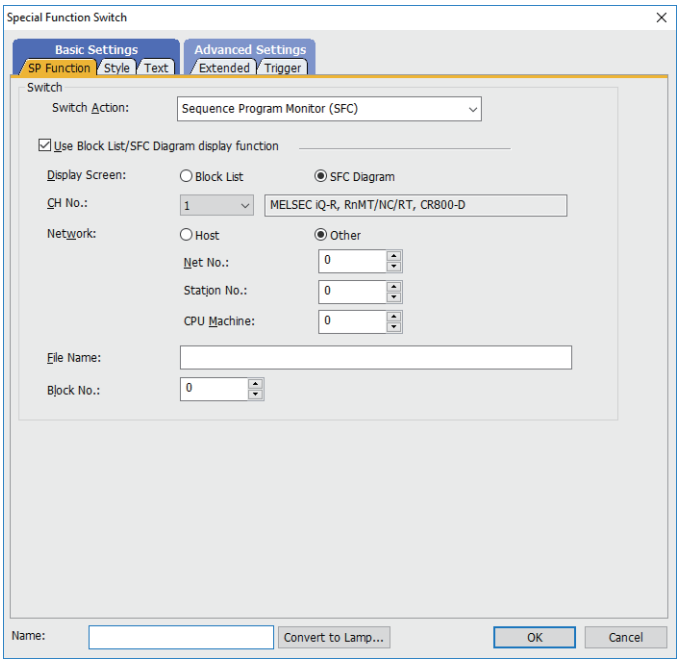
      When [Specify Connected Station] is selected for [Search Method], set the controller to be searched.
      Select [Host] to search for the controller of the host station.
      Set the CPU No.
      Select [Other] to search for the controller of another station.
      Set the network No., PC station No., and the CPU No. of the station connected with the GOT.
  - [Specify the search file]

    Select this item to specify the name of the program file to be searched.
    A file whose name is up to 60 characters long can be searched for.
    A file whose name includes both two-byte and one-byte characters can also be searched for.
    A file whose name includes one-byte spaces or any symbol below cannot be searched for.
    (" \ / ; : ? < > ¦ + = [ ] . ,)

(k) **Setting for [Sequence Program Monitor (SFC)]**

Configure the setting for the SFC program display on the block list screen or the SFC diagram monitor screen.
For the details of the sequence program monitor (SFC) function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Use Block List/SFC Diagram display function]

  Select this item to set the SFC program displayed on the block list screen or the SFC diagram monitor screen at the sequence program monitor (SFC) startup.

  - [Display Screen]

    Select the screen displayed at the sequence program monitor (SFC) startup.

    Select [Block List] to display the block list monitor screen. Select [SFC Diagram] to display the SFC diagram monitor screen.

    - [CH No.]:

      Select the channel No. of the controller to be monitored.
      The setting range is [1] to [4].
      Only the channel No. whose controller is any of the following models can be selected.
      [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
      [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
      [MELSEC-QnA, MELDAS C6*]
      [MELSEC-L]
      [MELIPC]

  - [Network]

    Configure the network setting of the controller to be monitored.

    Select [Host] to monitor the controller of the host station.

    Select [Other] to monitor the controller of another station.

    - [Net No.]:

      When [Other] is selected for [Network], set the network No. of the controller to be monitored.
      The setting range is [0] to [255].

    - [Station No.]:

      When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
      The setting range is [0] to [120].

    - [CPU Machine]:

      Set the CPU No. of the controller to be monitored.
      The setting range is [0] to [4].

    - [File Name]:

      Specify the name of the SFC program file to be read from the controller.
      Up to 8 characters can be set for the file name.

    - [Block No.]:

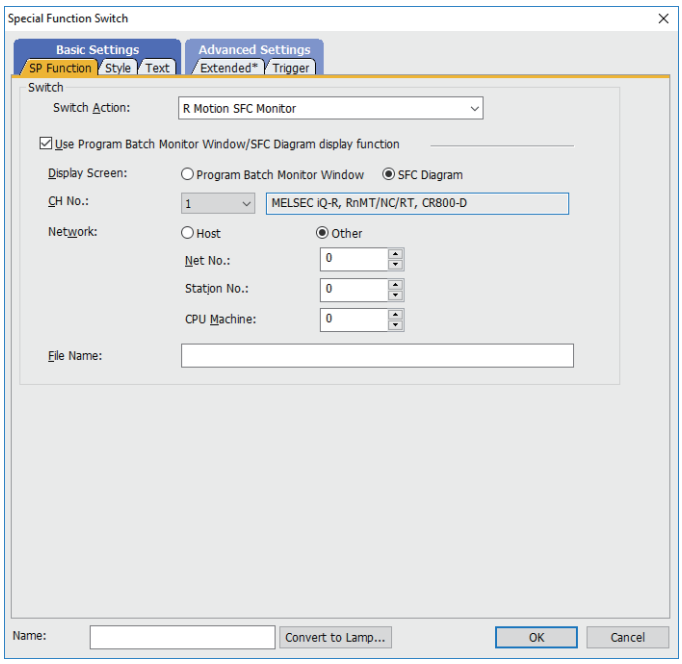
      When [SFC Diagram] is selected for [Display Screen], set the block No. of the block to be displayed at the SFC monitor startup.
      The setting range is [0] to [319].

(l) **Setting for [R Motion SFC Monitor]**

Configure the setting for the SFC program display by the program batch monitor window or the SFC diagram display function.

For details on the R motion SFC monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



• [Use Program Batch Monitor Window/SFC Diagram display function]

Select this item to set the SFC program displayed on the program batch monitor window or the SFC diagram monitor screen at the R motion SFC monitor startup.

• [Display Screen]:

Select the screen type to be displayed at the R motion SFC monitor startup.
Select [Program Batch Monitor Window] to display the program batch monitor window. Select [SFC Diagram] to display the SFC diagram monitor screen.

• [CH No.]:

Select the channel No. of the controller to be monitored.
The setting range is [1] to [4].
Only the channel No. whose controller is any of the following models can be selected.
[MELSEC iQ-R, RnMT/NC/RT, CR800-D]
[MELIPC]

• [Network]:

Configure the network setting of the controller to be monitored.
Select [Host] to monitor the controller of the host station.
Select [Other] to monitor the controller of another station.

• [Net No.]:

When [Other] is selected for [Network], set the network No. of the controller to be monitored.
The setting range is [0] to [255].

• [PC Station No.]

When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.

The setting range is [0] to [120].

• [CPU Machine]:

Set the CPU No. of the controller to be monitored.
The setting range is [0] to [4].

• [File Name]:

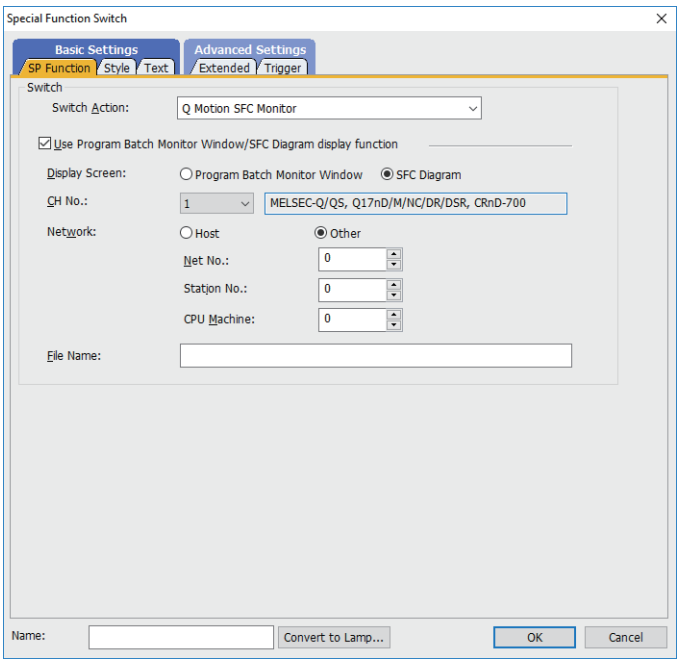
Specify the name of the SFC program file to be read from the controller.
Up to 16 characters can be set for the file name.

(m) **Setting for [Q Motion SFC Monitor]**

Configure the setting for the SFC program display by the program batch monitor window or the SFC diagram display function.

For details on the Q motion SFC monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Use Program Batch Monitor Window/SFC Diagram display function]

  Select this item to set the SFC program displayed on the program batch monitor window or the SFC diagram monitor screen at the Q motion SFC monitor startup.

  - [Display Screen]:

    Select the screen displayed at the Q motion SFC monitor startup. Select [Program Batch Monitor Window] to display the program batch monitor window. Select [SFC Diagram] to display the SFC diagram monitor screen.

  - [CH No.]:

    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELIPC]

  - [Network]:

    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.

  - [Net No.]:

    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].

- [PC Station No.]

  When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
  The setting range is [0] to [120].

  - [CPU Machine]:

    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

  - [File Name]:

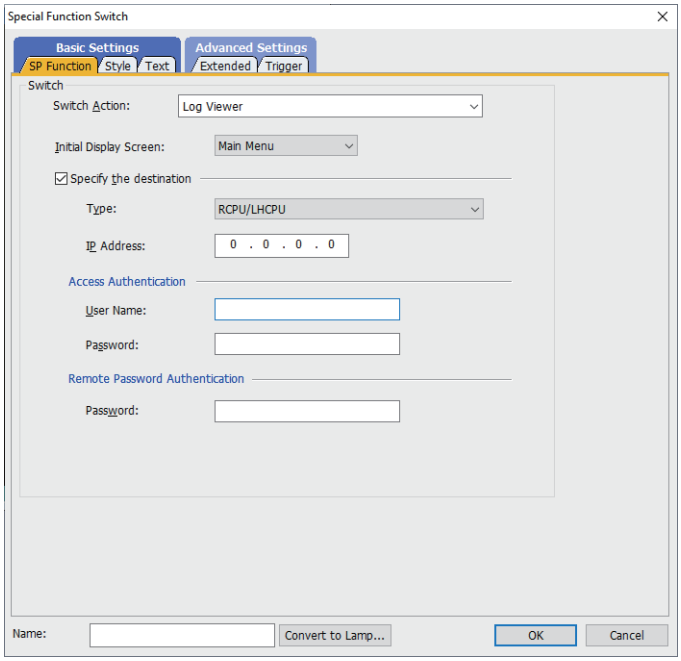
    Specify the name of the SFC program file to be read from the controller.
    Up to 16 characters can be set for the file name.

(n) **Setting for [Log Viewer]**

Set the initial screen and a controller connected when the log viewer is started with a special function switch.

For the details of the log viewer, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- **[Initial Display Screen]**

  Select the initial screen to be displayed at the log viewer startup.
  The following shows selectable items.
  [Main Menu]
  [File Selection Screen]

- **[Specify the destination]**

  - [Type]

    Select a controller.
    The following shows selectable items.
    [High Speed Data Logger/BOX Data Logger]
    [RCPU/LHCPU]
    [FX5CPU]
    [QnUDV/LCPU]

  - [IP Address]

    Set the IP address of the controller.
    The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].

- **[Access Authentication]**

  - [User Name]

    Set the user name for access authentication.
    Up to 32 one-byte alphanumeric characters are settable.

  - [Password]

    Set the password for access authentication.
    Up to 32 one-byte alphanumeric characters are settable.

- **[Remote Password Authentication]**

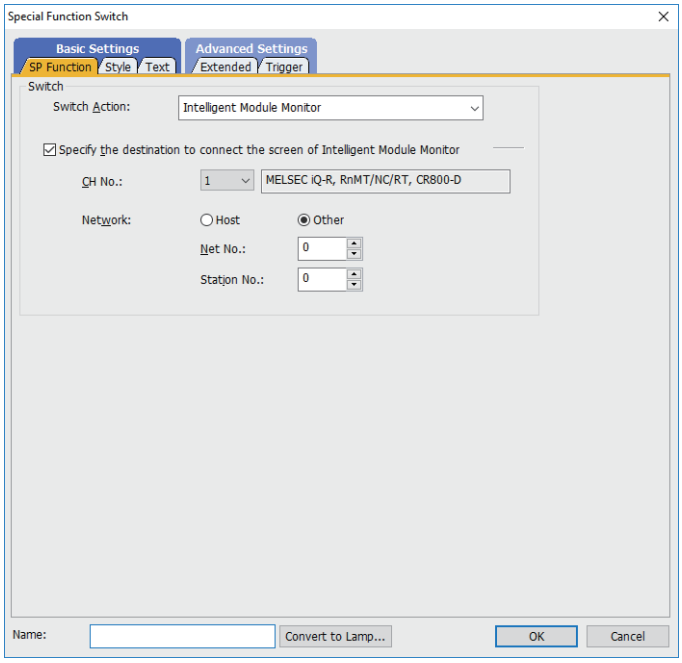
  - [Password]

    Set the password for remote password authentication.
    Up to 32 one-byte alphanumeric characters are settable.

(o) **Setting for [Intelligent Module Monitor]**

Set a controller connected when the intelligent module monitor is started with a special function switch.
For the details of the intelligent module monitor function, refer to the following manual.

➟GOT2000 Series User's Manual (Monitor)

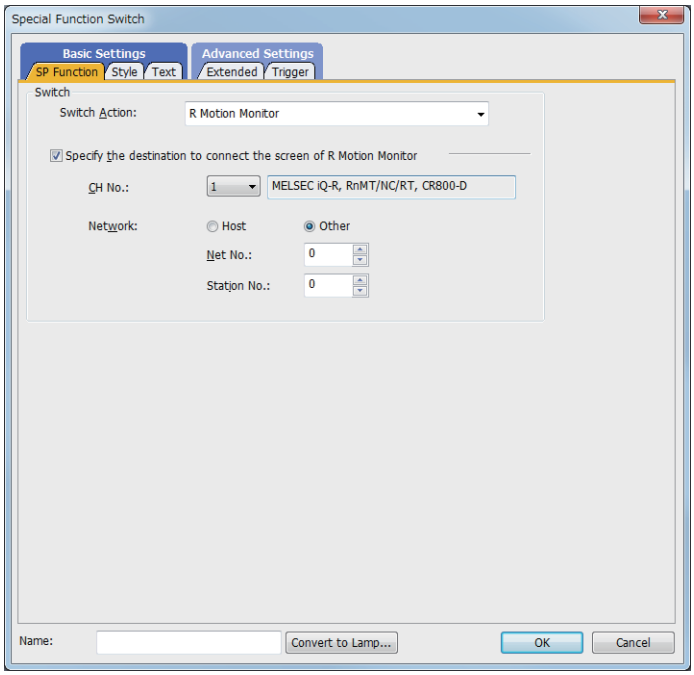


- [Specify the destination to connect the screen of Intelligent Module Monitor]
  - [CH No.]:]
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-L]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]:
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].

(p) **Setting for [R Motion Monitor]**

Set a controller connected when the R motion monitor is started with a special function switch.
For the details of the R motion monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

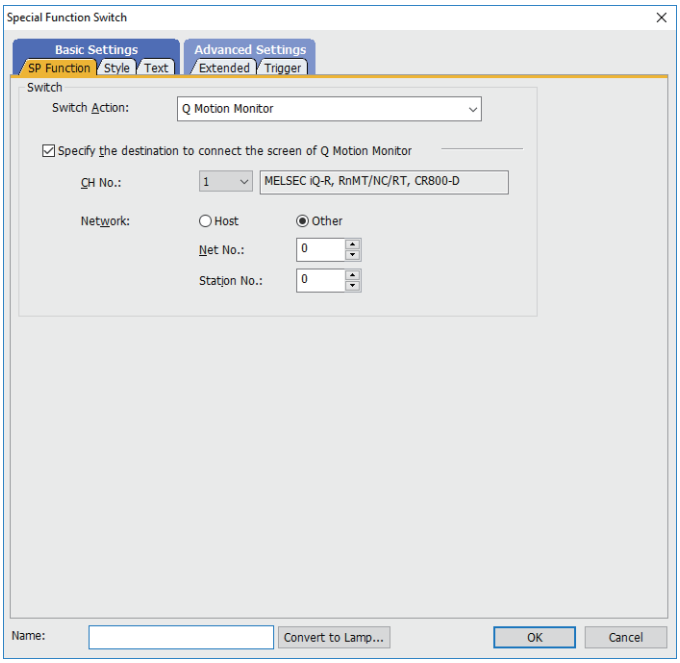


- [Specify the destination to connect the screen of R Motion Monitor]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]:
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].

(q) **Setting for [Q Motion Monitor]**

Set a controller connected when the Q motion monitor is started with a special function switch.
For the details of the Q motion monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

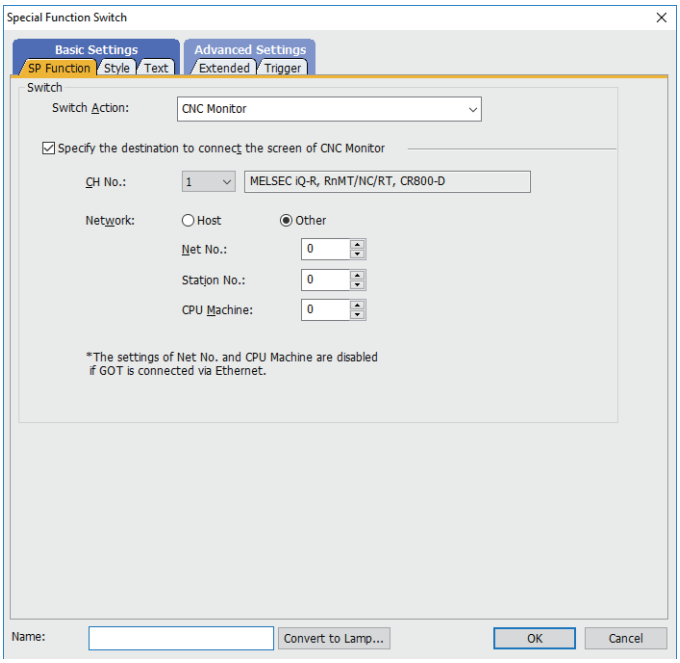


- [Specify the destination to connect the screen of Q Motion Monitor]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].

(r) **Setting for [CNC Monitor]**

Set the CNC connected when the CNC monitor is started with a special function switch.
For the details of the CNC monitor function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

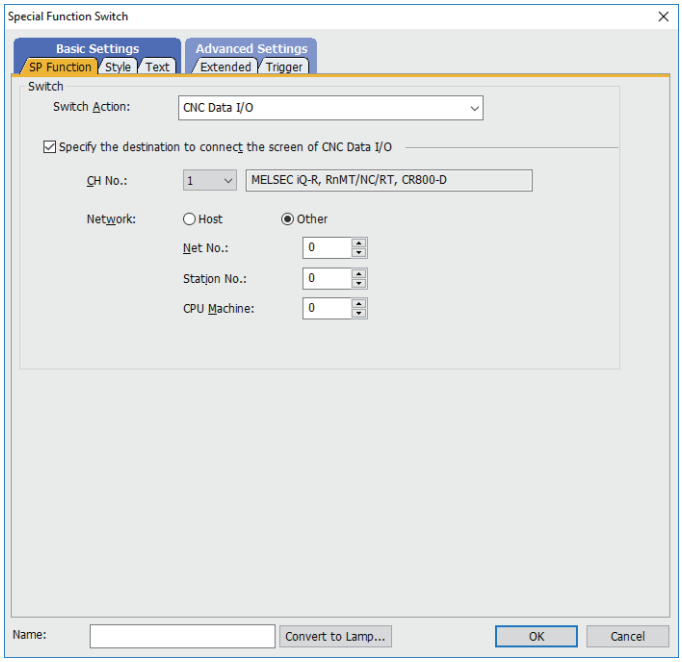


- [Specify the destination to connect the screen of CNC Monitor]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

(s) Setting for [CNC Data I/O]

Set the CNC connected when the CNC data I/O screen is called up with a special function switch.
For the details of the CNC data I/O function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

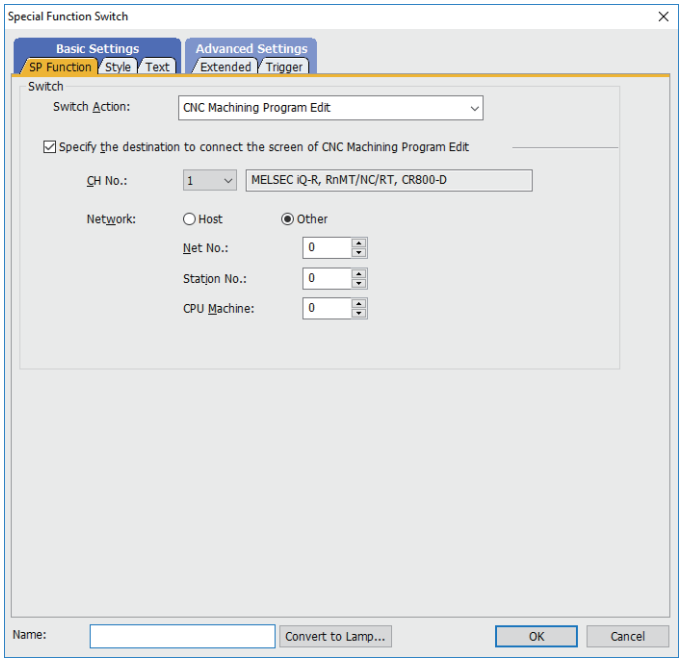


- [Specify the destination to connect the screen of CNC Data Input/Output]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

(t) Setting for [CNC Manufacturing Program Editor]

Set the CNC connected when the CNC machining program edit screen is called up with a special function switch.
For the details of the CNC machining program edit function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



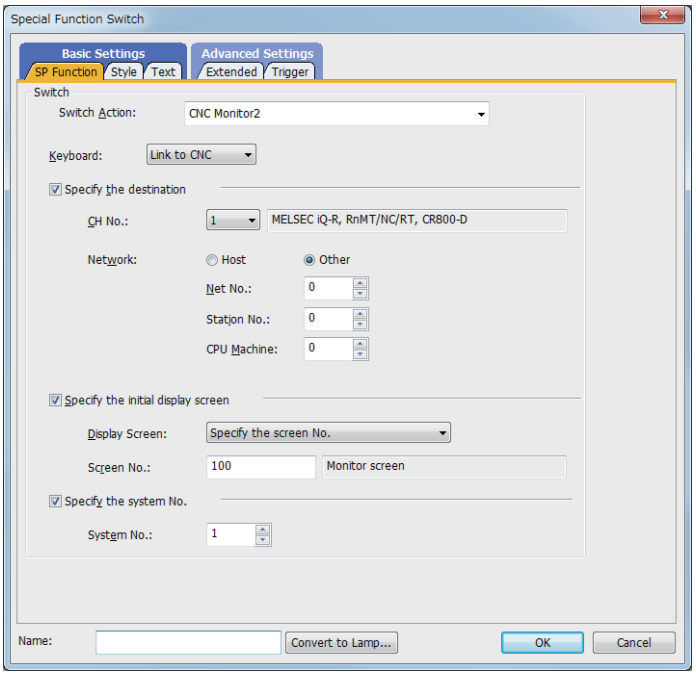
- [Specify the destination to connect the screen of CNC Manufacturing Program Editor]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

(u) **Setting for [CNC Monitor 2]**

Set the screen display method and connection destination for the CNC monitor 2 that is started with a special function switch.

For the details of the CNC monitor 2, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

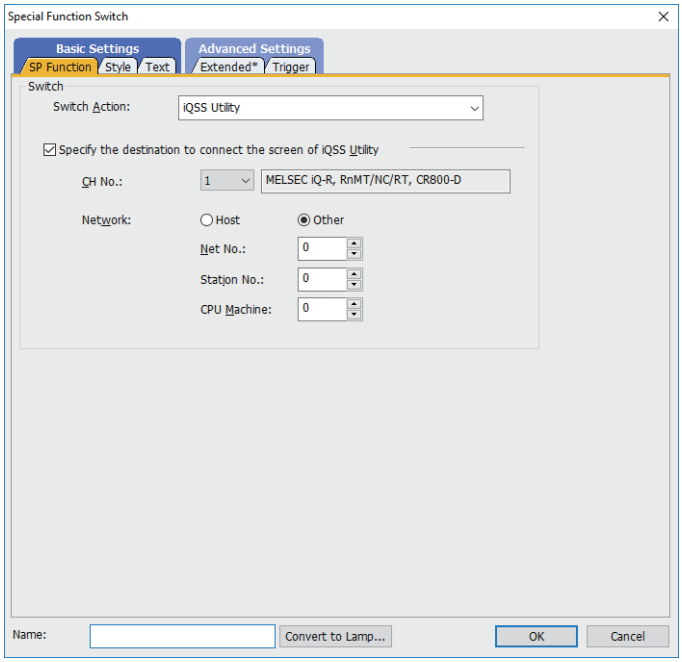


- [Keyboard]
  Available to GT27-S and GT25-S.
  Select the type of the software keyboard to be displayed on the CNC monitor 2 screen.
  - [Link to CNC]:
    Switches between software keyboards according to the type of the connected CNC.
  - [Not displayed]:
    Hides the software keyboard.
  - [M system]:
    Displays the software keyboard applicable to machining centers.
  - [L system]:
    Displays the software keyboard applicable to lathes.
- [Specify the destination]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]:
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].
- [Specify the initial display screen]
  Set the initial screen to be displayed at the startup of CNC monitor 2.
  Specify a CNC screen name or screen number.
  - [Display Screen]:
    Select the name of the initial screen.
    To use a screen number to specify the initial screen, select [Specify the screen No.].
    The following shows the items to be selected.
    [Monitor screen]
    [Setup screen (Tool offset)]
    [Edit screen]
    [Diagnosis screen (System Configuration)]
    [Alarm]
    [Maintenance screen]
    [Parameter]
    [Input/Output (Maintenance screen)]
    [Menu list]
    [Specify the screen No.]
  - [Screen No.]:
    This item appears when [Specify the screen No.] is selected for [Display Screen].
    Specify the screen number of the initial screen.
    If the specified screen has a name, the screen name is displayed.
- [Specify the system No.]
  Set the initial system to be displayed at the startup of CNC monitor 2.
- [System No.]:
  Specify the number of the initial system.
  The setting range is [1] to [7].

(v) **Setting for [iQSS Utility]**

Set a controller connected when the iQSS utility screen is called up with a special function switch.
For the details of the iQSS utility function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



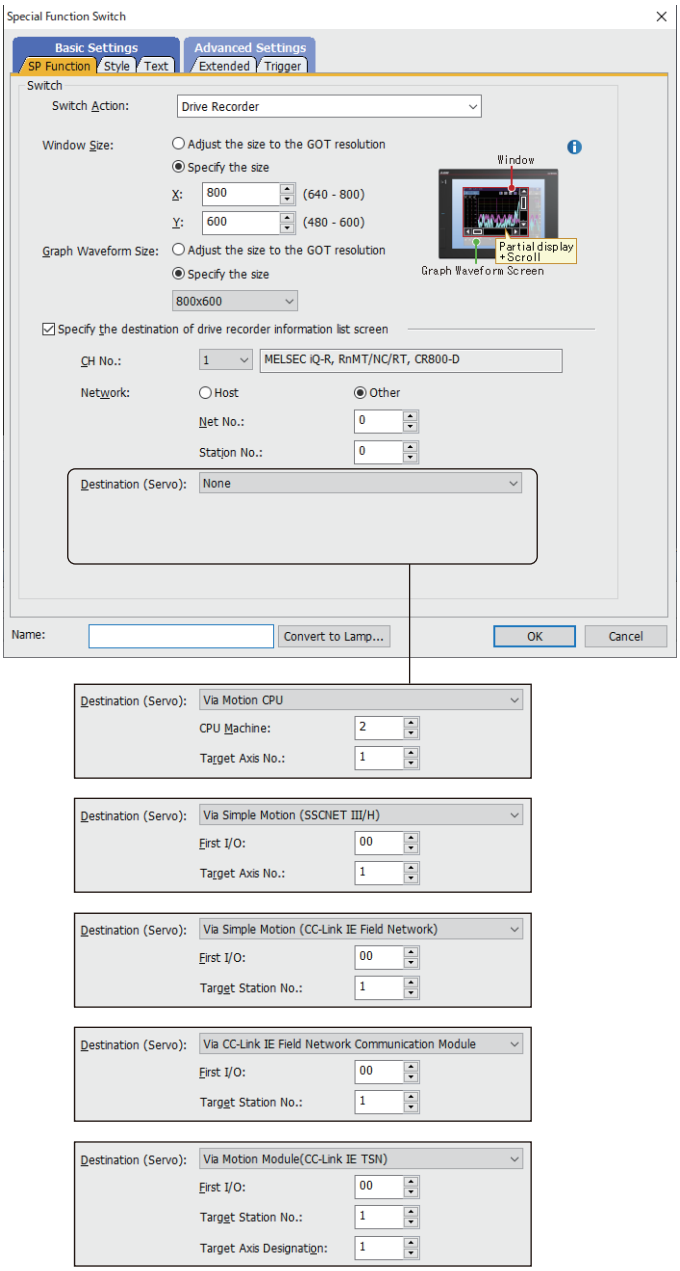
- [Specify the destination to connect the screen of iQSS Utility]
  - [CH No.]:
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-L]
    [MELIPC]
  - [Network]:
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]:
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]:
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].

To use the iQSS utility special control, select [Specify the destination to connect the screen of iQSS Utility], and set the sensor device number to [Name].
Set [<iQSS=n>] (sensor device number) to [Name].
You can set 0 to 65534 to "n".

(w) **Setting for [Drive Recorder]**

Set the screen display size and the connection destination for the drive recorder that is started with a special function switch.
For the details of the drive recorder, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



• [Window Size]

This item is settable for GT27-X, GT27-S, GT25-W, GT25-S, GT SoftGOT2000 and GS25.

Set the window size of the graph waveform screen.

· [Adjust the size to the GOT resolution]:
Adjusts the window size of the graph waveform screen to the GOT resolution.

· [Specify the size]:
Specify the window size directly.
The setting range depends on the GOT model.

• [Graph Waveform Size]

This item is settable for GT27-X, GT27-S, GT25-W, GT25-S, GT SoftGOT2000 and GS25.

Set the size of the graph display area on the graph waveform screen.

· [Adjust the size to the GOT resolution]:
Adjusts the graph display area size to the GOT resolution.
This item is selectable when [Specify the size] is selected for [Window Size].

· [Specify the size]:
Select the graph display area size.
The setting range depends on the GOT model.

• [Specify the destination]

• [CH No.]:
Select the channel No. of the controller to be monitored.
The setting range is [1] to [4].

• [Network]:
Configure the network setting of the controller to be monitored.
Select [Host] to monitor the controller of the host station.
Select [Other] to monitor the controller of another station.

• [Net No.]:
When [Other] is selected for [Network], set the network No. of the controller to be monitored.
The setting range is [0] to [255].

• [Station No.]

When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.

The setting range is [0] to [120].

• [Destination (Servo)]:
Select the controller through which a servo amplifier is monitored.
The following shows selectable items.
[None]
[Via Motion CPU]
[Via Simple Motion (SSCNET III/H)]
[Via Simple Motion (CC-Link IE Field Network)]
[Via CC-Link IE Field Network Communication Module]
[Via Motion Module(CC-Link IE TSN)]
To specify a controller upon startup of the drive recorder, select [None].

• [CPU Machine]:
Specify the CPU number of a Motion CPU through which a servo amplifier is monitored.
The setting range is [2] to [4].

• [First I/O]:
Specify the start I/O number of a Simple Motion module, CC-Link IE Field Network communication unit, or Motion module through which a servo amplifier is monitored.
The setting range varies with the controller.
When the controller is set to [MELSEC iQ-F] and [Network] is set to [Host], the setting range is [01] to [10].
In other cases, the setting range is [00] to [FF].

• [Target Axis No.]:
Specify the number of an axis from which data is read.
The setting range is [1] to [64].

• [Target Station No.]:
Specify the station number of a controller from which data is read.
The setting range is [0] to [120].

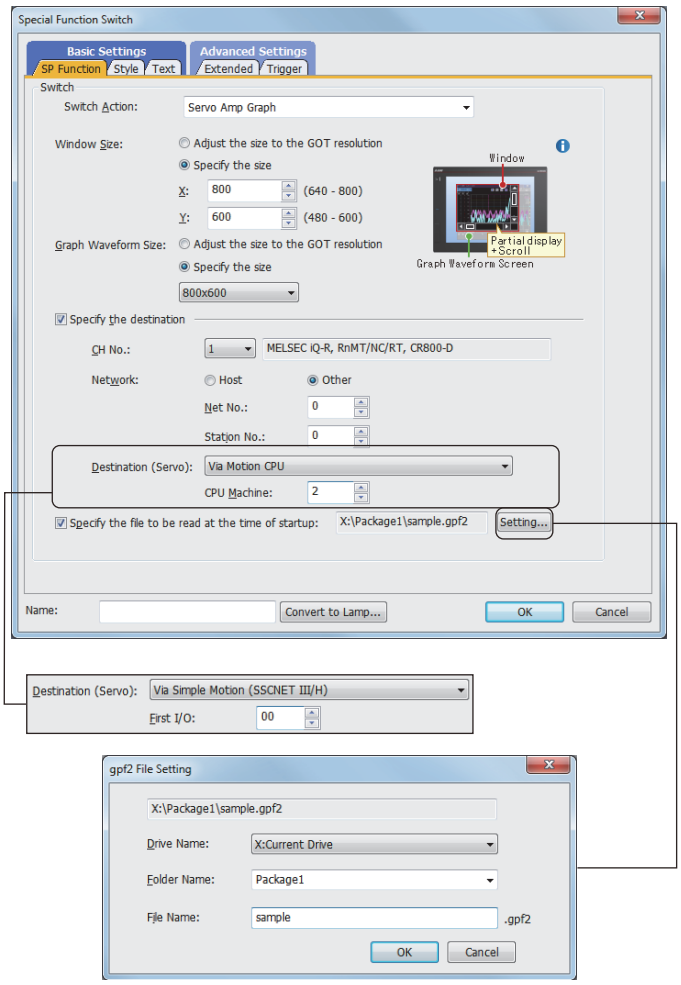
• [Target Axis Designation]:
Specify the axis from which data is read.
The following shows selectable items.
[1]: Single-axis/Axis A
[2]: Axis B
[3]: Axis C

(x) Settings for [Servo Amp Graph]

Set the screen display size and the connection destination for the servo amplifier graph that is started with a special function switch.

For the details of the servo amplifier graph, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



- [Window Size]

  This item is settable for GT27-X, GT27-S, GT25-W, GT25-S, GT SoftGOT2000 and GS25.

  Set the window size of the graph waveform screen.

  - [Adjust the size to the GOT resolution]:

    Adjusts the window size of the graph waveform screen to the GOT resolution.

  - [Specify the size]:

    Specify the window size directly.
    The setting range depends on the GOT model.

- [Graph Waveform Size]

  This item is settable for GT27-X, GT27-S, GT25-W, GT25-S, GT SoftGOT2000 and GS25.

  Set the size of the graph display area on the graph waveform screen.

  - [Adjust the size to the GOT resolution]:

    Adjusts the graph display area size to the GOT resolution.
    This item is selectable when [Specify the size] is selected for [Window Size].

  - [Specify the size]:

    Select the graph display area size.
    The setting range depends on the GOT model.

- [Specify the destination]

  - [CH No.]:

    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].

  - [Network]:

    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.

  - [Net No.]:

    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].

- [Station No.]

  When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.

  The setting range is [0] to [120].

  - [Destination (Servo)]:

    Select a controller through which a servo amplifier is monitored.
    The following shows selectable items.
    [None]
    [Via Motion CPU]
    [Via Simple Motion (SSCNET III/H)]
    [Via Motion Module(CC-Link IE TSN)]
    To connect the controller specified on the PLC side upon startup of the servo amplifier graph, select [None].
    [Via Motion Module(CC-Link IE TSN)] is selectable for the channels for which [MELSEC iQ-R, RnMT/NC/RT, CR800-D] is selected for [Controller Type].

  - [CPU Machine]:

    Specify the CPU number of a Motion CPU through which a servo amplifier is monitored.
    The setting range is [2] to [4].

  - [First I/O]:

    Specify the start I/O number of a Simple Motion module or Motion module through which a servo amplifier is monitored.
    The setting range varies with the controller.
    When the controller is set to [MELSEC iQ-F] and [Network] is set to [Host], the setting range is [01] to [10].
    In other cases, the setting range is [00] to [FF].

  - [Specify the file to be read at the time of startup]:

    Specify a waveform data file (*.gpf2) to be read upon startup of the servo amplifier graph.

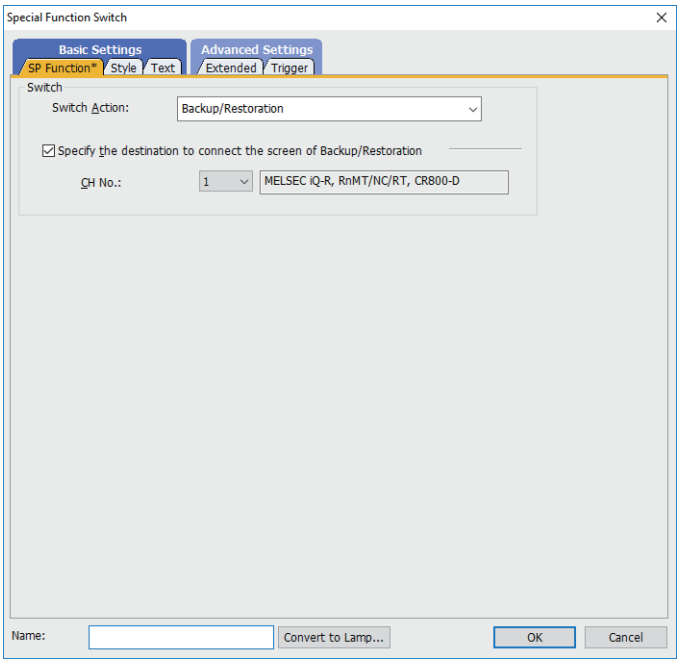
  - [Setting] button:

    Displays the [gpf2 File Setting] dialog.
    Set [Drive Name], [Folder Name], and [File Name] to specify the path of the file to be read.

(y) Setting for [Backup/Restoration]

Set a controller connected when the backup/restoration screen is called up with a special function switch.
For the details of the backup/restoration function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

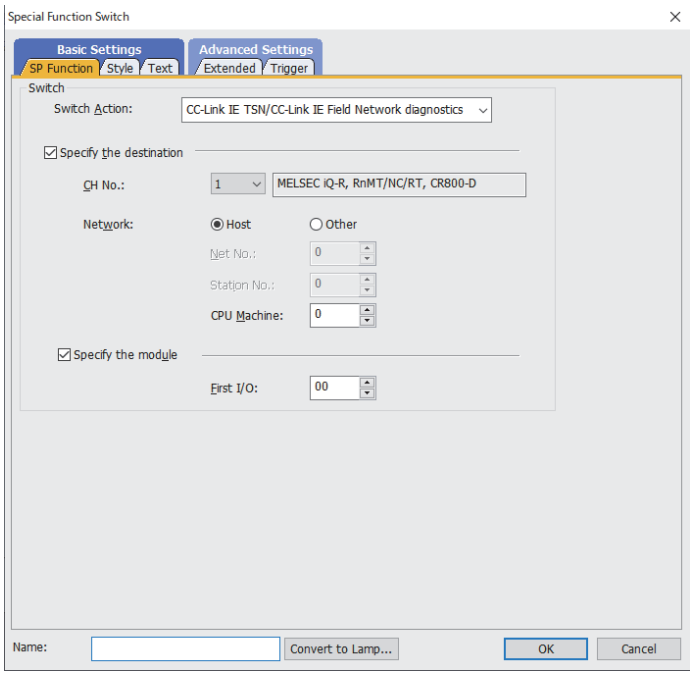


- [Specify the destination to connect the screen of Backup/Restoration]
  - [CH No.]:]
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC iQ-R, RnMT/RT, CR800-D]
    [MELSEC iQ-F]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]
    [MELSEC-QnA, MELDAS C6*]
    [MELSEC-L]
    [MELSEC-FX]
    [MELIPC]

(z) Settings for [CC-Link IE TSN/CC-Link IE Field Network diagnostics]

Set a controller connected when the screen for the CC-Link IE TSN/CC-Link IE Field Network diagnostics is called up with a special function switch.
For details on the CC-Link IE TSN/CC-Link IE Field Network diagnostics, refer to the following.

➟GOT2000 Series User's Manual (Monitor)



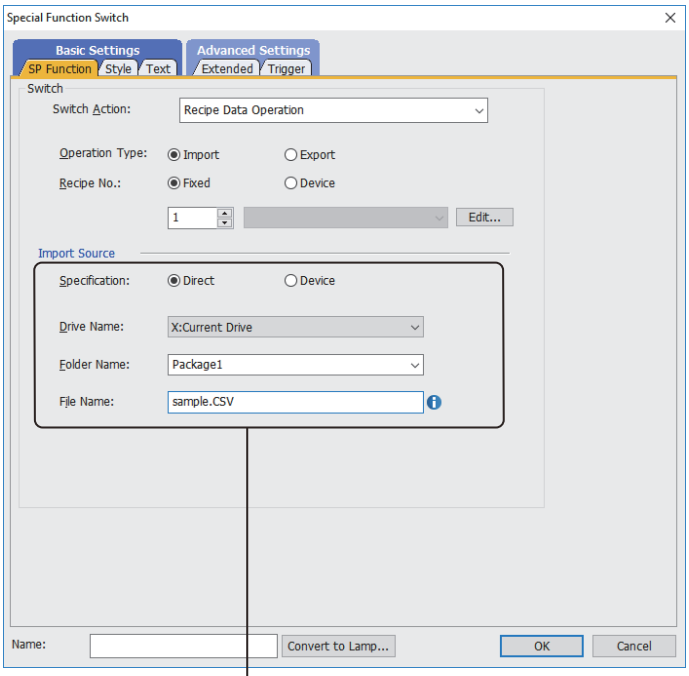
- **[Specify the destination]**
  - [CH No.]
    Select the channel No. of the controller to be monitored.
    The setting range is [1] to [4].
    Only the channel No. whose controller is any of the following models can be selected.
    [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
    [MELSEC iQ-F]
    [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]
    [MELSEC-L]
    [MELIPC]
  - [Network]
    Configure the network setting of the controller to be monitored.
    Select [Host] to monitor the controller of the host station.
    Select [Other] to monitor the controller of another station.
  - [Net No.]
    When [Other] is selected for [Network], set the network No. of the controller to be monitored.
    The setting range is [0] to [255].
  - [Station No.]
    When [Other] is selected for [Network], set the PC station No. of the controller to be monitored.
    The setting range is [0] to [120].
  - [CPU Machine]
    Set the CPU No. of the controller to be monitored.
    The setting range is [0] to [4].
- **[Specify the module]**
  - [First I/O]
    Set the start I/O number of a controller to be monitored.
    The setting range is [00] to [FF].

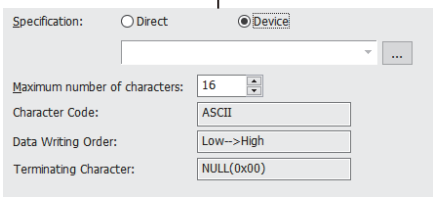
(aa) **Settings for [Recipe Data Operation]**

Set the detailed settings to import or export recipe data.

For the details of the recipe function, refer to the following.

➟9.3.3 How to use the recipe





- [Operation Type]

  Set the operation to be performed when the touch switch is touched.

  · [Import]:

  Imports data from the recipe file specified with [Import Source] into the recipe data specified with [Recipe No.].

  · [Export]:

  Exports the recipe data specified with [Recipe No.] to the recipe file specified with [Export Destination].

- [Recipe No.]

  · [Fixed]:

  Specifies the target recipe data with a specific recipe number.
  Select this item, and then specify the recipe number of the recipe data to be imported or exported.
  The setting range is [1] to [32767].
  If recipe names are set for each recipe data, the target recipe data is selectable from among the recipe names as well.
  Click the [Edit] button to display the [Recipe] dialog.
  Configure the settings of recipe data as necessary.

  · [Device]:

  Specifies the target recipe data with a device value.
  Select this item, and then specify a device.
  You can specify an unsigned 16-bit binary word device or word-specified bit device.

- [Import Source] and [Export Destination]

  When selecting [Import] for [Operation Type], set the import source file.

  When selecting [Export] for [Operation Type], set the export destination file.

- [Specification]

  Select the method of specifying a recipe file as the import source or export destination.

  When selecting [Direct] for [Specification], specify the path to the recipe file.

  When selecting [Device] for [Specification], specify the start device of consecutive devices that store the full path of the recipe file.

  You can specify an unsigned 16-bit binary word device.

- [Drive Name]

  Set this item when selecting [Direct] for [Specification].
  Select the drive in which the import source file or export destination file is stored.
  The following shows selectable items.
  [A:Standard SD Card]
  [B:USB Drive]
  [E:USB Drive]
  [F:USB Drive]
  [G:USB Drive]
  [X:Current Drive]
  For the available drives by GOT model, refer to the following.

  ➟1.2.8 Drive configuration of the target GOT for data transfer

- [Folder Name]

  Set this item when selecting [Direct] for [Specification].

  Specify the path to the import source folder or export destination folder.

- [File Name]

  Set the file name of the import source file or export destination file.

  The file must be in the binary format (*.G2P), Unicode text format (*.TXT), or CSV format (*.CSV).

- [Maximum number of characters]

  Set this item when selecting [Device] for [Specification].

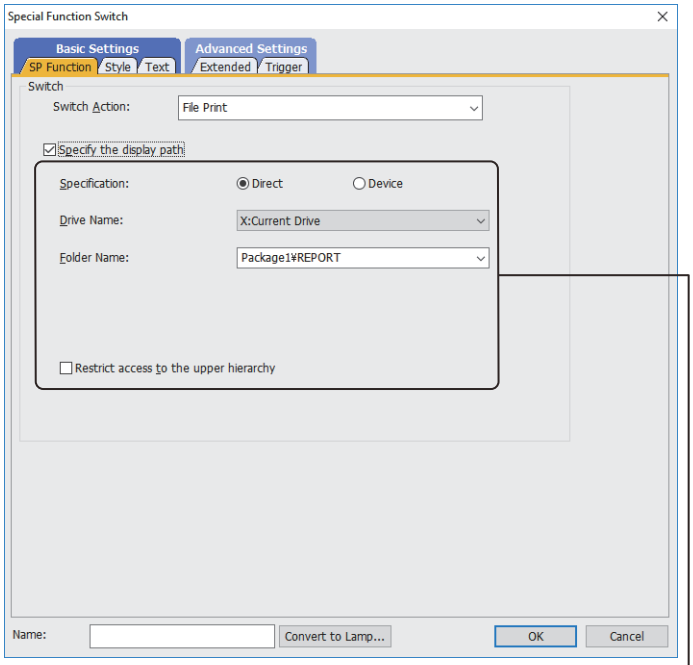
  Specify the maximum number of characters for the full path of the recipe file.

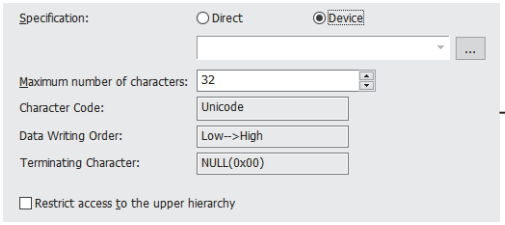
  The setting range is [8] to [78].

(ab) **Settings for [File Print]**

Set the folder to be displayed when the print file list display screen is called up with a special function switch.
For the details of the file print function, refer to the following.

➟GOT2000 Series User's Manual (Utility)





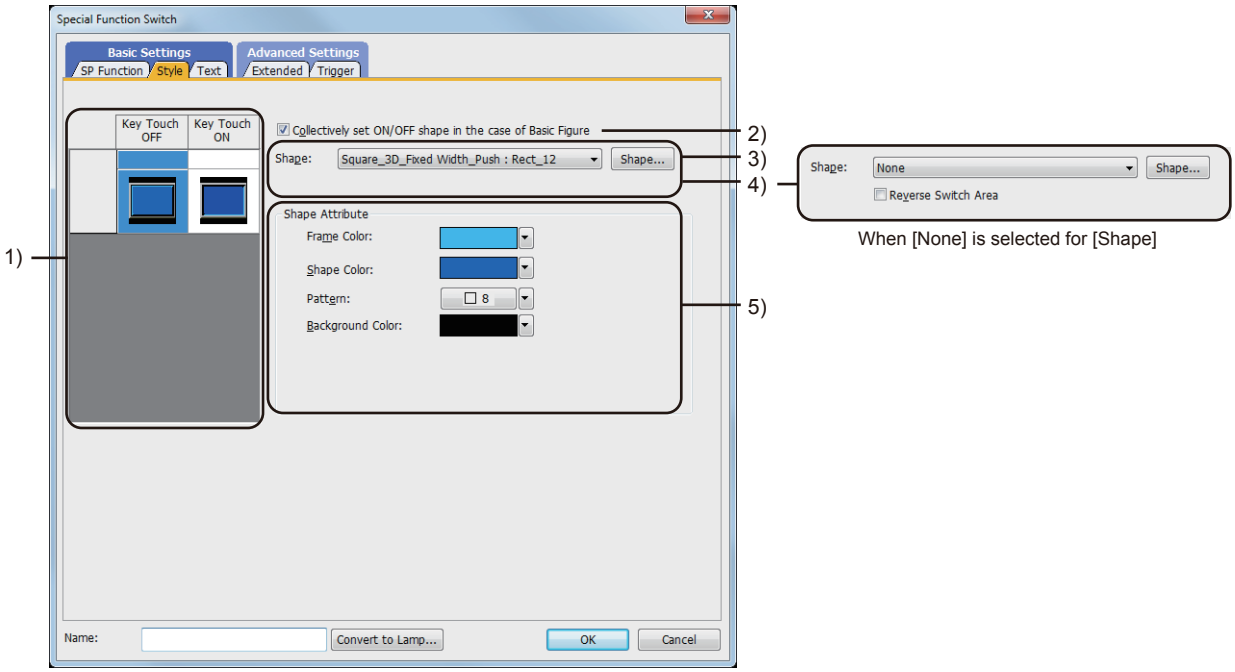
- [Specify the display path]
  Specify the folder to be displayed when the print file list display screen is called up.
- [Specification]
  Select a method of specifying the folder to be displayed.
  When selecting [Direct], specify the folder path directly.
  When selecting [Device], specify the start device of consecutive devices that store the full path of the folder.
  The number of the consecutive devices equals half of the set value of [Maximum number of characters].
- [Drive Name]
  Set this item when selecting [Direct] for [Specification].
  The following shows selectable items.
  [A:Standard SD Card]
  [B:USB Drive]
  [E:USB Drive]
  [F:USB Drive]
  [G:USB Drive]
  [N:Network Drive]
  [X:Current Drive]
  For the available drives by GOT model, refer to the following.
  ➟1.2.8 Drive configuration of the target GOT for data transfer
- [Folder Name]
  Set this item when selecting [Direct] for [Specification].
  Specify the folder path.
- [Maximum number of characters]
  Set this item when selecting [Device] for [Specification].
  Specify the maximum number of characters for the folder path.
  The setting range is [1] to [75].
- [Restrict access to the upper hierarchy]
  Disables the access to a parent folder from the folder that is displayed when the print file list display screen is called up.

■2 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].
Select this item to collectively change the shapes of the touch switches except [Press Twice].

3) **[Shape]**

Set the shape of the touch switch.
To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

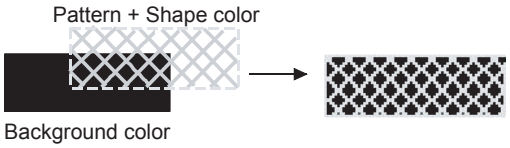
4) **[Reverse switch area]**

GOT Graphic Ver.1

This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].
Inverts the color of the touch switch.
When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

5) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.

Item	Description
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: 

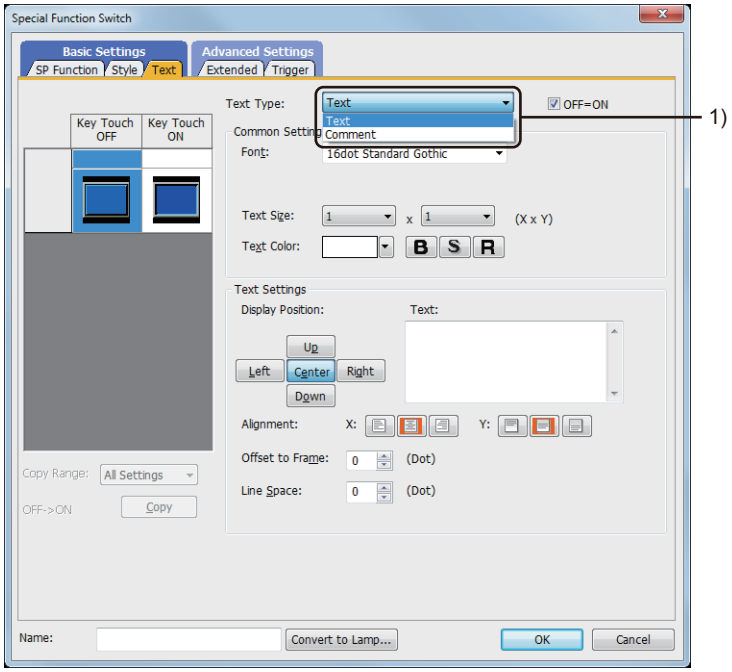
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

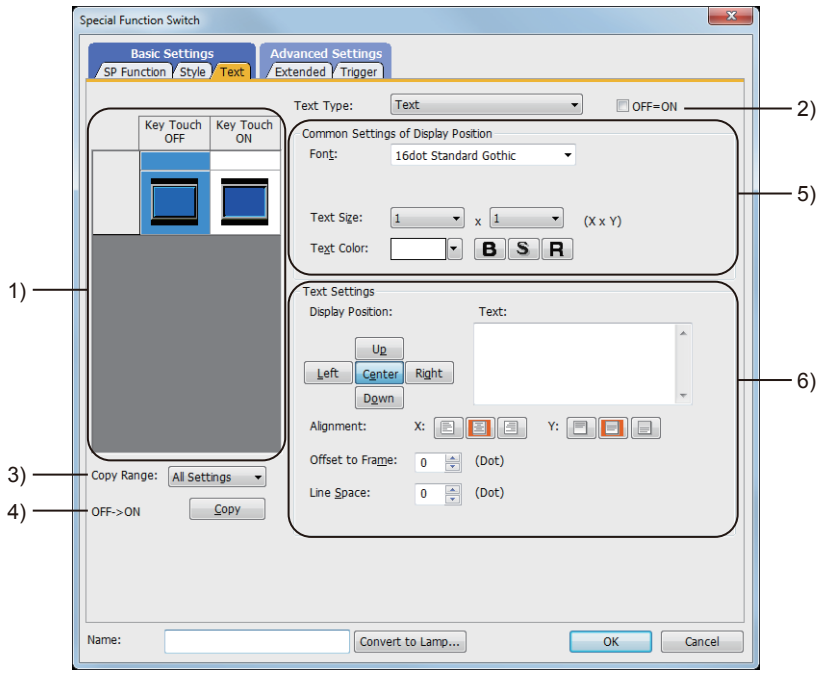
➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]



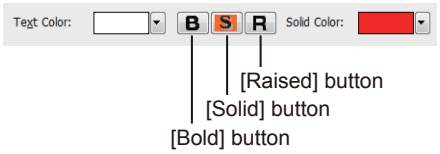
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

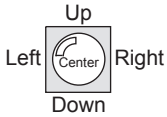
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

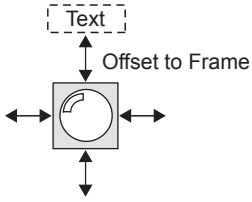
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) [Common Setting of Display Position]

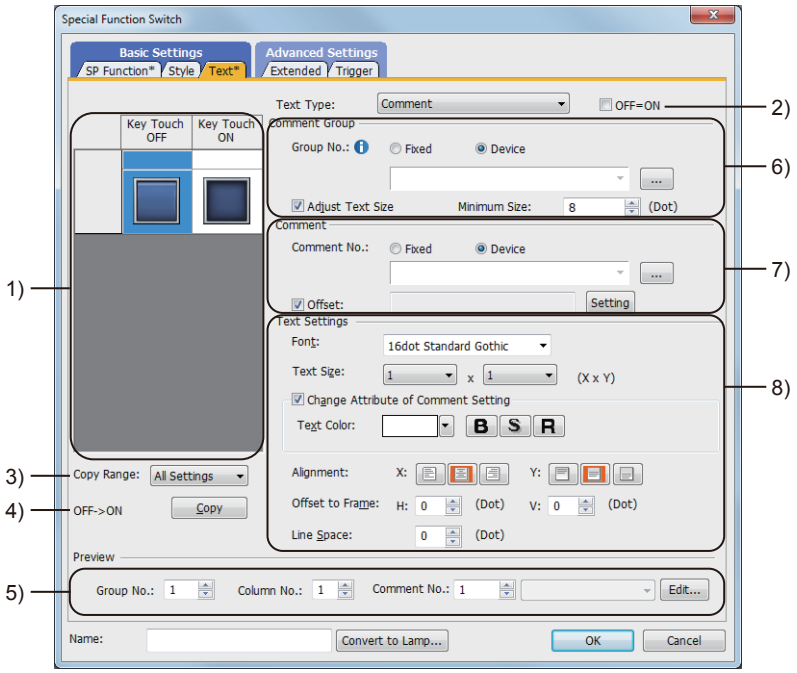
Item	Description
[Font]	Select the font of the displayed text. The following shows selectable items. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➥1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➥6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

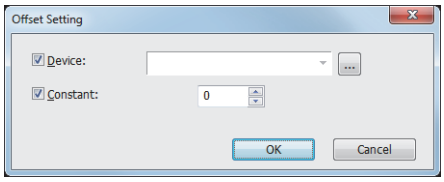
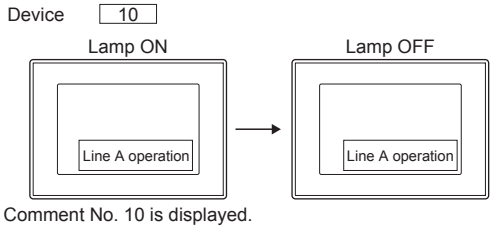
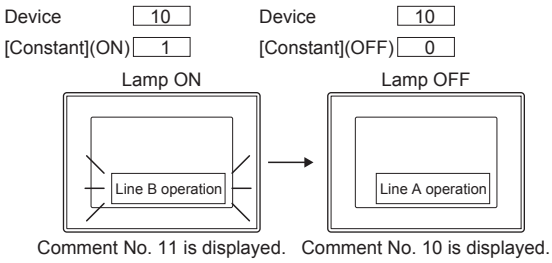
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

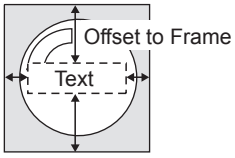
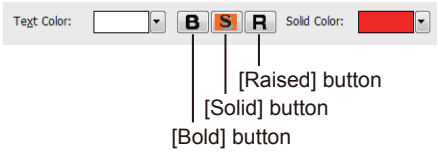
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. ➡6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➡12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➡6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • [Device] Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • [Constant] Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed. 

8) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows selectable items. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

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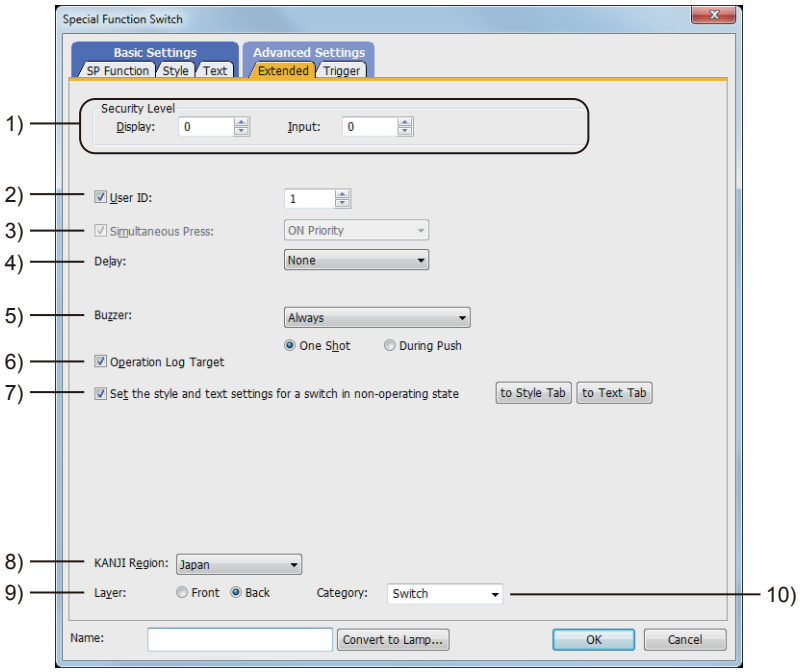
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

Setting the user ID enables identifying the object by the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

When multiple objects are set on the same screen editor, the target object may not operate.

To make sure that the target object operates, match the user ID with the user ID of the target object.

3) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

4) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time.
  This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.
  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
  After selecting the delay, set the delay time.

• [Delay Time]: The setting range is [1] to [5].

5) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

• [Always]: The buzzer is sounded every time you touch the touch switch.
In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.

• [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.

• [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

• [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.

• [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

6) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

7) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

8) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows selectable items.

• [Japan]

• [China(GB)-Mincho]

• [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

• [12dot Standard]

• [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)

• [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)

• [16dot Standard] (GT23, GT21, and GS21)

• [12dot HQ Mincho]

• [12dot HQ Gothic]

• [16dot HQ Mincho]

• [16dot HQ Gothic]

• [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Outline] (GT2107-W and GS21-W-N)

9) **[Layer]**

Select the layer to arrange the object on.
The following shows selectable items.

• [Front]

• [Back]

➟6.5.5 ■3 Superimposition

10) **[Category]**

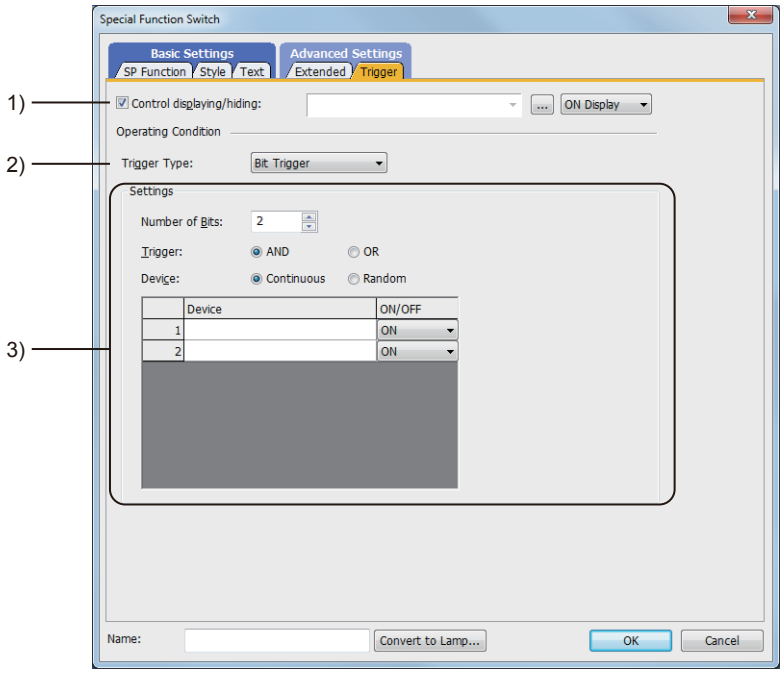
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows selectable items.
- [ON Display]
- [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows selectable items.
- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**
For details of each item, refer to the following.
➟6.2.2 Setting Trigger Types

8.2.10 [Key Window Display Switch] dialog

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The key window display switch displays a specified key window at a specified position, or displays a cursor on a specified object.

Step 1 Select [Object] → [Switch] → [Key Window Display Switch] from the menu.

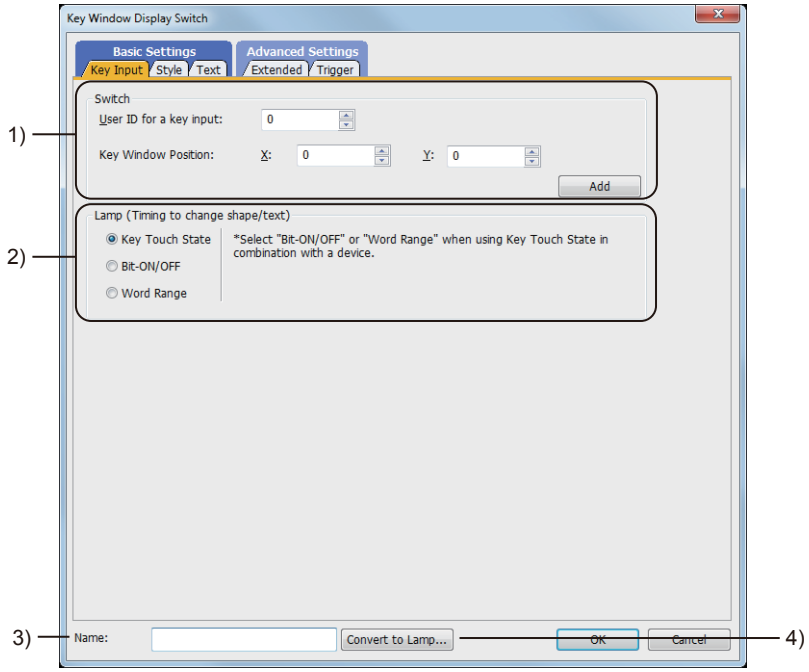
Step 2 Click the position where you arrange the key window display switch.

Step 3 Double-click the arranged key window display switch to display the setting dialog.

➥■1 [Key Input] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [Key Input] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) [Switch Action]

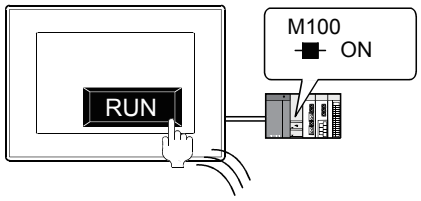
Item	Description
[User ID for a key input]	Set the user ID for the object on which the cursor is displayed when you touch the key window display switch. The setting range is [0] to [65535].
[Key Window Position]	Specify the position (top-left coordinate) where the key window is displayed. The maximum settable value is one dot smaller than the vertical or horizontal size of the GOT screen. • [X]: Specify the coordinate value of the X axis. • [Y]: Specify the coordinate value of the Y axis.
[Add] button	Adds actions to the switch. ➥8.2.4 ■1 [Action] tab

2) [Lamp (Timing to change shape/text)]

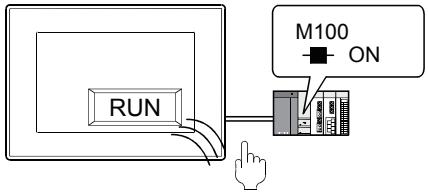
Select how to switch touch switch images (shapes of on status and off status).

• Switching the touch switch image according to the touch operation

Select [Key Touch State].



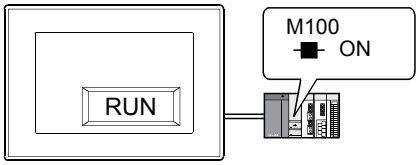
The shape of on status
is displayed while you touch the touch switch.



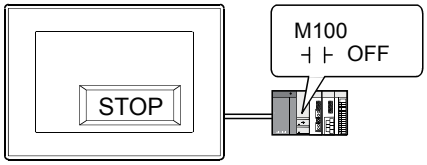
The shape of off status
is displayed regardless of the device status
while you do not touch the touch switch.

• Switching the touch switch image according to the status of the corresponding device
Select [Bit-ON/OFF] or [Word Range].

Example) Bit: When M100 is set



The shape of on status
is displayed when M100 is on.



The shape of off status
is displayed when M100 is off.

To switch the touch switch image using the lamp on and lamp off status in combination with the key touch on and key touch off status, refer to the following.

➟8.2.4 ■2 [Style] tab

Item	Description
[Key Touch State]	The shape of the key touch on status is displayed while you touch the touch switch. The shape of the key touch off status is displayed while you do not touch the touch switch.
[Bit-ON/OFF]	When the bit device set in [Device] turns on, the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the device. ➟6.1.2 How to set devices
[Word Range]	When the word device set in [Device] is within the range specified in [ON Range], the shape of the lamp off status is switched to the shape of the lamp on status. After selecting this item, set the followings. • [Device]: Set the word device. ➟6.1.2 How to set devices • [Data Type]: Select the data type of the word device. The following shows the items to be selected. [Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD16] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)] • [ON Range]: After setting the specified word device, click the [Exp] button to set the switching range between the shape of the lamp on status and the shape of the lamp off status. ➟6.2.2 Setting Trigger Types

3) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

4) **[Convert to Lamp] button**
Converts the object type to the lamp.

➟8.2.2 How to use touch switch

■2 [Style] tab

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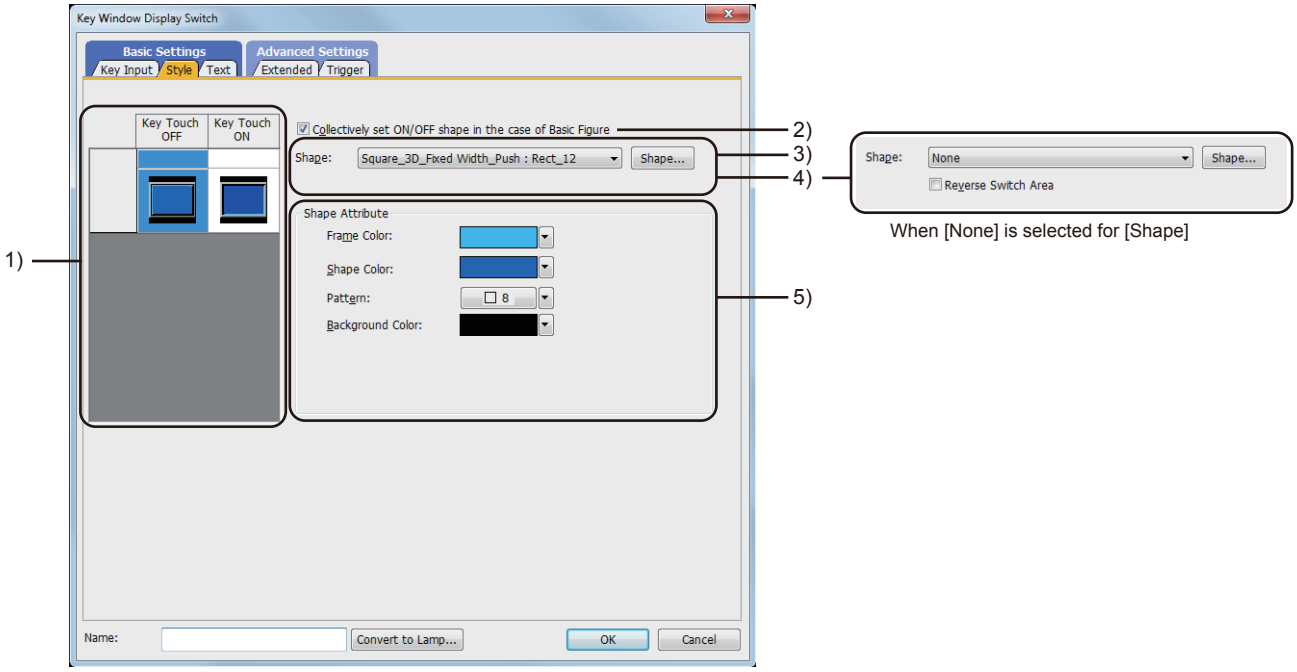

1) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].

Select this item to collectively change the shapes of the touch switches except [Press Twice].

3) **[Shape]**

Set the shape of the touch switch.

To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

4) **[Reverse switch area]**

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This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].

Inverts the color of the touch switch.

When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

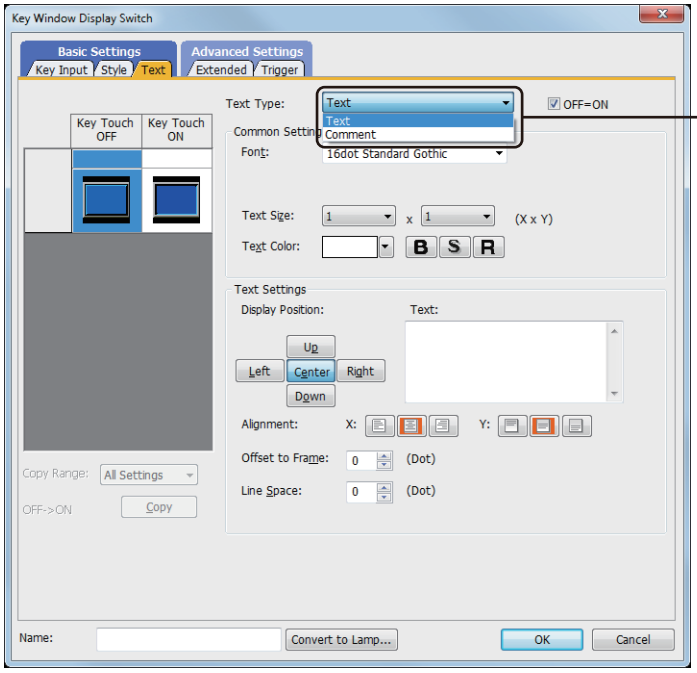
5) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

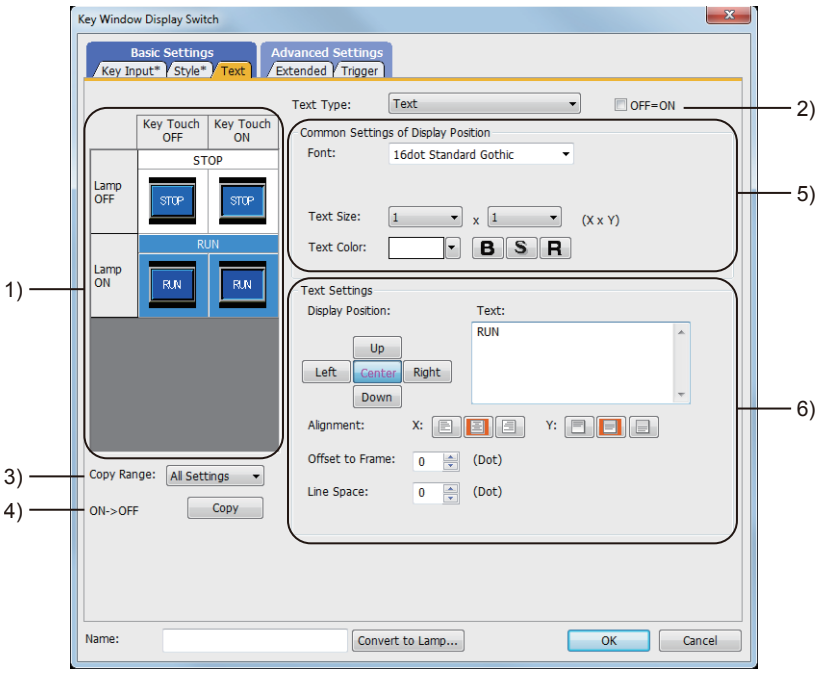
Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]

(2) [Comment]

(1) [Text]



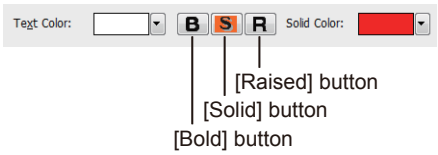
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

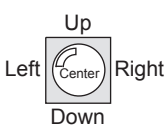
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

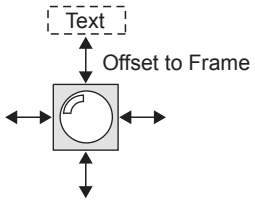
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Common Setting of Display Position]**

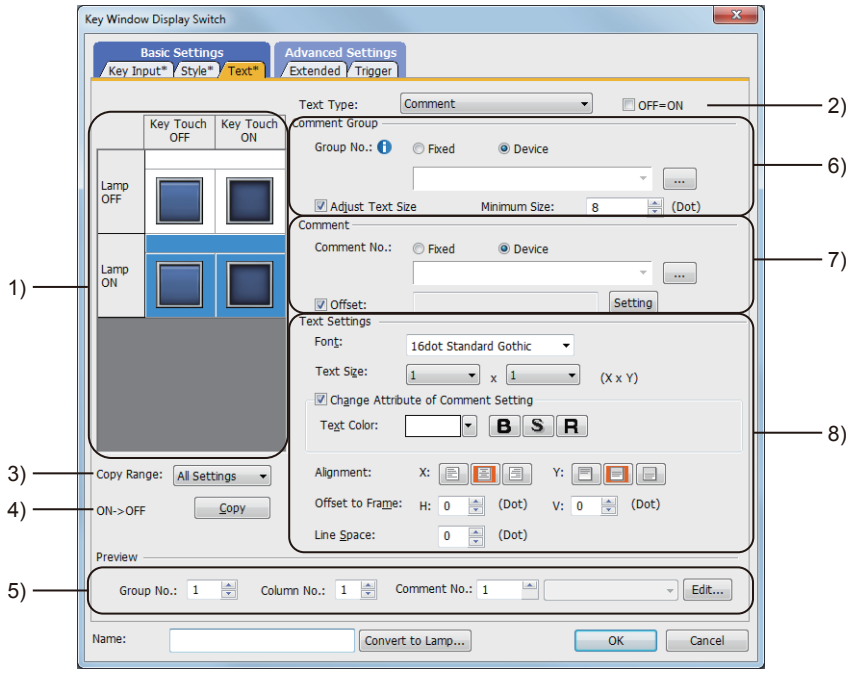
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) **[Text Settings]**

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]:
  Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]:
  Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

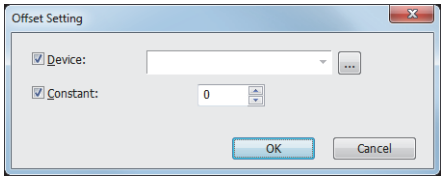
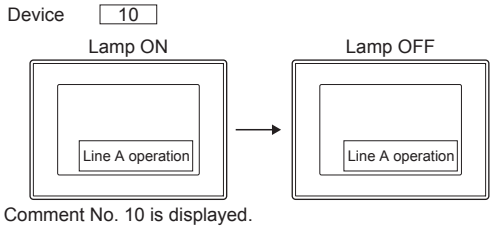
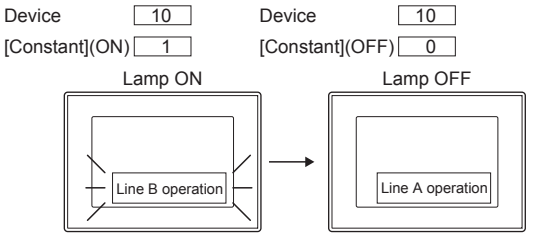
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

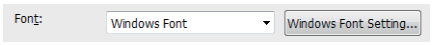
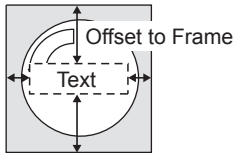
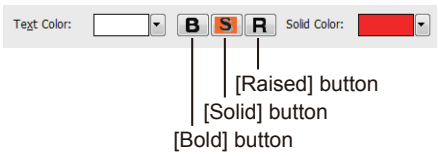
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

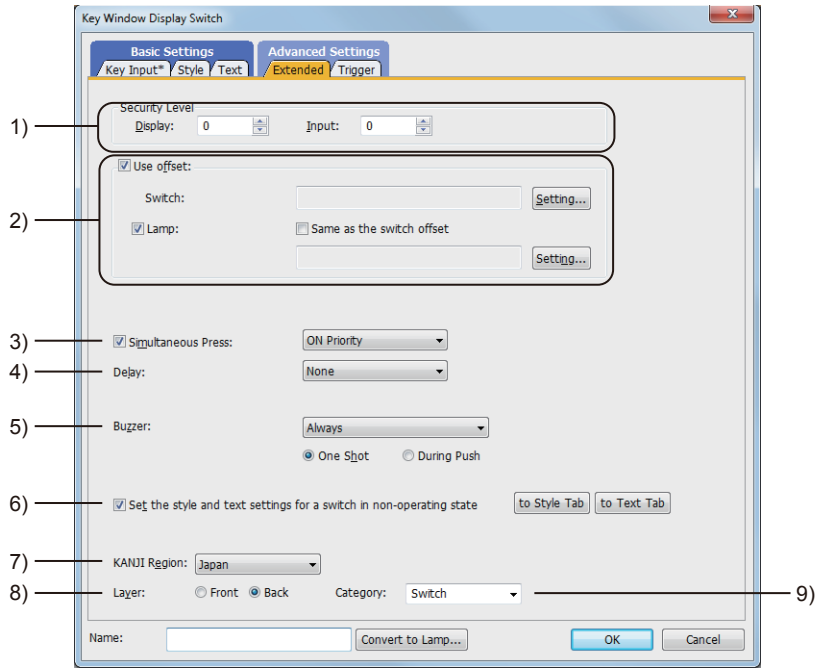
Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • [Device] Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • [Constant] Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  Comment No. 10 is displayed. • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed.  Comment No. 11 is displayed. Comment No. 10 is displayed.

8) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Monitors multiple devices by switching between them.

➟6.1.11 Offset

Item	Description
[Switch]	Set the offset device for the switch function. ➟6.1.2 How to set devices
[Lamp]	Set the offset device for the lamp function. ➟6.1.2 How to set devices • [Same as the switch offset] Uses the offset device set for [Switch].

3) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

4) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time. This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.

  The switch is on during the set time.

• [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.
After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.
Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.
After selecting the delay, set the delay time.
• [Delay Time]: The setting range is [1] to [5].

5) **[Buzzer]**
Select the timing of the buzzer when you touch the touch switch.
• [Always]: The buzzer is sounded every time you touch the touch switch.
In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.
• [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.
• [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.
• [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.
• [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

6) **[Set the style and text settings for a switch in non-operating state]**
Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.
[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.
➟8.2.4 ■2 [Style] tab
[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.
➟8.2.4 ■3 [Text] tab

7) **[KANJI Region]**
Select a KANJI region of the displayed text.
➟1.2.5 Font specifications
The following shows the items to be selected.
• [Japan]
• [China(GB)-Mincho]
• [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.
• [12dot Standard]
• [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
• [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
• [16dot Standard] (GT23, GT21, and GS21)
• [12dot HQ Mincho]
• [12dot HQ Gothic]
• [16dot HQ Mincho]
• [16dot HQ Gothic]
• [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
• [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
• [Outline] (GT2107-W and GS21-W-N)

8) **[Layer]**
Select the layer to arrange the object on.
The following shows the items to be selected.
• [Front]
• [Back]

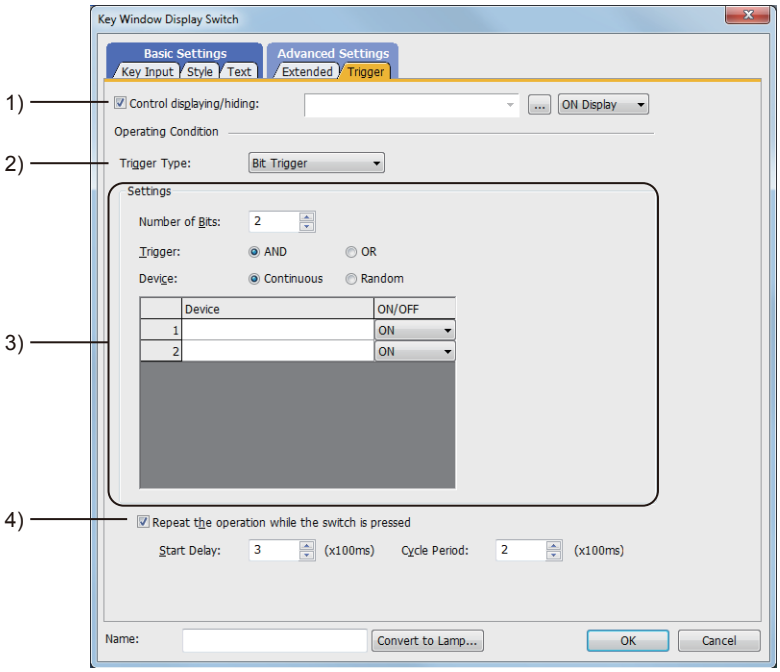
➟6.5.5 ■3 Superimposition

9) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**
For details of each item, refer to the following.
➟6.2.2 Setting Trigger Types

4) **[Repeat the operation while the switch is pressed]**
Select this item to allow the switch to repeat the same operation while you touch the touch switch.
For operations for which [Repeat the operation while the switch is pressed] can be set, refer to the following.
➟8.2.3 Precautions for a touch switch

Item	Description
[Start Delay]	Set the time period from when you touch the touch switch to when the operation repeat starts. The setting range is [1] to [20].
[Cycle Period]	Set the cycle for the operation repeat. The setting range is [1] to [10].

8.2.11 [Key Code Switch] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key code switch enables key input into numerical input and text input, alarm display, data list display, and alarm control.

Step 1 Select [Object] → [Switch] → [Key Code Switch] from the menu.

Step 2 Click the position where you arrange the key code switch.

Step 3 Double-click the arranged key code switch to display the setting dialog.

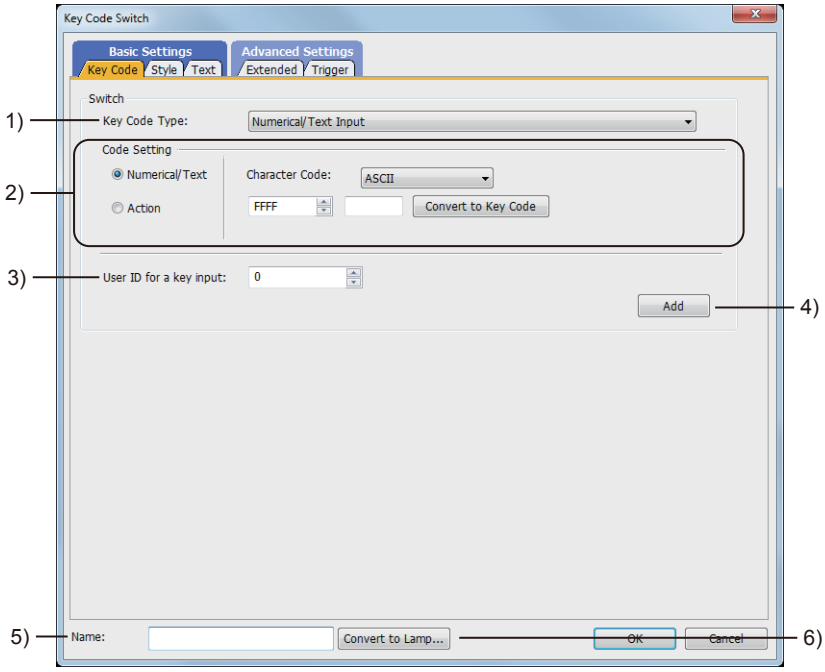
➟■1 [Key Code] tab
■2 [Style] tab
■3 [Text] tab
■4 [Extended] tab
■5 [Trigger] tab

■1 [Key Code] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Key Code Type]**

Specify the key code type.

- [Numerical/Text Input]: Inputs a key code for the numerical input or text input.
- [Alarm Display]: Inputs a key code for the alarm display (user), alarm display (system), or simple alarm display.

  ➟9.1.5 Viewing alarm events (Alarm display)
  8.13.2 How to use the system alarm display
- [Recipe Display (Record List)]: Inputs a key code for the recipe display (record list).

  ➟8.14.1 Specifications of the recipe display (record list)
- [Historical Trend Graph/Historical Data List]: Inputs a key code for the historical trend graph or historical data list display.

  ➟8.21.1 Specifications of the historical trend graph
- [Document Display]: Inputs a key code for the document display.

  ➟8.26.3 How to use the document display (for Document Converter output files)
- [Screen Gesture]: Inputs a key code for the screen gesture.

2) **[Code Setting]**

Item	Description
[Numerical/Text]	Inputs a numerical value or a character in its key code. Select an item for [Character Code], enter a numerical value or character in the selected character code, and click the [Convert to Key Code] button. The entered value or character is automatically converted to its key code. The following shows the items to be selected for [Character Code]. • [ASCII] • [Unicode] • [S-JIS] • [GB] • [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Big5] • [Not specify] When [Not specify] is selected for [Character Code], no character code conversion is executed and the key code switch operates using the character code set in the linked text input.
[Action]	Sets an action using its key code. Selecting [Switch window screens for text (screen no. specification)] displays a spin box. Specify the screen to be displayed. The setting range is [1] to [10].

3) **[User ID for a key input]**

Set the user ID for the object on which the cursor is displayed when you touch the key code switch.

The setting range is [0] to [65535].

4) **[Add] button**

Adds actions to the switch.

➟8.2.4 ■1 [Action] tab

5) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

6) **[Convert to Lamp] button**

Converts the object type to the lamp.

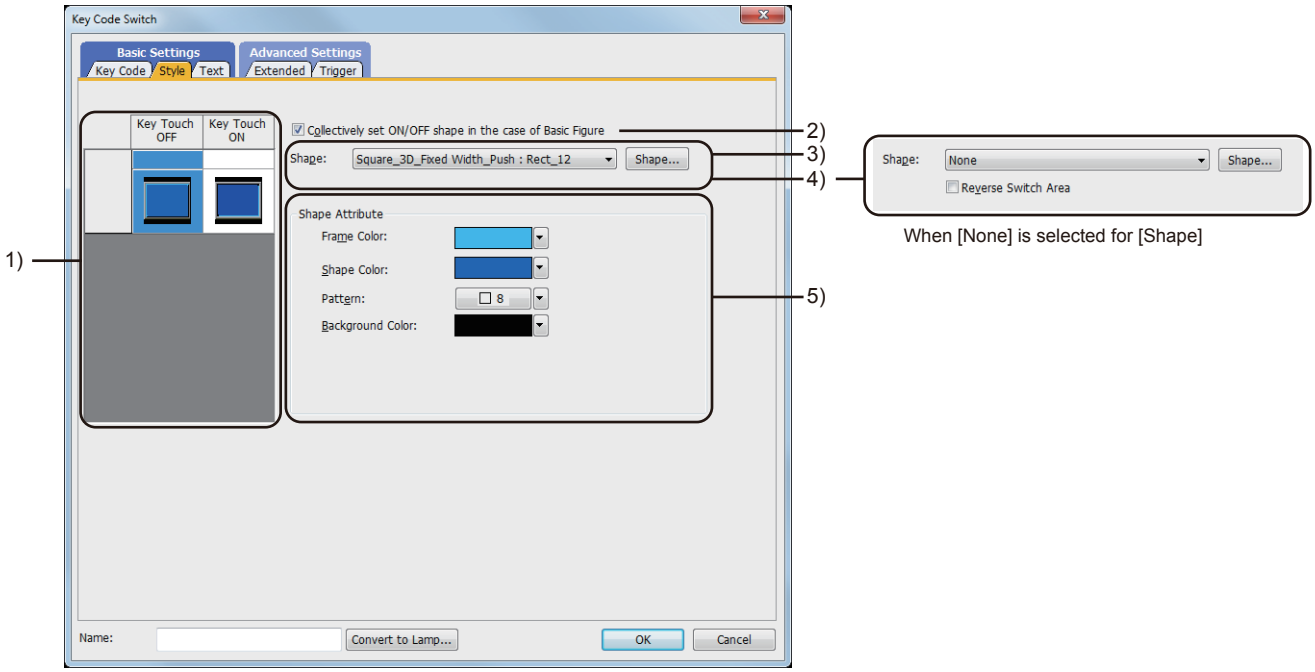
➟8.2.2 How to use touch switch

■2 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **Preview list**

Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function. The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab. The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[Collectively set ON/OFF shape in the case of basic figure]**

This item is available when [Basic Figure] is selected for [Shape].
Select this item to collectively change the shapes of the touch switches except [Press Twice].

3) **[Shape]**

Set the shape of the touch switch.
To select a shape other than those in the list box, click the [Shape] button.

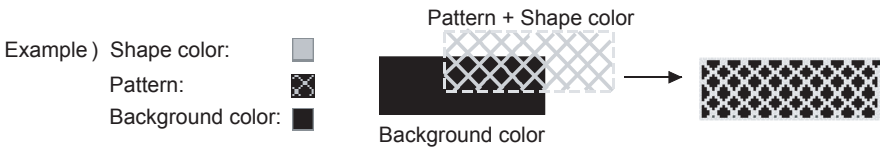
➟6.5.5 ■1 Setting object shapes

4) **[Reverse switch area]**

GOT Graphic Ver.1

This item is settable when an image in a state other than [Press Twice] and [When switch does not work] is selected in the preview list and [Shape] is set to [None].
Inverts the color of the touch switch.
When [Change a shape based on the key touch state] is selected, the touch switch is reversely displayed by switching between the key touch on and key touch off status.

5) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the touch switch shape.
[Shape Color]	Select the lamp color of the touch switch shape.
[Pattern], [Background Color]	Select the background color and the pattern for the touch switch shape. The selected pattern in the shape color is displayed on the background color. 

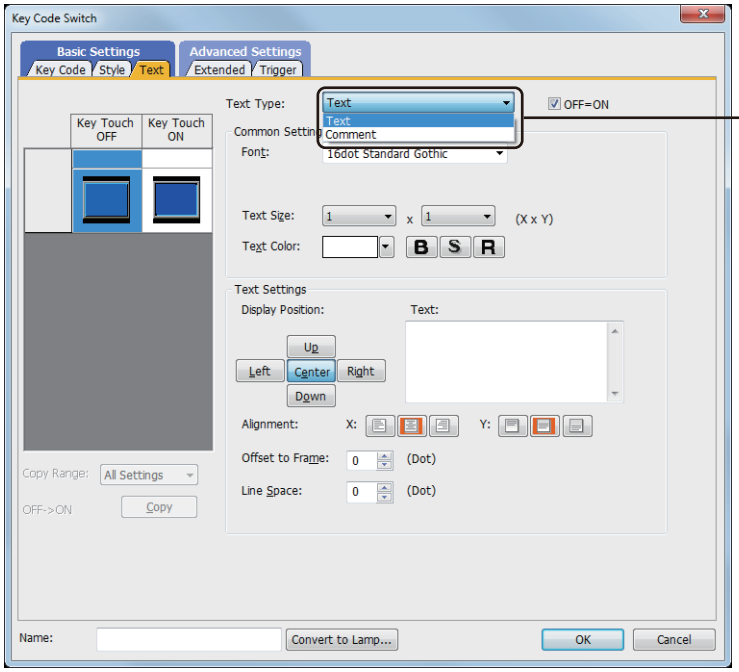
■3 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

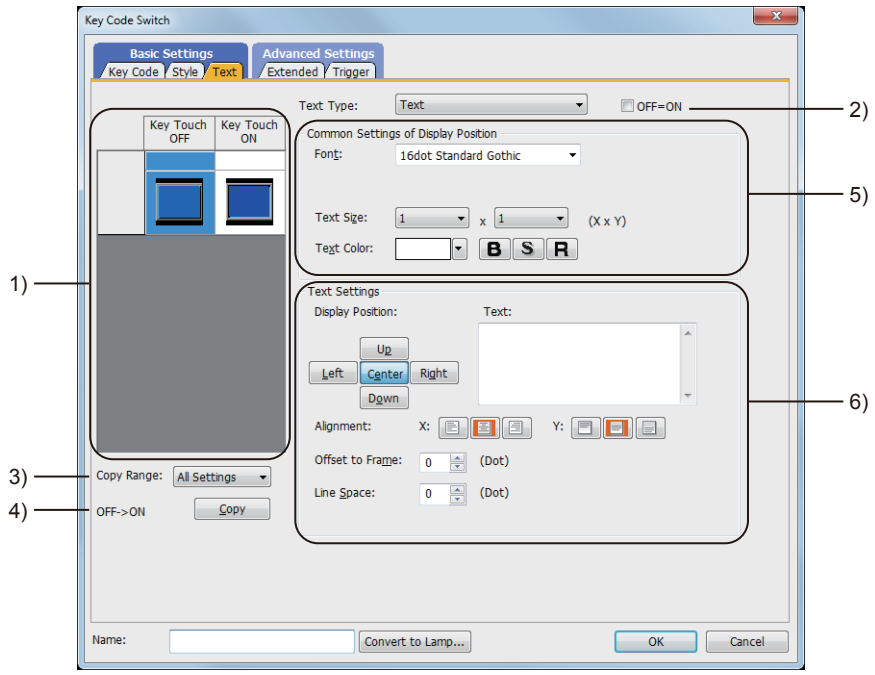
➟5.7.3 5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]



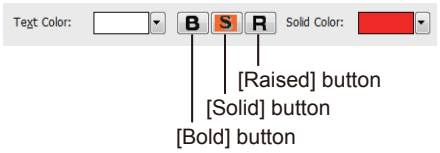
1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

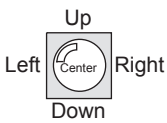
3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

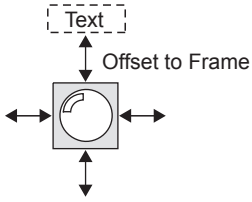
4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Common Setting of Display Position]**

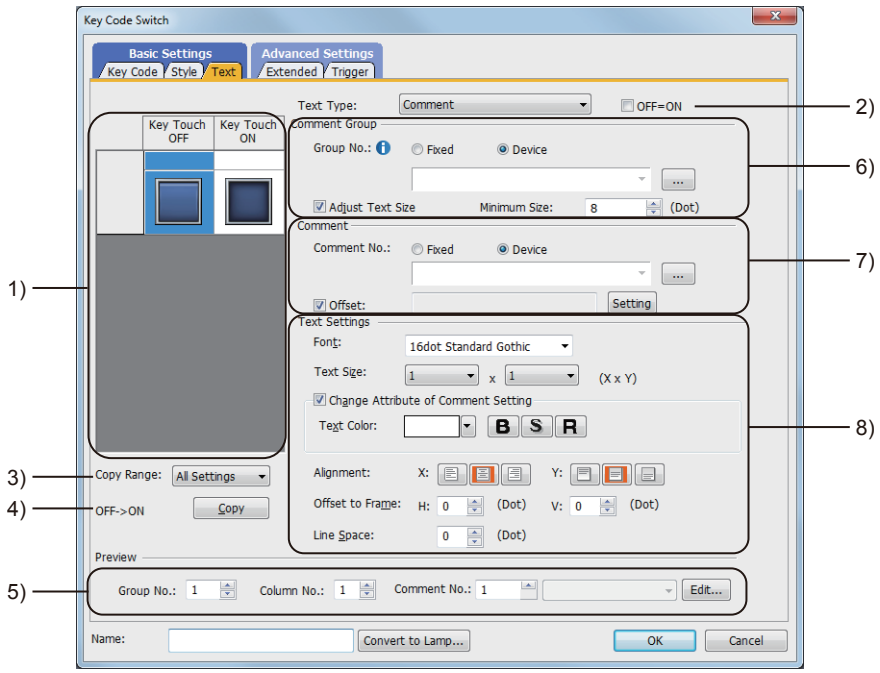
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➥1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➥6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) **[Text Settings]**

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the status when the device turns on or off, the switch is pressed twice, and the switch does not function.
The status of [Press Twice] is displayed only when [Press Twice] is set in [Delay] in the [Extended] tab.
The status of when the switch does not function is displayed only when [Set the style and text settings for a switch in non-operating state] is set in the [Extended] tab.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

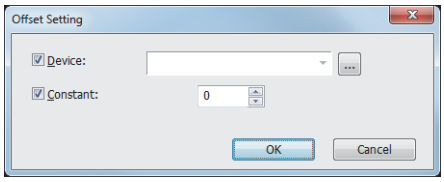
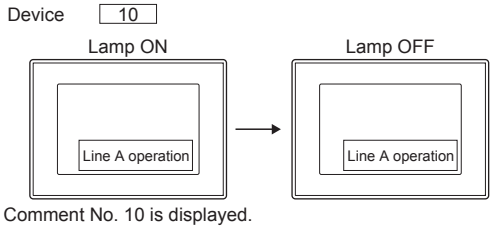
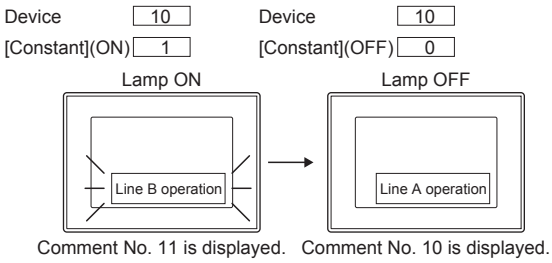
Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

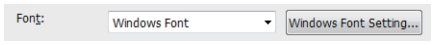
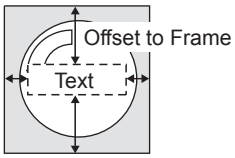
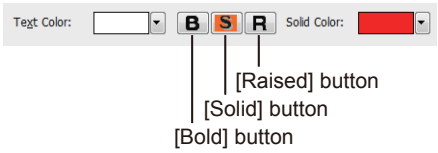
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

Item	Description
[Offset]	Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices This setting is available only when [Device] is selected for [Comment No.]. Click the [Setting] button, and set the offset in the [Offset Setting] dialog.  • [Device] Set this item to change the text display of the touch switch according to the device value. ➟6.1.2 How to set devices • [Constant] Set this item to add another value to the value of [Device] according to the indication status (on or off) of the lamp. After selecting this item, set the value to be added in the lamp on and off status. • When only [Device] is set The comment of the same number as the value of [Device] is displayed regardless of the lamp status.  • When [Device] and [Constant] are set When the lamp is on, the comment of the same number as the value derived from the addition of [Device] + [Constant](ON) is displayed. When the lamp is off, the comment of the same number as the value derived from the addition of [Device] + [Constant](OFF)] is displayed. 

8) **[Text Settings]**

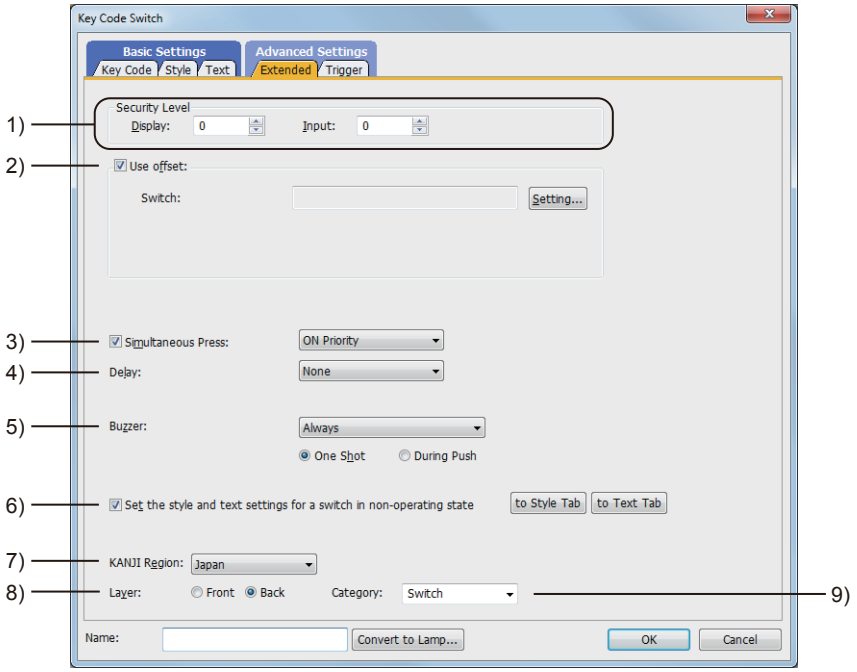
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[Simultaneous Press]**

Select this item to disable the simultaneous press for the switch and to set the action having a higher priority.

The following shows the items to be selected.

- [ON Priority]
- [OFF Priority]

For the details, refer to the following.

➟8.2.2 ■4 Disabling the simultaneous press for a touch switch

4) **[Delay]**

Select the delay.

- [None]: Select this item to set no delay.
- [ON]: Select this item to allow the switch to turn to the on status by pressing the touch switch for the set time. This setting can prevent incorrect operation.
- [OFF]: Select this item to allow the switch to turn to the off status after the set time passes since the touch switch is turned off.

  The switch is on during the set time.
- [Press Twice]: Select this item to allow the switch to function after you touch the touch switch once and then touch again within the set time.

  After selecting this item, configure the settings for [Press Twice] in the [Style] tab and the [Text] tab.

  Click the [To Style tab] and [To Text tab] buttons, and set [Press Twice] in the preview list.

  After selecting the delay, set the delay time.

• [Delay Time]: The setting range is [1] to [5].

5) **[Buzzer]**

Select the timing of the buzzer when you touch the touch switch.

• [Always]: The buzzer is sounded every time you touch the touch switch.
In GT21 and GS21, the buzzer does not sound if the security level of the operator is insufficient.

• [Only if conditions are met]: The buzzer is sounded only when you touch the touch switch with the operating condition satisfied.

• [None]: The buzzer is not sounded even when you touch the touch switch.

Set the following items when [Always] or [Only if conditions are met] is selected.

• [One Shot]: Select this item to sound the buzzer only at the moment you touch the touch switch.

• [During Push]: Select this item to keep sounding the buzzer while you touch the touch switch.

6) **[Set the style and text settings for a switch in non-operating state]**

Select this item to set how the touch switch is displayed when the operating condition in the [Trigger] tab is not satisfied or when the touch switch does not function due to the unsatisfied security level.

[To Style tab] button: Displays the [Style] tab. Set the shape displayed when the touch switch does not function.

➟8.2.4 ■2 [Style] tab

[To Text tab] button: Displays the [Text] tab. Set the text displayed when the touch switch does not function.

➟8.2.4 ■3 [Text] tab

7) **[KANJI Region]**

Select a KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

• [Japan]

• [China(GB)-Mincho]

• [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

• [12dot Standard]

• [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)

• [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)

• [16dot Standard] (GT23, GT21, and GS21)

• [12dot HQ Mincho]

• [12dot HQ Gothic]

• [16dot HQ Mincho]

• [16dot HQ Gothic]

• [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Outline] (GT2107-W and GS21-W-N)

8) **[Layer]**

Select the layer to arrange the object on.

The following shows the items to be selected.

• [Front]

• [Back]

➟6.5.5 ■3 Superimposition

9) **[Category]**

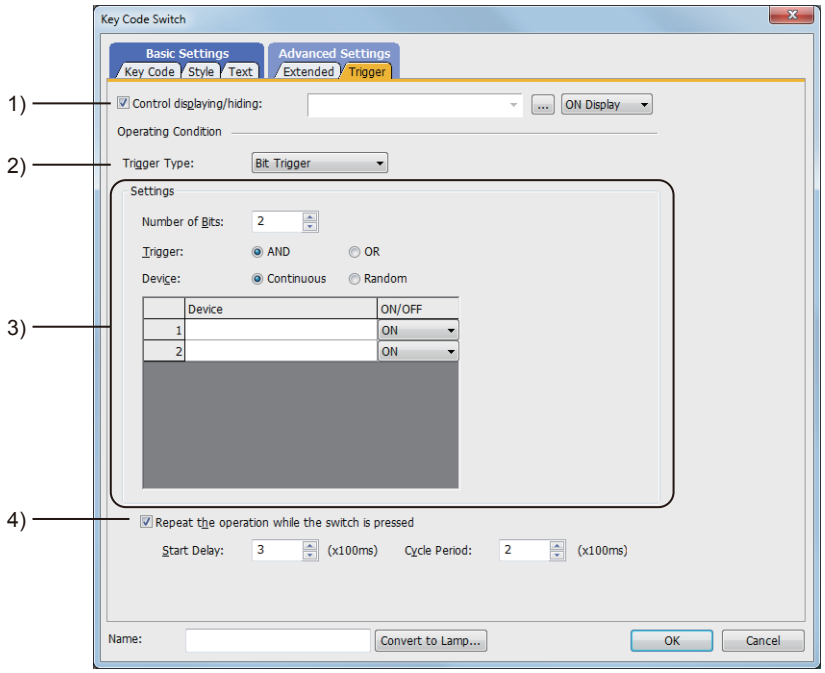
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Setting]**
For details of each item, refer to the following.
➟6.2.2 Setting Trigger Types

4) **[Repeat the operation while the switch is pressed]**
Select this item to allow the switch to repeat the same operation while you touch the touch switch.
For operations for which [Repeat the operation while the switch is pressed] can be set, refer to the following.
➟8.2.3 Precautions for a touch switch

Item	Description
[Start Delay]	Set the time period from when you touch the touch switch to when the operation repeat starts. The setting range is [1] to [20].
[Cycle Period]	Set the cycle for the operation repeat. The setting range is [1] to [10].

8.2.12 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the touch switch as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings ([Screen Switching/Windows])

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] from the menu to display the [Environmental Setting] window.

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

Function	Setting item
Setting the timing for the screen switching when you touch the Go To Screen switch. (ON synchronous/OFF synchronous)	[Operation Timing] (Not available to GT21 and GS21)

■3 GOT environmental settings (key window), screen property

Set the following functions for each project (GOT environmental settings) or for each screen (screen property).

➟5.2.4 Setting key windows ([Key Window])

- Settings for each project (GOT environmental settings)
  Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] window.
- Settings for each screen (screen property)
  Select the screen editor on which the key window is to be set and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog.

Function	Setting item
Displaying the key window when the operating condition is satisfied.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window]
Displaying the key window when the screen is switched.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the key window]
Displaying the cursor when the screen is switched.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the cursor]
Displaying the cursor when the operating condition is satisfied.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Cursor]
Deleting the key window and cursor when the operating condition is not satisfied.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Clear the key window and the cursor] in [When operating conditions are not satisfide]

■4 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information...] from the menu to display the [Environmental Setting] window.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying the key codes set to the input keys when the keys are input to text input, touch switch, or other objects. (Write device)	[Key Code Input]
Disabling the key input. (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]

■5 Sound file settings

Select [Common] → [Sound] → [Sound File Setting] from the menu to display the setting dialog.

➟10.12.8 [Touch Key Sound Setting] dialog

Function	Setting item
Using a sound file for the sound generated when you touch the touch switch. (The sound file must be registered.)	[Use a sound file for touch key tone] (Not available to GT21 and GS21)
Canceling the currently output sound and outputs the sound of the touch switch in priority to the canceled sound when you touch the touch switch.	[Give top priority to sound output of a switch] (Not available to GT21 and GS21)

■6 GOT internal device

➟12.1 GOT Internal Device

Function	Setting item
Setting the operation timing of the touch switch in which the bit alternate, bit set, or bit reset action and the screen switching or station No. switching action are set.	GS450.b12 (Not available to GT21 and GS21)
Saving the history of screen transitions to the memory card.	GS450.b13 (Not available to GT21 and GS21)
Switching the operation when the screen is switched to the previous screen by using the touch switch. (Hierarchy/Historical)	GS450.b14 (Not available to GT21 and GS21)

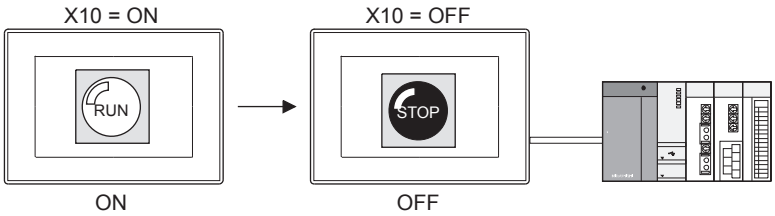
8.3 Placing a Lamp

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Bit lamp

Turns on or off according to the status of the bit device.

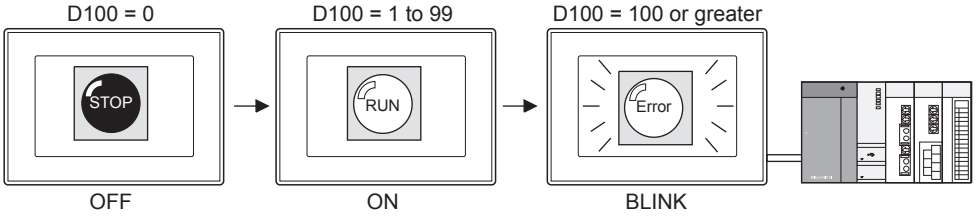
➟8.3.4 [Bit Lamp] dialog



■2 Word lamp

Changes the lamp color according to the value of the word device.

➟8.3.5 [Word Lamp] dialog

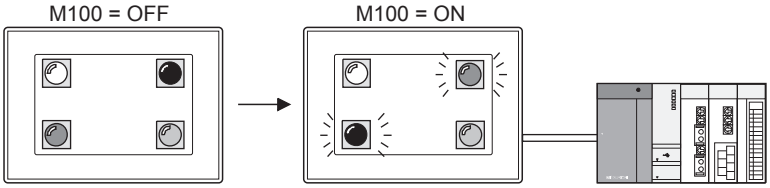


■3 Lamp area

GOT Graphic Ver.1

Switches two colors of the figure and object within the specified area in units of dots according to the status of the bit device.

➟8.3.6 [Lamp Area] dialog



■4 Difference between the lamp and the figure to which a lamp attribute is set

When the lamp attribute is set to the figure, the color of the figure can also be changed like the lamp by turning on the bit device.

➟7. FIGURES

For the figure with the lamp attribute, only the color can be changed by turning on the bit device.
To set layers or texts to the object, use the lamp.

8.3.1 Specifications of lamps

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the lamp.

■1 Maximum number of objects arrangeable on one screen

Up to 1024 objects can be arranged on one screen. Maximum number of lamps is calculated by subtracting the number of objects other than lamps including objects with the lamp attribute from 1024.

■2 Minimum size of lamp

The minimum size of the lamp is 2 dots (height) × 2 dots (width).

8.3.2 How to use lamp

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the lamp.

■1 Arranging the lamp

Arrange the lamp on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing the lamp

Edit the lamp arranged on the screen editor.

➟6.5.3 Editing figures and objects

■3 Setting the lamp

Configure the settings for the lamp arranged on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Settings of lamps

➟8.3.4 [Bit Lamp] dialog
8.3.5 [Word Lamp] dialog
8.3.6 [Lamp Area] dialog

8.3.3 Precautions for a lamp

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for lamps.

■1 Precautions for drawing

(1) Reducing basic figures in size

When the basic figure is set on the lamp, reducing the lamp in size may not display the figure properly.

(2) Reading GT Designer2 format file for GOT-F900 series

When the GT Designer2 format file for GOT-F900 series is read into GT Designer3, the bit lamp area is converted into the lamp area.

➟2.3.2 ■3 Opening a project for GOT900

To set the actions of the lamp area to be the same as those of the bit lamp area, the display order of the objects must be configured.

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

Select [Adjust object display order in GOT to the one in GT Designer3].

(3) Converting the lamp to the touch switch

(a) **Settings to be deleted**

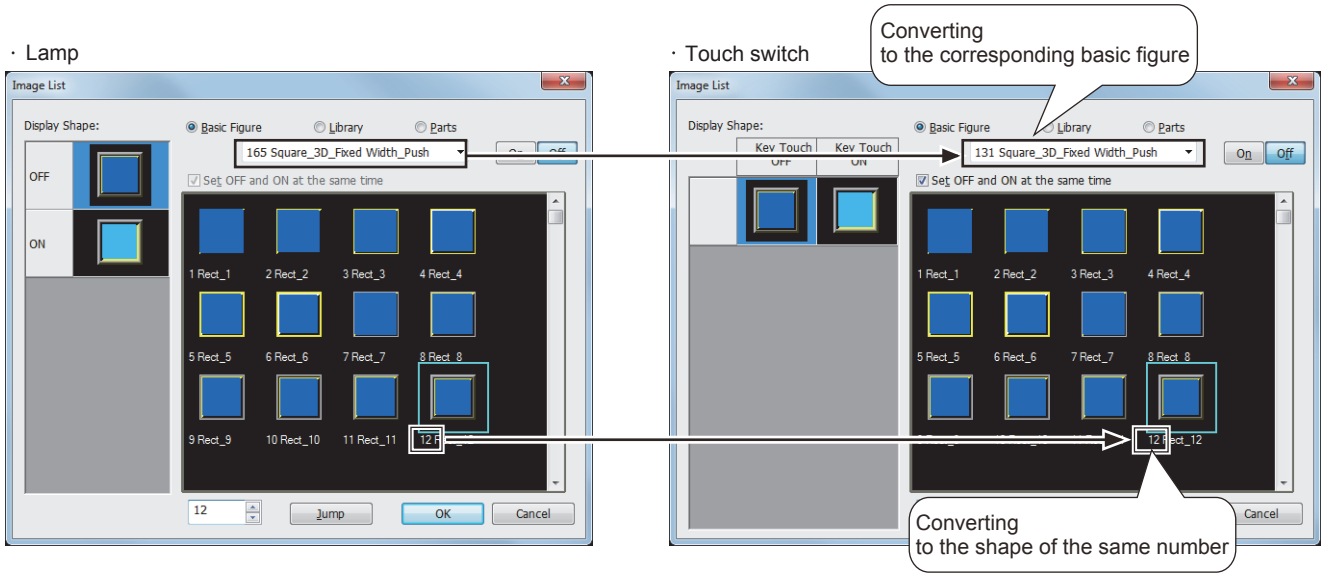
When the lamp is converted to the touch switch, some of the settings are deleted.

The deleted settings are applied as the default setting for the touch switch.

(b) **Converting basic figures**

For converting the basic figure from the lamp to the touch switch, the figure of the lamp is converted to the corresponding figure with the same number on the switch.

Example: Converting the lamp to the touch switch when the basic figure [Square_3D_Fixed Width _Push] is set for the lamp



Even if the shapes have the same reference number, there may be difference between the lamp and the touch switch. Check the shape after the conversion to see if it can be properly used.

(c) **Object size at conversion**

If the lamp with the object size incompatible with the touch switch is converted, the converted touch switch is adjusted to have the applicable size.

(d) **Restoring the touch switch to the lamp after the conversion**

To restore the touch switch to the lamp after conversion, select [Edit] → [Undo] from the menu.

Even if the touch switch has been converted back to the lamp, the previous settings cannot be restored.

If the [OK] button is not clicked, clicking the [Cancel] button cancels the conversion even after the [Convert to Switch] button is clicked.

(e) **Types of the touch switch to be converted to**

Both the bit lamp and word lamp are converted to the switch.

8.3.4 [Bit Lamp] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A bit lamp turns on or off according to the status of the bit device.

Step 1 Select [Object] → [Lamp] → [Bit Lamp] from the menu.

Step 2 Click the position where you arrange the bit lamp.

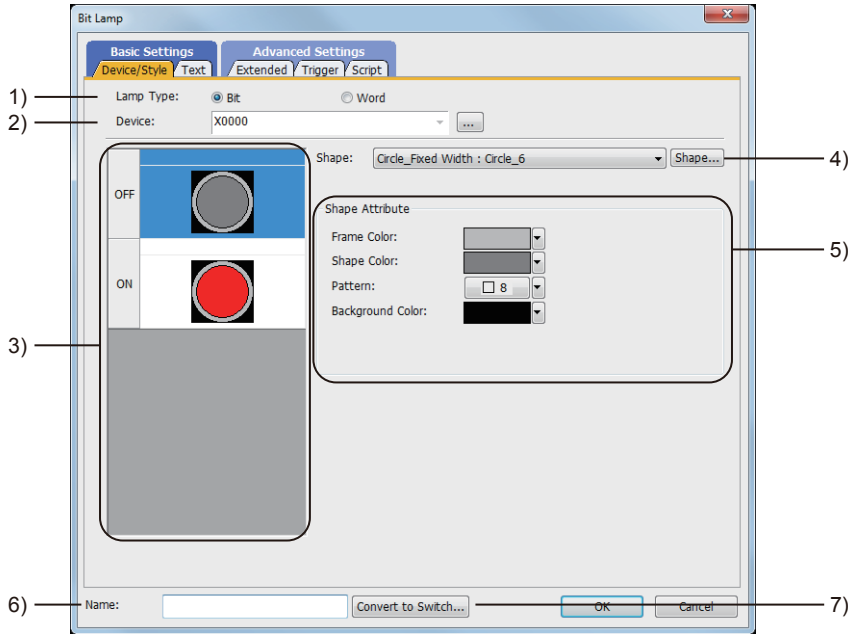
Step 3 Double-click the arranged bit lamp to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Text] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the lamp shape (figure and color) for the on and off status of the device.



1) **[Lamp Type]**
Select the lamp type.
The following shows the items to be selected.
- [Bit]
- [Word]

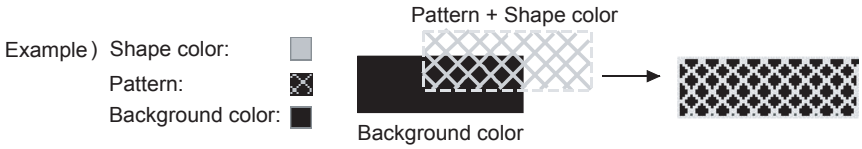
2) **[Device]**
Set the device to be monitored.
➟6.1.2 How to set devices

3) **Preview list**
Displays the shapes for the on and off status.

4) **[Shape]**
Set the lamp shape.
To select a shape other than those in the list box, click the [Shape] button.
➟6.5.5 ■1 Setting object shapes

5) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the lamp shape.

Item	Description
[Shape Color]	Select the lamp color of the lamp shape. When the shape in the library (other than the favorite) is selected for [Shape], changing the lamp color sets the selected shape in the different color.
[Pattern], [Background Color]	Select the pattern and background color of the lamp shape. The selected pattern in the shape color is displayed on the background color. 
[Blink]	Select the blinking speed of the lamp. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

7) **[Convert to Switch] button**

Converts the object type to the touch switch.

➟8.3.2 How to use lamp

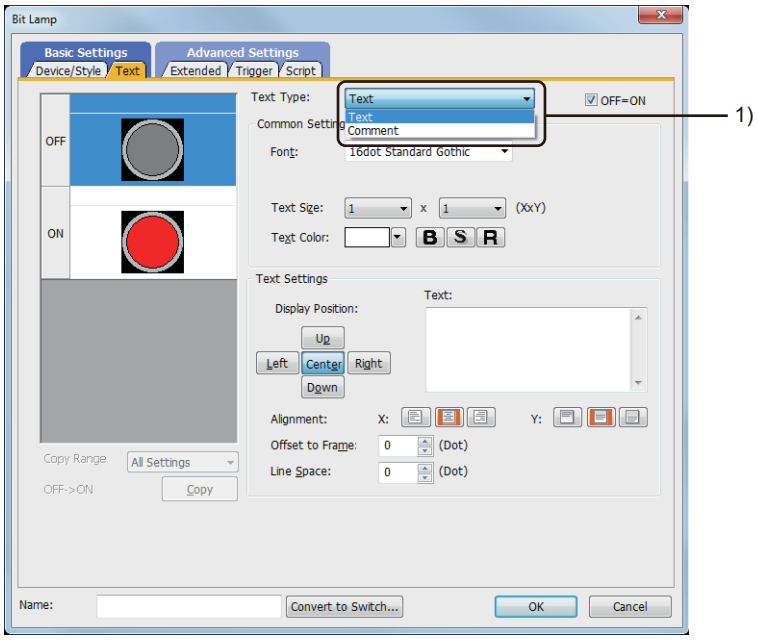
■2 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) **[Text Type]**

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

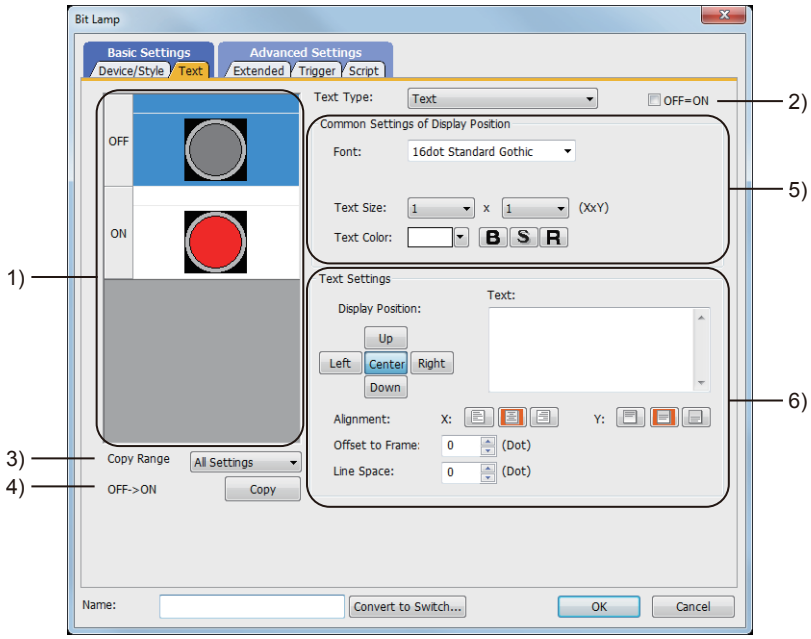
Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]

(2) [Comment]

(1) [Text]



1) **Preview list**

Displays the shapes for the on and off status.

2) **[OFF=ON]**

Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**

Set the range to be copied.

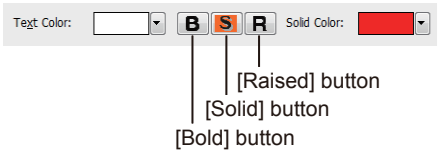
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**

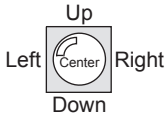
Copies the text setting.

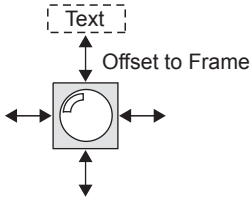
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) [Common Setting of Display Position]

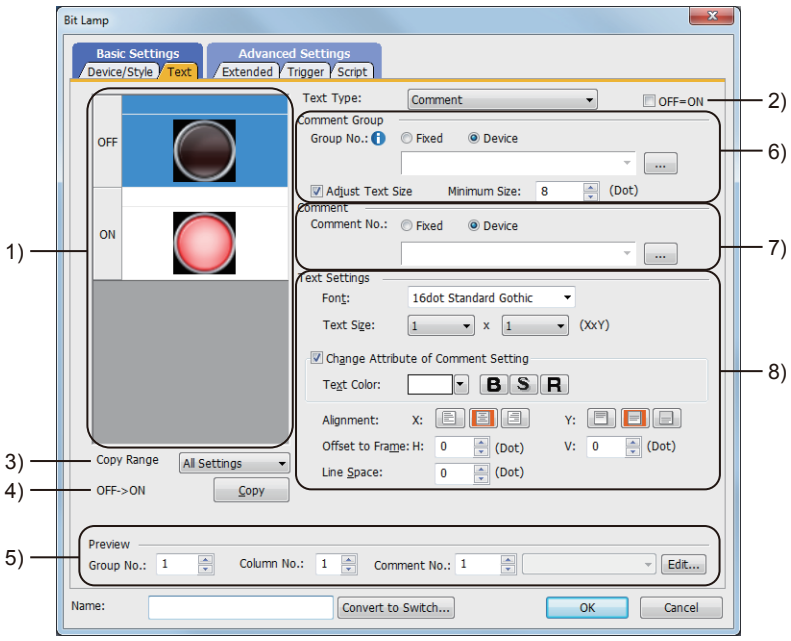
Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➥1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➥6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

6) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]



1) **Preview list**
Displays the shapes for the on and off status.

2) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

3) **[Copy Range]**
Set the range to be copied.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the [Copy] button.

5) **[Preview]**

Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.

Item	Description
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

6) **[Comment Group]**

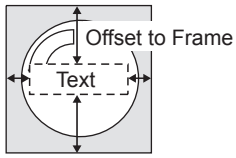
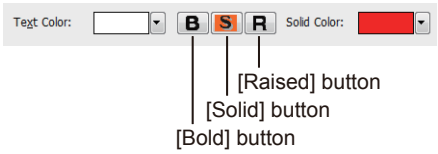
Item	Description
[Group No.]	Set the comment group No. to be used. • [Fixed]: Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used. • [Device]: Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

7) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, directly enter the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

8) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications

Item	Description
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➡6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

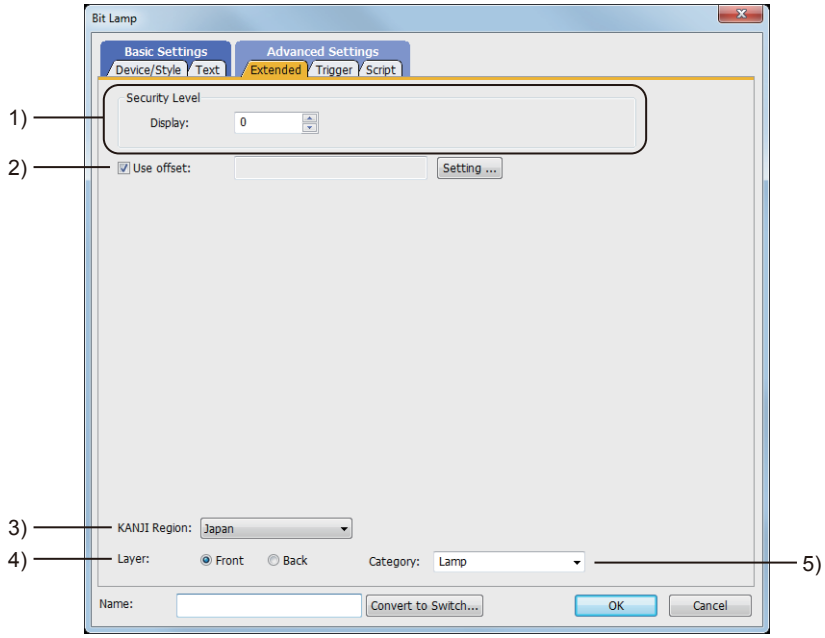
■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the security level, offset, layer, category, and KANJI region.



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[KANJI Region]**

Select the KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

4) **[Layer]**

Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

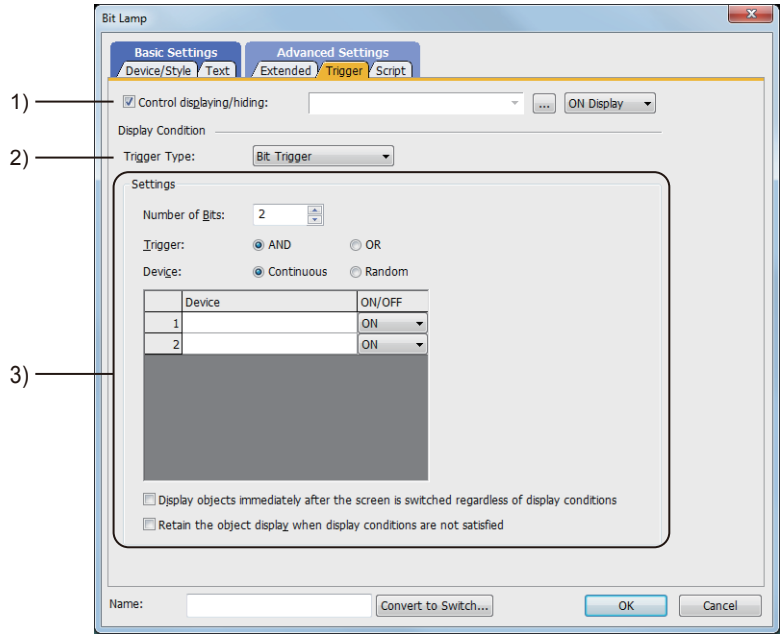
5) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

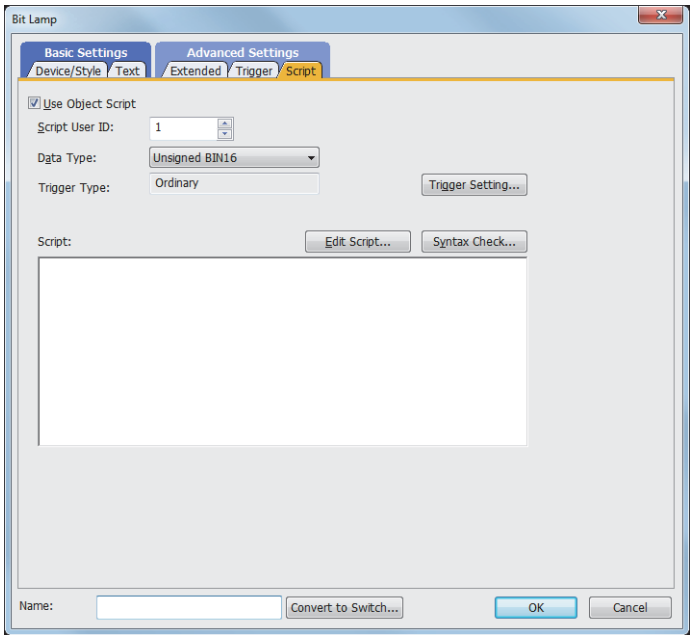
➟6.2.2 Setting Trigger Types

■5 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.3.5 [Word Lamp] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A word lamp changes its color according to the value of the target word device.

Step 1 Select [Object] → [Lamp] → [Word Lamp] from the menu.

Step 2 Click the position where you arrange the word lamp.

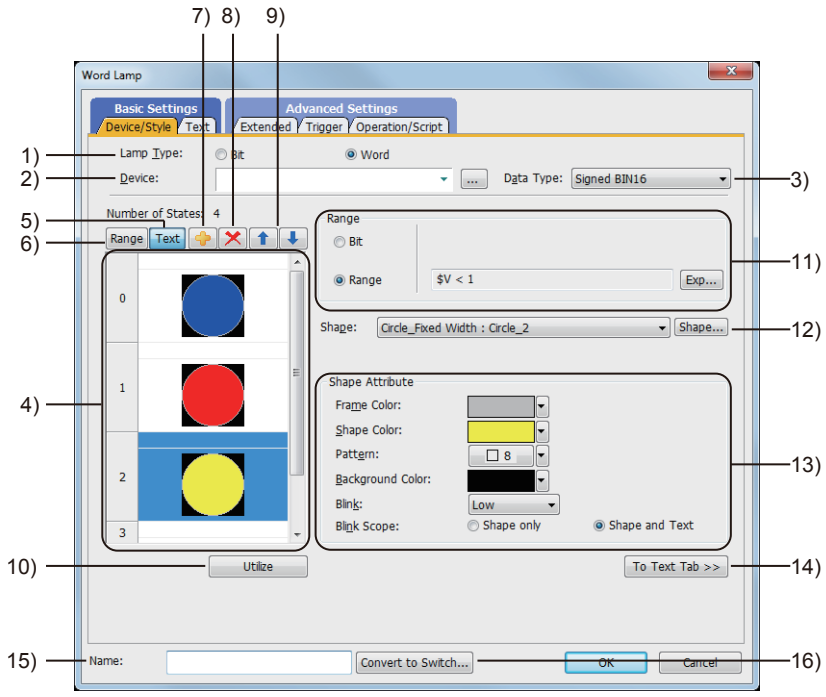
Step 3 Double-click the arranged word lamp to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Text] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the lamp shape (figure and color) corresponding to the device value.



1) **[Lamp Type]**
Select the lamp type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Device]**
Set the device to be monitored.
➟6.1.2 How to set devices

3) **[Data type]**
Select the data type of the word device.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]

- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

4) **Preview list**
Displays set conditions.

5) **[Text] button**
Displays the preview list in text.

6) **[Range] button**
Displays the preview list in range.

7) **Add button**
Adds a new condition.

8) **Delete button**
Deletes a selected condition.

9) **Up button, down button**
Changes the order of priority of the selected condition.

10) **[Utilize] button**
Creates a new condition utilizing the selected condition.

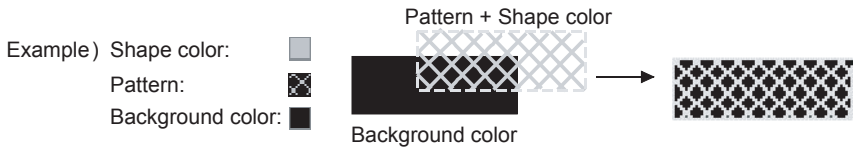
11) **[Range]**
Set a condition which changes the display property of the lamp. When setting the value of the word device as the condition, click the [Exp] button to display the [Edit Range] dialog, and then set the conditional expression.
For the details of conditions, refer to the following.

➟6.5.5 ■2 Setting conditions

12) **[Shape]**
Set the lamp shape.
To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

13) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame color of the lamp shape.
[Shape Color]	Select the lamp color of the lamp shape. When the shape in the library (other than the favorite) is selected for [Shape], changing the lamp color sets the selected shape in the different color.
[Pattern], [Background Color]	Select the pattern and background color of the lamp shape. The selected pattern in the shape color is displayed on the background color. 
[Blink]	Select the blinking speed of the lamp. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select an area to be blinked. The following shows the items to be selected. • [Shape and Text] • [Shape only]

14) **[To Text Tab] button**
Displays the [Text] tab.

15) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.
Up to 100 characters can be set.

16) **[Convert to Switch] button**
Converts the object type to the touch switch.

➟8.3.2 How to use lamp

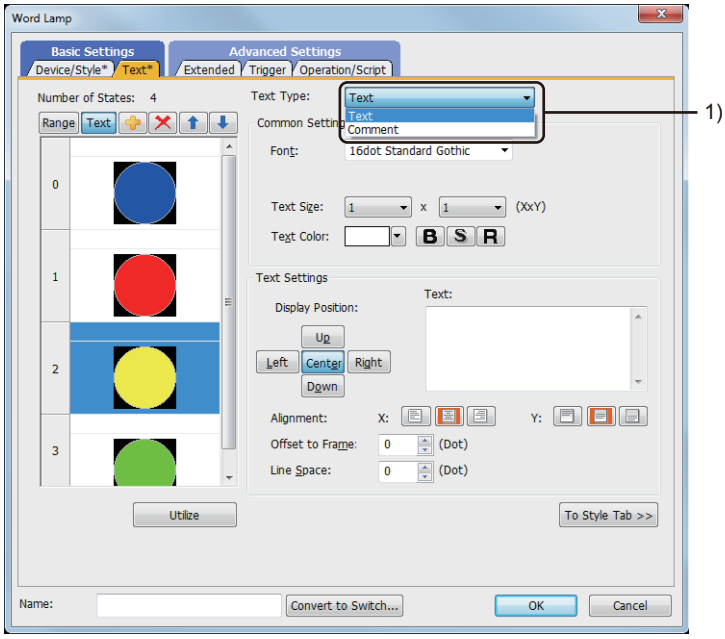
■2 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Select the text type to use the directly input texts or the comments set in a comment group as a text.



1) **[Text Type]**

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

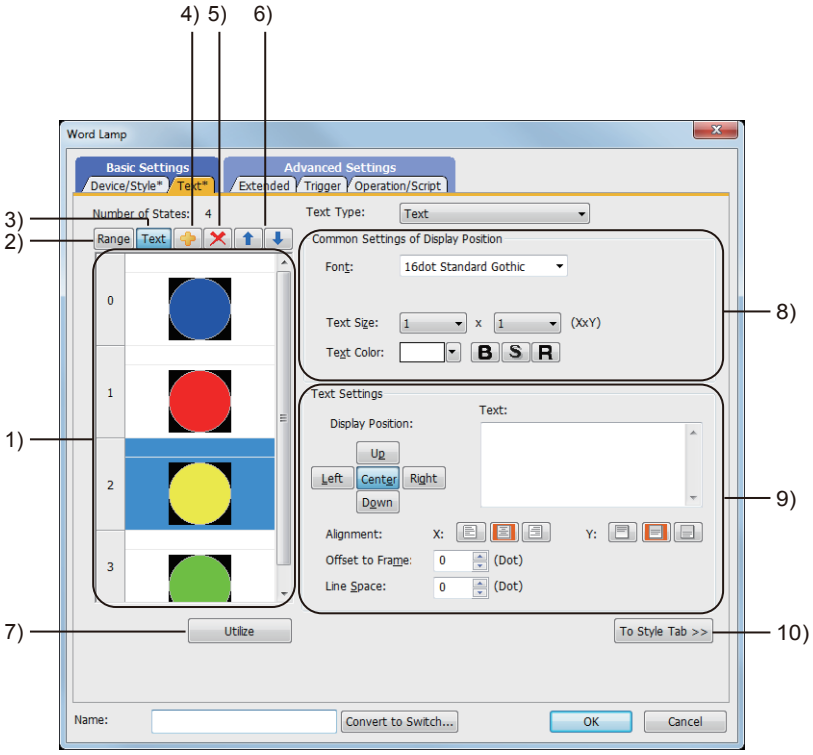
For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.
For the setting items for each text type, refer to the following.

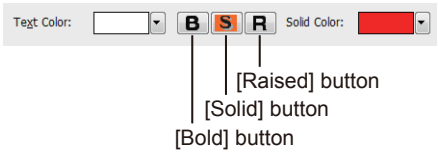
➟(1) [Text]
(2) [Comment]

(1) [Text]

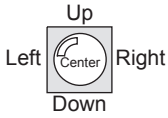


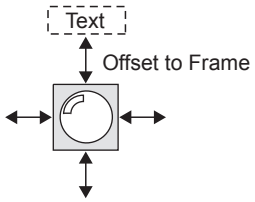
1) **Preview list**
   Displays set conditions.
2) **[Range] button**
   Displays the preview list in range.
3) **[Text] button**
   Displays the preview list in text.
4) **Add button**
   Adds a new condition.
5) **Delete button**
   Deletes the selected condition.
6) **Up button, down button**
   Changes the order of priority of the selected condition.
7) **[Utilize] button**
   Creates a new condition utilizing the selected condition.

8) [Common Setting of Display Position]

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

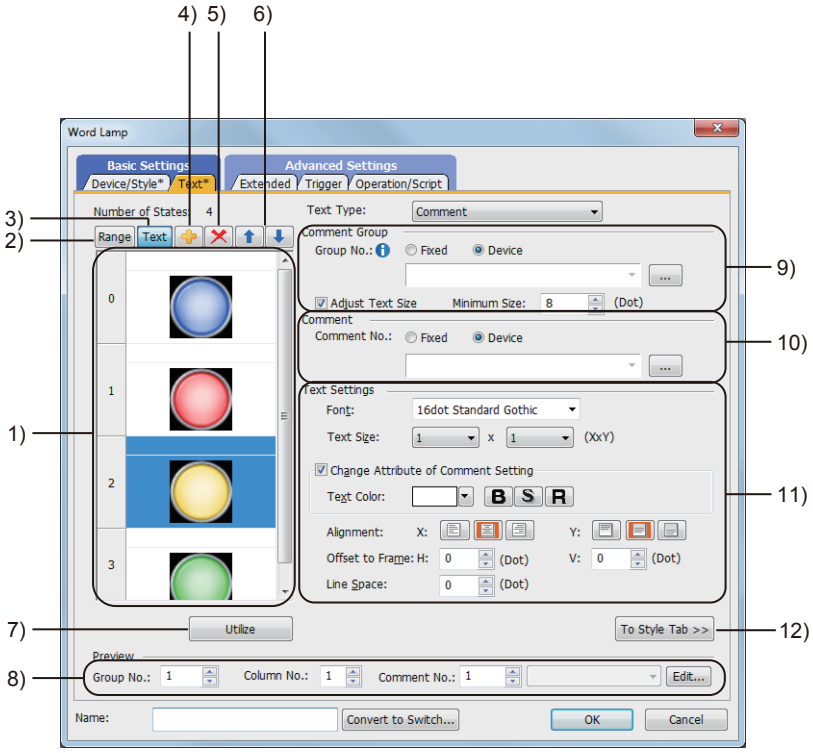
9) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 

Item	Description
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

10) **[To Style Tab] button**
Moves to the [Device/Style] tab.

(2) [Comment]



1) **Preview list**
Displays set conditions.

2) **[Range] button**
Displays the preview list in range.

3) **[Text] button**
Displays the preview list in text.

4) **Add button**
Adds a new condition.

5) **Delete button**
Deletes the selected condition.

6) **Up button, down button**
Changes the order of priority of the selected condition.

7) **[Utilize] button**
Creates a new condition utilizing the selected condition.

8) **[Preview]**

Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

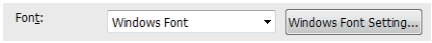
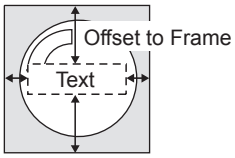
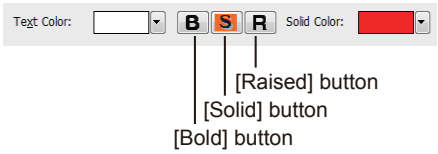
9) **[Comment Group]**

Item	Description
[Group No.]	Set the comment group No. to be used. • [Fixed]: Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used. • [Device]: Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

10) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[To Style Tab] button	Moves to the [Device/Style] tab.

11) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).
[Change comment attributes]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

12) **[To Style Tab] button**

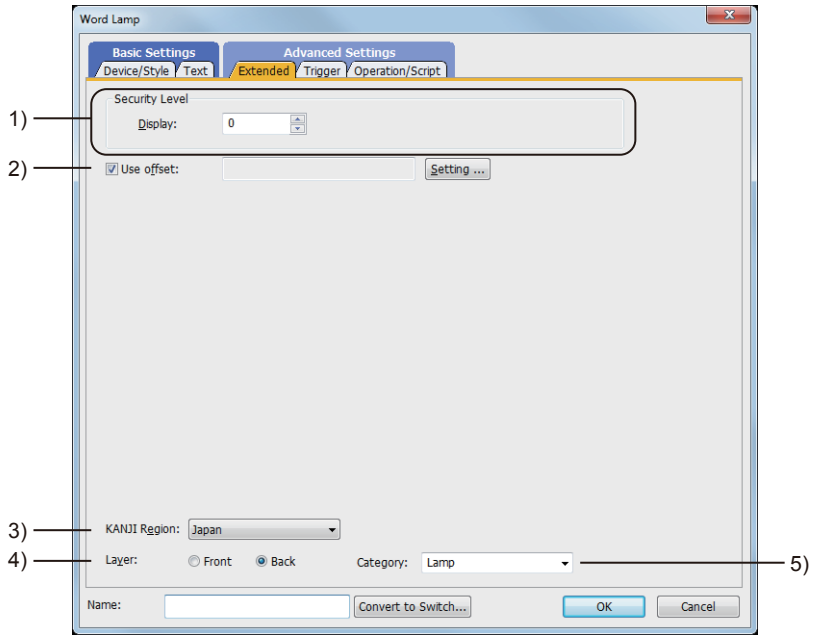
Moves to the [Device/Style] tab.

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

The value of [Input] must be greater than that of [Display].

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[KANJI Region]**

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

This setting is available only when any of the following fonts is selected in the [Text Settings] tab.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

4) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

• [Front]
• [Back]

➟6.5.5 ■3 Superimposition

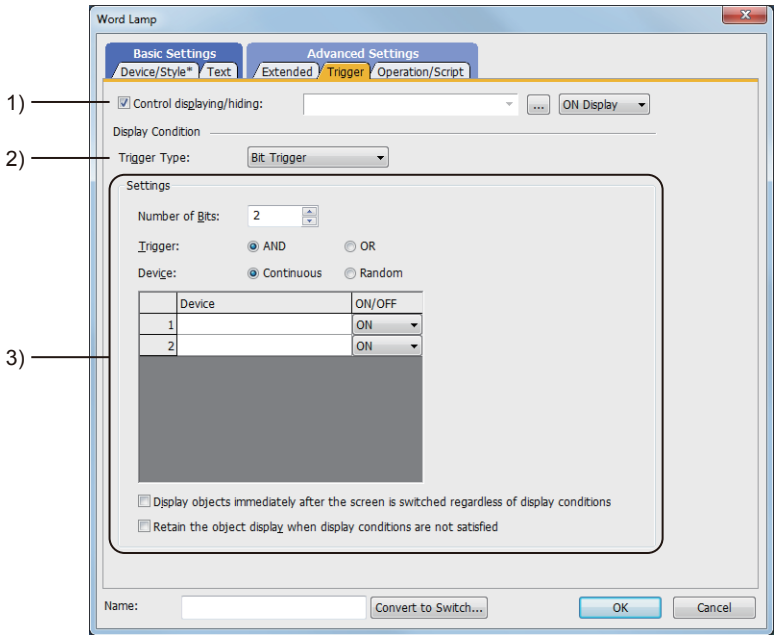
5) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
• [ON Display]
• [OFF Display]

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
• [Ordinary]
• [ON]
• [OFF]
• [Rise]
• [Fall]
• [Rise/Fall]
• [Sampling]
• [Range]
• [Bit Trigger]
• [ON Sampling]
• [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**
For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

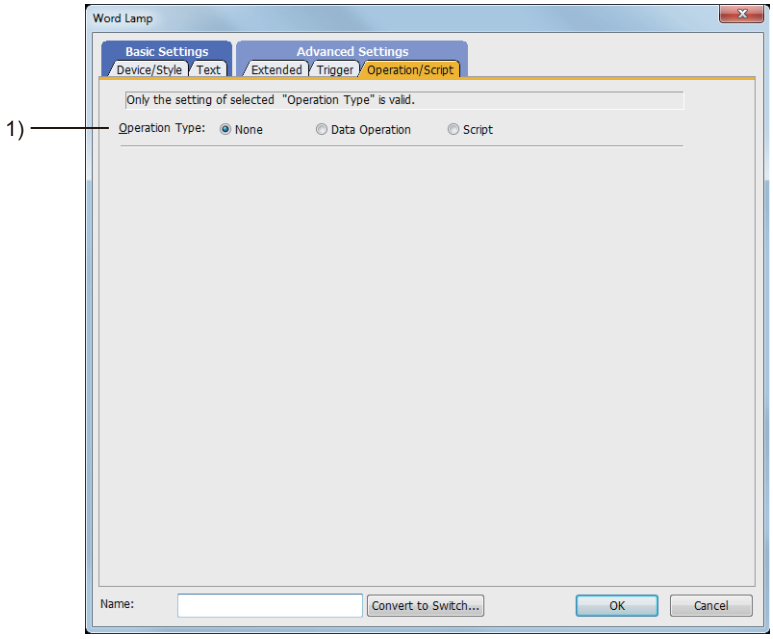
■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) [Operation Type]

Item	Description
[None]	Select this item if the data operation function and script function is unnecessary.
[Data Operation]	Set the expression used for the data operation function.
[Script]	Not available to GT21 and GS21. Set the expression used for the script function.

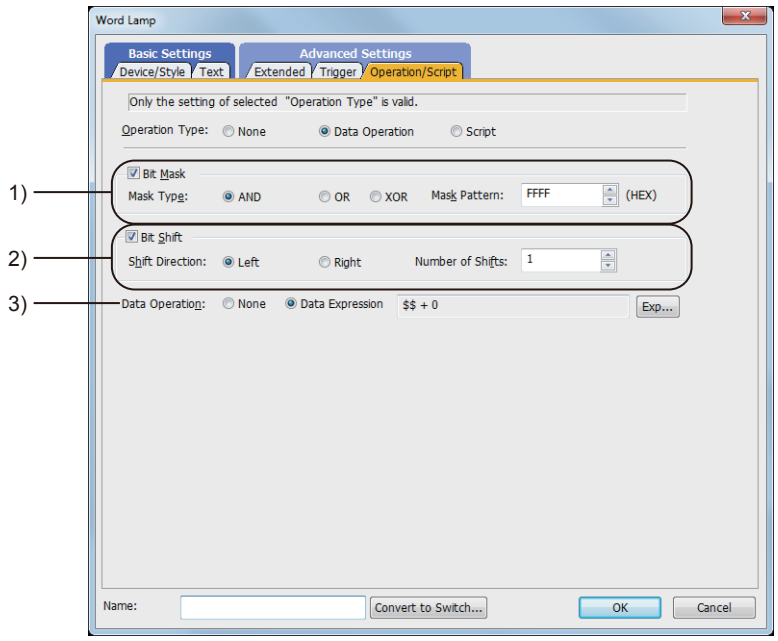
The setting items differ depending on which function to select.
The next page shows the setting items for each function.

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➡6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Set the format of the expression.

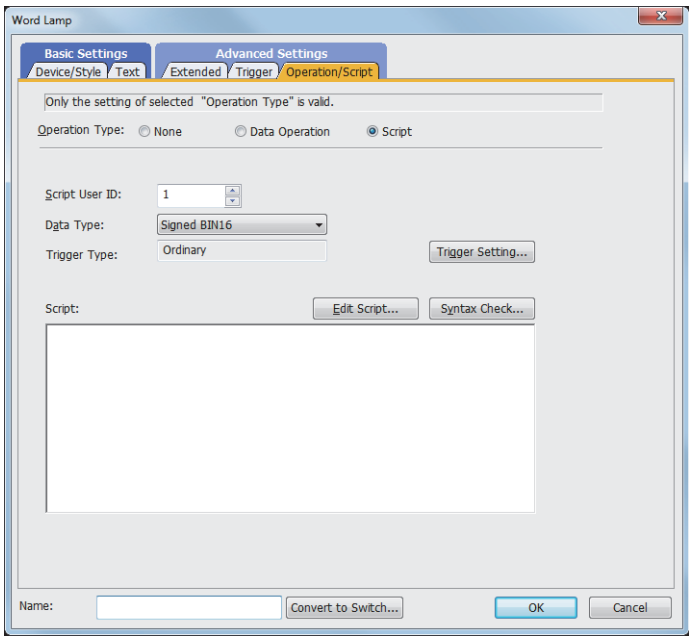
Item	Description
[None]	Select this item not to perform the data operation by using the expression.
[Edit Data Expression]	Select this item to perform the data operation by using the expression.
[Exp] button	This button appears only when [Data Expression] is selected for [Data Operation]. Click the [Exp] button to set the format of the expression in the [Edit Data Expression] dialog. ➡6.5.5 ■4 (3) [Edit Data Expression] dialog

(2) Script

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.3.6 [Lamp Area] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.1

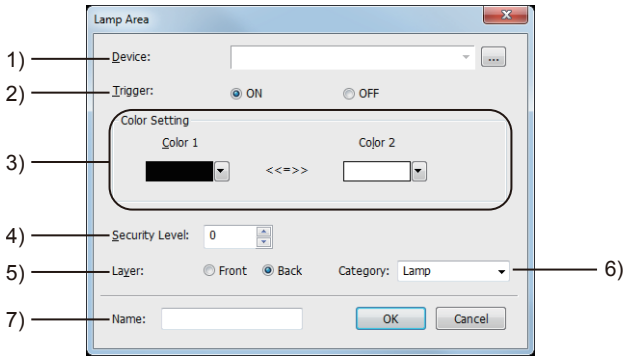
In a specified lamp area, two colors of the figure and object are switched in units of dots according to the status of the bit device.

Step 1 Select [Object] → [Lamp] → [Lamp Area] from the menu.

Step 2 Click the position where you arrange the lamp area.

Step 3 Adjust the dotted frame to specify the applicable lamp area.

Step 4 Double-click the arranged lamp area to display the setting dialog.



1) **[Device]**
Set the device to be monitored.
➟6.1.2 How to set devices

2) **[Trigger]**
Select the on or off status of the bit device as the condition for the colors to be switched.
The following shows the items to be selected.
- [ON]
- [OFF]

3) **[Color Setting]**
Set [Color 1] and [Color 2] as the two colors to be switched when the condition is satisfied.
The set colors are switched every time the condition is satisfied.

4) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15]. Set the level to [0] when the security function is not used.
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

5) **[Layer]**
Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.
- [Front]
- [Back]

Select the same layer as that of the figure and object to which the lamp area is applied.
➟6.5.5 ■3 Superimposition

6) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

7) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

Point

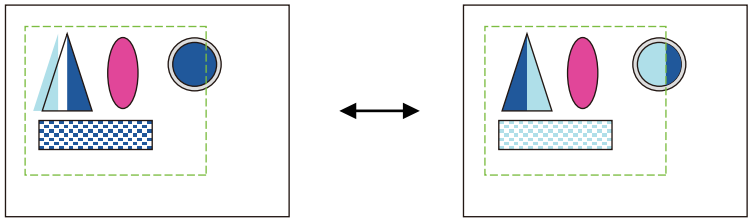
(1) **Applying the lamp area**

When using the lamp area, set the following items for the lamp area, and the figure and object to which the lamp area is applied.

(a) **Applicable area**

The colors are switched within the lamp area regardless of the shape of the figure and object.
When a part of the figure or object is outside the lamp area, the area is not applied to the part.
Specify the applicable lamp area so that the figure and object are within the dotted frame of the lamp area.

Example) When ■ and ■ are set for [Color Setting] of the lamp area



(b) **Layer**

Not available to GT21 and GS21.
Arrange the lamp area, and the figure and object to which the lamp area is applied on the same layer.

(c) **Arrangement order**

Arrange the figure and object to which the lamp area is applied behind the lamp area.
(If the figure and object are arranged before the lamp area, they are arranged behind the lamp area.)
To change the arrangement order, right-click on the selected figure or object and select [Stacking Order].

(d) **Display order**

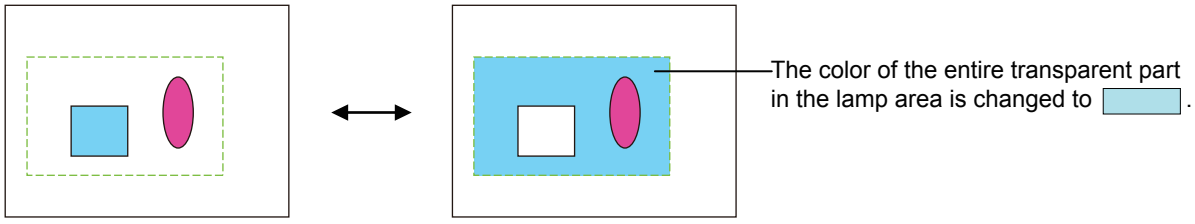
Set the display order of the objects in the applied lamp area.
Select [Common] → [GT Type Setting] from the menu to display the [GT Type Setting] dialog.
Select [Adjust object display order in GOT to the one in GT Designer3].

(2) **Setting the same color for the switching color of the lamp area as the transparent color of the front layer**

Not available to GT21 and GS21.
On the front layer to which the lamp area is applied, when either [Color 1] or [Color 2] in [Color Setting] is set to the same color as [Front Layer Transparent], the transparent color (The back layer is displayed.) and the other color are switched.
The colors are switched not only for the figure or object, but also for the whole lamp area.
For the details of [Front Layer Transparent], refer to the following.

➟2.5.1 ■1 Creating a base screen

Example) When ■ and ■ are set for [Color Setting] of the lamp area and ■ is set for [Front Layer Transparent]



(3) **Checking action of the lamp area in the preview window and screen editor**

The preview window and screen editor cannot check that the colors are switched for the lamp area.

8.3.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the lamp as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

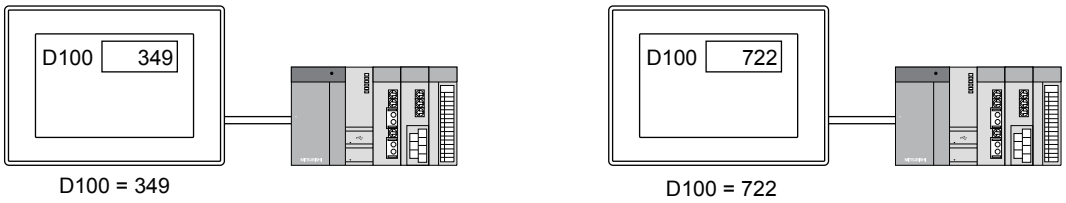
Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.4 Placing a Numerical Display and Numerical Input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Numerical display

With this function, the data stored in devices are displayed numerically on the GOT.



D100 = 349　　D100 = 722

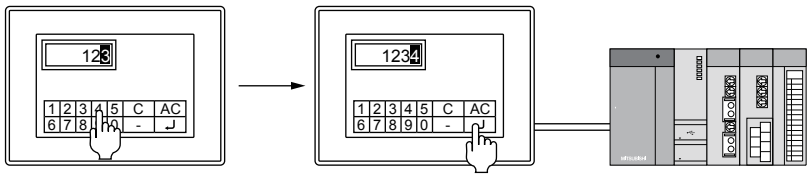
■2 Numerical Input

With this function, values entered into the GOT are written into devices.

(1) Entering values with keys for entries

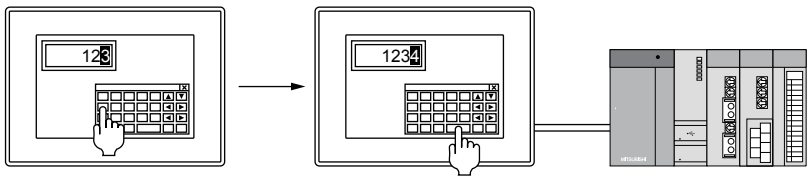
As keys for entries, a key window and touch switches to which key codes are assigned are available.

(a) **Entering with touch switches placed on the screen**



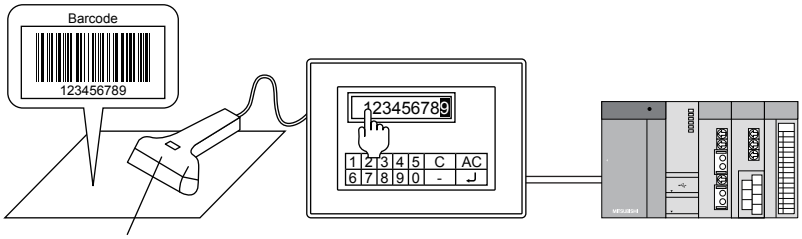
(b) **Entering from a key window**

➟5.2.4 Setting key windows ([Key Window])



(2) Inputting values with a barcode reader or RFID

➟10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)



Barcode reader　　The corresponding numerical value is input in a touched numerical input.

8.4.1 Specifications of the numerical display and numerical input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 1024 numerical displays and numerical inputs can be placed on one screen.
- For GT21 and GS21
  Up to 1024 numerical displays can be placed on one screen.
  Up to 100 numerical inputs can be placed on one screen.

■2 Display when a data operation error occurs

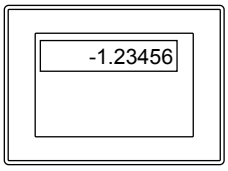
If there is any of the following errors in an operation of the displayed data, the object displays the number of hyphens corresponding to the number of displayed digits.

- BCD-BIN conversion error
- Division by zero error
- 64-bit operation overflow

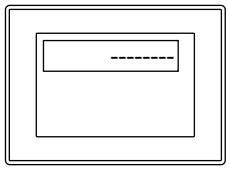
While the object displays hyphens, touch the input value area to display 0 in the area.

(1) Display of a value containing a symbol or decimal point

A symbol and a decimal point, which are contained in a value, are also displayed as hyphens.
Example) When the settings are configured as follows: display format: real, number of displayed digits: 8 (fractional portion: 5), and right alignment



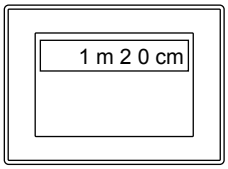
Normal display



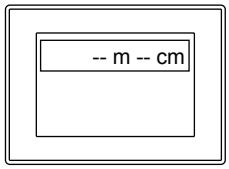
Display at an error occurrence

(2) Display when characters and numerics are displayed together

Of a character string specified as [Format String], numerics are displayed as hyphens, and characters are displayed as they are.
Example) When the settings are configured as follows: display format: decimal, specified character string: ##m##cm, and right alignment



Normal display



Display at an error occurrence

■3 Displaying with level objects superimposed

A numerical display or numerical input can be superimposed on a level object.
For restrictions imposed on displaying with level objects superimposed, refer to the following.

➡8.23 Placing a Level Object

8.4.2 How to use the numerical display and numerical input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the numerical display and numerical input

Place numerical displays and numerical inputs on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing numerical displays and numerical inputs

Edit numerical displays and numerical inputs that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting numerical displays and numerical inputs

Set numerical displays and numerical inputs that have been placed on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Numerical display settings

➟8.4.4 [Numerical Display] dialog

- Numerical input settings

➟8.4.5 [Numerical Input] dialog

■4 Using numerical inputs on base screens and window screens

If numerical inputs are displayed on both a base screen and an overlap window simultaneously, the cursor for entries is displayed on the overlap window by the operations other than a touch operation (such as the display of the key window with the special function switch).
To display the cursor for the numerical input on the base screen, touch the numerical input on the base screen.

■5 Inputting a value with a key code switch on a base screen

When key code switches are placed on a base screen and are used, values can be entered without the display of a key window.
For key code switches, refer to the following.

➟8.2.11 [Key Code Switch] dialog

■6 Inputting a value with a barcode reader or RFID

Numerical values can be input using a barcode reader or RFID.
When inputting numerical values from a barcode reader or RFID, set the barcode function or RFID function.

➟10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)

■7 Specifying the destination to which the cursor moves after the confirmation of a numerical value entry

When [User ID] is set, the destination to which the cursor moves after the confirmation of a numerical value entry can be specified.
[User ID] can be set only when numerical inputs are used.

➟8.4.5 ■4 [Extended] tab

(1) About [User ID]

When [User ID] is set, the following setting and operations are enabled.

- Setting the position where the cursor is displayed at screen switching

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

- Storing in a device the timing with which an entered numerical value is confirmed

➟(a) The timing with which numerical value entries are confirmed (system information)

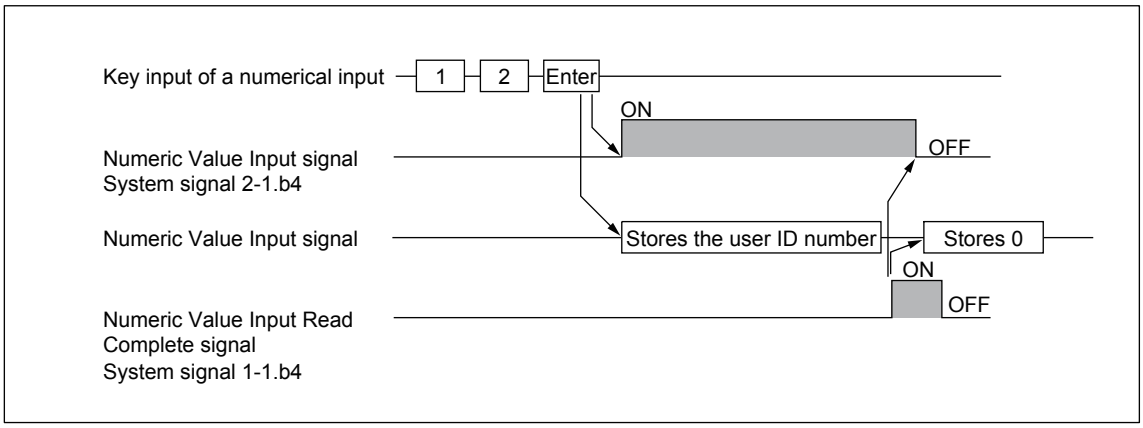
- Moving the cursor in ascending or descending order of user ID number

➟(b) Moving the cursor in ascending or descending order of user ID number

(a) The timing with which numerical value entries are confirmed (system information)

When a numerical value entry is confirmed with the numerical input function, the corresponding user ID number is written

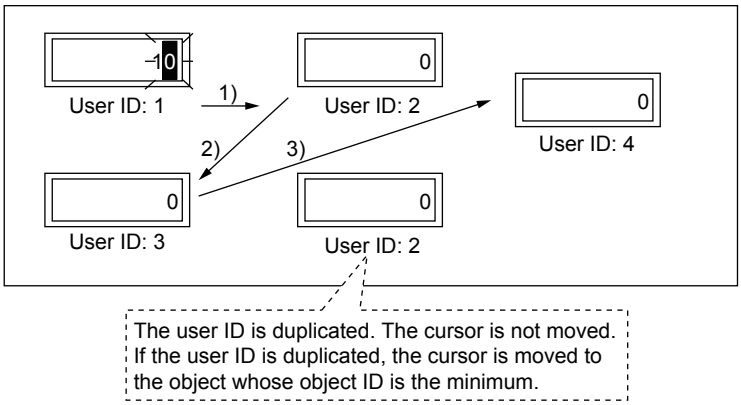
in [Numeric Value Input Number] of [System Information], and the Numeric Value Input signal (System signal 2-1.b4) turns on.
When deleting the user ID written in the numeric value input number (System signal 2-1.b4) and turning off the Numeric Value Input signal (System signal 2-1.b4), turn on the Numeric Value Input Read Complete signal.
(After clearing, turn off the Numeric Value Input Read Complete signal (System signal 1-1.b4).) Otherwise user ID numbers cannot be stored and bit devices cannot turn on even when numerical value entries are confirmed.



(b) **Moving the cursor in ascending or descending order of user ID number**

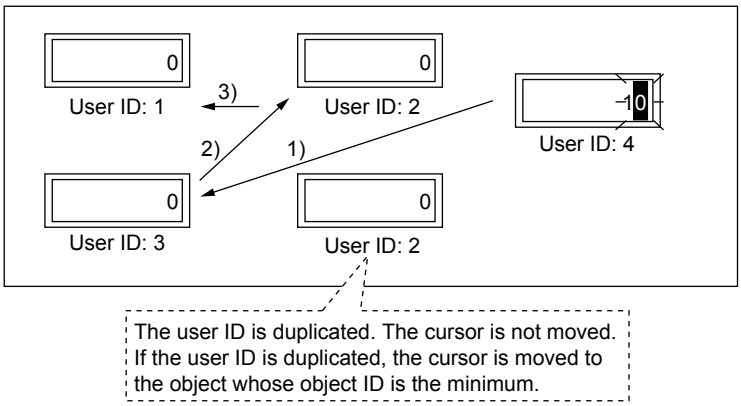
When the following key code switches are used, the cursor can be moved in ascending or descending order of user ID number.

• User ID ascending order movement of cursor (key code: 0092h)



The cursor is moved in order of 1) → 2) → 3).
After 3), the cursor does not move because the destination user ID number does not exist.

• User ID descending order movement of cursor (key code: 0093h)

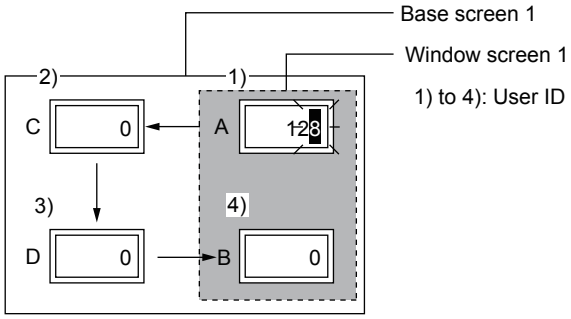


The cursor is moved in order of 1) → 2) → 3).
After 3), the cursor does not move because the destination user ID number does not exist.

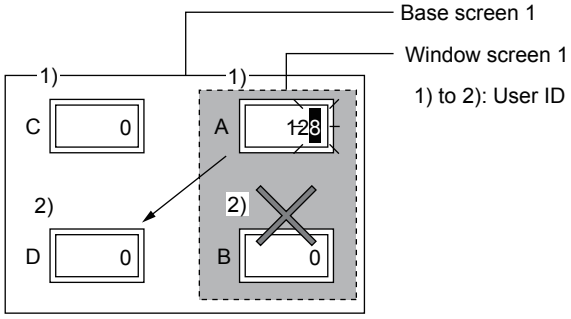
(2) User ID setting

When controlling the cursor using user ID numbers, assign different user ID numbers to each object.
Also, when using overlay screens or superimpose windows, set screens in a way that different user ID numbers are assigned to each object.
When the same user ID number is assigned to different objects, the cursor operation may not perform normally.

- When assigning different user ID numbers to each object
  Even when overlay screens or superimpose windows are used, the cursor operation using user ID numbers is performed normally.



- When assigning the same user ID number
  If objects which have the same user ID exist on the screen (including set overlay screens and superimpose windows), the cursor operation using user ID numbers may not perform normally.

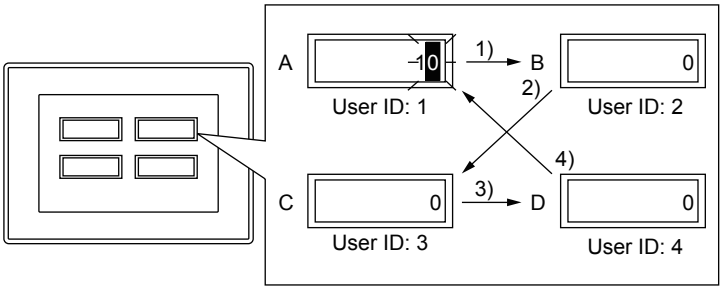


(3) The relation between user ID and destination ID

The destination ID number is the user ID number of the numerical input where the cursor is moved next.

➟8.4.5 ■4 [Extended] tab

Example) Moving the cursor using the destination ID number



Numerical Input	User ID	Destination ID
A	1	2
B	2	3
C	3	4
D	4	1

8.4.3 Precautions for a numerical display object and a numerical input object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for use

(1) Space or symbol entry

If you enter only a space or symbol and then touch the [Enter] key, the entry is cancelled.
To enter only a space or symbol as a device value, use the text input.

➟8.5.2 How to use the text display and text input

(2) Operations when a key window is called up with a special function switch (Key windows)

The following shows the operations when a key window is called up with a special function switch in which [Key Windows] is set for the switch action, while no cursor appears on the numerical input.

- When using the standard key window
  The standard key window for decimal numbers is displayed.
- When using a key window a user created
  Screens set for [Window Screen No.] for decimal numbers are displayed.
  When [Window Screen No.] for decimal values is not set (or set to 0), the standard key window for decimal numbers is displayed.

(3) Entering an integer when using GT27, GT25, or GS25

When you enter an integer in a device that satisfies all the following conditions, the value to be stored in the device and the value to be displayed on the GOT differ.

- [Data Type] in the [Device] tab is set to [Real(32bit)].
- [Format] in the [Device] tab is set to [Binary] or [Hexadecimal].

Example) Entering 1 (integer) in the device for which [Data Type] is set to [Real(32bit)] and [Format] is set to [Hexadecimal]

- Value to be stored in the device: 1 (integer)
- Value to be displayed on the GOT: 0

(4) [Input Case] in the [Numerical Input] dialog

The setting for [Range] in the [Input Case] tab in the [Numerical Input] dialog is effective only when data entry is performed with an numerical input object.
If data entry is performed with a different object, through communications, or by any other methods, the setting for [Range] is invalid.

➟8.4.5 ■3 [Input case] tab

(5) Input range when GT21 is used

When [Real(32bit)] is selected for [Data Type], if you enter the maximum value of the input range set in the [Input Case] tab, the value may be regarded as out-of-range data.
In this case, take one of the following corrective actions.

- Change the selection for [Data Type].
- Extend the input range in the [Input Case] tab.

(6) Behavior when the automatic adjustment to the decimal point is enabled

The numerical input is canceled when all the following conditions are satisfied.

- The numerical input is a 64-bit device.
- The auto-adjusted value exceeds the value range of the data type.

■2 When setting [ON and OFF] for [Write Check Device]

The setting of [Write Check Device] (write completion device) is available for a text input object as well.
If you specify a common write completion device for a numerical input object and a text input object, or for multiple numerical input objects, note the following points.

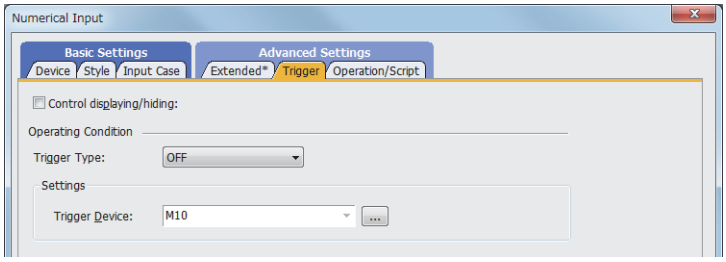
(1) Number of write completion devices that turn on simultaneously

Do not turn on 21 or more write completion devices simultaneously.
Otherwise the write completion devices that turn on 21st and later do not turn off automatically.

(2) When specifying a common write completion device for multiple numerical input objects

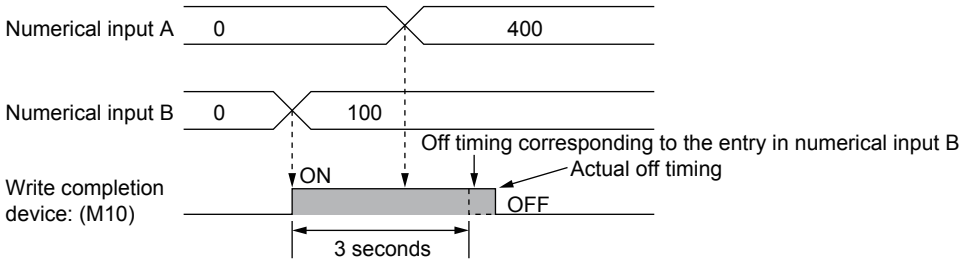
Set trigger conditions in a way that prevents numerical values from being entered while the same write completion device is on.

Example) Setting [Write Check Device] to M10 and [Trigger Type] to [OFF]



If you enter data into a target input object while the common write completion device is on for another target input object, the common write completion device does not turn off at the appropriate time.

Example) When entering data into numerical input A while the common write completion device is on for numerical input B



(3) Operations performed at screen switching

Even when screen switching (including switching to utilities) occurs while a write completion device is on, the write completion device does not turn off.

The device remains on until a set time elapses.

■3 Checking the input range while entering numerical values

This following describes the precautions taken when designing and operating screens.

(1) When designing screens

(a) Number of conditions that can be set

Set only one condition.

If two or more conditions are set, the input range is checked when the entry is confirmed.

(b) Range expressions set for conditions

Set either of the following patterns.

If setting with a pattern other than following patterns, the input range is checked when the entry is confirmed.

- $W<A, $W<=A

  $W: Device set with a numerical input

  A: Constant, another device (positive value (+) only)
- A<$W<B, A<=$W<B, A<$W<=B, A<=$W<=B

  $W: Device set with a numerical input

  A: Constant, another device

  B: Constant, another device (positive value (+) only)

(c) When the input range and display range are set individually

Only the input range is checked.

(d) Device whose [Data Type] is [Real(32bit)] or [Real(64bit)]

For a device whose [Data Type] is [Real], the GOT and a controller handle the device value a little differently.

If you set a precise input condition using [==] or [!=], the input range may not be checked properly.

When checking the input range with such a device, do not use [==] and [!=] to set the input condition.

For the data type specifications, refer to the following.

➟1.2.7 ■2 Data type of devices

(2) In operation

(a) **Inputting minus (-)**
Input minus (-) then enter a numerical value.

(b) **Lower limit check**
The lower limit is checked when the entry is confirmed.

(c) **Comparing with devices**
In a case where comparison with a device is made, a message is displayed when the device value cannot be read.

(d) **Moving the cursor**
When the cursor in the object is moved while a numerical value is entered, the range is not checked while the numerical value is entered.
The input range is checked when the entry is confirmed.
To have the range checked while entering a numerical value, hide the cursor (cancel the input status of the numerical input), and then execute the numerical input again.

■4 Number of significant digits in the fractional portion

When the data type is 64-bit and either of the following conditions is satisfied, 14 digits in the fractional portion are significant after automatic adjustment.

- Data operation is set.
- Object internal variables are used.

➟9.10.2 ■3 (2) Object internal variables

The range expression set with the range operation function uses 14 significant digits in the fractional portion, and operation is performed with the auto-adjusted value.

■5 Displaying the input confirmation message

(1) Number of the digits of a numerical value which can be displayed on the message

When the number of displayed digits exceeds 35, the values are not displayed on the message.
Do not input over 35 digits.

(2) Display position of the message

The display position of the message depends on the type of the key window.

- When using the standard key window
  The message is displayed on the key window.
- When using a user-created key window or using no key window
  The message is displayed in the center of the screen.

■6 Blink

The blink of the text display is paused when the input cursor is displayed.

■7 When using a barcode reader or RFID

(1) Reading data from a barcode reader or RFID while entering a numerical value in a key window

Depending on the operation, the read data may or may not be input numerically.

- While displaying dialog windows
  The data read from a barcode reader or RFID cannot be input numerically.
- While not displaying dialog windows
  The value being input in the key window is abandoned and the data read from a barcode reader or RFID is numerically input.

(2) Performing key touch operations while the data read from a barcode reader or RFID is in the process of being input

While the data read from a barcode reader or RFID is in the process of being input, key touch operations are invalid and the data read from a barcode reader or RFID is input.

(3) When data is not numerical values or insufficient for the specified start position

When the data read from a barcode reader or RFID is applicable to the following cases, the numerical value input is not executed for the data.

- Other than numerical values
- The format of the data is different from the setting of [Format]
- The data is insufficient for the setting of [Start Position]

8.4.4 [Numerical Display] dialog

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Step 1 Select [Object] → [Numerical Display/Input] → [Numerical Display] from the menu.

Step 2 Click the position where you place the numerical display. Placing the numerical display is complete.

Step 3 Double-click the numerical display which has been placed to display the setting dialog.

➟■1 [Device] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Device] tab

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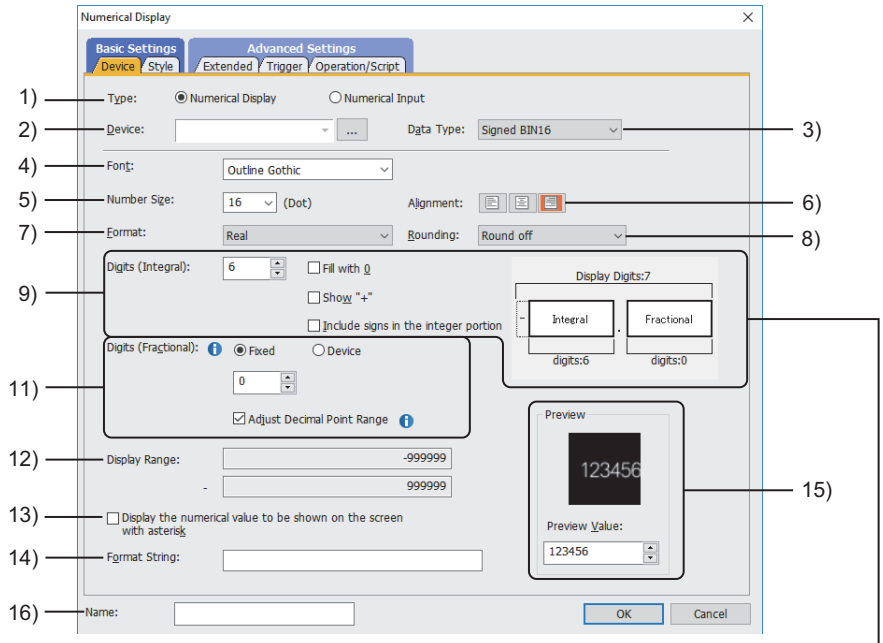
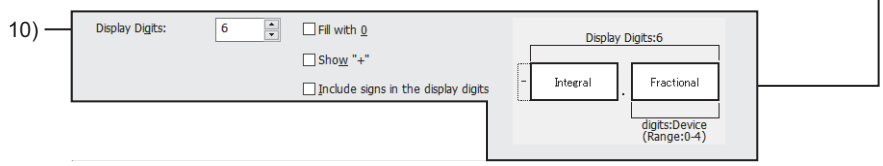
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



When [Fixed] is selected for [Digits (Fractional)]



When [Device] is selected for [Digits (Fractional)]

1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Numerical Display]
- [Numerical Input]

2) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

3) **[Data type]**
Select the data type of the device to be set.

The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

4) **[Font]**

Select the font of the numerical value to be displayed.

The following shows the items to be selected.

- [6x8dot]
- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Gothic]
- [16dot HQ Gothic]
- [TrueType Numerical Gothic]
- [TrueType Numerical 7seg]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

5) **[Number Size]**

Set the size of the numerical value to be displayed.

➡1.2.5 Font specifications

6) **[Alignment]**

Set the horizontal position of the numerical value.

7) **[Format]**

Select the display type of the device to be monitored.

The selectable items vary with the data type of the device.

○ : Available, ×: Not available

[Data Type]	[Format]					
	[Signed Decimal]	[Unsigned Decimal]	[Hexadecimal]	[Octal]	[Binary]	[Real]
[Signed BIN16]	○	○	○	○	○	○
[Unsigned BIN16]	○	○	○	○	○	○
[Signed BIN32]	○	○	○	×	○	○
[Unsigned BIN32]	○	○	○	×	○	○
[Signed BIN64]	○	○	○	×	×	○
[Unsigned BIN64]	○	○	○	×	×	○
[Signed BIN8]	○	○	○	○	○	○
[Unsigned BIN8]	○	○	○	○	○	○
[BCD16]	○	○	○	○	○	○
[BCD32]	○	○	○	×	○	○
[BCD64]	○	○	○	×	×	○
[Real(32bit)]	○	○	○	×	○	○
[Real(64bit)]	○	○	○	×	×	○

8) **[Rounding]**

If there is a numerical value that have digits to the right of the digit set for [Digits (Fractional)], select the processing method.

The following shows the items to be selected.

- [Round off]
- [Round down]
- [Round up]

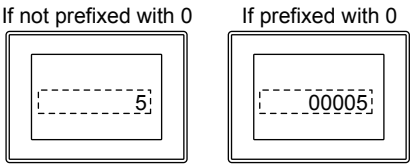
9) **[Digits (Integral)]**

This item is displayed when [Fixed] is selected for [Digits (Fractional)].

Set the number of digits of the integer part to be displayed.

The setting range depends on the setting of [Display Type].

- [Signed Decimal] or [Unsigned Decimal]: [1] to [21]
- [Hexadecimal]: [1] to [16]
- [Octal]: [1] to [6]
- [Binary] or [Real]: [1] to [32]

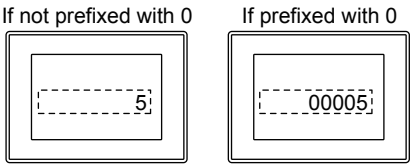
Item	Description
[Fill with 0]	When the right justification is set for [Alignment], 0 is prefixed to the numerical value. Example): When setting [5] for [Digits (Integral)]  When [Format] is set to [Binary], the GOT displays the numerical value prefixed with 0, regardless of the setting of [Fill with 0].
[Show "+"]	When the numerical value is positive number, [+] is prefixed to the numerical value. This item can be set only when [Format] is either [Signed Decimal] or [Real].
[Include signs in the integer portion]	A sign is included as one digit in the number of digits of the integer part. This item can be set only when [Format] is either [Signed Decimal] or [Real].

10) **[Display Digits]**

This item is displayed when [Real] is selected for [Format] and [Device] is selected for [Digits (Fractional)].

Set the total number of digits of the integer part and fractional part to be displayed.

The setting range is [1] to [32].

Item	Description
[Fill with 0]	When the right justification is set for [Alignment], 0 is prefixed to the numerical value. Example) When setting [5] for [Display Digits] 
[Show "+"]	When the numerical value is positive number, [+] is prefixed to the numerical value.
[Include signs in the display digits]	Includes a sign as one digit in the number of digits displayed.

11) **[Digits (Fractional)]**

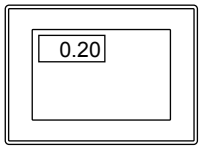
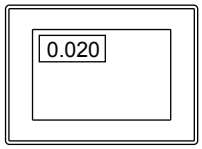
This item is displayed when [Real] is selected for [Format].

Select a method to specify the number of decimal places, and specify the number of decimal places to be displayed.

The following shows selectable items.

- [Fixed]:
  Enter the number of decimal places.
  The setting range is [0] to [30].
- [Device]:
  Set a device to specify the number of decimal places.
  The number of decimal places changes based on the device value.
  The data type of the device is unsigned 16-bit binary.

Set the device value as follows.
X > Y + 1
X: Value set for [Display Digits]
Y: Device value to specify the number of decimal places
If the device value is outside the valid range, 0 is assumed.

Item	Description
[Adjust Decimal Point Range]	(When a value other than binary floating values is held in the monitor target device) the integer device value is displayed as a value with the decimal point. This item can be set when [Format] is [Real] and [Data Type] is set to one other than [Real]. Example) Number of the digits to the right of the decimal point: 2 Controller device value: 20  The value is displayed as 0.20 in the GOT. Example) Number of the digits to the right of the decimal point: 3 Controller device value: 20  The value is displayed as 0.020 in the GOT. This setting is applied to the monitored device value and the following device values. • Device values specified for [$V] and [Other Device] that are used in the expression for the display range in the [Style] tab • Device values specified to [$$] and [Other Device] that are used in the expression for a data operation in the [Operation/Script] tab

12) **[Display Range]**
Displays the maximum/minimum value which can be displayed on the screen.

13) **[Display the numerical value to be shown on the screen with asterisk]**
Displays the numerical value, sign, and decimal point to be displayed on the screen in asterisk.
This item can be set when [Font] is set to one other than [TrueType Numerical Gothic] and [TrueType Numerical 7seg].
The character string (except #) set for [Format String] is not displayed in asterisk.
When saved as an operation log, the text is saved not as an asterisk but as a numerical value.

14) **[Format String]**
Displays characters (such as alphanumeric characters, kanji, or symbols) in the numerical display
This item can be set when [Font] is set to one other than [TrueType Numerical Gothic] and [TrueType Numerical 7seg].
Enter #s to the positions where the digits of a numerical value are to be displayed.
The #s entered in setting this item are replaced with the digits of the device value.
Each # is replaced with the digit of the value in the same position counted from the right. If the number of the digits of the device value is larger than that of #s, the digits overflowing from the left are not displayed.
The digits of a real number to the right of the decimal point are processed according to the setting for [Rounding].
The sign included in the device value is also processed in the same way that processes the numerical value.
The following shows examples of displays.
Example 1) When the setting for [Format] is not [Real]

[Format String]	[Digits (Fractional)]	Device value	Display
##m##cm	-	1234	12m34cm
		123	1m23cm
		12345	23m45cm
		-123	-1m23cm

Example 2) When setting [Real] for [Format] and [Round off] for [Rounding]

[Format String]	[Digits (Fractional)]	Device value	Display	Description
##m##cm	0	12.345	m12cm	Since [Digits (Fractional)] is 0, only the integer part is displayed.
	2		12m35cm	Since [Digits (Fractional)] is 2, the digits from the integer part to the second decimal place are displayed. The device value is rounded off to the third decimal place.

[Format String]	[Digits (Fractional)]	Device value	Display	Description
####cm	2	12.344	1234cm	Since [Digits (Fractional)] is 2, the device value is rounded off to the third decimal place.
		12.345	1235cm	
##.##cm	2	12.344	12.34cm	
		12.345	12.35cm	

15) **[Preview]**

Displays the preview of the screen.

Item	Description
[Preview Value]	Set the numerical value to be displayed in the preview.

16) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

Point

(1) **Items whose settings are invalid when the format text is used**

- The settings of [Digits (Integral)] and [Display Digits] in the [Device] tab become invalid.
- The setting of [Alignment] in the [Device] tab becomes invalid and the right justification is performed.

(2) **Characters which cannot be displayed in the format text**

When [6x8dot] is set for [Font], and a character other than the ASCII cords (0x20 to 0x7E) is included in the format text, the character and all the following characters are not displayed.

In such a case, the cursor may not appear in its default position.

➟12.6 ASCII Code List

■2 [Style] tab

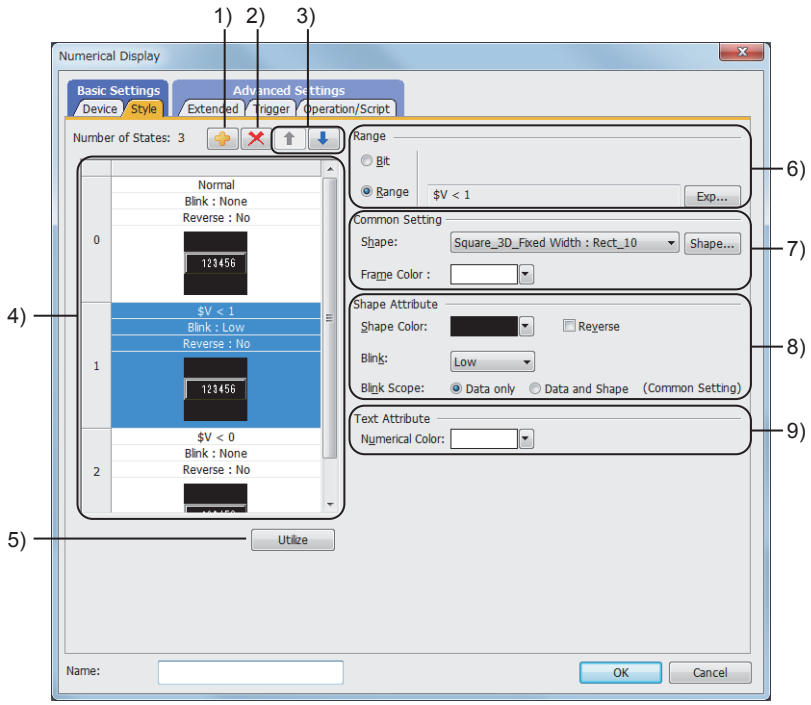
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

For the conditions, refer to the following.

➟6.5.5 ■2 Setting conditions



1) **Add button**
Adds a new condition.

2) **Delete button**
Deletes the selected condition.

3) **Up button, down button**
Changes the order of priority of the selected condition.

4) **Preview list**
Displays set conditions.

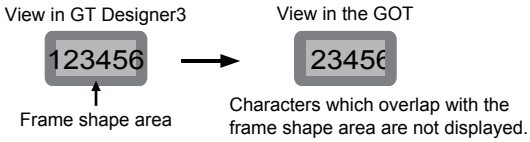
5) **[Utilize] button**
Creates a new condition utilizing the selected condition.

6) **[Range]**
Set a device of the condition under which a display is changed.

➟6.5.5 ■2 Setting conditions

- [Bit]
  Set the value of the bit device.
- [Range]
  Set the word device value using a conditional expression.

7) **[Common Setting]**
These settings are applied to all the conditions to be set.

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 ■1 Setting object shapes When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings

8) **[Shape Attribute]**

Item	Description
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings
[Reverse]	Inverts the color of the numerical value.
[Blink]	Select the blinking speed of the numerical value and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Data only] • [Data and Shape] These settings are applied to all the conditions to be set.

9) **[Text Attribute]**

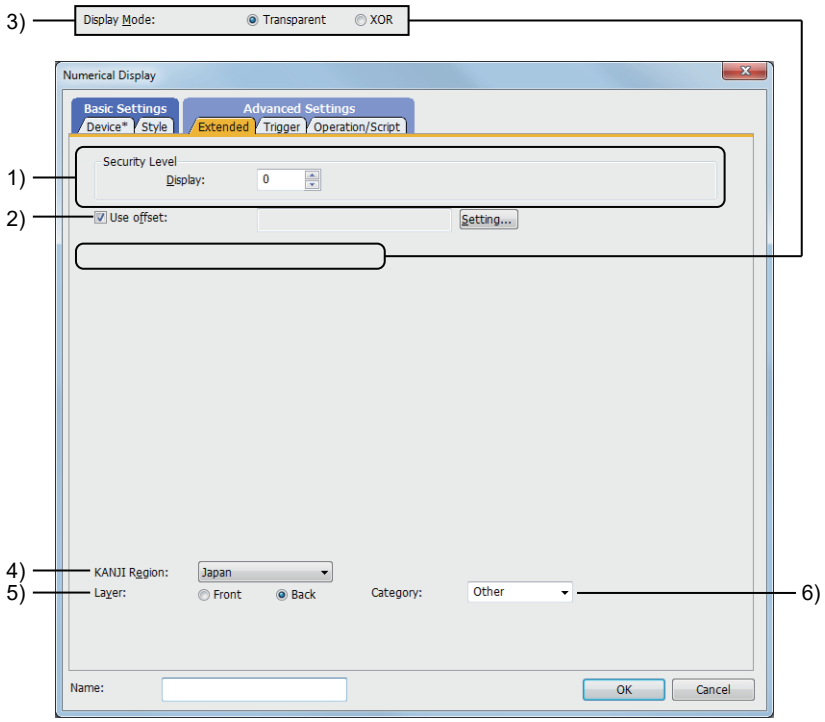
Item	Description
[Numerical Color]	Set the color of the numerical value. ➟6.4 Color Settings

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set a security level when using the security.

The setting range is [0] to [15].

If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching them.

Set the offset device with the [Setting] button.

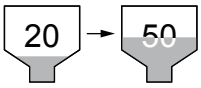
➟6.1.11 Offset

3) **[Display Mode]**

Display mode when the numerical display is superimposed on a level object.

- [Transparent]: Displays the numerical value on the level object.

- [XOR]: The numerical value in a numerical display is integrated into the XOR synthesis with a level color, to be able to be distinguished from the level object.



GOT Graphic Ver.2

As the setting is fixed to [Transparent], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows the items to be selected.

- [Transparent]
- [XOR]

4) **[KANJI region]**

Select the KANJI region of the displayed text.

This item can be set only when [Format String] is set in the [Device] tab.

➡1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

5) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

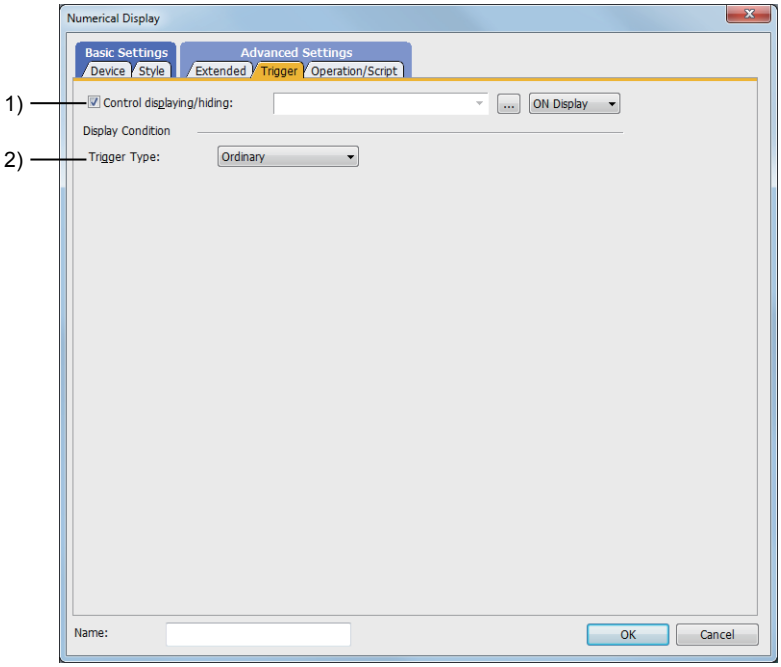
6) **[Category]**

Select the category to assign the object.

➡11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➡6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]

• [Rise/Fall]
• [Sampling]
• [Range]
• [Bit Trigger]
• [ON Sampling]
• [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

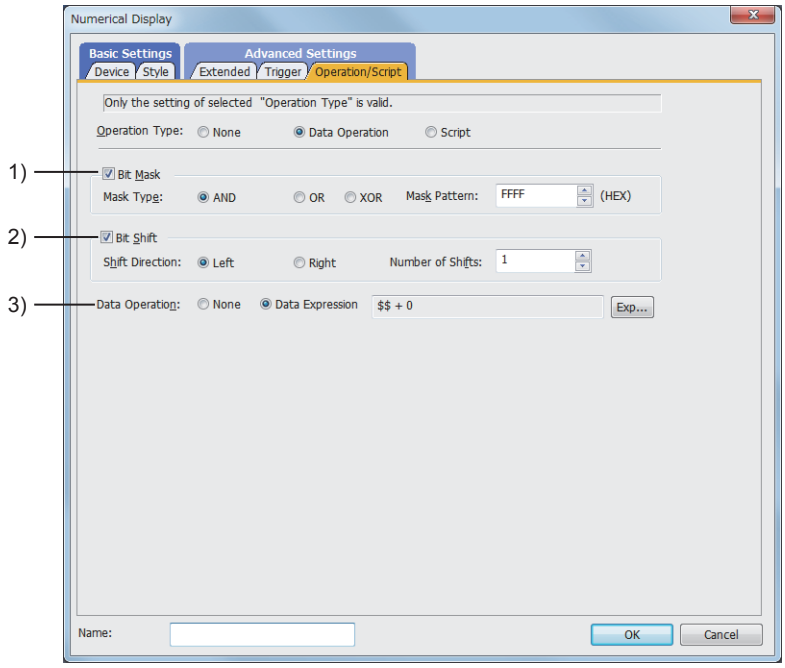
Depending on the selection for [Operation Type], the setting items are different.

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This item can be set only when [Operation Type] is [Data Operation].
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left] • [Right]
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device] tab.

3) **[Data Operation]**

Select the format of the expression operating with the data operation.

The following shows the items to be selected.

- [None]
- [Data Expression]

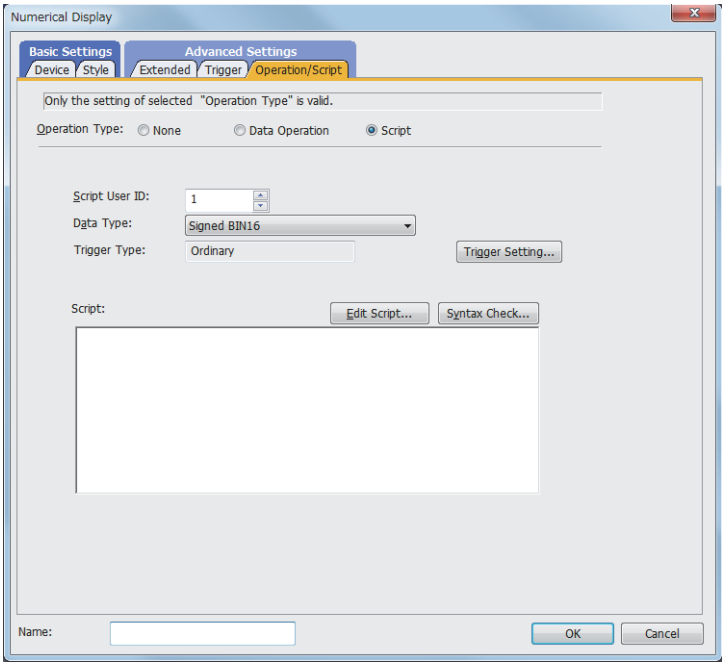
(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This item can be set only when [Operation Type] is [Script].

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) **Correspondence between the object settings and the object properties used in scripts**

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device]	[Number Size] (width)	text_width	○	○	When the object is updated	
	[Number Size] (length)	text_height	○	○	When the object is updated	
	[Alignment]	arrange	○	○	When the object is updated	
	[Digits (Fractional)]	decimal_point	○*3	○*3	Upon the setting change	
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Numerical Color]	text_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated
	[Display Mode]	draw_mode	○	○	When the object is updated	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

*3 Not available when [Device] is selected for [Digits (Fractional)].

8.4.5 [Numerical Input] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Numerical Display/Input] → [Numerical Input] from the menu.

Step 2 Click the position where you place the numerical input. Placing the numerical input is complete.

Step 3 Double-click the numerical input which has been placed to display the setting dialog.

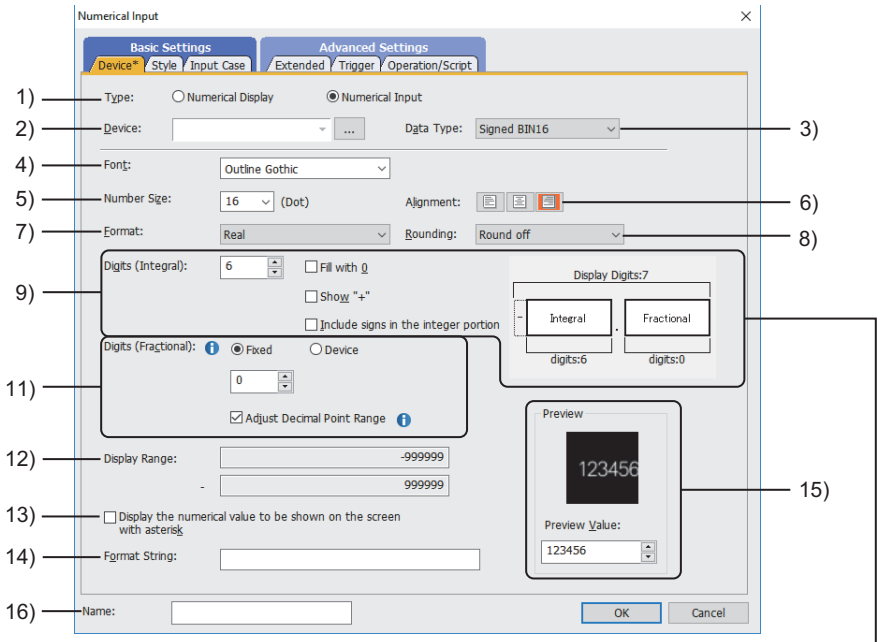
➥■1 [Device] tab
■2 [Style] tab
■3 [Input case] tab
■4 [Extended] tab
■5 [Trigger] tab
■6 [Operation/Script] tab

■1 [Device] tab

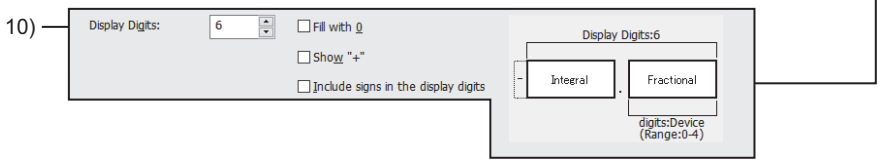
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➥10.19.2 ■2 Usable functions



When [Fixed] is selected for [Digits (Fractional)]



When [Device] is selected for [Digits (Fractional)]

1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Numerical Display]
- [Numerical Input]

2) **[Device]**
Set the device to be monitored.

➥6.1.2 How to set devices

3) **[Data Type]**

Select the data type of the device to be set.

The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

4) **[Font]**

Select the font of the numerical value to be displayed.

The following shows the items to be selected.

- [6x8dot]
- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Gothic]
- [16dot HQ Gothic]
- [TrueType Numerical Gothic]
- [TrueType Numerical 7seg]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

5) **[Number Size]**

Set the size of the numerical value to be displayed.

➟1.2.5 Font specifications

6) **[Alignment]**

Set the horizontal position of the numerical value.

7) **[Format]**

Select the display type of the device to be monitored.

The selectable items vary with the data type of the device.

○ : Available, ×: Not available

[Data Type]	[Format]					
	[Signed Decimal]	[Unsigned Decimal]	[Hexadecimal]	[Octal]	[Binary]	[Real]
[Signed BIN16]	○	○	○	○	○	○
[Unsigned BIN16]	○	○	○	○	○	○
[Signed BIN32]	○	○	○	×	○	○
[Unsigned BIN32]	○	○	○	×	○	○
[Signed BIN64]	○	○	○	×	×	○
[Unsigned BIN64]	○	○	○	×	×	○
[Signed BIN8]	○	○	○	○	○	○
[Unsigned BIN8]	○	○	○	○	○	○
[BCD16]	○	○	○	○	○	○
[BCD32]	○	○	○	×	○	○
[BCD64]	○	○	○	×	×	○

[Data Type]	[Format]					
	[Signed Decimal]	[Unsigned Decimal]	[Hexadecimal]	[Octal]	[Binary]	[Real]
[Real(32bit)]	○	○	○	×	○	○
[Real(64bit)]	○	○	○	×	×	○

8) **[Rounding]**

If there is a numerical value that have digits to the right of the digit set for [Digits (Fractional)], select the processing method.

The following shows the items to be selected.

- [Round off]
- [Round down]
- [Round up]

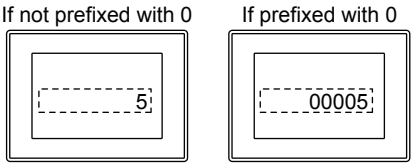
9) **[Digits (Integral)]**

This item is displayed when [Fixed] is selected for [Digits (Fractional)].

Set the number of digits of the integer part to be displayed.

The number of the digits that can be set depends on the setting for [Format].

- [Signed Decimal] or [Unsigned Decimal]: [1] to [21]
- [Hexadecimal]: [1] to [16]
- [Octal]: [1] to [6]
- [Binary] or [Real]: [1] to [32]

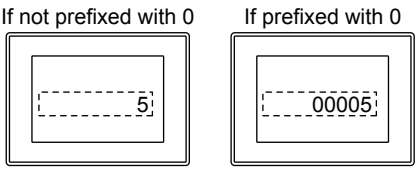
Item	Description
[Fill with 0]	When the right justification is set for [Alignment], 0 is prefixed to the numerical value. Example): When setting [5] for [Digits (Integral)]  When [Format] is set to [Binary], the GOT displays the numerical value prefixed with 0, regardless of the setting of [Fill with 0].
[Show "+"]	When the numerical value is positive number, [+] is prefixed to the numerical value. This item can be set only when [Format] is either [Signed Decimal] or [Real].
[Include signs in the integer portion]	A sign is included as one digit in the number of digits of the integer part. This item can be set only when [Format] is either [Signed Decimal] or [Real].

10) **[Display Digits]**

This item is displayed when [Real] is selected for [Digits] and [Device] is selected for [Digits (Fractional)].

Set the total number of digits of the integer part and fractional part to be displayed.

The setting range is [1] to [32].

Item	Description
[Fill with 0]	When the right justification is set for [Alignment], 0 is prefixed to the numerical value. Example): When setting [5] for [Display Digits] 
[Show "+"]	When the numerical value is positive number, [+] is prefixed to the numerical value.
[Include signs in the display digits]	Includes a sign as one digit in the number of digits displayed.

11) **[Digits (Fractional)]**

This item is displayed when [Real] is selected for [Format].

Select a method to specify the number of decimal places, and specify the number of decimal places to be displayed.

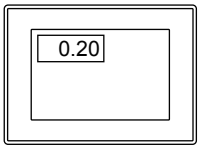
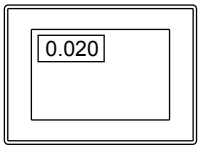
The following shows selectable items.

- [Fixed]:

Enter the number of decimal places.
The setting range is [0] to [30].

• [Device]:

Set a device to specify the number of decimal places.
The number of decimal places changes based on the device value.
The data type of the device is unsigned 16-bit binary.
Set the device value as follows.
X > Y + 1
X: Value set for [Display Digits]
Y: Device value to specify the number of decimal places
If the device value is outside the valid range, 0 is assumed.

Item	Description
[Adjust Decimal Point Range]	(When a value other than binary floating values is held in the monitor target device) the integer device value is displayed as a value with the decimal point. This item can be set when [Format] is [Real] and [Data Type] is set to one other than [Real]. Example) Number of the digits to the right of the decimal point: 2 Controller device value: 20  The value is displayed as 0.20 in the GOT. Example) Number of the digits to the right of the decimal point: 3 Controller device value: 20  The value is displayed as 0.020 in the GOT. This setting is applied to the monitored device value and the following device values. • Device values specified for [$V] and [Other Device] that are used in the expression for the display range in the [Style] tab • Device values specified to [$W] and [Other Device] that are used in the expression for the input range in the [Input Case] tab • Device values specified to [$$], [$W], and [Other Device] that are used in the expression for a data operation in the [Operation/Script] tab

12) **[Display Range]**

Displays the maximum/minimum value which can be displayed on the screen.

13) **[Display the numerical value to be shown on the screen with asterisk]**

Displays the numerical value, sign, and decimal point to be displayed on the screen in asterisk.
This item can be set when [Font] is set to one other than [TrueType Numerical Gothic] and [TrueType Numerical 7seg].
The character string (except #) set for [Format String] is not displayed in asterisk.
When saved as an operation log, the text is saved not as an asterisk but as a numerical value.

14) **[Format String]**

Displays characters (such as alphanumeric characters, kanji, or symbols) in the numerical display
This item can be set when [Font] is set to one other than [TrueType Numerical Gothic] and [TrueType Numerical 7seg].
Enter #s to the positions where the digits of a numerical value are to be displayed.
The #s entered in setting this item are replaced with the digits of the device value.
Each # is replaced with the digit of the value in the same position counted from the right. If the number of the digits of the device value is larger than that of #s, the digits overflowing from the left are not displayed.
The digits of a real number to the right of the decimal point are processed according to the setting for [Rounding].
The sign included in the device value is also processed in the same way that processes the numerical value.
The following shows examples of displays.
Example 1) When the setting for [Format] is not [Real]

[Format String]	[Digits (Fractional)]	Device value	Display
##m##cm	-	1234	12m34cm
		123	1m23cm
		12345	23m45cm
		-123	-1m23cm

Example 2) When setting [Real] for [Format] and [Round off] for [Round off]

[Format String]	[Digits (Fractional)]	Device value	Display	Description
##m##cm	0	12.345	m12cm	Since [Digits (Fractional)] is 0, only the integer part is displayed.
	2		12m35cm	Since [Digits (Fractional)] is 2, the digits from the integer part to the second decimal place are displayed. The device value is rounded off to the third decimal place.
####cm	2	12.344	1234cm	Since [Digits (Fractional)] is 2, the device value is rounded off to the third decimal place.
		12.345	1235cm	
##.##cm	2	12.344	12.34cm	
		12.345	12.35cm	

15) **[Preview]**

Displays the preview of the screen.

Item	Description
[Preview Value]	Set the numerical value to be displayed in the preview.

16) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

Point

(1) **Items whose settings are invalid when the format text is used**

- The settings of [Digits (Integral)] and [Display Digits] in the [Device] tab become invalid.
- The setting of [Alignment] in the [Device] tab becomes invalid and the right justification is performed.

(2) **Characters which cannot be displayed in the format text**

When [6x8dot] is set for [Font], and a character other than the ASCII cords (0x20 to 0x7E) is included in the format text, the character and all the following characters are not displayed.

➟12.6 ASCII Code List

(3) **Operations performed when an input value is displayed at the input object position**

When [Display input value on destination object location] is selected in the [Extended] tab, the input value of the key window is reflected on the object, according to the setting of [Format String].

However, in the following cases, the setting of [Format String] is not reflected to the display on the object while a value is being entered. Consequently, the value is displayed on the object in the set digits (the number of the pound signs [#]). (The decimal point is not counted as one digit.)

- The [Format] is set to [Binary] in the [Device] tab, and GS450.b6 is off.
- The [Format] is set to [Octal] in the [Device] tab, and GS450.b7 is off.
- The [Format] is set to [Real] in the [Device] tab.

To display the value on the object according to the setting of [Format String], confirm the entry.

■2 [Style] tab

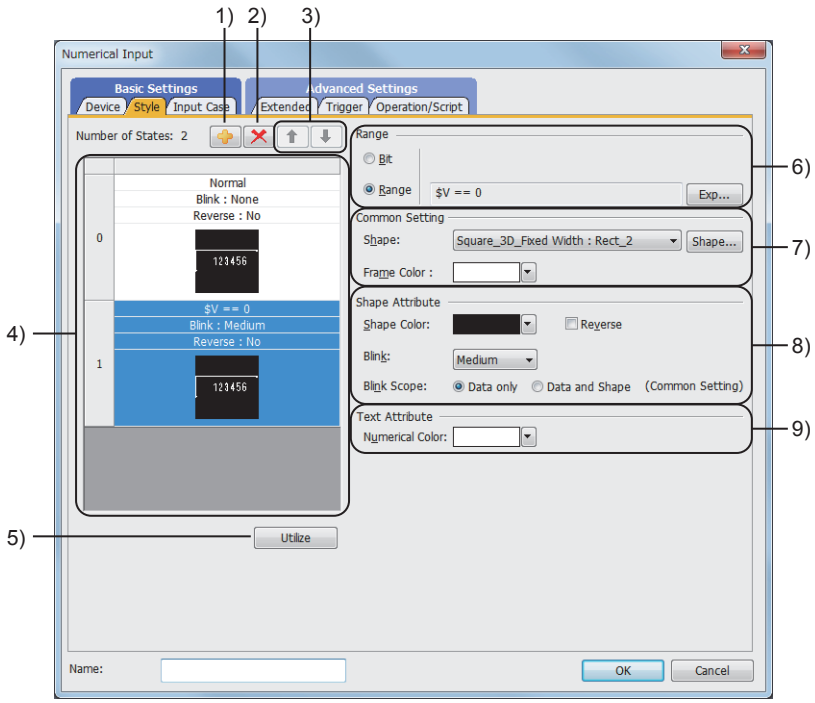
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

For the conditions, refer to the following.

➟6.5.5 Common setting for objects



1) **Add button**
Adds a new condition.

2) **Delete button**
Deletes the selected condition.

3) **Up button, down button**
Changes the order of priority of the selected condition.

4) **Preview list**
Displays set conditions.

5) **[Utilize] button**
Creates a new condition utilizing the selected condition.

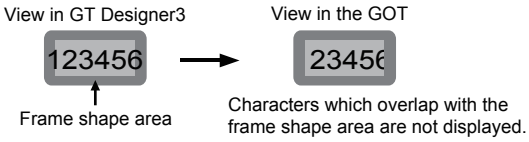
6) **[Range]**
Set a device of the condition under which a display is changed.

➟6.5.5 ■2 Setting conditions

- [Bit]
  Set the value of the bit device.
- [Range]
  Set the word device value using a conditional expression.

7) **[Common Setting]**

These settings are applied to all the conditions to be set.

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 Common setting for objects When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings

8) **[Shape Attribute]**

Item	Description
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings
[Reverse]	Inverts the color of the numerical value.
[Blink]	Select the blinking speed of the numerical value and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Data only] • [Data and Shape] These settings are applied to all the conditions to be set.

9) **[Text Attribute]**

Item	Description
[Numerical Color]	Set the color of the numerical value. ➟6.4 Color Settings

■3 [Input case] tab

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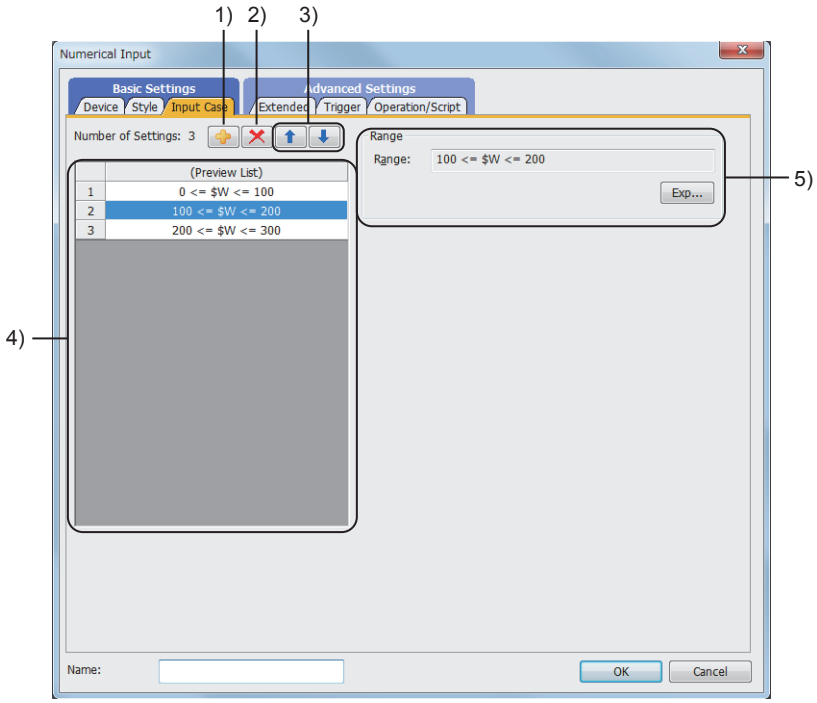
➟6.5.5 ■2 Setting conditions



1) **Add button**
Adds a new condition.

2) **Delete button**
Deletes the selected condition.

3) **Up button, down button**
Changes the order of priority of the selected condition.

4) **Setting list**
Displays the status set for each condition.

5) **[Range]**

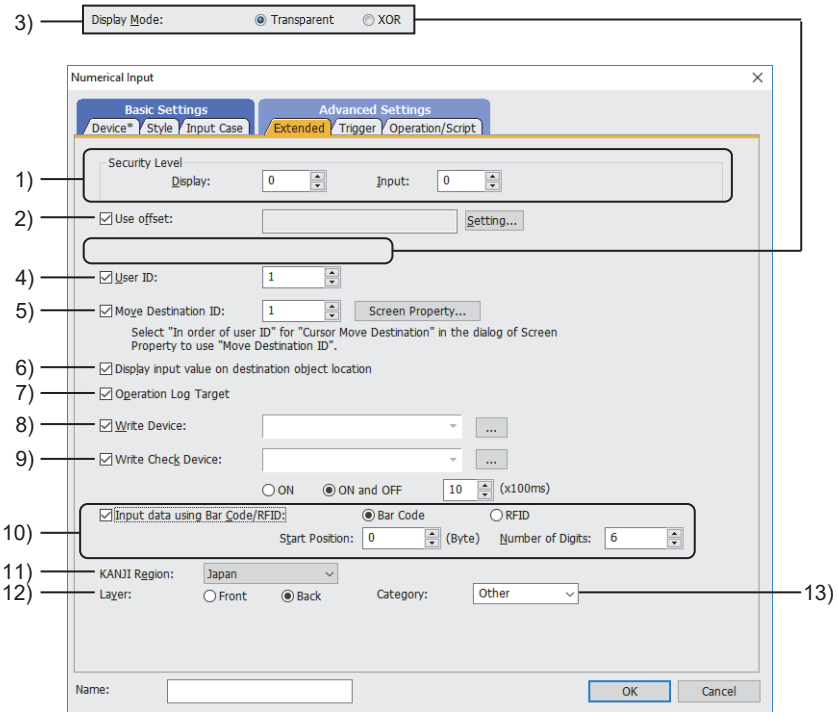
Item	Description
[Range]	Set the range of the word device value for screen switching using a conditional expression.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set a security level when using the security.

The setting range is [0] to [15].

If you do not use the security, select [0].

Set a value greater than [Display] for [Input].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching them.

Set the offset device with the [Setting] button.

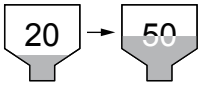
➟6.1.11 Offset

3) **[Display Mode]**

Display mode when the numerical input is superimposed on a level object.

- [Transparent]: Displays the numerical value on the level object.

- [XOR]: The numerical value in a numerical display is integrated into the XOR synthesis with a level color, to be able to be distinguished from the level object.



GOT Graphic Ver.2

As the setting is fixed to [Transparent], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows the items to be selected.

- [Transparent]

• [XOR]

4) **[User ID]**

Select this item to set the user ID.
The setting range is [1] to [65535].
The following operations can be performed when user ID numbers are set.

• Setting the position where the cursor is displayed at screen switching

➟5.2.4 Setting key windows ([Key Window])

• Checking the numerical input function that is displaying the cursor

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

• Specifying objects that were used with operation logs

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

For the details of this setting, refer to the following.

➟8.4.2 ■7 Specifying the destination to which the cursor moves after the confirmation of a numerical value entry

5) **[Move Destination ID]**

Set the user ID of a numerical input to which the cursor moves upon inputting a value.
To move the cursor by specifying a user ID, a cursor movement setting must also be configured.
Configure one of the following settings to enable the cursor movement per project or per screen.

• To enable the cursor movement per project

Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] window ([Key Window]), and select the [Advanced Setting] tab.

➟5.2.4 ■4 (2) [Advanced Setting] tab

Select [Control the cursor] for [Defined key action], and select one of the following items for [Cursor Move Destination].

• [In order of user ID]
• [Subsequently valid user ID] (Not available to GT21 and GS21)

• To enable the cursor movement only on the screen having a target numerical input

Click the [Screen Property] button to display the [Screen Property] dialog, and select the [Key Window Advanced Setting] tab.
(The [Screen Property] dialog corresponds to the screen having a target numerical input.)

➟2.7.1 Property of base screens
2.7.2 Properties of window screens

Select [Prioritize screen setting over project setting] in [Key Window/Cursor Movement].
Select [Control the cursor] for [Defined key action], and select one of the following items for [Cursor Move Destination].

• [In order of user ID]
• [Subsequently valid user ID] (Not available to GT21 and GS21)

6) **[Display input value on destination object location]**

Reflects the numerical values entered with the key window in the object on the screen immediately.
Write the value to a device after touching the enter key.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select this item to target the object for the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

8) **[Write Device]**

Set the target device where an input numerical value is to be written.
When the data operation is set, the data before the execution of the data operation can be stored.

9) **[Write Check Device]**

Set a bit device to turn on upon completion of a numerical input.

• [ON]

Turns on a set bit device upon completion of a numerical input.

• [ON and OFF]

Turns on a set bit device upon completion of a numerical input, and then turns off the bit device after a specified time period.
The setting range of the time period for which a set bit device is on is [5] x 100 ms to [30] x 100 ms.

10) **[Input data using Bar Code/RFID]**

Inputs the numerical value read from a serial barcode reader or RFID.

➟10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)

The following shows the items to be selected.

- [Bar Code]
- [RFID]

Item	Description
[Start Position]	Set the position of the byte from which a read value is input. • [Bar Code]: [0] to [3997] byte(s) • [RFID]: [0] to [19997] byte(s)
[Digits]	Set the number of digits for inputting the read data. The same number of digits as that set for [Digits (Integral)] in the [Device] tab or smaller can be set.

11) **[KANJI region]**

Select the KANJI region of the displayed text.

This item can be selected only when [Format String] is set in the [Device] tab.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

12) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

13) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

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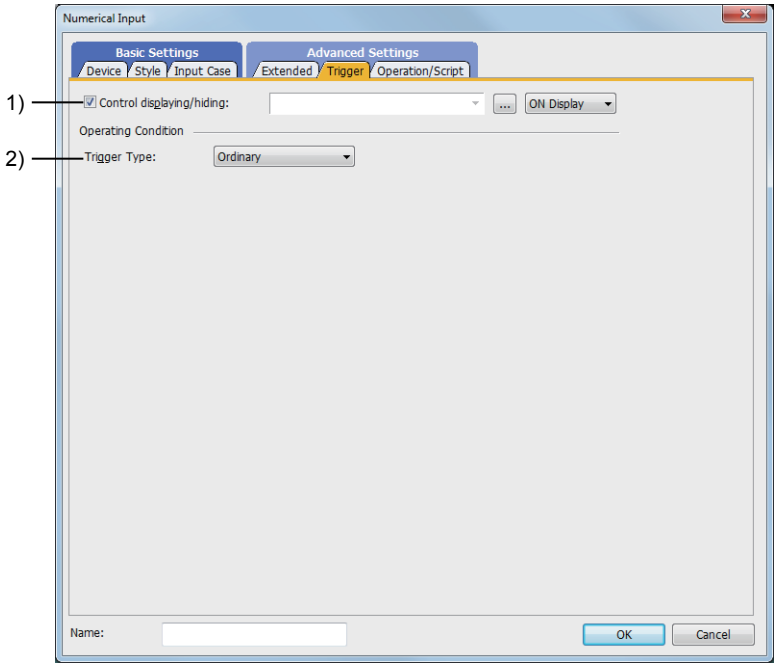

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■6 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Depending on the selection for [Operation Type], the setting items are different.

(1) Data operation

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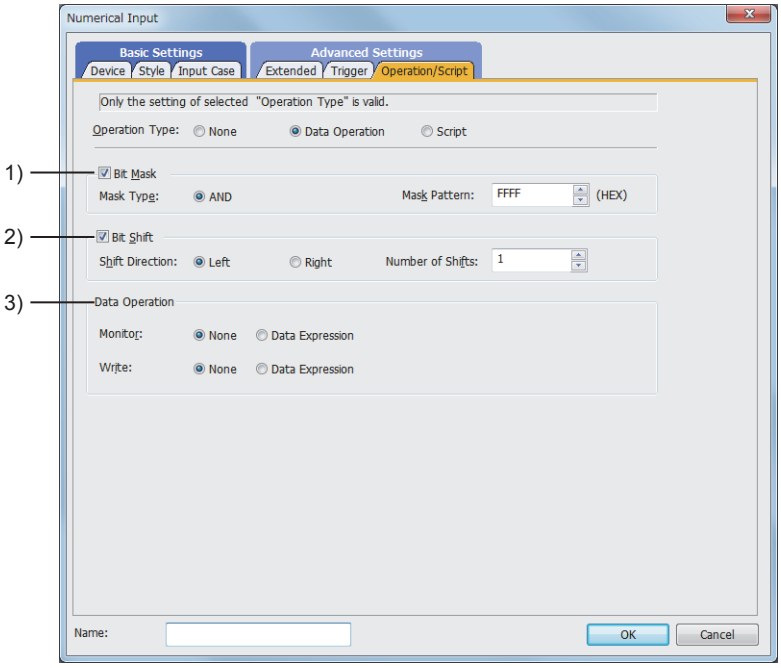
This item can be set only when [Operation Type] is [Data Operation].
For the settings of the data operation function, refer to the following.

➟6.5.5 Common setting for objects



1) **[Bit Mask]**
Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device] tab.

2) **[Bit Shift]**
Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left] • [Right]
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device] tab.

3) **[Data Operation]**

Select the format of the expression operating with the data operation.

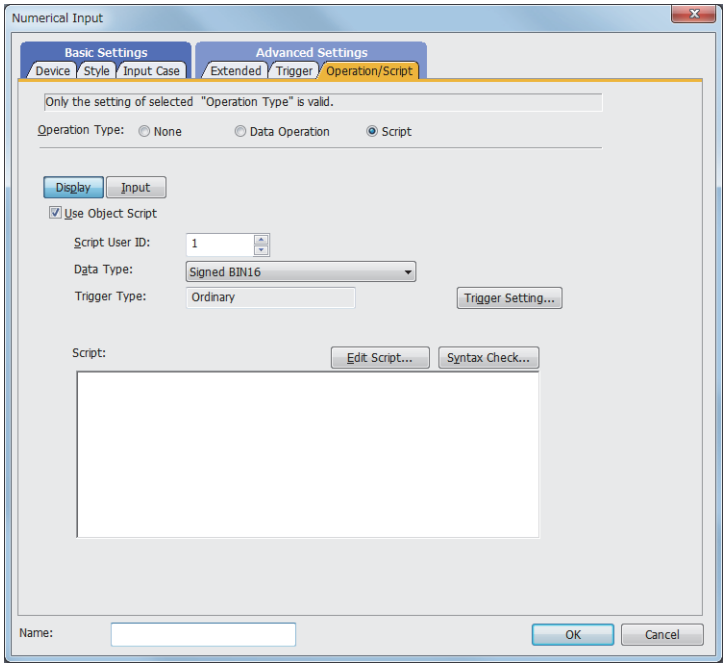
Item	Description
[Monitor]	Select the expression used when devices are monitored. The following shows the items to be selected. • [None] • [Data Expression]
[Write]	Select the expression used when values are written to devices. The following shows the items to be selected. • [None] • [Data Expression]

(2) Script (display)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When the [Script] and [Display] buttons are clicked, [Operation Type] can be set.
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) **Correspondence between the object settings and the object properties used in scripts**

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device]	[Number Size] (width)	text_width	○	○	When the object is updated	
	[Number Size] (length)	text_height	○	○	When the object is updated	
	[Alignment]	arrange	○	○	When the object is updated	
	[Digits (Fractional)]	decimal_point	○[*3]	○[*3]	Upon the setting change	
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Numerical Color]	text_color	○	○	When the object is updated	
[Extended]	[Security Level] ([Display])	security	○	○	When the object is updated	When the screen is updated
	[Security Level] ([Input])	input_security	○	○	Upon the setting change	
	[Display Mode]	draw_mode	○	○	×	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➡9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

*3 Not available when [Device] is selected for [Digits (Fractional)].

(3) Script (input)

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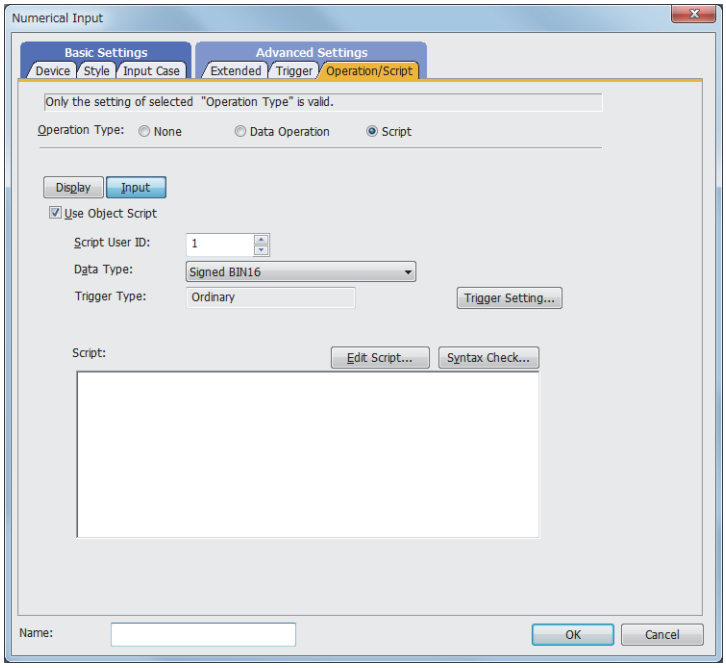
When the [Script] and [Input] buttons are clicked, [Operation Type] can be set.
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.
○: Available
×: Not available
-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device]	[Number Size] (width)	text_width	○	○	When the object is updated	
	[Number Size] (length)	text_height	○	○	When the object is updated	
	[Alignment]	arrange	○	○	When the object is updated	
	[Digits (Fractional)]	decimal_point	○[*3]	○[*3]	Upon the setting change	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Numerical Color]	text_color	○	○	When the object is updated	
[Extended]	[Security Level] (display)	security	○	○	When the object is updated	When the screen is updated
	[Security Level] (input)	input_security	○	○	Upon the setting change	
	[Display Mode]	draw_mode	○	○	×	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➡9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

*3 Not available when [Device] is selected for [Digits (Fractional)].

8.4.6 Relevant settings

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Set the relevant settings other than the specific settings for the numerical display/input as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings (key window), screen property

Set the following functions for each project (GOT environmental settings) or for each screen (screen property).

➟5.2.4 Setting key windows ([Key Window])

- Settings for each project (GOT environmental settings)
  Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] window.
- Settings for each screen (screen property)
  Select the screen editor on which the key window is to be set and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog.

Function	Setting item
While entering a numerical value, checking the input range	Not available to GT21 and GS21. This item is enabled only when an input range is set. Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Check the input range while entering numerical values] ➟8.4.5 ■3 [Input case] tab
Displaying the allowable input range as a message when entering a numerical value outside the input range	Not available to GT21 and GS21. Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Display the valid input range when an invalid value is input in Numerical Input]
Displaying the cursor when the operating condition is satisfied.	Not available to GT21 and GS21. Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Cursor]
Deleting the key window and cursor when the operating condition is not satisfied.	Not available to GT21 and GS21. Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Clear the key window and the cursor] of [When operating conditions are not satisfied]
Setting whether to move the display of the key window or not by screen	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window Position Correction]

Function	Setting item
Selecting when displaying the value being entered in the key window	Not available to GT21 and GS21. Set the following item in the [Basic Setting] tab or [Key Window Basic Setting] tab. • [Display value during input]
Selecting when displaying the input range of data in the key window	Not available to GT21 and GS21. Set the following item in the [Basic Setting] tab or [Key Window Basic Setting] tab. • [Display input function range]
Setting whether to display or hide the cursor when hiding the cursor and pressing the enter key or an arrow key	Not available to GT21 and GS21. Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Display the cursor with a touch on the Enter/arrow key when the cursor is hidden]
When entering a value in a numerical input or text input, displaying a dialog for checking the input at a key touch operation on the enter key	Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Display the input confirmation dialog when setting the function of Numerical/ASCII Input]
Displaying the key window when the operating condition is satisfied.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window]
Displaying the key window when the screen is switched	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the key window]
Displaying the cursor when the screen is switched.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the cursor]
Selecting the method of displaying the cursor when entering a value with a numerical input or text input	Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Cursor Type]
Displaying the key window at a touch input or deleting the key window by touching the enter key	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window] • [Defined key action]
When multiple numerical inputs or text inputs exist, setting the order of input After an entry is complete, moving the cursor to the next destination automatically	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Defined key action] • [Reference for determining cursor destination]
Setting the window screen to be used as a key window for numerical inputs (decimal or hexadecimal) and text inputs	Set the following item in the [Basic Setting] tab or [Key Window Basic Setting] tab. • [Key Window]

■3 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] window.

➡5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
When deleting the cursor, clearing the cursor information, such as the cursor display object ID and cursor display user ID	[Clear the cursor information when deleting the cursor]
Notifying the value (32 bits) before a change with the numerical input function (Write device)	[Previous Numeric Value Input(32bit)]
Notifying the value (32 bits) confirmed with the numerical input function (Write device)	[Current Numeric Value Input(32bit)]
Notifying the confirmation of an entry from a numerical input (Write device: System signal 2-1.b4)	[System Signal 2-1]
Notifying the user ID of the numerical input to which an entry is confirmed (Write device)	[Numeric Value Input Number]
Notifying the object ID No. of the object for which the cursor was previously displayed (Write device)	[Previous Cursor Display Object ID]
Notifying the user ID No. of the object for which the cursor had been displayed previously (Write device)	[Previous Cursor Display User ID]

Function	Setting item
Notifying the key codes set to the input keys when the keys are input to text input, touch switch, or other objects (Write device)	[Key Code Input] (Not available to GT21 and GS21)
Notifying that the key window is being displayed (Write device: System signal 2-1.b11)	[System Signal 2-1]
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Turning off the Numeric Value Input signal (Read device: System signal 1-1.b4)	[System Signal 1-1]
Notifying the object ID No. of the object for which the cursor is currently being displayed (Write device)	[Current Cursor Display Object ID]
Notifying the user ID No. of the object for which the cursor is being displayed currently (Write device)	[Current Cursor Display User ID]
Notifying the cursor is being displayed in a numerical value or text input (Write device: System signal 2-2.b11)	[System Signal 2-2]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]
Notifying a value out of the input range is stored (Write device: System signal 2-1.b14)	[System Signal 2-1] (Not available to GT21 and GS21)

■4 GOT Internal Device

➟12.1.3 GOT special register (GS)

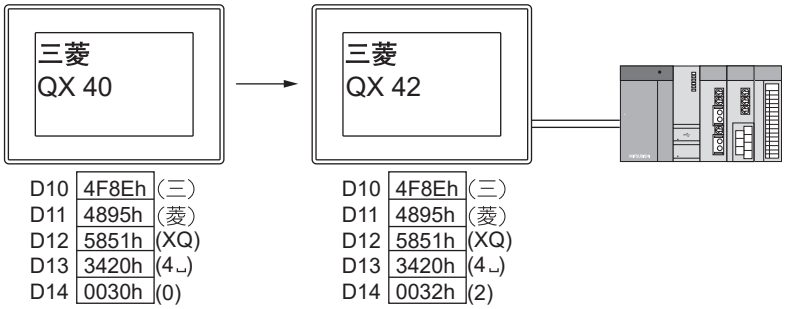
Function	Setting item
Notifying that the object is ready for receiving an input from the barcode reader or RFID	GS243.b15 (Not available to GT21 and GS21)
When entering a value or text with a numerical input or text input object, displaying a dialog prompting you to confirm the entry when the enter key is touched	GS450.b0 (Not available to GT21 and GS21)
Checking the input range while entering a value for a numerical input object	GS450.b1 (Not available to GT21 and GS21)
Storing 0 in the current cursor position device and other related devices of the system information when the cursor is hidden.	GS450.b3 (Not available to GT21 and GS21)
Displaying the key window for inputting binary values when the format of the numerical input is binary	GS450.b6 (Not available to GT21 and GS21)
Displaying the key window for inputting octal values when the format of the numerical input is octal	GS450.b7 (Not available to GT21 and GS21)
Notifying the upper-left coordinates of a numerical input object on which the cursor is displayed	GS694 GS695 (Available to GT27, GT25, and GS25)

8.5 Placing a Text Display and Text Input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Text Display

Data in a word device is handled in a specified character code and displayed as text.



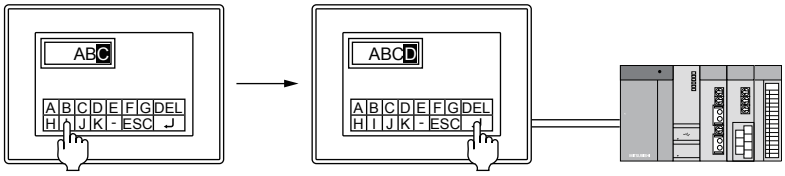
■2 Text Input

This function writes a character string into word devices.

(1) Entering characters with keys for entries

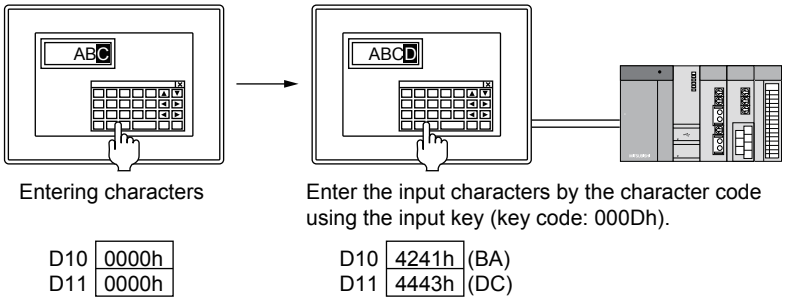
As keys for entries, a key window and touch switches to which key codes are assigned are available.

(a) Entering with touch switches placed on the screen



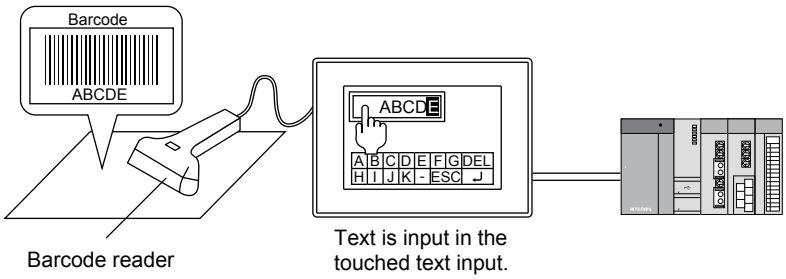
(b) Entering from a key window

➡5.2.4 Setting key windows ([Key Window])



(2) Inputting text with a barcode reader or RFID

➡10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)



8.5.1 Specifications of the text display and text input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 1024 text displays and text inputs can be placed on one screen.
- For GT21 and GS21
  Up to 1024 text displays can be placed on one screen.
  Up to 100 text inputs can be placed on one screen.

■2 Kana-Kanji/Pinyin Conversion

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
For the Kana-Kanji/Pinyin conversion, refer to the following.

➟5.2.13 Configuring the settings to convert a text into kanji or Simplified Chinese characters in the GOT ([Kana-Kanji/Pinyin Conversion])

■3 Supported character code

The following character codes are supported.

- ASCII code
- Unicode (UTF-16)
- Shift JIS code
- GB code
- KS code*1
- Big5 code

*1 Not available to GT21 and GS21.

■4 Number of monitored devices and number of digits to be displayed

The number of monitored devices depends on the device data type, character code, and the number of digits to be displayed.

Device data type	Character code	The number of monitored devices
16-bit	ASCII code Shift JIS code GB code KS code Big5 code	One word device is used for two digits to be displayed. If an odd number of digits is displayed, the odd number incremented by 1 is the number of monitored devices.*1*2 Example) Number of digits to be displayed: 3, start device: D1000 Two word devices (D1000 and D1001) starting from D1000 are used.
	Unicode (UTF-16)	One word device is used for one digit to be displayed. Example) Number of digits to be displayed: 3, start device: D1000 Three word devices (D1000 to D1002) starting from D1000 are used.
8-bit	ASCII code Shift JIS code GB code KS code Big5 code	Eight bit devices are used for one digit to be displayed. Example) Number of digits to be displayed: 3, start device: GB1000 Twenty-four consecutive devices (GB1000 to GB1023) starting from GB1000 are used.
	Unicode (UTF-16)	Sixteen bit devices are used for one digit to be displayed. Example) Number of digits to be displayed: 3, start device: GB1000 Forty-eight consecutive devices (GB1000 to GB1047) starting from GB1000 are used.

*1 For a text display, the lower- or higher-order bytes of the last device are not monitored.
Whether the lower- or higher-order bytes are not monitored depends on the display order of the string data.
- High to low: Lower-order bytes of the last device
- Low to high: Higher-order bytes of the last device

*2 For a text input, the value written to the last device of the devices to be monitored varies depending on the GOT type.
GT27, GT25, GT23, GT SoftGOT2000, and GS25:
A null is inserted.
GT21 and GS21:
A null or space selected for [Input Character String Terminal] is inserted.

The position of insertion depends on the storage order of the string data.

- High to low: Lower-order bytes of the last device
- Low to high: Higher-order bytes of the last device

■5 Order of displaying and storing character strings

You can specify the order of displaying the character strings stored in devices and the order of storing character strings in devices.

The following shows the specifications of each character code.

(1) ASCII code, shift JIS code, GB code, KS code, Big5 code

Specifications differ depending on the data type.

- When the data type is 16-bit

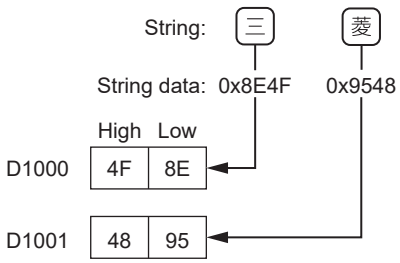
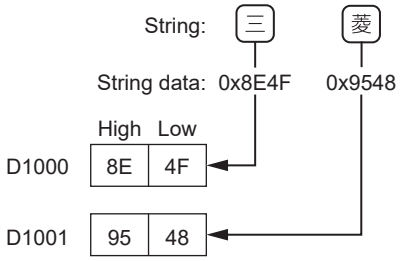
  Low to high or high to low can be specified.

  b8 to b15 of a word device are handled as the higher-order bytes, and b0 to b7 as the lower-order bytes.
- When the data type is 8-bit

  Only low to high can be specified.

  When the start device is GB1000, GB1008 to GB1015 are handled as the higher-order bytes, and GB1000 to GB1007 as the lower-order bytes.

Example) Storing 16 bit string data in D1000 to D1001

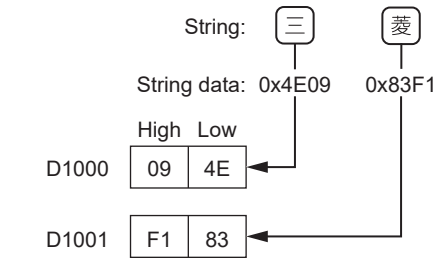
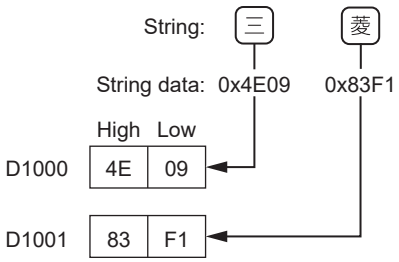
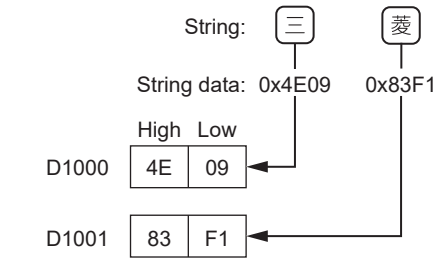
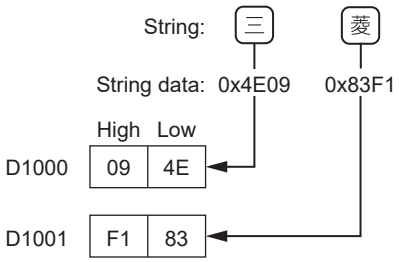
Display order and storage order	Specifications
Low to high	Example) Character code: Shift JIS code  Higher: b8 to b15, lower: b0 to b7
High to low	Example) Character code: Shift JIS code  Higher: b8 to b15, lower: b0 to b7

(2) Unicode

Specifications differ depending on the data type and GOT model.

- When the data type is 16-bit
  Low to high or high to low can be specified.
  b8 to b15 of a word device are handled as the higher-order bytes, and b0 to b7 as the lower-order bytes.
- When the data type is 8-bit
  Low to high or high to low can be specified.
  When the start device is GB1000, GB1008 to GB1015 are handled as the higher-order bytes, and GB1000 to GB1007 as the lower-order bytes.

Example) Storing 16 bit string data in D1000 to D1001

Display order and storage order	Specifications	
	GT27, GT25, GT23, GT SoftGOT2000, GS25	GT21, GS21
Low to high	 Higher: b8 to b15, lower: b0 to b7	 Higher: b8 to b15, lower: b0 to b7
High to low	 Higher: b8 to b15, lower: b0 to b7	 Higher: b8 to b15, lower: b0 to b7

8.5.2 How to use the text display and text input

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the text display and text input

Place text displays and text inputs on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing text displays and text inputs

Edit text displays and text inputs that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting text displays and text inputs

Set text displays and text inputs that have been placed on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Text display settings

➟8.5.4 [Text Display] dialog

- Text input settings

➟8.5.5 [Text Input] dialog

■4 Inputting a value with a key code switch on a base screen

When key code switches are placed on a base screen and are used, text can be entered without the display of a key window.

For key code switches, refer to the following.

➟8.2.11 [Key Code Switch] dialog

■5 Action examples of text displays and text inputs

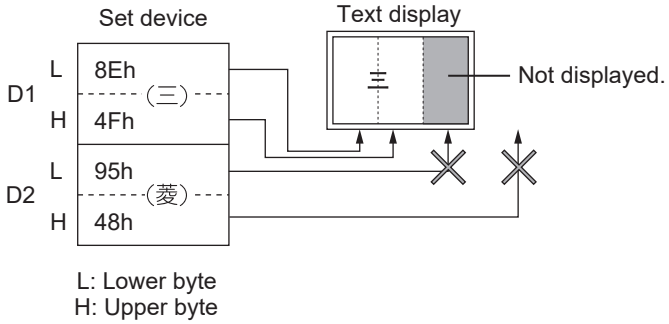
The following shows the examples of displaying and inputting the Shift JIS code on GT27.

Example 1)

When the shift JIS code 8E4h (MITSU) and 9548 (BISHI) are displayed in the order of lower byte to upper byte in the text display

Setting device: D1

Number of displayed digits: 3

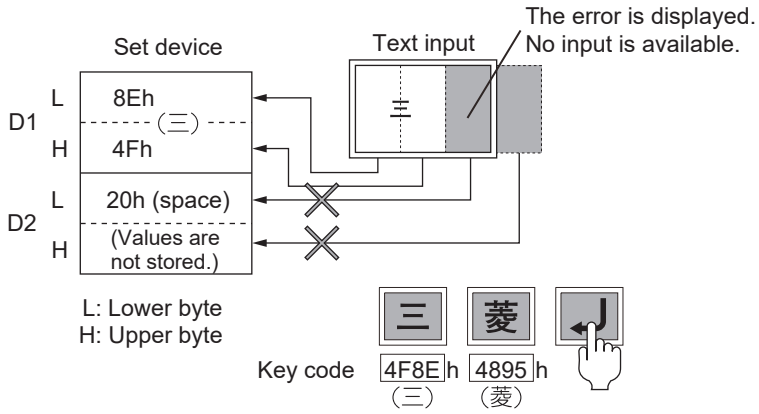


Example 2)

When the shift JIS code 8E4h (MITSU) and 9548 (BISHI) are written in the order of lower byte to upper byte in the text input

Setting device: D1

Number of displayed digits: 3



■6 Inputting texts using a barcode reader or RFID

Texts can be input using a barcode reader or RFID.

When inputting texts from a barcode reader or RFID, set the barcode function or RFID function.

➟10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)

■7 Specifying the destination to which the cursor moves after the confirmation of a text entry

When [User ID] is set, the destination to which the cursor moves after the confirmation of a text entry can be specified. [User ID] can be set only when texts are used.

➟8.5.5 ■2 [Extended] tab

(1) About [User ID]

When [User ID] is set, the following setting and operations are enabled.

- Setting the position where the cursor is displayed at screen switching

  ➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

- Specifying objects that were used with operation logs

  Not available to GT21 and GS21.

  ➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

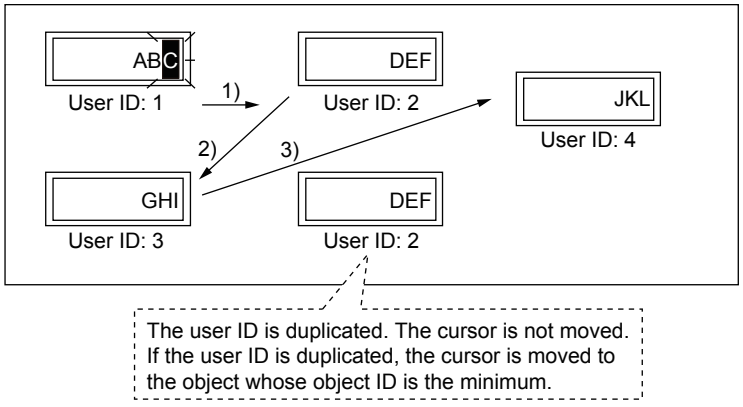
- Moving the cursor in ascending or descending order of user ID number

  ➟(a) Moving the cursor in ascending or descending order of user ID number

(a) Moving the cursor in ascending or descending order of user ID number

When the following key code switches are used, the cursor can be moved in ascending or descending order of user ID number.

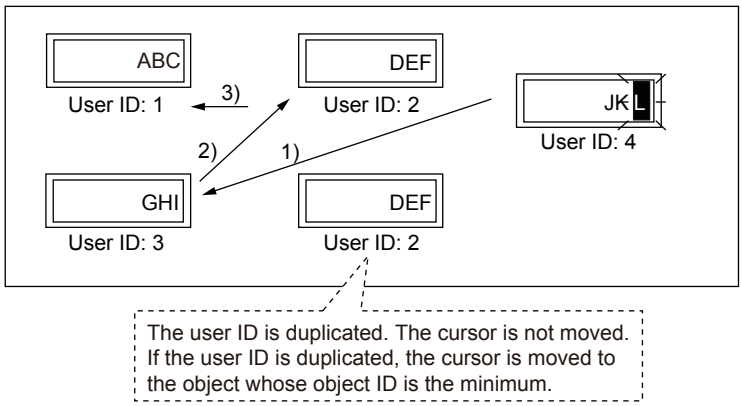
- User ID ascending order movement of cursor (key code: 0092h)



The cursor is moved in order of 1) → 2) → 3).

After 3), the cursor does not move because the destination user ID number does not exist.

- User ID descending order movement of cursor (key code: 0093h)

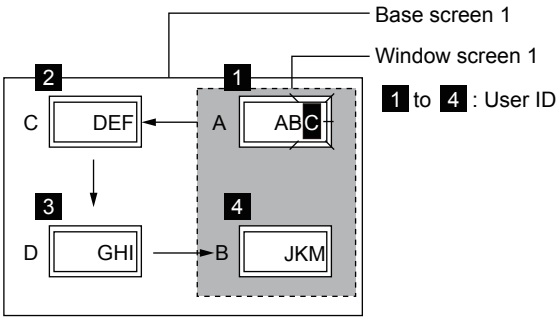


The cursor is moved in order of 1) → 2) → 3).
After 3), the cursor does not move because the destination user ID number does not exist.

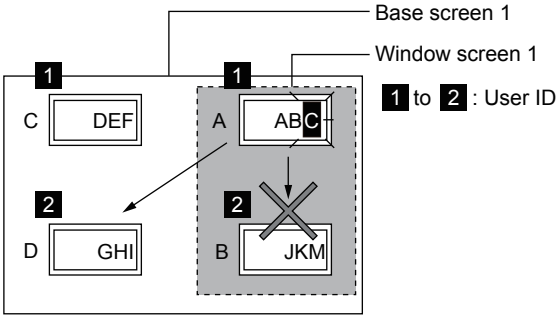
(2) User ID setting

When controlling the cursor using user ID numbers, assign different user ID numbers to each object.
Also, when using overlay screens or superimpose windows, set screens in a way that different user ID numbers are assigned to each object.
When the same user ID number is assigned to different objects, the cursor operation may not perform normally.

- When assigning different user ID numbers to each object
  Even when overlay screens or superimpose windows are used, the cursor operation using user ID numbers is performed normally.



- When assigning the same user ID number
  If objects which have the same user ID exist on the screen (including set overlay screens and superimpose windows), the cursor operation using user ID numbers may not perform normally.

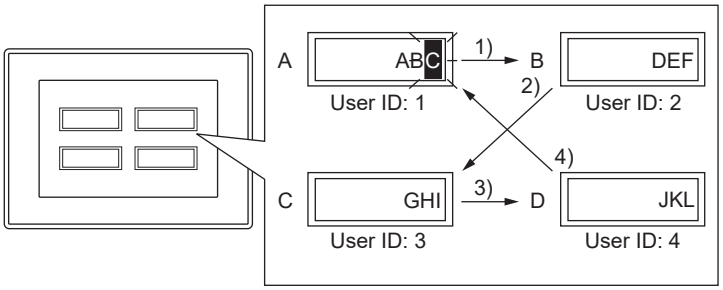


(3) The relation between user ID and destination ID

The destination ID number indicates the user ID number of the text input where the cursor is moved next.

➟8.5.5 ■2 [Extended] tab

Example) Moving the cursor using the destination ID number



Text input	User ID	Destination ID
A	1	2
B	2	3
C	3	4
D	4	1

8.5.3 Precautions for a text display object and a text input object

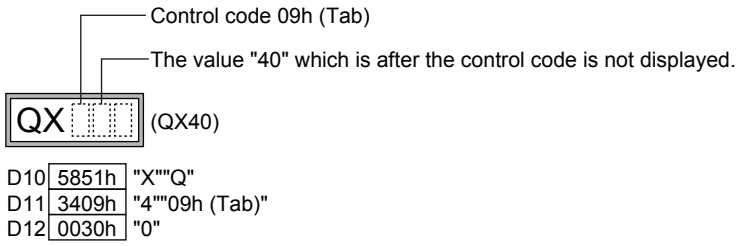
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 When the unavailable ASCII code is stored

If the following ASCII code is included in the target data of the text display, the text that is after the ASCII code is not displayed.

- 0000h to 001Fh
- 0080h
- 00F0h to 00FFh

Example) When the control code 09h (Tab) is included



■2 About system message and text display and text input

Depending on the language set in the system message, the character code to be displayed is different.

- Other than English: shift JIS code
- English: ASCII code

The Kana character or others are not displayed for ASCII code.

■3 Blink

The blink of the text display is paused when the input cursor is displayed.

■4 Characters displayable in the HQ fonts

The following characters are displayable in the HQ fonts on the text display or the text input.

- HQ font characters that are registered in a comment group
- HQ font characters to be displayed on an object when [Text Type] is set to [Text]
- HQ font characters that are set for a text figure
- Alphanumeric characters
- Symbols (! " # $ % & ' ( ) : + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~)

If the text set to be displayed in an HQ font includes any character other than the above, the text is displayed in the corresponding standard font.

■5 When using a barcode reader or RFID

(1) Reading data from a barcode reader or RFID while entering texts in the key window

Depending on the operation, the read data may or may not be input as texts.

- While displaying dialog windows

  The data read from a barcode reader or RFID cannot be input texts.

• While not displaying dialog windows
The text being input in the key window is dropped, and the data read from a barcode reader or RFID is input as text.

(2) Performing key touch operations while the data read from a barcode reader or RFID is in the process of being input

While the data read from a barcode reader or RFID is in the process of being input, key touch operations are invalid and the data read from a barcode reader or RFID is input.

(3) Under the specified start position

When the data read from a barcode reader or RFID is under [Start Position], the text input is not executed for the data.

■6 When setting [ON and OFF] for [Write Check Device]

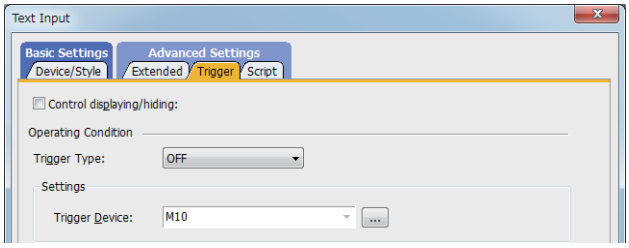
The setting of [Write Check Device] (write completion device) is available for a numerical input object as well.
If you specify a common write completion device for a numerical input object and a text input object, or for multiple text input objects, note the following points.

(1) Number of write completion devices that turn on simultaneously

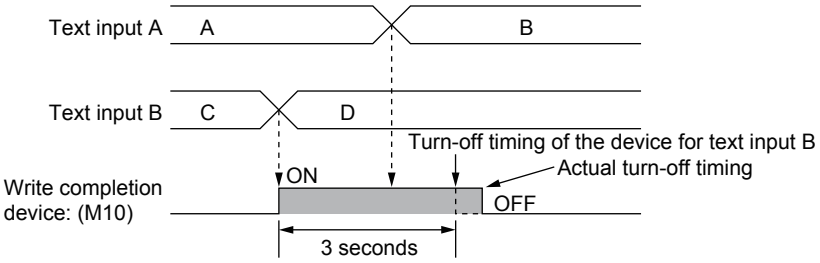
Do not turn on 21 or more write completion devices simultaneously.
Otherwise the write completion devices that turn on 21st and later do not turn off automatically.

(2) When specifying a common write completion device for multiple text input objects

Set trigger conditions to prevent data entry into a target input object while the common write completion device is on for another target input object.
Example) Setting [Write Check Device] to M10 and [Trigger Type] to [OFF]



If you enter data into a target input object while the common write completion device is on for another target input object, the common write completion device does not turn off at the appropriate time.
Example) When entering data into text input A while the common write completion device is on for text input B



(3) Operations performed at screen switching

Even when screen switching (including switching to utilities) occurs while a write completion device is on, the write completion device does not turn off.
The device remains on until a set time elapses.

■7 Character code setting when using a string-type label or tag

If you set a label or tag for the device of an object, set the character code according to the type of the label or tag.

- System label Ver.1: ASCII code or Shift JIS code
- System label Ver.2 and global label: ASCII code, Unicode, or Shift JIS code
- OMRON NJ/NX tag: Unicode
- AB native tag: ASCII code
- OPC UA tag: Unicode

8.5.4 [Text Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Text Display/Input] → [Text Display] from the menu.

Step 2 Click the position where you place the text display. Placing the text display is complete.

Step 3 Double-click the text display which has been placed to display the setting dialog.

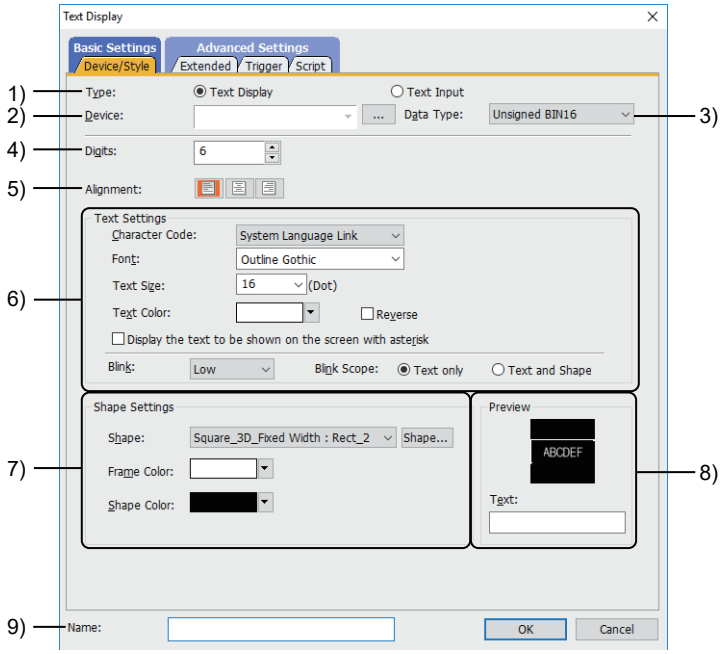
➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Text Display]
- [Text Input]

2) **[Device]**
Set the start device to be monitored.

➟6.1.2 How to set devices

The number of monitored devices depends on the setting.
For details, refer to the following.

➟8.5.1 ■4 Number of monitored devices and number of digits to be displayed

3) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.
- [Unsigned BIN16]
- [Unsigned BIN8]

4) **[Digits]**
Set the text digits to be displayed.
The setting range is [1] to [100].

A one-byte character is counted as one digit, and a two-byte character is counted as two digits.

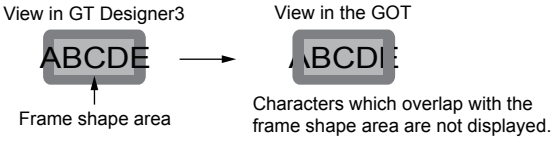
5) **[Alignment]**

Set the horizontal position of the text.

6) **[Text Settings]**

Item	Description
[Character Code]	Select the character code of the text to be displayed. The following shows the items to be selected. • [System Language Link] • [ASCII] • [Unicode] • [S-JIS] • [GB] • [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Big5] When [System Language Link] is selected, the text is displayed by the following character codes according to the system language. • When the system language is English ASCII code is used. • When the system language is Chinese (Simplified) and the conversion method for the Kana-Kanji/Pinyin conversion function is [Pinyin Simplified Characters] GB code is used. • Other than the above S-JIS code is used.
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Text Color]	Set the text color. ➟6.4 Color Settings
[Reverse]	Inverts the text.
[Display the text to be shown on the screen with asterisk]	Displays the text to be displayed on the screen with asterisk. When saved as an operation log, the text is saved not as an asterisk but as a text.
[Blink]	Select the blinking speed of the text and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Text only] • [Text and Shape]

7) **[Shape Settings]**

Item	Description
[Shape Settings]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 ■1 Setting object shapes When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings

8) **[Preview]**

Displays the preview of the screen.

Item	Description
[Text]	Set the text to be displayed in the preview.

9) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

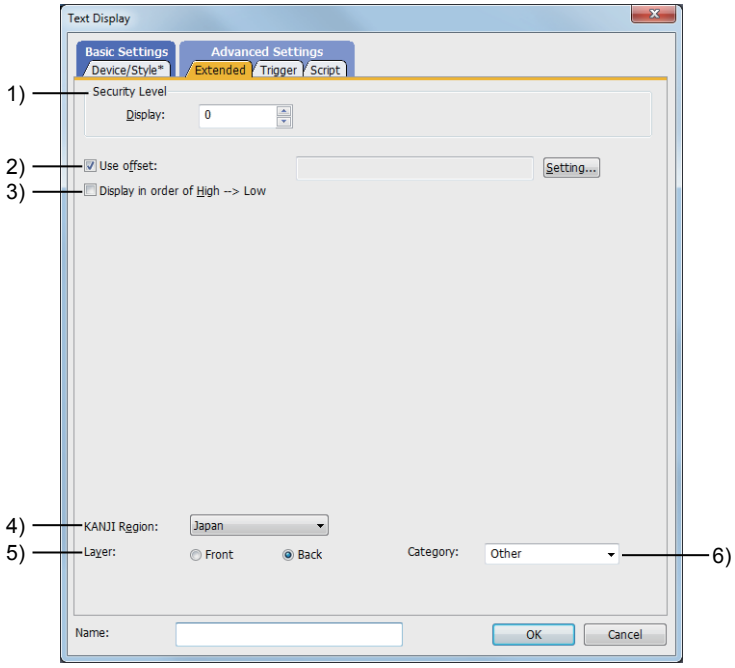
Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Sets the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Display in order of High -> Low]**
Select this item to display string data stored in devices in order of lower byte to upper byte.
For details, refer to the following.

➟8.5.1 ■5 Order of displaying and storing character strings

4) **[KANJI Region]**
When [Unicode] is selected for [Character Code], select a KANJI region.
The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

5) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

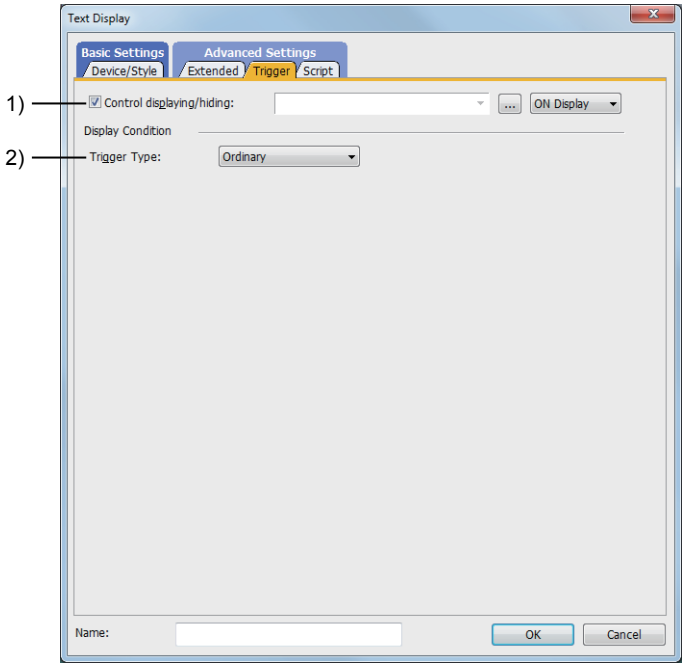
- [Front]
- [Back]

6) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

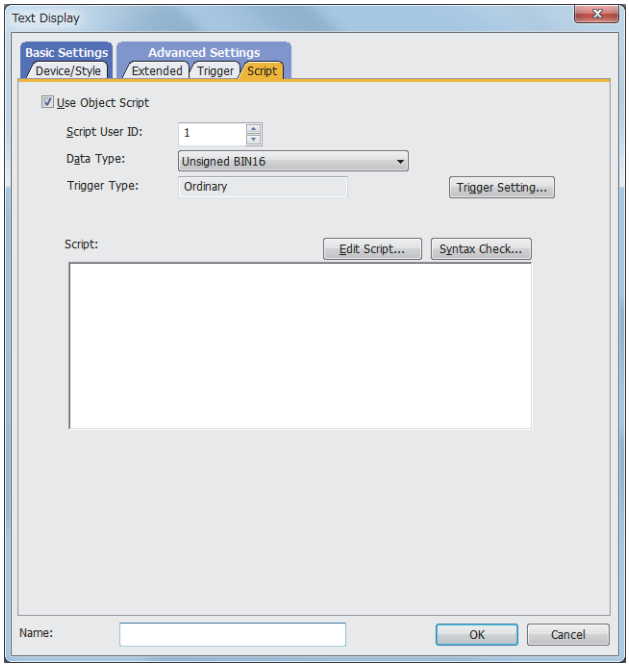
➟6.2 Setting Trigger Types

■4 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device/Style]	[Alignment]	arrange	○	○	When the object is updated	
	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Text Color]	text_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.5.5 [Text Input] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Text Display/Input] → [Text Input] from the menu.

Step 2 Click the position where you place the text input. Placing the text input is complete.

Step 3 Double-click the text input which has been placed to display the setting dialog.

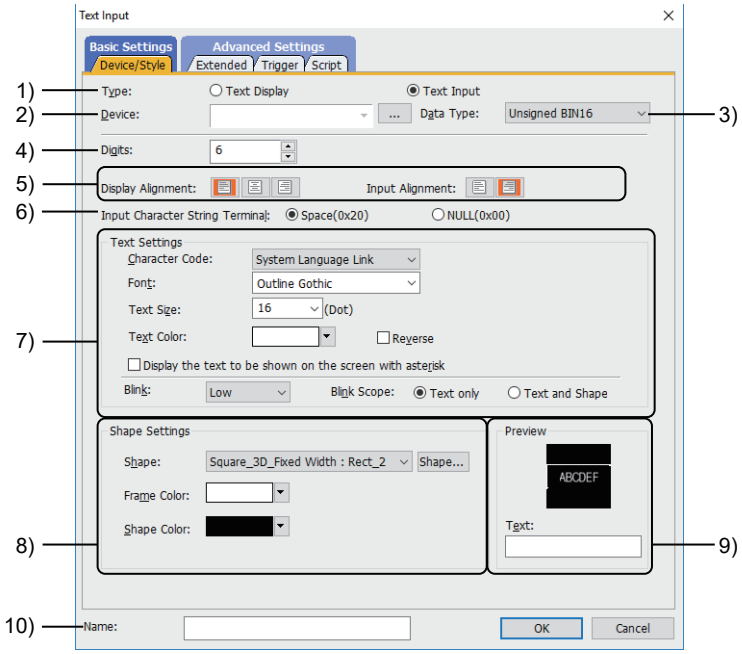
➥■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➥10.19.2 ■2 Usable functions



1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Text Display]
- [Text Input]

2) **[Device]**
Set the start device to be monitored.

➥6.1.2 How to set devices

The number of monitored devices depends on the setting.
For details, refer to the following.

➥8.5.1 ■4 Number of monitored devices and number of digits to be displayed

3) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.
- [Unsigned BIN16]
- [Unsigned BIN8]

4) **[Digits]**
Set the text digits to be displayed.
The setting range is [1] to [100].

A one-byte character is counted as one digit, and a two-byte character is counted as two digits.

5) **Alignment**

Item	Description
[Display Alignment]	Select the horizontal position of the text to be displayed.
[Input Alignment]	Select the horizontal position of the text to be entered.

6) **[Input Character String Terminal]**

If the number of input characters is less than the number of characters specified in [Digits] of the [Device/Style] tab, you can select the ASCII code to be inserted to the lacked part.

The following shows the items to be selected.

• [Space (0x20)]:

Insert the space (0x20) to reserve it as a space.

Reentering text deletes the inserted space, and confirming the entry inserts a space.

This item can be selected only when the left alignment is selected in [Display Alignment].

Example) When the entered text has three digits with [7] set in [Digits]

Text	A	B	C	(SP)	(SP)	(SP)	(SP)
ASCII code	(0x41)	(0x42)	(0x43)	(0x20)	(0x20)	(0x20)	(0x20)

• [NULL (0x00)]:

Insert NULL(0x00) as the first character of the lacked part.

The characters before NULL are enabled, and the characters after NULL are ignored because they are indefinite.

The controller is enabled to detect the text end.

Example) When the entered text has three digits with [7] set in [Digits]

Text	A	B	C	(NULL)	-	-	-
ASCII code	(0x41)	(0x42)	(0x43)	(0x0)	-	-	-

7) **[Text Settings]**

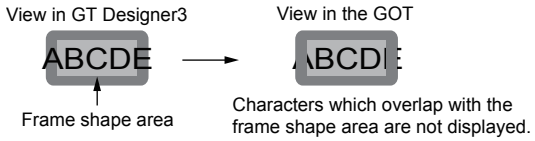
Item	Description
[Character Code]	Select the character code of the text to be displayed. The following shows the items to be selected. • [System Language Link] • [ASCII] • [Unicode] • [S-JIS] • [GB] • [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Big5] When [System Language Link] is selected, the text is displayed by the following character codes according to the system language. • When the system language is English ASCII code is used. • When the system language is Chinese (Simplified) and the conversion method for the Kana-Kanji/Pinyin conversion function is [Pinyin Simplified Characters] GB code is used. • Other than the above S-JIS code is used.
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)

Item	Description
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Text Color]	Set the text color. ➟6.4 Color Settings
[Reverse]	Inverts the text.
[Display the text to be shown on the screen with asterisk]	When saved as an operation log, the text is saved not as an asterisk but as a text. When this item is selected, Kana-Kanji/Pinyin conversion is not available. Even turning on GS450.b4 does not activate Kana-Kanji/Pinyin conversion. Displays the text and control character (other than NULL) to be displayed on the screen with asterisk. The control character is also displayed with asterisk. Depending on the setting of [Input Character String Terminal], the number of displayed asterisks is different.*1 ➟12.1.3 GOT special register (GS)
[Blink]	Select the blinking speed of the text and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Text only] • [Text and Shape]

*1 The following shows the number of asterisks to be displayed.

Setting of Input Character String Terminal	Display without display setting of asterisk	Display with display setting of asterisk
Space (0x20)	ABCD␣␣	******
NULL (0x00)	ABCD	****

8) **[Shape Settings]**

Item	Description
[Shape Settings]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 Common setting for objects When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings

9) **[Preview]**

Displays the preview of the screen.

Item	Description
[Text]	Set the text to be displayed in the preview.

10) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

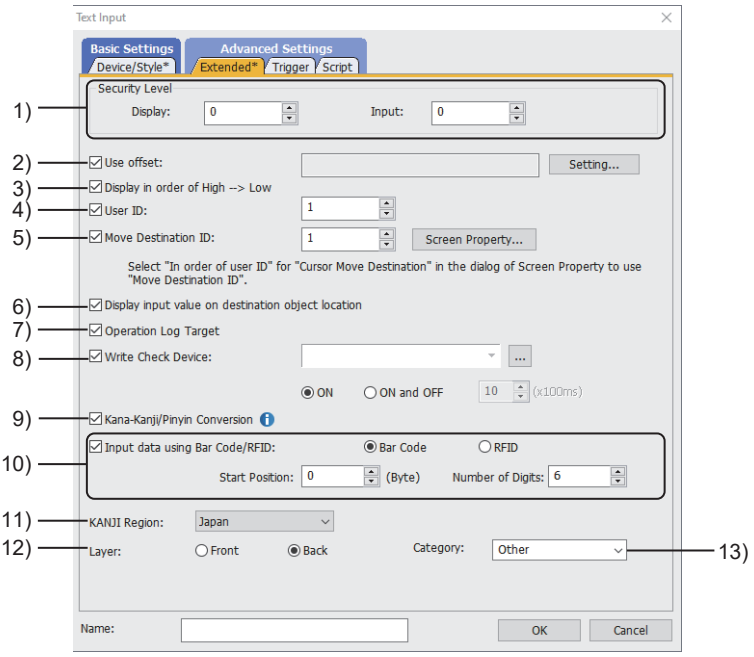
Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].
Set a value greater than [Display] for [Input].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching them.
Sets the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Display in order of High -> Low]**

Select this item to display string data stored in devices in order of lower byte to upper byte.
For details, refer to the following.

➟8.5.1 ■5 Order of displaying and storing character strings

4) **[User ID]**

Select this item to set the user ID.
The setting range is [1] to [65535].
The following operations can be performed when user ID numbers are set.

- Setting the position where the cursor is displayed at screen switching

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

- Specifying objects that were used with operation logs

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

- Moving the cursor in ascending or descending order of user ID number

➟8.5.2 ■7 Specifying the destination to which the cursor moves after the confirmation of a text entry

5) **[Move Destination ID]**

Set the user ID of a text input to which the cursor moves upon inputting text.
To move the cursor by specifying a user ID, a cursor movement setting must also be configured.
Configure one of the following settings to enable the cursor movement per project or per screen.

- To enable the cursor movement per project

  Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] window ([Key Window]), and select the [Advanced Setting] tab.

➟5.2.4 ■4 (2) [Advanced Setting] tab

Select [Control the cursor] for [Defined key action], and select one of the following items for [Cursor Move Destination].

- [In order of user ID]
- [Subsequently valid user ID] (Not available to GT21 and GS21)

• To enable the cursor movement only on the screen having a target text input

Click the [Screen Property] button to display the [Screen Property] dialog, and select the [Key Window Advanced Setting] tab.

(The [Screen Property] dialog corresponds to the screen having a target numerical input.)

➟2.7.1 Property of base screens
2.7.2 Properties of window screens

Select [Prioritize screen setting over project setting] in [Key Window/Cursor Movement].

Select [Control the cursor] for [Defined key action], and select one of the following items for [Cursor Move Destination].

- [In order of user ID]
- [Subsequently valid user ID] (Not available to GT21 and GS21)

6) **[Display input value on destination object location]**

Reflects the texts entered with the key window in the object on the screen immediately.

Write the value to a device after touching the enter key.

7) **[Operation Log Target]**

Only available to GT2107-W for GT21.

Only available to GS21-W-N for GS21.

Select this item to target the object for the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

8) **[Write Check Device]**

Set a bit device to turn on upon completion of a text input.

- [ON]

  Turns on a set bit device upon completion of a text input.
- [ON and OFF]

  Turns on a set bit device upon completion of a text input, and then turns off the bit device after a specified time period.

  The setting range of the time period for which a set bit device is on is [5] x 100 ms to [30] x 100 ms.

9) **[Kana-Kanji/Pinyin Conversion]**

Only available to GT2107-W for GT21.

Only available to GS21-W-N for GS21.

Kana-Kanji/Pinyin conversion is available.

When [Display the text to be shown on the screen with asterisk] is set in the [Device/Style] tab, this function cannot be set.

When GS450.b4 is on, Kana-Kanji/Pinyin conversion is enabled at text entry even if this item is deselected.

➟12.1.3 ■5 (32) Monitor Common Control (GS450)

10) **[Input data using Bar Code/RFID]**

Inputs the text read from a barcode reader or RFID.

➟10.1 Using a Barcode Reader with the GOT (Barcode Function)
10.2 Using an RFID with the GOT (RFID Function)

The following shows the items to be selected.

- [Bar Code]
- [RFID]

Item	Description
[Start Position]	Set the position of the byte from which a read value is input. • [Bar Code]: [0] to [3997] byte(s) • [RFID]: [0] to [19997] byte(s)
[Number of Digits]	Set the number of digits for inputting the read data. The same or smaller number of digits as that set for [Digits] in the [Device/Style] tab can be set.

11) **[KANJI Region]**

When [Unicode] is selected for [Character Code], select a KANJI region.

The following shows the items to be selected.

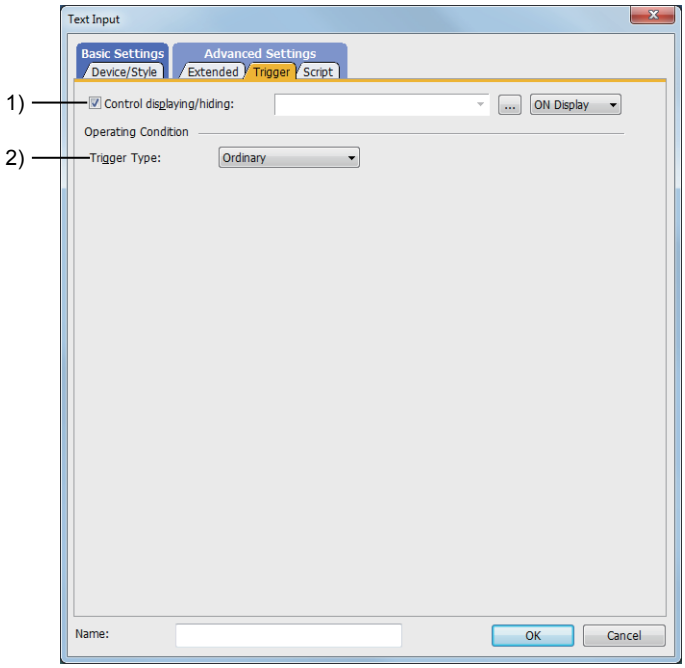
• [Japan]
• [China(GB)-Mincho]
• [China(Big5)-Gothic]

12) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.
• [Front]
• [Back]

13) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
• [ON Display]
• [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
• [Ordinary]
• [ON]
• [OFF]
• [Rise]
• [Fall]
• [Rise/Fall]
• [Sampling]
• [Range]
• [Bit Trigger]
• [ON Sampling]

• [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

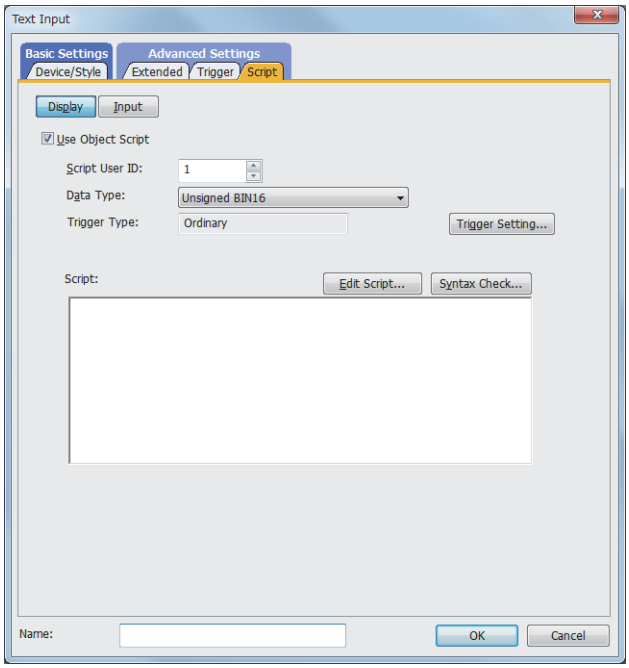
■4 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Script (display)

This item can be set when the [Display] button is clicked.
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available
×: Not available
-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
[Device/Style]	[Alignment]	arrange	○	○	When the object is updated	
	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Text Color]	text_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level] (display)	security	○	○	When the object is updated	When the screen is updated
	[Security Level] (input)	input_security	○	○	Upon the setting change	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

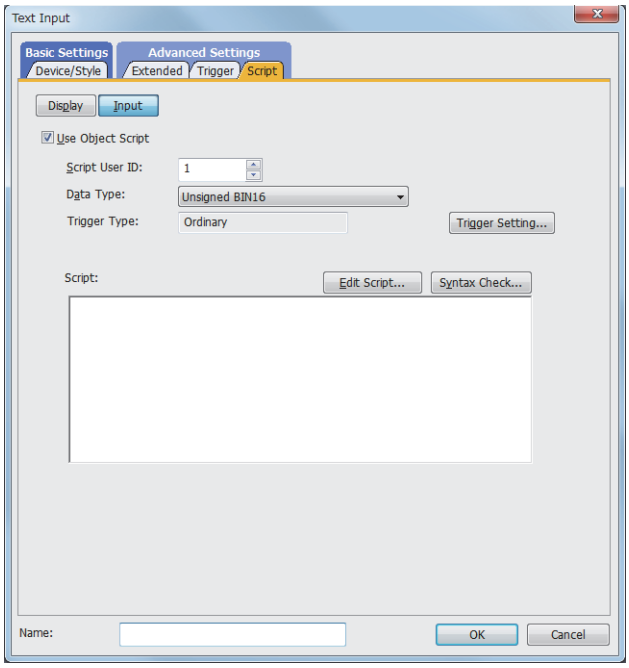
*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

(2) Script (input)

This item can be set when the [Input] button is clicked.
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.
○: Available
×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device/Style]	[Alignment]	arrange	○	○	When the object is updated	
	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Text Color]	text_color	○	○	When the object is updated	
	[Reverse]	highlight	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level] (display)	security	○	○	When the object is updated	When the screen is updated
	[Security Level] (input)	input_security	○	○	Upon the setting change	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➡9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

8.5.6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the text display and text input as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings (key window), screen property

Set the following functions for each project (GOT environmental settings) or for each screen (screen property).

➟5.2.4 Setting key windows ([Key Window])

- Settings for each project (GOT environmental settings)
  Select [Common] → [GOT Environmental Setting] → [Key Window] from the menu to display the [Environmental Setting] window.
- Settings for each screen (screen property)
  Select the screen editor on which the key window is to be set and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog.

Function	Setting item
Displaying the key window when the operating condition is satisfied.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window]
Displaying the key window when the screen is switched	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the key window]
Displaying the cursor when the screen is switched.	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Display the cursor]
Displaying the cursor when the operating condition is satisfied.	Not available to GT21 and GS21. Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Cursor]
Deleting the key window and cursor when the operating condition is not satisfied.	Not available to GT21 and GS21. Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Clear the key window and the cursor] of [When operating conditions are not satisfied]
Selecting the method of displaying the cursor when entering a value with a numerical input or text input	Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Cursor Type]
Displaying the key window at a touch input or deleting the key window by touching the enter key	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window] • [Defined key action]

Function	Setting item
When multiple numerical inputs or text inputs exist, setting the order of input After an entry is complete, moving the cursor to the next destination automatically	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Defined key action] • [Reference for determining cursor destination]
Setting the window screen to be used as a key window for numerical inputs (decimal or hexadecimal) and text inputs	Set the following item in the [Basic Setting] tab or [Key Window Basic Setting] tab. • [Key Window]
Setting whether to move the display of the key window or not by screen	Set this function in the following item in the [SP Function] tab and [Key Window Advanced Setting] tab. • [Key Window Position Correction]
Setting whether to display or hide the cursor when hiding the cursor and pressing the enter key or an arrow key	Not available to GT21 and GS21. Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Display the cursor with a touch on the Enter/arrow key when the cursor is hidden]
When entering a value in a numerical input or text input, displaying a dialog for checking the input at a key touch operation on the enter key	Display the [Display Detail Setting] dialog with the [Setting] button in the [Advanced Setting] tab or [Key Window Advanced Setting] tab to set this function with the following item. • [Display the input confirmation dialog when setting the function of Numerical/ASCII Input]

■3 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] window.

➡5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Outputting the input signal, input number, or others to the system information when the text input is executed	[Output object ID of Text Input to the system information device]
When deleting the cursor, clearing the cursor information, such as the cursor display object ID and cursor display user ID	[Clear the cursor information when deleting the cursor]
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Turning off the Numeric Value Input signal (Read device: System signal 1-1.b4)	[System Signal 1-1]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]
Notifying the confirmation of an entry from a numerical input (Write device: System signal 2-1.b4)	[System Signal 2-1]
Notifying that the key window is being displayed (Write device: System signal 2-1.b11)	[System Signal 2-1]
Notifying the cursor is being displayed in a numerical value or text input (Write device: System signal 2-2.b11)	[System Signal 2-2]
Notifying the user ID of the numerical input to which an input is confirmed (Write device)	[Numeric Value Input Number]
Notifying the object ID No. of the object for which the cursor is currently being displayed (Write device)	[Current Cursor Display Object ID]
Notifying the object ID No. of the object for which the cursor was previously displayed (Write device)	[Previous Cursor Display Object ID]
Notifying the user ID No. of the object for which the cursor is being displayed currently (Write device)	[Current Cursor Display User ID]
Notifying the user ID No. of the object for which the cursor had been displayed previously (Write device)	[Previous Cursor Display User ID]
Notifying the key codes set to the input keys when the keys are input to text input, touch switch, or other objects (Write device)	[Key Code Input]

■4 GOT Internal Device

➟12.1.3 GOT special register (GS)

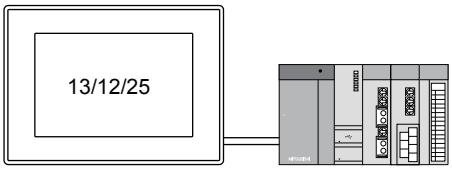
Function	Setting item
Notifying that the object is in the ready state for the data read by the barcode reader and the RFID to be directly input.	GS243.b15 (Not available to GT21 and GS21)
When entering a value or text with a numerical input or text input object, displaying a dialog prompting you to confirm the entry when the enter key is touched.	GS450.b0 (Not available to GT21 and GS21)
Storing 0 in the current cursor position device and other related devices of the system information when the cursor is hidden.	GS450.b3 (Not available to GT21 and GS21)
Switching the conversion method at text entry between Kana-Kanji conversion and Pinyin conversion.	GS450.b4 (Only available to GT2107-W for GT21) (Not available to GS21)
Changing the character code to be used for the text display and text input objects.	GS456
Switching a key window for text input to a key window that supports Kana-Kanji conversion or Pinyin conversion.	GS467.b1 (Not available to GT23, GT21, and GS21)
Changing the KANJI region to be used for the text display and text input where [Character Code] is set to [Unicode].	GS468
Notifying the upper-left coordinates of the text input object on which the cursor is displayed.	GS694 GS695 (Available to GT27, GT25, and GS25)

8.6 Placing a Date Display and Time Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

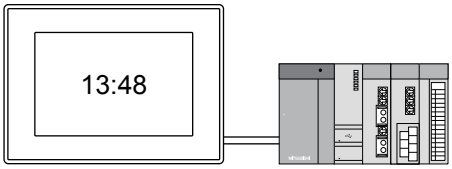
■1 Date Display

This function displays the date on the GOT.



■2 Time Display

This function displays the time on the GOT.



8.6.1 Specifications of the date display and time display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

The maximum number of objects on one screen depends on the screen type.

- For a base screen
  Up to 1024 date displays and time displays can be placed on one screen.
- For a window screen
  Up to 512 date displays and time displays can be placed on one screen.

■2 Date data and time data to be displayed

The date display and time display display the data of the GOT clock.
For the details of the GOT clock, refer to the following.

➟5.3.5 Setting the GOT time setting method ([Time Setting])

8.6.2 How to use the date display and time display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the date display and time display

Place date displays and time displays on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing date displays and time displays

Edit date displays and time displays that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting date displays and time displays

Set date displays and the time displays that have been placed on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Date display settings

➟8.6.3 [DateDisplay] dialog

- Time display settings

➟8.6.4 [Time Display] dialog

8.6.3 [DateDisplay] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Date/Time Display] → [DateDisplay] from the menu.

Step 2 Click the position where you place the date display. Placing the date display is complete.

Step 3 Double-click the date display which has been placed to display the setting dialog.

➥■1 [Text/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Text/Style] tab

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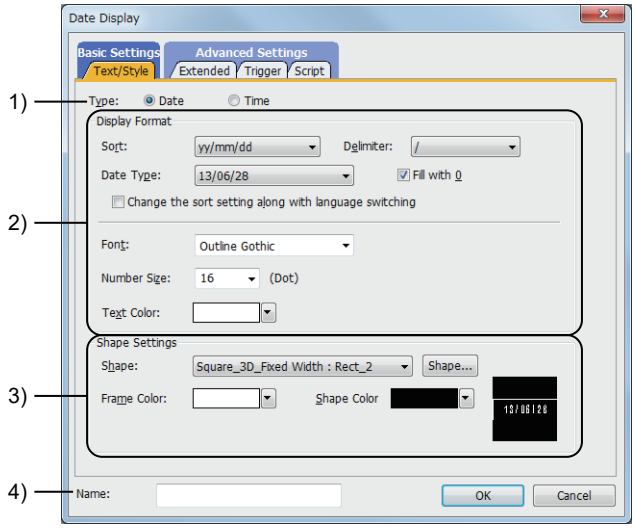


1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Date]
- [Time]

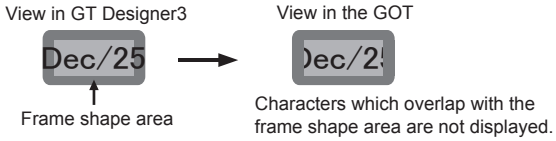
2) **[Display Format]**

Item	Description
[Sort]	Select a sorting order of year, month, and date. When [Change the sort setting along with language switching] is selected, a sorting order cannot be selected. The following shows the items to be selected. • [yy/mm/dd] • [mm/dd/yy] • [dd/mm/yy]
[Delimiter]	Select a delimiter used for separating the year, month, and date. The following shows the items to be selected. • [/] • [-] • [.]

Item	Description
[Date Type]	Select the display type of the date. The items to be displayed differ depending on the selected item of [Delimiter] and [Fill with 0]. The following shows the default items to be selected. Example) To display Wednesday, December 25, 2013 • [13/12/25] • [Dec/25] • [DEC/25] • [Dec/25(WED)] • [DEC/25(WED)] • [13/Dec/25] • [13/DEC/25] • [13/Dec/25(WED)] • [13/DEC/25(WED)] • [2013/Dec/25] • [2013/DEC/25] • [2013/Dec/25(WED)] • [2013/DEC/25(WED)] • [2013/12/25] • [2013/12/25(WED)] • [12/25] • [12/25(WED)] • [13/12/25(WED)] • 〔12月25日〕 • 〔12月25日(水)〕 • 〔13年12月25日〕 • 〔13年12月25日(水)〕 • 〔2013年12月25日〕 • 〔2013年12月25日(水)〕 • 〔12/25(水)〕 • 〔13/12/25(水)〕 • 〔2013/12/25(水)〕
[Fill with 0]	When the month and/or date are/is in single digit, zero is displayed before the single-digit number.
[Change the sort setting along with language switching]	Changes a sorting order of the date associating with language switching. When the following items are selected in [Date Type], this function cannot be set. • 〔12月25日〕 • 〔12月25日(水)〕 • 〔13年12月25日〕 • 〔13年12月25日(水)〕 • 〔2013年12月25日〕 • 〔2013年12月25日(水)〕 • 〔12/25(水)〕 • 〔13/12/25(水)〕 • 〔2013/12/25(水)〕 To use this function, set [Region Setting] in [Language Switching] of [Environmental Setting]. ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Numerical Gothic] • [TrueType Numerical 7seg] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Text Color]	Set the text color. ➟6.4 Color Settings

3) **[Shape Settings]**

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.4 Color Settings When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings
Preview	Displays the preview of the screen.

4) **[Name]**

Set the object name.

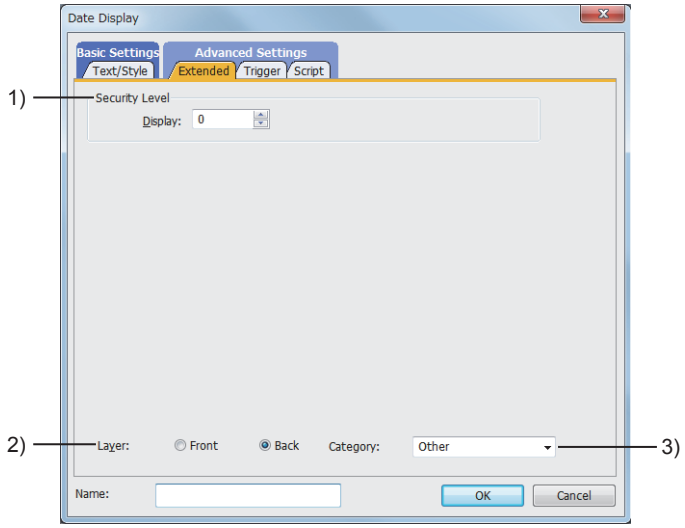
The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

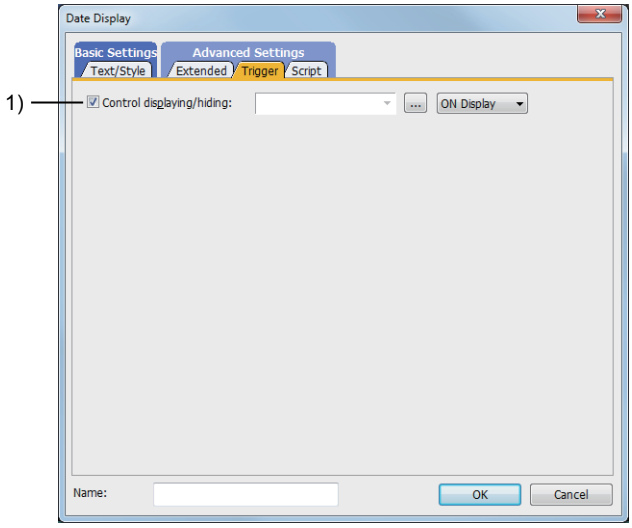
- [Front]
- [Back]

3) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

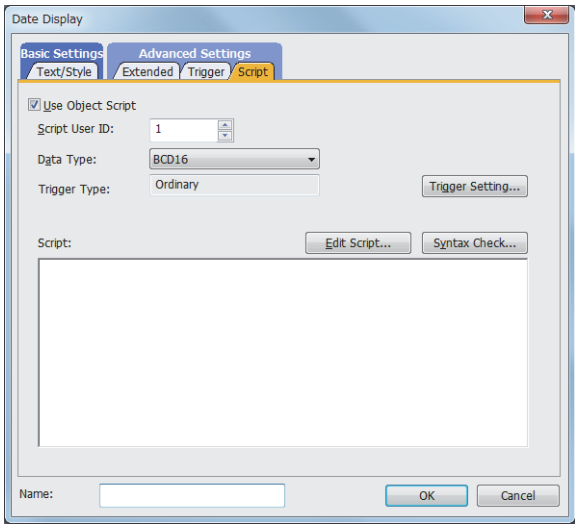
➟6.1.2 How to set devices

■4 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Text/Style]	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Text Color]	text_color	○	○	When the object is updated	
	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.6.4 [Time Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Date/Time Display] → [TimeDisplay] from the menu.

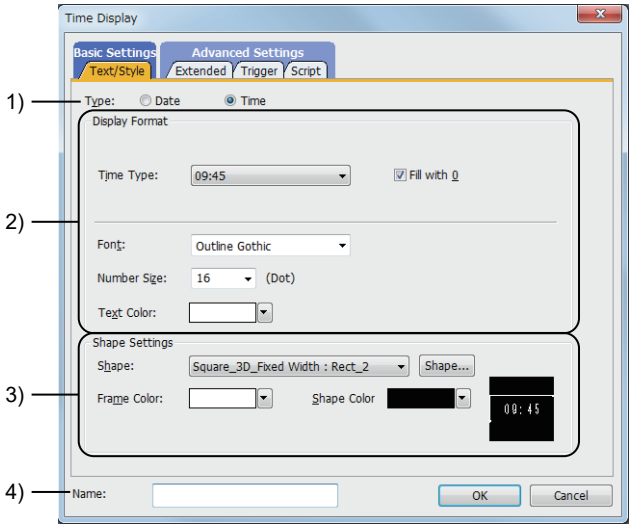
Step 2 Click the position where you place the time display. Placing the time display is completed.

Step 3 Double-click the time display which has been placed to display the setting dialog.

➥■1 [Text/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Text/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



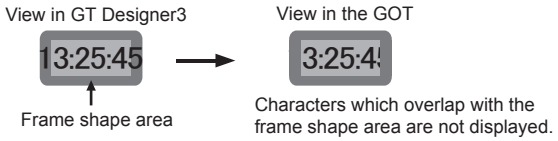
1) **[Item]**
Select the function to be used.
The following shows the items to be selected.
- [Date]
- [Time]

2) **[Display Format]**

Item	Description
[Time Type]	Select the display type of the time. The display of the setting range differs depending on the selected item of [Fill with 0]. The following shows the default items to be selected. Example) To display 13:25:45 • [13:25] • [13:25:45] • [01:25(PM)] • [01:25:45(PM)] • [13時25分] • [13時25分45秒] • [午前01時25分] • [午前01時25分45秒]
[Fill with 0]	When the time, minute, and/or second are/is in single digit, 0 is displayed before the single-digit number.

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Numerical Gothic] • [TrueType Numerical 7seg] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Text Color]	Set the text color. ➟6.4 Color Settings

3) **[Shape Settings]**

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.4 Color Settings When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally. Configure the settings so that the text and the shape frame area do not overlap. 
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings
Preview	Displays the preview of the screen.

4) **[Name]**

Set the object name.

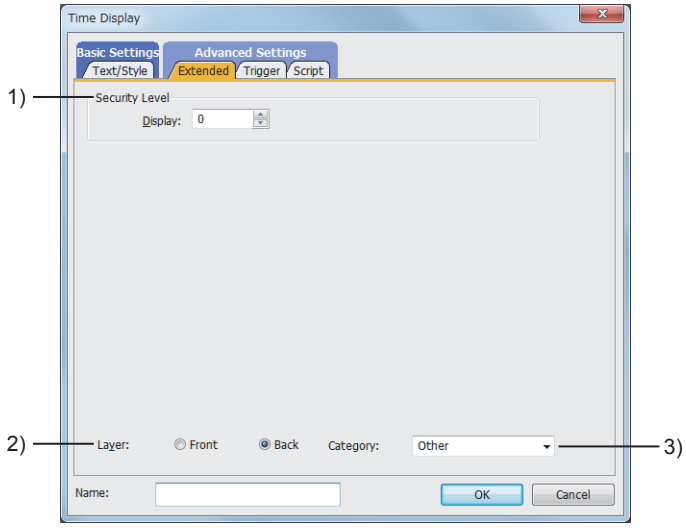
The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

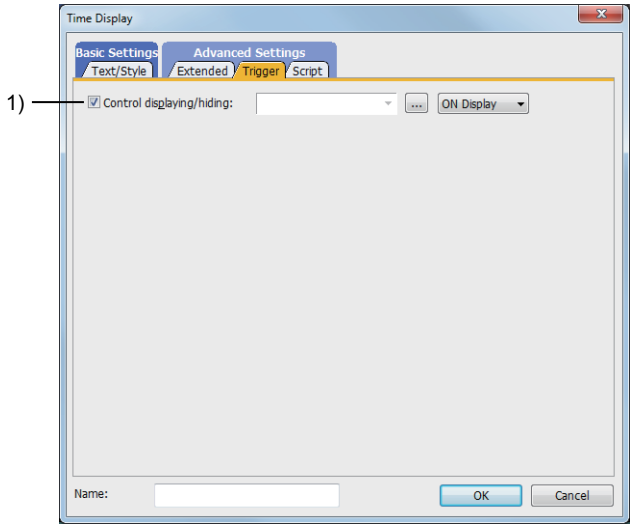
- [Front]
- [Back]

3) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

■4 [Script] tab

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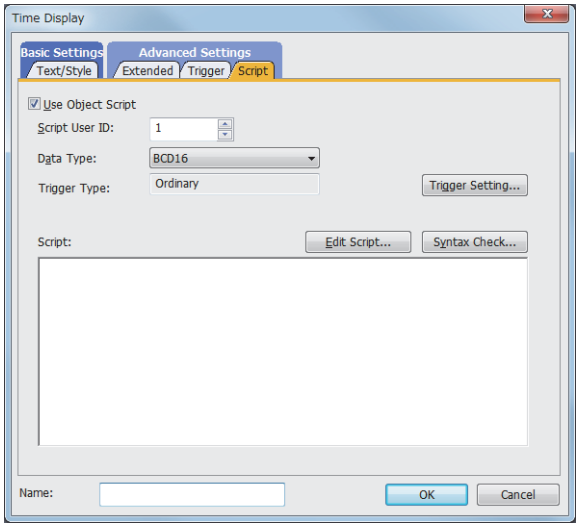


(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Text/Style]	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Text Color]	text_color	○	○	When the object is updated	
	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➡9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

8.6.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the data display and time display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

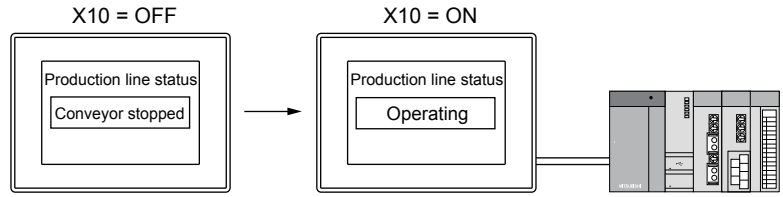
Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3]

8.7 Placing a Comment Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Comment display (bit)

This function displays the comment corresponding to the on/off status of a bit device.

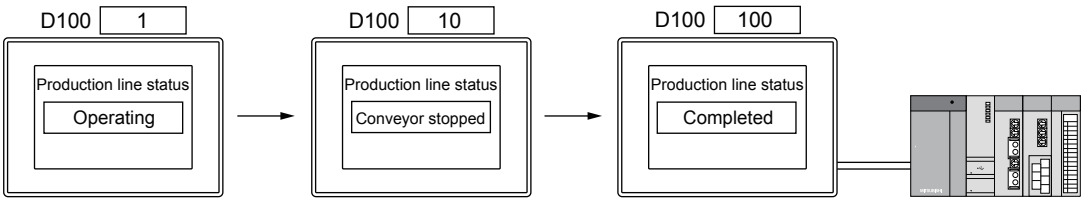


Comment of when the bit device is off

Comment of when the bit device is on

■2 Comment display (word)

This function displays the comment corresponding to the value of a word device.



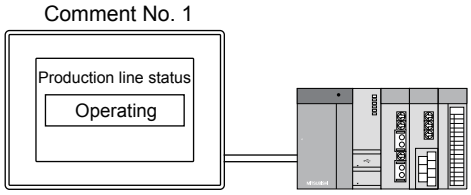
The comment No. 1 is displayed.

The comment No. 10 is displayed.

The comment No. 100 is displayed.

■3 Comment display (simple)

This function displays comments without setting a device.



The comment No. 1 is always displayed.

8.7.1 Specifications of the comment display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

Up to 1024 comment displays can be placed on each screen.

■2 Comment to be used

The comment display uses the comment that is created in the comment group.

➟5.8 Comment Setting ([Comment])

■3 Superimposing a comment display on a level object

A comment display can be superimposed on a level object.

For restrictions on superimposing a comment display on a level object, refer to the following.

➟8.23 Placing a Level Object

8.7.2 How to use the comment display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the comment display

Place comment displays on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing comment displays

Edit comment displays that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting comment displays

Set comment displays that have been placed on the screen editor.

Common setting of objects

➟6.5.5 Common setting for objects

Comment display (bit) settings

➟8.7.4 [Bit Comment Display] dialog

Comment display (word) settings

➟8.7.5 [Word Comment Display] dialog

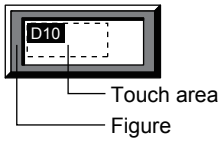
Comment display (simple) settings

➟8.7.6 [Simple Comment Display] dialog

■4 How to adjust the display position of shapes set for objects

Select [Edit] → [Edit Touch Area] → [Manual Edit] from the menu to adjust the display position of touch areas and shapes.

➟6.6.14 [Edit Touch Area]



■5 Displaying the comment that exceeds the display range

The display method for the comment that exceeds the display range can be set.

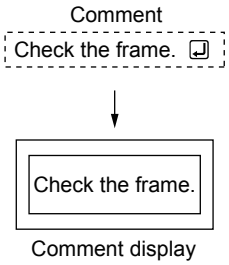
Select the comment display on the screen editor to display the numbers of digits and rows that are available for the object size in the status bar.

If the stroke font is used, the available numbers of digits and rows are not displayed in the status bar.

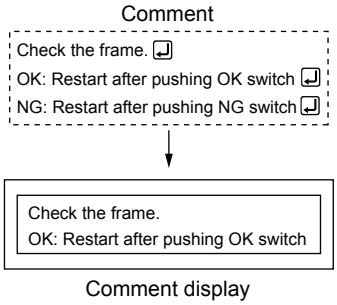
(1) Displaying the comment with the word wrap

If a comment exceeds the display range horizontally, the comment is wrapped to the next line.

However, the word wrap is not applicable to the comment displayed in a Windows font.



If a comment exceeds the display range vertically, only the part of the comment within the range is displayed.



(2) Displaying the comment without the word wrap

When [Adjust Text Size] is selected, the comment is resized automatically so that the entire comment fits on the display range.

➟8.7.4 ■2 [Comment] tab
8.7.5 ■2 [Comment] tab
8.7.6 [Simple Comment Display] dialog

8.7.3 Precautions for a comment display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Object size

Some comment cannot be displayed within the display range by language switching.
Set the display range of the object after considering the number of characters in the registered comment.
The display range of the comment can be checked on the screen of GT Designer3 by changing the preview column No.

➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

■2 Setting the comment group

If the nonexistent value (column No.) is stored in the language switching device, the comment is not displayed.

8.7.4 [Bit Comment Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Comment Display] → [Bit Comment] from the menu.

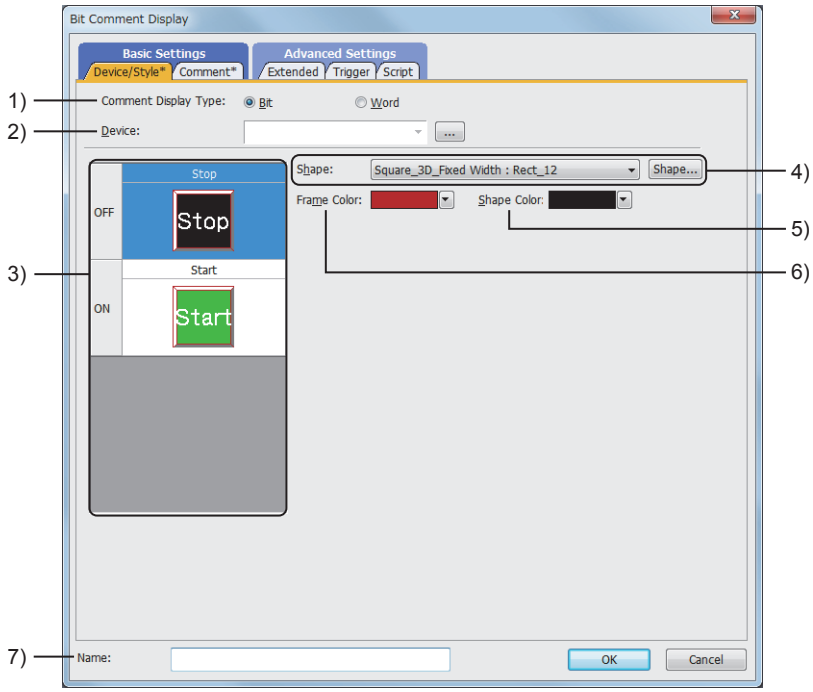
Step 2 Click the position where you place the comment display (bit). Placing the comment display (bit) is completed.

Step 3 Double-click the comment display (bit) which has been placed to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Comment] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

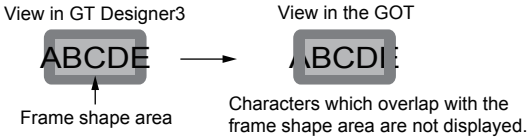


1) **[Comment Display Type]**
Select the comment display type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Device]**
Set the device to be monitored.
➟6.1.2 How to set devices

3) **Preview list**
Displays the shapes for the on and off status.

4) **[Shape]**
Select the shape to be set for the object from the list or with the [Shape] button.
➟6.5.5 ■1 Setting object shapes
When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally.
Configure the settings so that the text and the shape frame area do not overlap.



5) **[Shape Color]**
Select the color of the shape.

6) **[Frame Color]**
Select the frame color of the shape.

➟6.4 Color Settings

7) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Comment] tab

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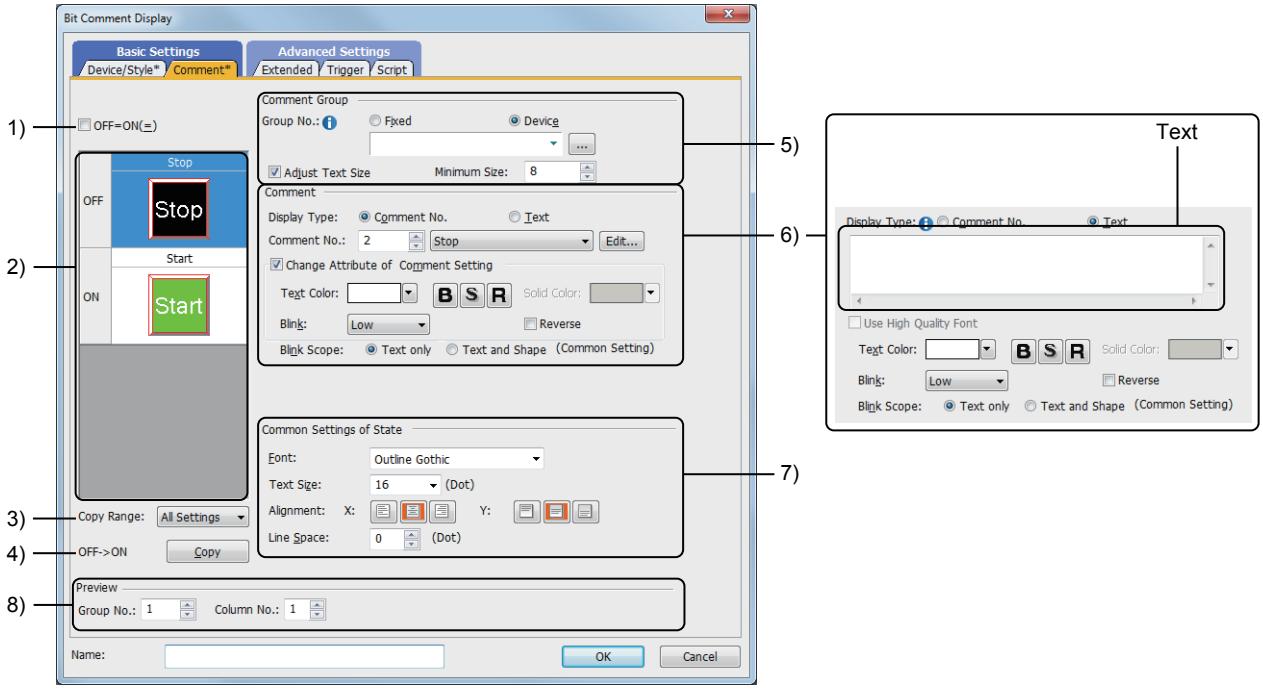
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[OFF=ON]**
Selecting this item applies the same setting to both when the switch is on and off.

2) **Preview list**
Displays the shapes for the on and off status.

3) **[Copy Range]**
Set the range to be copied.
The following shows the items to be selected.
- [All settings]: Copies all the text settings.
- [Text only]: Copies the text only.

4) **[OFF→ON], [ON→OFF]**
Copies the text setting.
Depending on the selection in the preview list, the copy source and copy destination are different.
- [OFF→ON]: Copies the setting for when the switch is off to the setting for when the switch is on by clicking the [Copy] button.
- [ON→OFF]: Copies the setting for when the switch is on to the setting for when the switch is off by clicking the

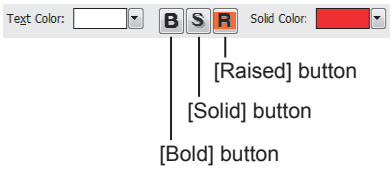
[Copy] button.

5) **[Comment Group]**

Item	Description
[Group No.]	Set the group number of the comment group to be used. • [Fixed]: Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used. • [Device]: Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	This item can be set only when [Adjust Text Size] is set. Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dots.

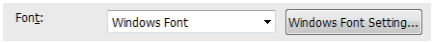
6) **[Comment]**

Depending on the selection in [Display Type], the setting items are different.

Item	Description
[Display Type]	Select the setting method of the comment. The following shows the items to be selected. • [Comment No.]: Set the comment No. • [Text]: Enter the text directly.
[Comment No.]	Set the comment No. to be display. The setting range is [0] to [32767]. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog
Text	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Change Attribute of Comment Setting]	Set the comment attribute such as [Text Color] and [Blink].
[Use High Quality Font]	Select this item to use the HQ font. This item can be set only when the following items are set in [Font]. • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic]
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

Item	Description
[Blink]	Select the blinking speed of the text and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Reverse]	Inverts the text.
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Text only] • [Text and Shape] These settings are applied to all the conditions to be set.

7) **[Common Settings of State]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128].

8) **[Preview]**

Set the comment to be previewed in the preview list.

Item	Description
[Group No.]	Set the comment group No. to be previewed. This item can be set only when [Device] is set in [Group No.]. The setting range is [1] to [500].
[Column No.]	Set the column No. to be previewed. The setting range is [1] to [30].

■3 [Extended] tab

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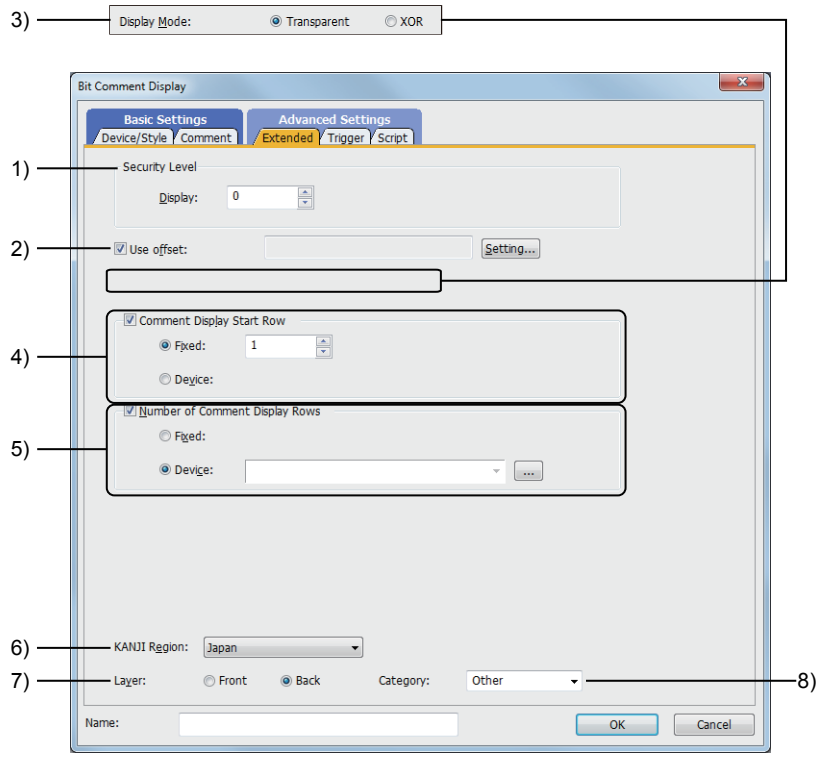
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

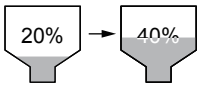
2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Set the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Display Mode]**
Display mode when the comment display is superimposed on a level object.

- [Transparent]: Displays the comment on the level object.

- [XOR]: The comment in a comment display is integrated into the XOR synthesis with a level color, to be able to be distinguished from the level object.



GOT Graphic Ver.2

As the setting is fixed to [Transparent], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows the items to be selected.

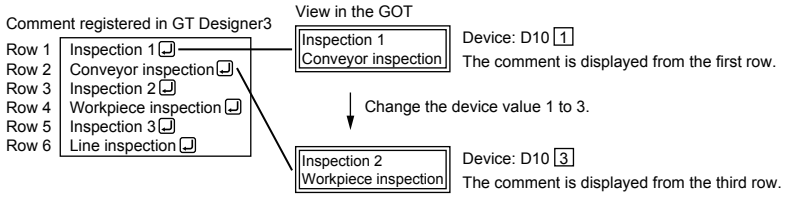
- [Transparent]
- [XOR]

4) **[Comment Display Start Row]**

When setting a comment having multiple rows, set the first row to be displayed.

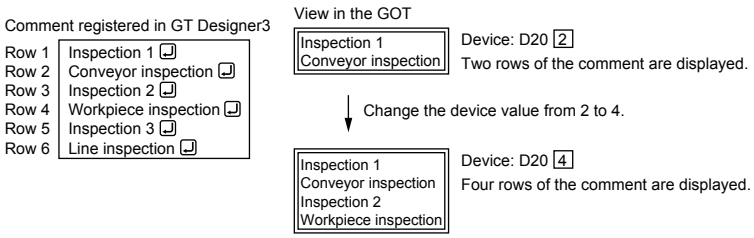
If the value out of the number of created comment rows is set, the comment is displayed as blank.

If the comment is displayed as blank, check the number of rows of the specified comments.

Item	Description
[Fixed]	Enter the start row directly. The setting range is [1] to [32767].
[Device]	Set the device value as the start row to be displayed. ➟6.1.2 How to set devices Example) When [Device] is selected and [D10] is set 

5) **[Number of Comment Display Rows]**

When setting a comment having multiple rows, set the number of rows to be displayed.

Item	Description
[Fixed]	Enter the number of rows to be displayed directly . The setting range is [1] to [32767].
[Device]	Set the device value as the number of rows to be displayed. ➟6.1.2 How to set devices If the device value is zero, the comment is not displayed. Example) When [Device] is selected and [D20] is set 

6) **[KANJI region]**

Select the KANJI region of the displayed text.

➟1.2.5 Font specifications

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

7) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

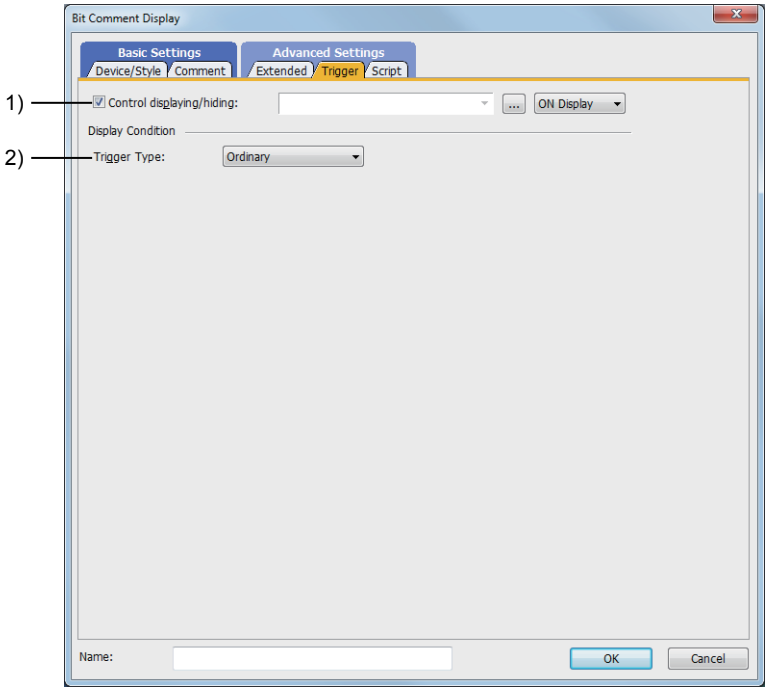
8) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

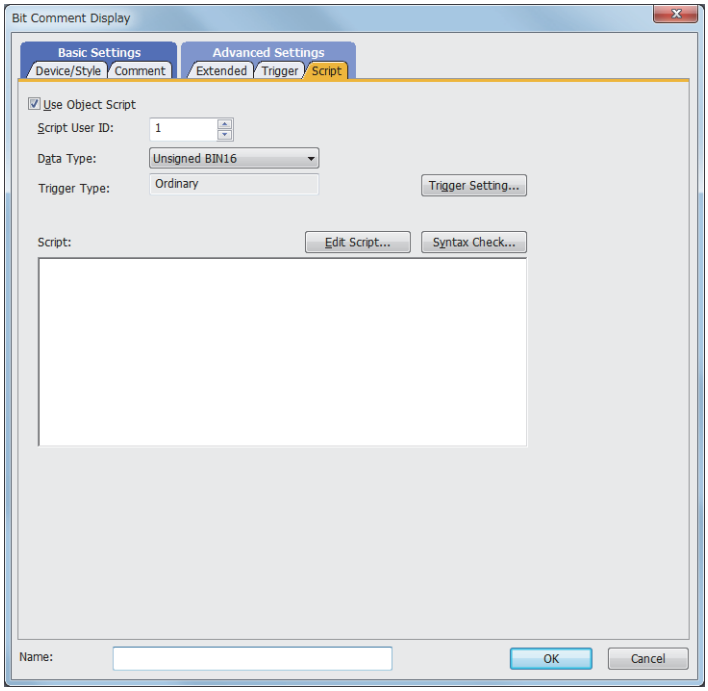
➟6.2 Setting Trigger Types

■5 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device/Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Text Color]	text_color	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Reverse]	highlight	○	○	When the object is updated	
	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Alignment]	arrange	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated
	[Display Mode]	draw_mode	○	○	When the object is updated	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.7.5 [Word Comment Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Comment Display] → [Word Comment] from the menu.

Step 2 Click the position where you place the comment display (word). Placing the comment display (word) is completed.

Step 3 Double-click the comment display (word) which has been placed to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Comment] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Device/Style] tab

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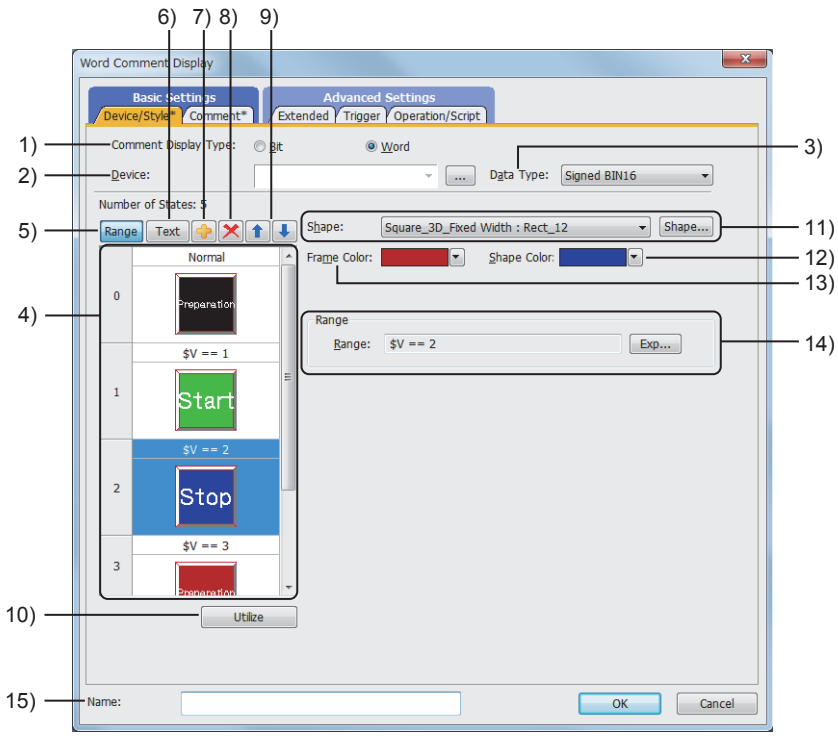
For the conditions, refer to the following.

➟6.5.5 ■2 Setting conditions



1) **[Comment Display Type]**
Select the comment display type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

3) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN8]

• [Unsigned BIN8]
• [BCD16]

4) **Preview list**
Displays set conditions.

5) **[Range] button**
Displays the preview list in range.

6) **[Text] button**
Displays the preview list in text.

7) **Add button**
Adds a new condition.

8) **Delete button**
Deletes the selected condition.

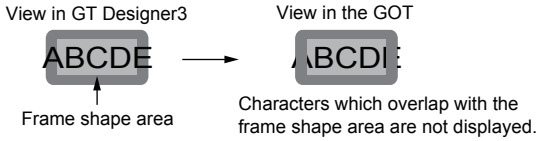
9) **Up button, down button**
Changes the order of priority of the selected condition.

10) **[Utilize] button**
Creates a new condition utilizing the selected condition.

11) **[Shape]**
Select the shape to be set for the object from the list or with the [Shape] button.

➟6.5.5 ■1 Setting object shapes

When the characters to be displayed overlap with the shape frame area, the characters cannot be displayed normally.
Configure the settings so that the text and the shape frame area do not overlap.



12) **[Shape Color]**
Select the color of the shape.

➟6.4 Color Settings

13) **[Frame Color]**
Select the frame color of the shape.

➟6.4 Color Settings

14) **[Range]**
Set a condition which changes the display property of the lamp.
Click the [Exp] button, and set the conditional expression in the [Edit Range] dialog.
For the details of the [Edit Range] dialog, refer to the following.

➟6.5.5 ■2 (3) [Edit Range] dialog

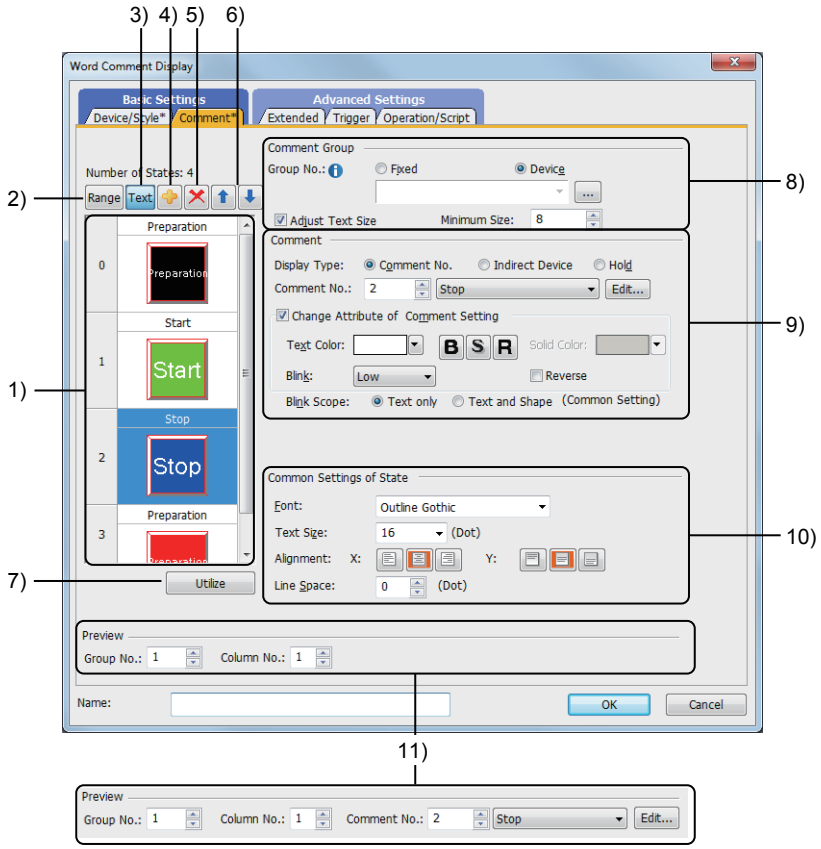
15) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Comment] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➡10.19.2 ■2 Usable functions



1) **Preview list**
Displays set conditions.

2) **[Range] button**
Displays the preview list in range.

3) **[Text] button**
Displays the preview list in text.

4) **Add button**
Adds a new condition.

5) **Delete button**
Deletes the selected condition.

6) **Up button, down button**
Changes the order of priority of the selected condition.

7) **[Utilize] button**
Creates a new condition utilizing the selected condition.

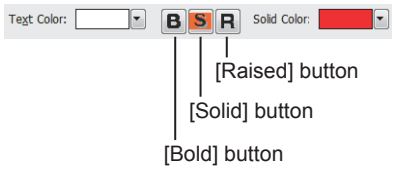
8) **[Comment Group]**

Item	Description
[Group No.]	Set the group number of the comment group to be used. • [Fixed]: Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used. • [Device]: Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➡6.1.2 How to set devices

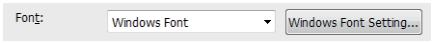
Item	Description
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	This item can be set only when [Adjust Text Size] is set. Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dots.

9) **[Comment]**

Depending on the selection in [Display Type], the setting items are different.

Item	Description
[Display Type]	Select the setting method of the comment. The following shows the items to be selected. • [Comment No.]: Set the comment No. • [Indirect Device]: Select this item to use the comment number corresponding to the monitor device value. • [Hold]: Select this item to hold the comment being displayed on the current screen.
[Comment No.]	Set the comment No. to be display. The setting range is [0] to [32767]. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog
[Change Attribute of Comment Setting]	Set the comment attribute such as [Text Color] and [Blink].
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.
[Blink]	Select the blinking speed of the text and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Reverse]	Inverts the text.
[Blink Scope]	Select the area to be blinked. The following shows the items to be selected. • [Text only] • [Text and Shape] These settings are applied to all the conditions to be set.

10) **[Common Settings of State]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128].

11) **[Preview]**

Set the comment to be previewed in the preview list.

Item	Description
[Group No.]	Set the comment group No. to be previewed. This item can be set only when [Device] is set in [Group No.]. The setting range is [1] to [500].
[Column No.]	Set the column No. to be previewed. The setting range is [1] to [30].
[Comment No.]	Set the comment No. to be previewed. The setting range is [0] to [32767]. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. ➟12.15.4 [Edit Comment] dialog

■3 [Extended] tab

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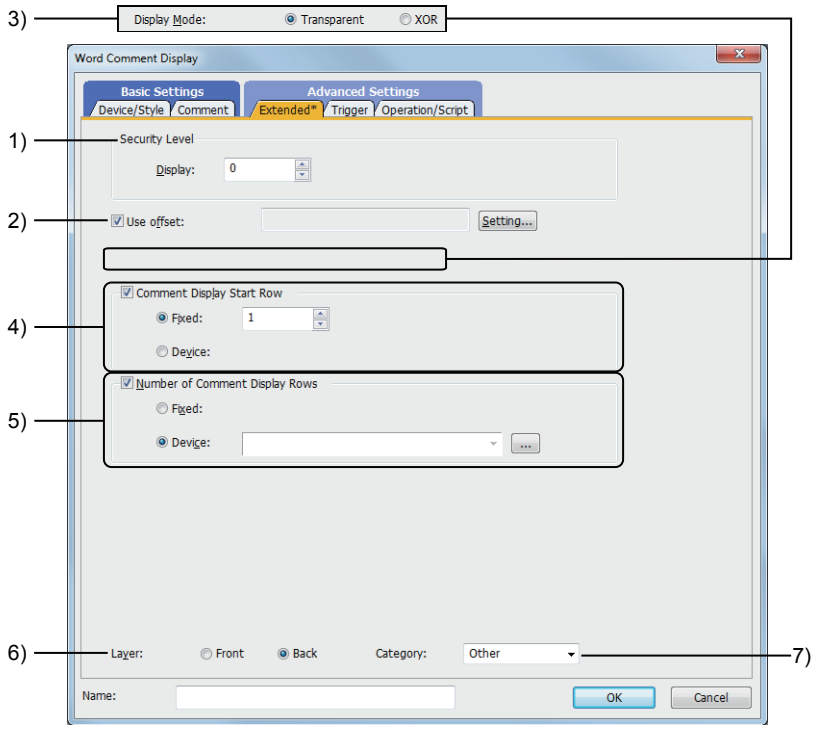
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

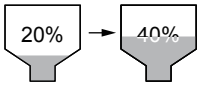
2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Set the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Display Mode]**
Display mode when the comment display is superimposed on a level object.

- [Transparent]: Displays the comment on the level object.

- [XOR]: The comment in a comment display is integrated into the XOR synthesis with a level color, to be able to be distinguished from the level object.



GOT Graphic Ver.2

As the setting is fixed to [Transparent], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows the items to be selected.

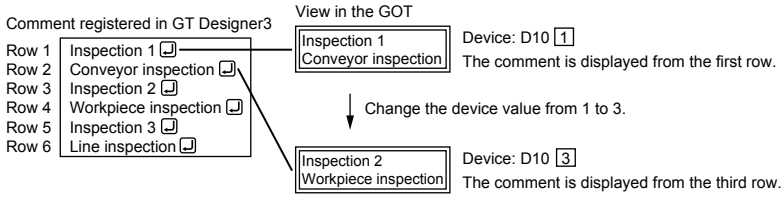
- [Transparent]
- [XOR]

4) **[Comment Display Start Row]**

When setting a comment having multiple rows, set the first row to be displayed.

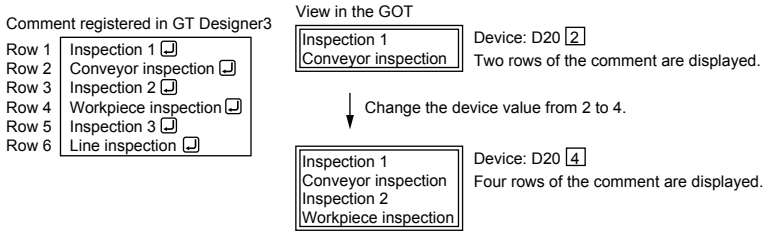
If the value out of the number of created comment rows is set, the comment is displayed as blank.

If the comment is displayed as blank, check the number of rows of the specified comments.

Item	Description
[Fixed]	Enter the start row directly. The setting range is [1] to [32767].
[Device]	Set the device value as the start row to be displayed. ➟6.1.2 How to set devices Example) When [Device] is selected and [D10] is set 

5) **[Number of Comment Display Rows]**

When setting a comment having multiple rows, set the number of rows to be displayed.

Item	Description
[Fixed]	Enter the number of rows to be displayed directly . The setting range is [1] to [32767].
[Device]	Set the device value as the number of rows to be displayed. ➟6.1.2 How to set devices If the device value is zero, the comment is not displayed. Example) When [Device] is selected and [D20] is set 

6) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

7) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

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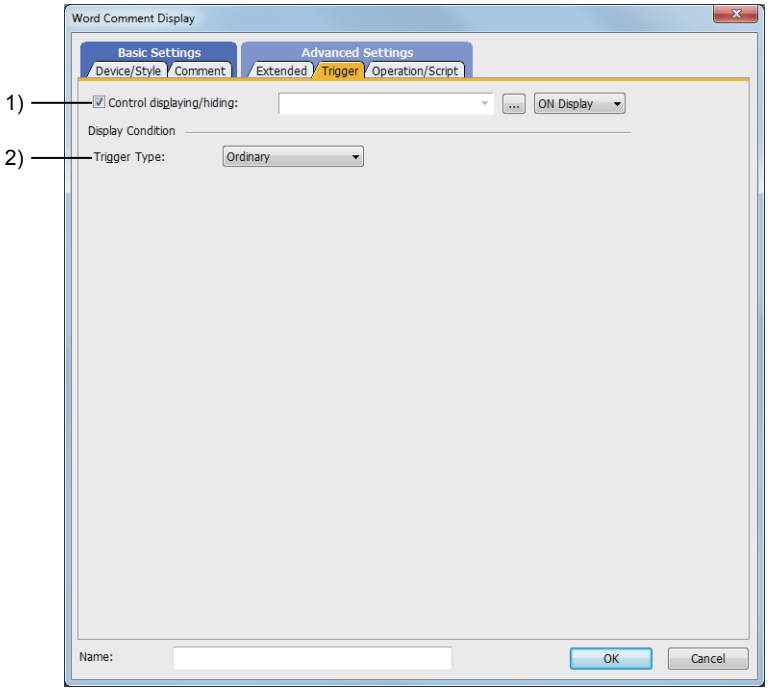

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Depending on the selection for [Operation Type], the setting items are different.

(1) [Data Operation]

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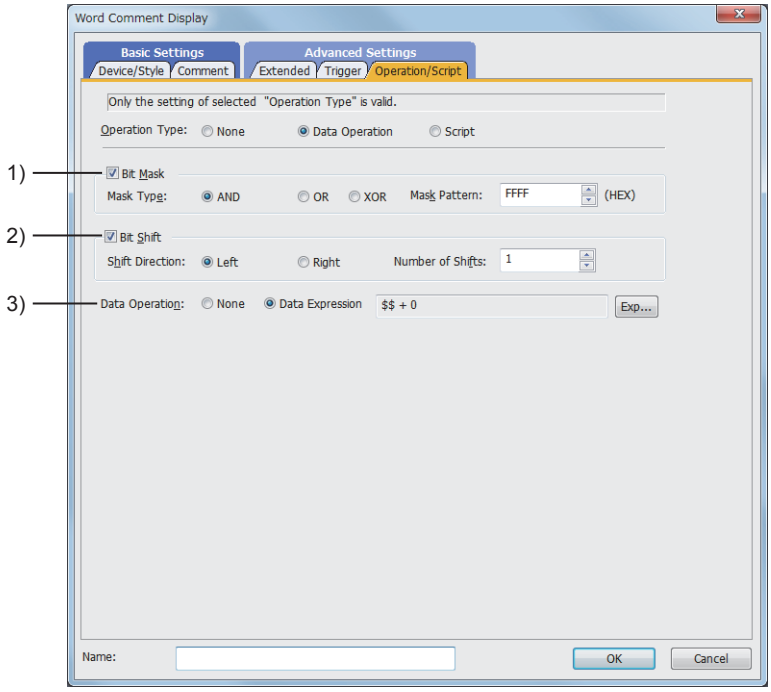
This item can be set only when [Operation Type] is [Data Operation].
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left] • [Right]
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Select the format of the expression operating with the data operation.
The following shows the items to be selected.

- [None]
- [Data Expression]

(2) [Script]

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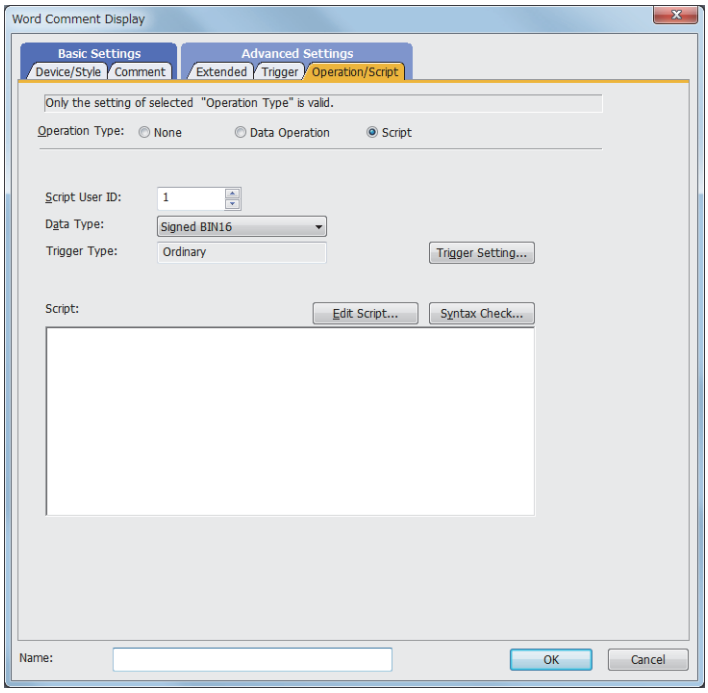
This item can be set only when [Operation Type] is [Script].
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) **Correspondence between the object settings and the object properties used in scripts**

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device/Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Text Color]	text_color	○	○	When the object is updated	
	[Blink]	blink	○	○	Upon the setting change	When the object is updated
	[Blink Scope]	blink	○	○	Upon the setting change	When the object is updated
	[Reverse]	highlight	○	○	When the object is updated	
	[Text Size] (width)	text_width	○	○	When the object is updated	
	[Text Size] (height)	text_height	○	○	When the object is updated	
	[Alignment]	arrange	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updateddd
	[Display Mode]	draw_mode	○	○	When the object is updated	

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➡9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

8.7.6 [Simple Comment Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

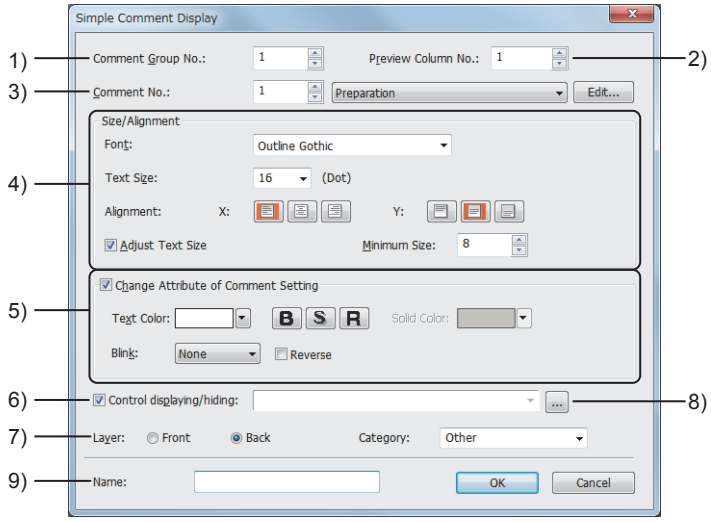
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Step 1 Select [Object] → [Comment Display] → [Simple Comment] from the menu.

Step 2 Click the position where you place the comment display (simple). Placing the comment display (simple) is completed.

Step 3 Double-click the comment display (simple) which has been placed to display the setting dialog.

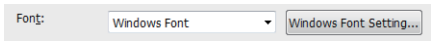


1) **[Comment Group No.]**
Set the comment group number to be used.
The setting range is [1] to [500].
When the nonexistent comment group No. is set, the comment is not displayed.

2) **[Preview Column No.]**
Set the column No. to be displayed.
The setting range is [1] to [30].

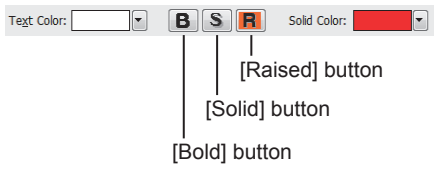
3) **[Comment No.]**
Set the comment No. to be display.
The setting range is [0] to [32767].
If [0] is set, the comment is not displayed.

4) **[Size/Alignment]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog.  • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Alignment]	Set the vertical or horizontal position of the text.
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	This item can be set only when [Adjust Text Size] is set. Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dots.

5) **[Change Attribute of Comment Setting]**

Set the comment attribute such as [Text Color] and [Blink].

Item	Description
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.
[Blink]	Select the blinking speed of the text and shape. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]
[Reverse]	Inverts the text.

6) **[Control displaying/hiding]**
Set the device that controls display/hide of all objects.

➟6.1.2 How to set devices

7) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

- [Front]
- [Back]

8) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

9) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

8.7.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the comment display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.8 Placing a Parts Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

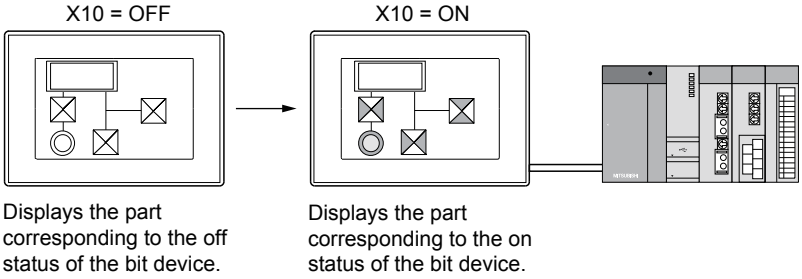
With this function, registered parts, base screens, and window screens can be displayed corresponding to the status of a device.

■1 How to switch the parts

(1) Parts display (bit)

➟8.8.4 [Bit Parts Display] dialog

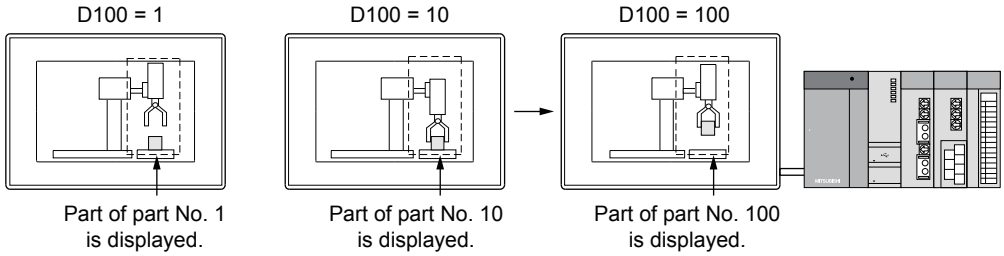
This object displays a part, base screen, or window screen corresponding to the ON or OFF status of a bit device.



(2) Parts display (word)

➟8.8.5 [Word Parts Display] dialog

This object displays a part, base screen, or window screen corresponding to the value of a word device.

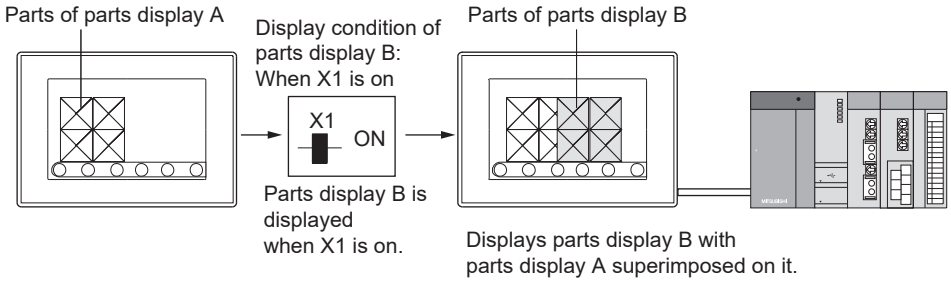


(3) Parts display (fixed)

➟8.8.6 [Fixed Parts Display] dialog

This function displays the parts, base screen, and window screen corresponding to the rising edge or falling edge of a bit device.

Only one type of parts can be displayed. However, the parts can be displayed with another parts display superimposed on it.



8.8.1 Specifications of the parts display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

Up to 1024 parts displays can be placed on each screen.

■2 Parts displayed by parts displays

The following two types of parts can be displayed by the parts display, and the parts need to be registered in advance.

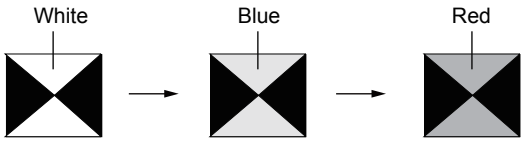
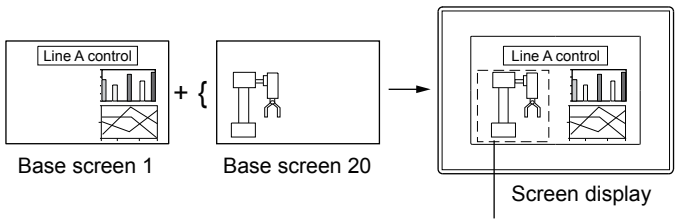
(1) The parts data registered as the parts in GT Designer3 (registered parts)

➟5.9 Registering Parts ([Parts])

(2) BMP file, JPEG file, and PNG file (BMP file parts, JPEG file parts, PNG file parts) which are stored in the data storage

➟5.9.3 ■6 Using the image file stored in the data storage as a part

■3 Types of parts which can be displayed

Type	Description	Remarks
Parts	Displays the figure registered as a part. Example) Registrable figures as parts Figure Text BMP file, JPEG file, PNG file	• The parts are required to be registered in advance. ➟5.9 Registering Parts ([Parts]) 5.9.3 ■6 Using the image file stored in the data storage as a part
Mark	Switches the figure colors which are registered as the parts corresponding to the change of device status. Because one part can display different images, the registration of multiple parts is not necessary and the capacity of the GOT memory can be saved.  The display color of the white space can be changed.	• The parts with BMP format, JPEG format, or PNG format cannot be used. • Draw the part whose color is to be switched in white. • While fixed parts are being displayed, switching to multiple colors cannot be executed. The display is only in a single color.
Base screen Window screen	Displays the figure on a base screen and window screen.  Base screen 1 Base screen 20 Screen display The figure of base screen 20 is displayed on base screen 1.	• The object set on a base screen or window screen is not displayed.

■4 Setting the parts to be integrated into an XOR synthesis

GOT Graphic Ver.1

(1) BMP file parts, JPEG file parts, PNG file parts registered in GT Designer3

XOR synthesis is not available for PNG file parts.

To integrate BMP file parts or JPEG file parts by XOR synthesis, set such parts on the back layer. (Not available in GT21 and GS21)

(2) When superimposing multiple parts displays and integrating them into an XOR synthesis

- Among parts displays, only parts displays (fixed parts) can be superimposed.
- Place all the parts display objects targeted for an XOR synthesis on the same layer. (Not available to GT21 and GS21)
- If they are placed on the front layer, the portion on which no parts are superimposed is combined with [Front Layer Transparent Color] of the screen by XOR synthesis. (Not available to GT21 and GS21)

(3) When integrating parts including characters into an XOR synthesis

In cases where the parts to be displayed includes an object whose character effect is set to [Bold], [Solid], or [Raised], the characters may be chipped or the character color may not be displayed normally when the parts are displayed.

(4) Combining a user-registered logo text part with other parts or objects by XOR synthesis

To combine a user-registered logo text part with other parts or objects by XOR synthesis, select [Background Color] in the [Logo Text] dialog.
If [Background Color] is deselected, the logo text part cannot be combined with other parts or objects by XOR synthesis.

8.8.2 How to use the parts display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the parts display

Place parts displays on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing parts displays

Edit parts displays that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting parts displays

Set parts displays that have been placed on the screen editor.
Common setting of objects

➟6.5.5 Common setting for objects

Parts display (bit) settings

➟8.8.4 [Bit Parts Display] dialog

Parts display (word) settings

➟8.8.5 [Word Parts Display] dialog

Parts display (fixed) settings

➟8.8.6 [Fixed Parts Display] dialog

■4 Method of displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage

BMP file parts, the JPEG file parts, and the PNG file parts can be displayed by object or project.

(1) Method of displaying by object (in the use of image files)

(a) When using BMP file parts, JPEG file parts, and PNG file parts in the data storage

Specify a BMP file, JPEG file, or PNG file stored in the data storage at each object setting of the parts display to display as parts.

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.
For the storing method, refer to the following.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 When the display condition set for a parts display to display parts is satisfied, the specified BMP file part, JPEG file part, or PNG file part in the data storage is displayed.
Set the following items in the [Device/Style] tab of the parts display and use the parts display.

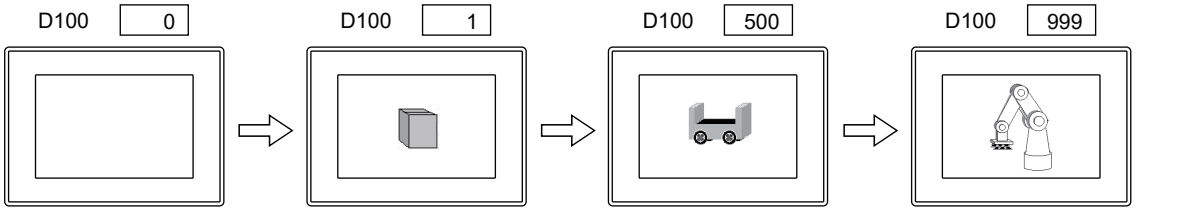
- Setting image files
- Setting image file numbers

(b) Display example

The following shows a display example of when a BMP file part is stored in the data storage.

Example) Displaying BMP images in the parts display (word)
Set image files and write parts numbers between 1 and 65536 in a word device to display the BMP images.

• Word device to display the parts: D100



When specifying 0 for the part No., BMP file parts are hidden.

BMP file part (IMG0001.BMP) is displayed.

BMP file part (IMG0500.BMP) is displayed.

BMP file part (IMG0999.BMP) is displayed.

(2) Method of displaying by project

To display BMP file parts, JPEG file parts, or PNG file parts in the data storage, specify the parts No. from 9001 to 9999.
To display the BMP file parts, the JPEG file parts, or the PNG file parts in the data storage when the parts No. from 9001 to 9999 is specified, follow the following procedure.

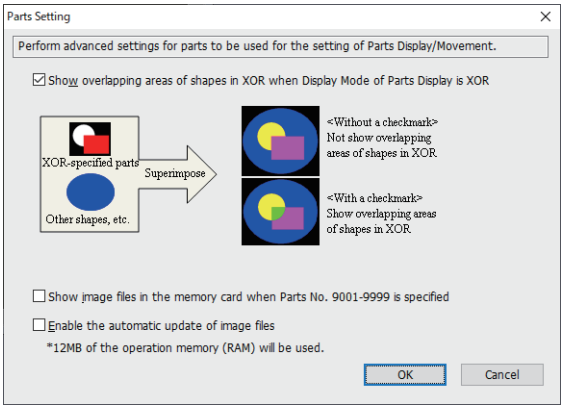
(a) When using BMP file parts, JPEG file parts, and PNG file parts in the data storage

This method is applied to display BMP files, JPEG files, or PNG files in the data storage when the parts number 9001 to 9999 is specified.

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 Select [Show image files in the memory card when Parts No. 9001-9999 is specified] in the [Parts Setting] dialog and write the setting to the GOT.



Step 3 When the display condition (parts number: 9001 to 9999) set for a parts display to display parts is satisfied, the BMP file part, JPEG file part, or PNG file part in the data storage is displayed.

The settings of [Image File Setting] and [Image File No.] are unnecessary.

(b) When displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage using GS450.b8

Not available to GT21 and GS21.
This method is applied to switch between the parts registered in GT Designer3 and BMP files, JPEG files, or PNG files in the data storage when the parts number 9001 to 9999 is specified.
To use GS450.b8, deselect [Show image files in the memory card when Parts No. 9001-9999 is specified] in the [Parts Setting] dialog.
If the above setting is valid, BMP files, JPEG files, or PNG files in the data storage can be used as parts regardless of

the status of GS450.b8.

Parts No.	GS450.b8: ON	GS450.b8: OFF
9001 to 9999	Displays BMP file parts, JPEG file parts, and PNG file parts in the data storage.	Displays the parts registered in GT Designer3

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 Turn on GS450.b8.

Step 3 When the display condition (parts number: 9001 to 9999) set for a parts display to display parts is satisfied, the BMP file part, JPEG file part, or PNG file part in the data storage is displayed.

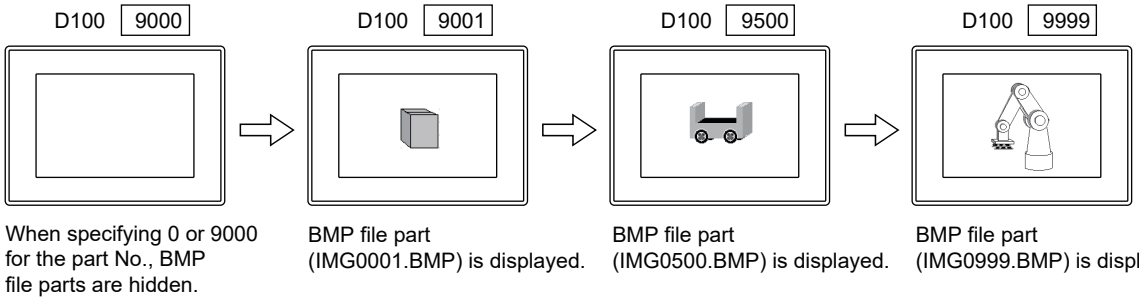
(c) Display example

The following shows a display example of when a BMP file part is stored in the data storage.

Example) Displaying BMP file parts in a parts display (word part)

Write the parts numbers between 9001 and 9999 to a word device to display the BMP file parts.

• Word device to display the parts: D100



Point

(1) When specifying a parts number other than 9001 to 9999

Even if BMP file parts, JPEG file parts, or PNG file parts in the data storage are set to be displayed, parts registered in GT Designer3 are displayed when a parts number out of the range between 9001 and 9999 is specified.

(2) When switching to BMP file parts, JPEG file parts, or PNG file parts in the data storage that are given the same parts number (only when using GS450.b8)

Not available to GT21 and GS21.

To switch to a part (BMP file part, JPEG file part, or PNG file part) in the data storage that has been given the same parts number while a part registered in GT Designer3 whose parts number is one of 9001 to 9999 is displayed, follow the following procedure.

Step 1. Turn on GS450.b8.

Step 2. Specify either the parts number 0 or 9000 and hide the displayed part.

Step 3. Specify the parts number of BMP file parts, JPEG file parts, or PNG file parts in the data storage to be displayed.

(3) Example of cases where GS450.b8 is automatically turned on after the GOT is powered on

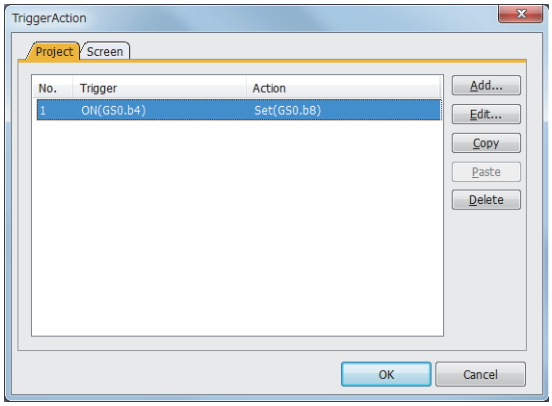
Not available to GT21 and GS21.

The following shows an example of cases where GS450.b8 is automatically turned on after the GOT is powered on.

This method is useful when using GS450.b8 and displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage from the beginning of operation.

Step 1. As a trigger action, make the GOT internal device (device always on: GS0.b4) as a trigger condition and make settings that store 1 to GS450.b8 while the trigger is on.

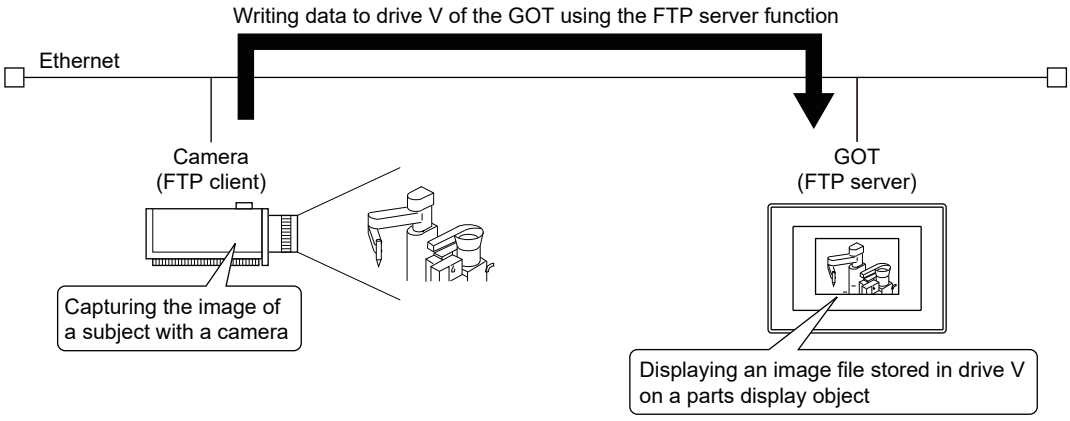
Step 2. Store 1 in GS450.b8 with the trigger action after the GOT is powered on.



- Set in the [Project] tab of [Trigger Action].
- Set this trigger action in the first row of the list.
  This stores 1 in GS450.b8 immediately after the GOT is powered on.
  Parts of parts displays or parts movements at a GOT startup may not be switched to BMP file parts, JPEG file part, or PNG file parts.
  (When the screen is switched, the parts are switched.)
  Design screens under consideration for the above description.
- Select [Ordinary] for [Trigger Type].

■5 Switching the image on a parts display object automatically

Available to GT27, GT25, GT SoftGOT2000, and GS25.
When an image file stored in drive V is updated, the image on the parts display object is automatically switched.
The image file can be displayed like a video playback when the file is frequently updated.
Write the image files in drive V using the FTP server function.



(1) Displayable image files

The image files that satisfy all the following conditions can be displayed as parts.

- Storage designation: Drive V
- File name: IMG1, IMG2, IMG3, or IMG4
- File format: JPEG
- Resolution: QVGA, VGA, SVGA, or XGA

(2) Specifications of drive V

Up to four files can be stored.
Up to 6 MB of data can be stored regardless of the storable number of files.
The status of drive V is not notified and the files stored in drive V are not manipulated.
The image files stored in drive V are deleted at the following timings.

- GT27, GT25, GS25
  When the GOT is restarted
  Note that the image files are retained if the package data is updated at the restart.
- GT SoftGOT2000
  The files are deleted when monitoring starts with GT SoftGOT2000 or GT SoftGOT2000 exits.

(3) Settings of a parts display object

The following shows the settings and operating procedure required for a parts display.

Step 1 Select [Common] → [Parts] → [Parts Setting] from the menu to display the [Parts Setting] dialog.

Step 2 Select [Enable the automatic update of image files].

➟5.9.6 [Parts Setting] dialog

Step 3 Place a parts display object.

Step 4 In the [Device/Style] or [Style] tab, configure the following settings.

- Select [Image File (automatic update)] for [Parts Type].
- Set the image file number to be used in [Detail Settings of Parts].

➟8.8.4 ■1 [Device/Style] tab
8.8.5 ■1 [Device/Style] tab
8.8.6 ■1 [Style] tab

(4) Configuring the FTP server and FTP client settings

Whose FTP server function to be used depends on the GOT model.

- GT27, GT25, GS25

  Use the FTP server function of the GOT for settings.

  ➟10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)

- GT SoftGOT2000

  Use the FTP server function of Windows for settings.

For the image files stored in drive V, configure the settings on the FTP client to be used.

■6 Parts No.

Depending on the parts number, the parts that can be displayed and operations are different.
The following shows the relation between the parts numbers and the parts which can be displayed.

○: Can be displayed ×: Cannot be displayed -: Display is deleted

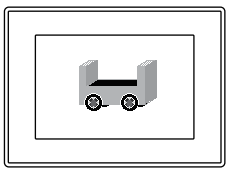
Parts No.	When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are set to be displayed		When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are not set to be displayed	
	Parts registered in GT Designer3	BMP file parts, JPEG file parts, and PNG file parts in the data storage	Parts registered in GT Designer3	BMP file parts, JPEG file parts, and PNG file parts in the data storage
0	-*1	-*1	-*1	×
1 to 8999	○	×	○	×
9000	×	-*1	○	×
9001 to 9999	×*2	○	○	×
10000 to 32767	○	×	○	×

*1 When [Indirect Device] is set for [Detail Settings of Parts] in the [Word Parts Display] dialog, the parts are not hidden. (The current display is held.)
For the method of hiding parts in the [Word Parts Display] dialog, refer to [Detail Settings of Parts] in the [Word Parts Display] dialog.

➟8.9.5 ■1 [Device/Style] tab

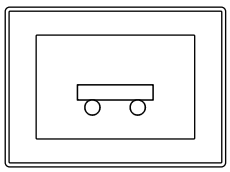
*2 Even if the parts registered in GT Designer3 are registered, they cannot be displayed.
Example) When a part registered in GT Designer3 is registered with the parts No. 9123

BMP file parts, JPEG file parts, and PNG file parts are displayed.



When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are set to be displayed.

The parts registered in GT Designer3 (parts No. 9123) are displayed.



When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are not set to be displayed.

■7 Setting the image data of parts to a transparent color

When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled.
The following shows the method of enabling a transparent color setting for parts.

• Set a transparent color for the image data.
(Transparent colors can be set only for the image data of BMP files.)
• Register the image data for which the transparent color has been set as parts or into the library.
• Set the registered parts or library as the parts.

➟6.5 Placing and Editing Figures and Objects

8.8.3 Precautions for a parts display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for drawing

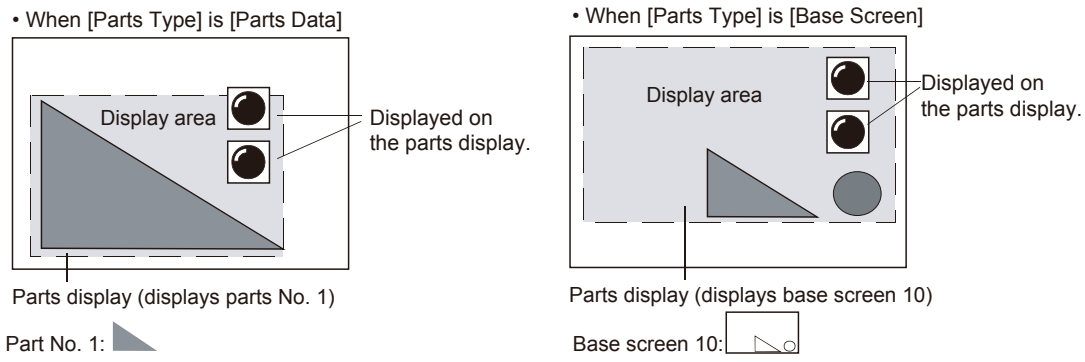
(1) Display when a part extends off the screen

If a part is placed so that it extends off the screen, the display on the GOT differs depending on the components of the part and [Graphics Setting].

Part components	[Graphics Setting]	Part display
Image data + figures	GOT Graphic Ver.2	The part within the screen is displayed.
	GOT Graphic Ver.1	The part within the screen is displayed. If a part extends above or left of the screen, the display differs depending on the model used as shown below. • Other than GT SoftGOT2000 The figures within the screen are displayed, whereas image data even within the screen is not displayed. • GT SoftGOT2000 or GT Simulator3 If the image file format is BMP or JPEG, image data within the screen is also displayed.
Image data only	GOT Graphic Ver.2	The part within the screen is displayed.
	GOT Graphic Ver.1	The part within the screen is displayed. When an image file in the data storage is used as a part and the part extends above or left of the screen, system alarm 537 is output in the following cases. The data will not be displayed. • Other than GT SoftGOT2000: A BMP file part, JPEG file part, or PNG file part is to be displayed. • GT SoftGOT2000 or GT Simulator3: A PNG file part is to be displayed.

(2) When a part overlaps with another object

Set the parts display in a way that does not make the part overlap with another object.
Otherwise, the overlapped object may not be displayed normally.
In such a case, set the parts display and the object in different layers.
This also applies to cases where an object overlaps with the display area as shown below.



(3) When specifying a screen for the parts type and XOR for the display type

GOT Graphic Ver.1

- When the base screen or window screen is specified as the parts type of a parts display (bit part/word part) and XOR is specified as the display type, the parts that have been displayed are deleted and then a new screen is displayed.
- The area to be deleted is the same as that of the base/window screen around the drawing point of the parts display (screen (center, top left)).
- When an object is included in the base/window screen area to be deleted, the object is also deleted.
  To prevent the object from being deleted, change the parts type from the screen to the parts and adjust the position in a way that does not make the parts overlap with an object or change the display type to overwrite when leaving the screen being specified as the parts type.
  Because the parts that were displayed previously are left when an overwrite operation is performed, the same size of parts is required.
- In cases where the parts, base screen, and window screen to be displayed include an object whose character effect is set to [Bold], [Solid], or [Raised], the characters may be chipped or the character color may not be displayed normally when the parts are displayed.

(4) Displaying the parts for which PNG file parts and logo text parts ([Background Color] is deselected) are registered

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When all the following conditions are satisfied, the parts display is retained on the GOT even when the display conditions are unsatisfied.

- [XOR] is selected for [Display Mode].
- [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog is deselected.

For the XOR synthesis and object stacking order adjustment settings, refer to the following.

➟8.8.4 [Bit Parts Display] dialog
8.8.5 [Word Parts Display] dialog
8.8.6 [Fixed Parts Display] dialog
5.1.5 ■3 [Option Setting]

■2 Precautions for use

(1) Deleting parts

Use [Mark Data] and [Parts Data] of [Parts Type] to delete parts.
When [Base Screen] or [Window Screen] of [Parts Type] is used, parts are not deleted even if the parts are specified to 0. (When the screen is redisplayed after being switched to another, the parts are deleted.)

(2) While reading BMP files, JPEG files, and PNG files

While files are read, the monitor screen stops.

(3) When BMP file parts, JPEG file parts, and PNG file parts are displayed halfway

When an error occurs while files are being on display step by step, the images may be displayed halfway.
In this case, display the parts again or check the BMP file, JPEG file, or PNG file.

(4) Displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage

Do not disconnect the data storage from the GOT while displaying BMP file parts, JPEG file parts or PNG file parts in the data storage.

(5) When stopping using BMP file parts, JPEG file parts, and PNG file parts in the data storage

Carry out either of the following operations.

- Change [Parts Setting] of GT Designer3 and write the project.
- Turn off the GOT internal device (GS450.b8).

Even if disconnecting the data storage without carrying out the above operations, the BMP file parts, JPEG file parts, or PNG file parts may be displayed due to the following reasons.
BMP file parts, JPEG file parts, and PNG file parts displayed on the GOT are stored in the built-in memory of the GOT. (Only one of the BMP file parts, JPEG file parts, PNG file parts is retained.)
If the BMP file parts, JPEG file parts, and PNG file parts which have the same parts number are displayed successively, the parts registered with GT Designer3 are not displayed because the BMP file parts, JPEG file parts, and PNG file parts stored in the built-in memory of the GOT are displayed.

(6) Priority of settings of GT Designer3 and GS450.b8

When [Show image files in the memory card when Parts No. 9001-9999 is specified] in the [Parts Setting] dialog is selected, the BMP file parts, JPEG file parts, or PNG file parts in the data storage are displayed regardless of the status of GS450.b8.

8.8.4 [Bit Parts Display] dialog

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Step 1 Select [Object] → [Parts Display] → [Bit Parts] from the menu.

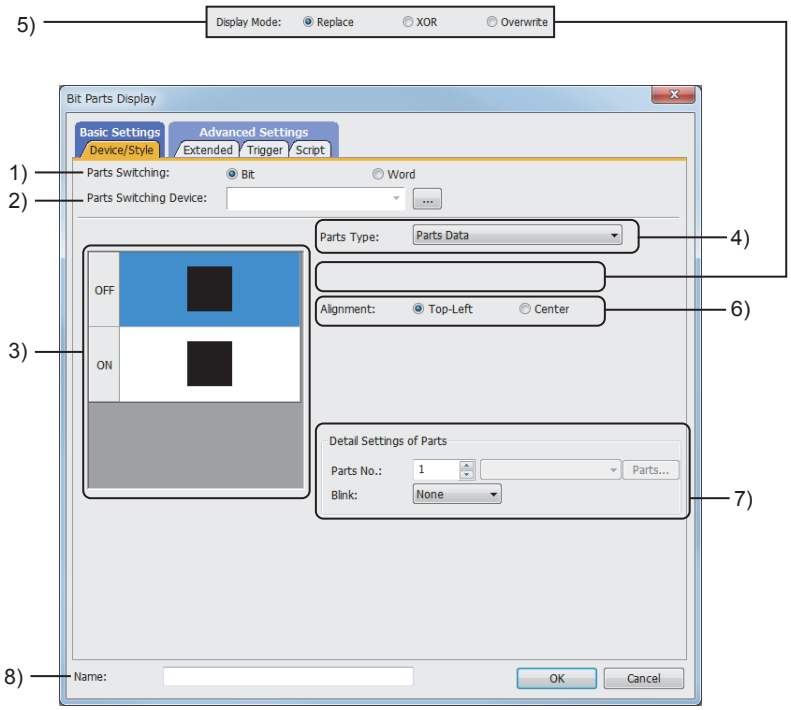
Step 2 Click the position to place a bit parts display.

Step 3 Double-click the bit parts display to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Parts Switching]**
Select the parts display type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Parts Switching Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

3) **Preview list**
Displays the shapes for the on and off status.

4) **[Parts Type]**

Select the type of the parts for the parts display.

Item	Description
[Parts]	Displays registered parts. When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Mark Data]	Switches the white area of the registered part to another display color according to the change of the device status. After selecting, set [Parts No.] to be displayed. The setting range is [0] to [32767]. Click the [Parts] button to check the type of the registered parts. For the parts that can be displayed by mark, refer to the following. ➟5.9 Registering Parts ([Parts]) When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Base Screen]	Displays the registered base screens as parts.
[Window Screen]	Displays the registered window screens as parts.
[Image File]	Select an image file registered in the data storage to display the file as a part. Click the [Setting] button and select an image file in the [Image File Setting] dialog. ➟(1) [Image File Setting] dialog
[Image File (automatic update)]	Available to GT27, GT25, GT SoftGOT2000, and GS25. Select an image file in drive V to display it as a part. When the file in drive V is updated, the image on the parts display object is automatically switched. For the image files that can be used, refer to the following. ➟8.8.2 ■5 Switching the image on a parts display object automatically Set the image file No. to be used in [Details Settings of Parts]. When [XOR] is selected for [Display Mode], even though an image file in drive V is updated, the image on the parts display object is not automatically switched.

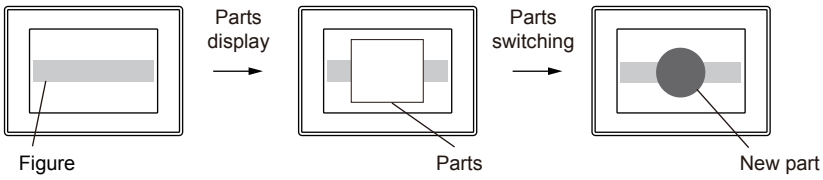
5) **[Display Mode]**

Select a method of displaying at parts switching.

• [Replace]

Deletes the parts displayed previously and displays the new parts.

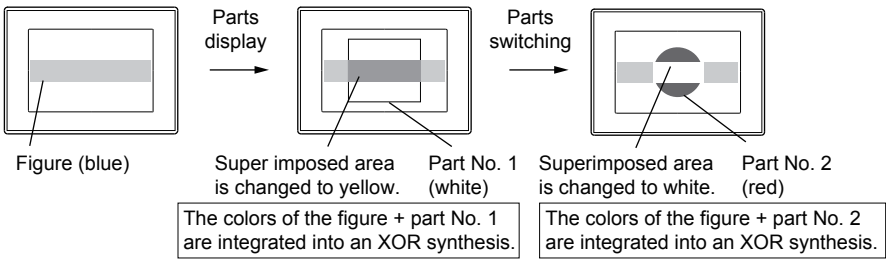
When [Parts Type] is [Base Screen] or [Window Screen], this item cannot be set.



• [XOR]

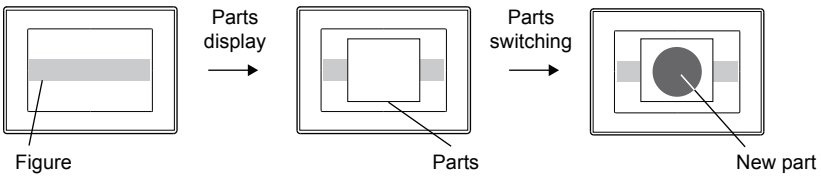
After deleting the parts displayed previously, the areas which overlap with the new part are displayed with an XOR synthesis.

For the combination of overlapped colors with an XOR synthesis, refer to the following



• [Overwrite]

Displays a new part, base screen, or window screen on the part that has been displayed.



GOT Graphic Ver.2

As the setting is fixed to [Replace], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows selectable items.

- [Replace]
- [XOR]
- [Overwrite]

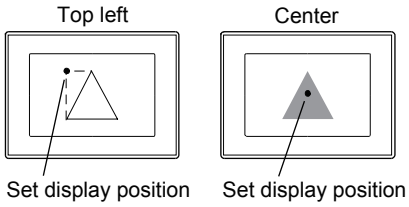
6) **[Alignment]**

Select the default display position of parts, base screens, and window screens.

- [Top-Left]

  Sets the top left of parts, base screens, and window screens as the default display position.
- [Center]

  Sets the center of parts, base screens, and window screens as the default display position.



7) **[Detail Settings of Parts]**

Item	Description
[Parts No.]	Set the number that has been assigned to the part, base screen, or window screen to be displayed. Click the [Parts Data] button to check the registered parts, base screen, and window screen. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from white.
[Screen No.]	When selecting [Base Screen] or [Window Screen] for [Parts Type], specify the screen No. Click the [Screen] button to check the registered parts, base screen, and window screen.
[Image File No.]	Set the image file No. when you select [Image File] or [Image File (automatic update)] for [Part Type]. The setting range varies with the selection for [Parts Type] or [Digits] in the [Image File Setting] dialog. • Selecting [Image File] for [Parts Type] When [Digits] is [5]: [0] to [65535] [Digits] is [4]: [0] to [9999] [Digits] is [3]: [0] to [999] [Digits] is [2]: [0] to [99] [Digits] is [1]: [0] to [9] • Selecting [Image File (automatic update)] for [Parts Type] [0] to [4] When 0 is set for [Screen File No.], images are deleted. When displaying only images for the on status, set 0 for [Image File No.] for the off status.
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

8) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.
Up to 100 characters can be set.

(1) [Image File Setting] dialog

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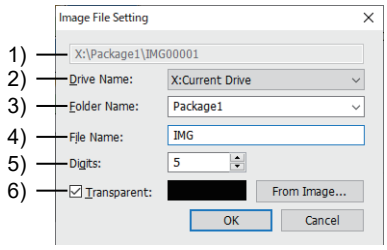
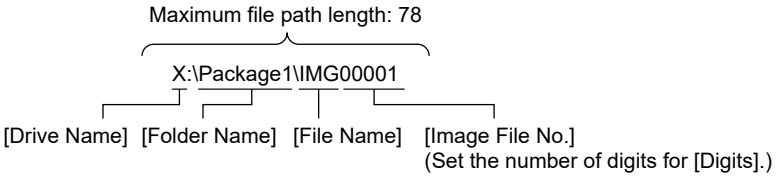
Select an image file to be displayed as a part.



1) **Image file path**
Displays the full path to the specified image file.
Set the path with 78 characters or less in total.
Example) Using IMG00001.bmp stored in Package1 folder in drive X as a part



When [Image File No.] is set to [0], the path is not displayed.

2) **[Drive Name]**
Select the drive to store the image file.
The following shows the items to be selected.
- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.
➟1.2.8 Drive configuration of the target GOT for data transfer

3) **[Folder Name]**
Specify the folder in which image files are stored.

4) **[File Name]**
Specify the first character string of the image file name.

5) **[Digits]**
Specify the number of digits for [Image File No.].
The setting range is [1] to [5].

6) **[Transparent]**
Enable the transparent color setting for the image file selected in this dialog.
This setting is only effective for BMP files.
Set a transparent color in the [Transparent Setting].
➟7.13.1 [Transparent Setting] dialog
Click the [From Image] button to display the [Open] dialog.
Select an image file to be used in the [Transparent Setting] dialog, and the [Transparent Setting] dialog is displayed.

■2 [Extended] tab

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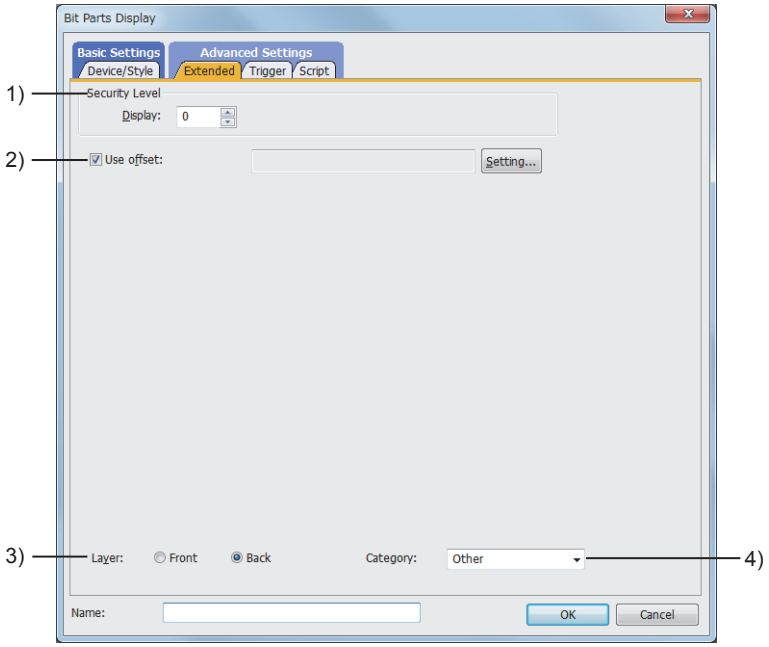

1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Set the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

- [Front]
- [Back]

4) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

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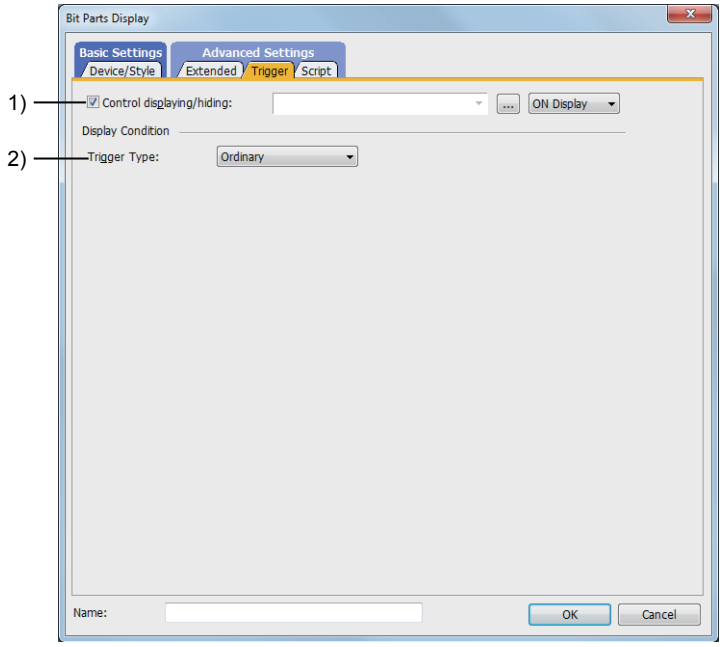

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■4 [Script] tab

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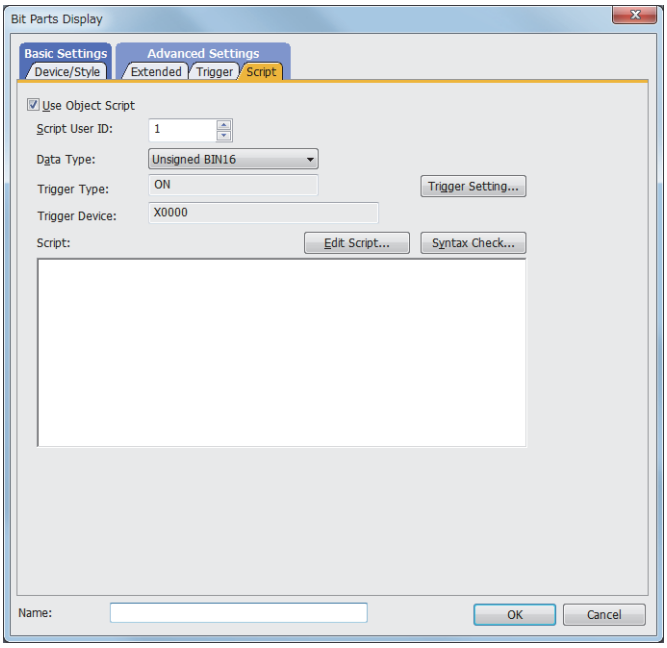
For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
[Device/Style]	[Display Mode]	draw_mode	○	○	When the object is updated	
	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.8.5 [Word Parts Display] dialog

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Step 1 Select [Object] → [Parts Display] → [Word Parts] from the menu.

Step 2 Click the position to place a word parts display.

Step 3 Double-click the word parts display to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Operation/Script] tab

■1 [Device/Style] tab

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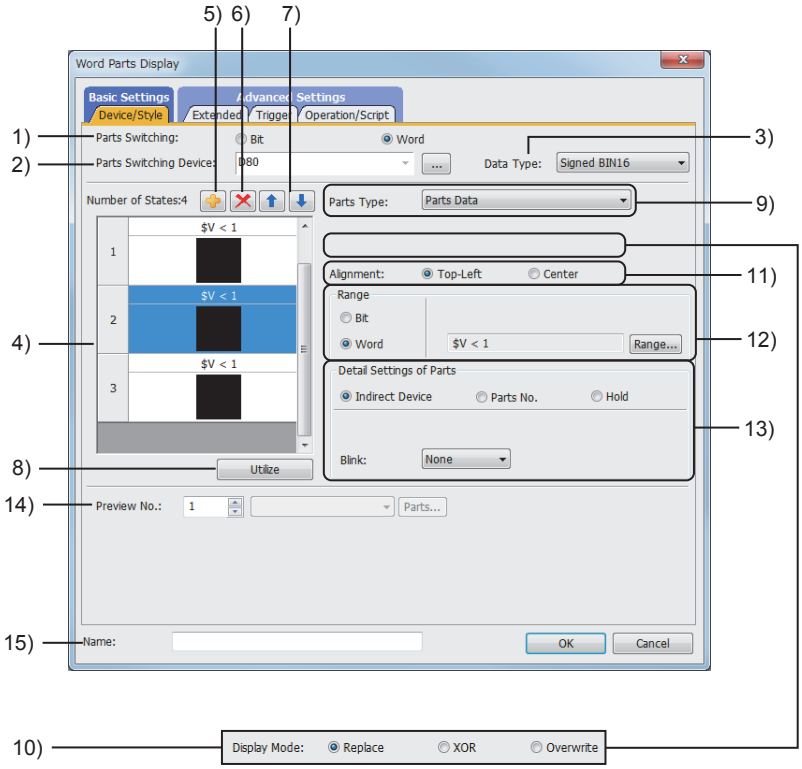


1) **[Parts Switching]**
Select the parts display type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Parts Switching Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

3) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]

4) **Preview list**

Displays set conditions.

5) **Add button**
Adds a new condition.

6) **Delete button**
Deletes the selected condition.

7) **Up button, down button**
Changes the order of priority of the selected condition.

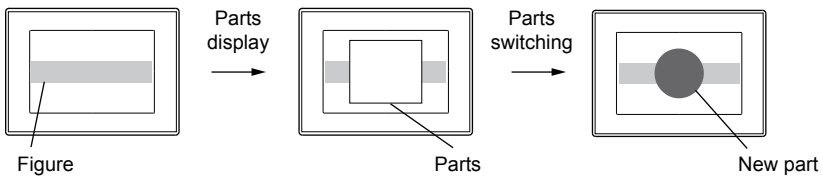
8) **[Utilize] button**
Creates a new condition utilizing the selected condition.

9) **[Parts Type]**
Select the type of the parts for the parts display.

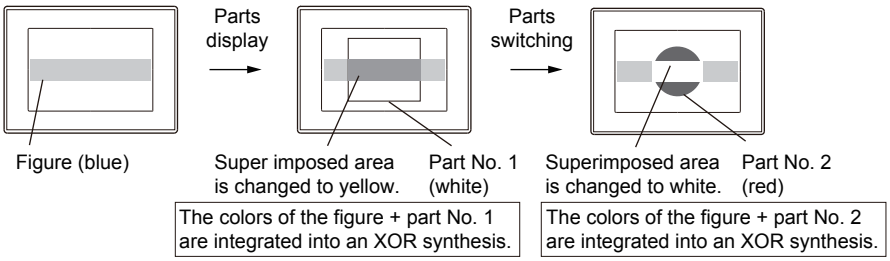
Item	Description
[Parts]	Displays registered parts. When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Mark Data]	Switches the white area of the registered part to another display color according to the change of the device status. After selecting, set [Parts No.] to be displayed. The setting range is [0] to [32767]. Click the [Parts] button to check the type of the registered parts. For the parts that can be displayed by mark, refer to the following. ➟5.9 Registering Parts ([Parts]) When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Base Screen]	Displays the registered base screens as parts.
[Window Screen]	Displays the registered window screens as parts.
[Image File]	Select an image file registered in the data storage to display the file as a part. Click the [Setting] button and select an image file in the [Image File Setting] dialog. ➟8.8.4 ■1 (1) [Image File Setting] dialog
[Image File (automatic update)]	Available to GT27, GT25, GT SoftGOT2000, and GS25. Select an image file in drive V to display it as a part. When the file in drive V is updated, the image on the parts display object is automatically switched. For the image files that can be used, refer to the following. ➟8.8.2 ■5 Switching the image on a parts display object automatically Set the image file No. to be used in [Details Settings of Parts]. When [XOR] is selected for [Display Mode], even though an image file in drive V is updated, the image on the parts display object is not automatically switched.

10) **[Display Mode]**
Select a method of displaying at parts switching.

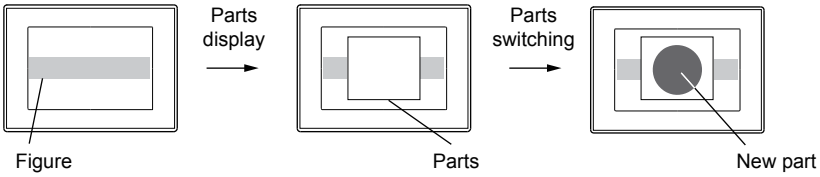
• [Replace]
Deletes the parts displayed previously and displays the new parts.
When [Parts Type] is [Base Screen] or [Window Screen], this item cannot be set.



• [XOR]
After deleting the parts displayed previously, the areas which overlap with the new part are displayed with an XOR synthesis.
For the combination of overlapped colors with an XOR synthesis, refer to the following



• [Overwrite]
Displays a new part, base screen, or window screen on the part that has been displayed.



GOT Graphic Ver.2

As the setting is fixed to [Replace], no additional setting is required accordingly.

GOT Graphic Ver.1

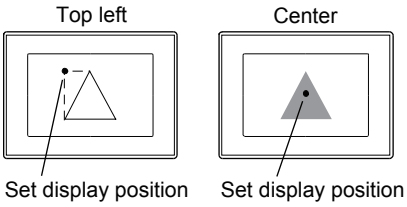
The following shows selectable items.

• [Replace]
• [XOR]
• [Overwrite]

11) **[Alignment]**

Select the default display position of parts, base screens, and window screens.

• [Top-Left]
Sets the top left of parts, base screens, and window screens as the default display position.
• [Center]
Sets the center of parts, base screens, and window screens as the default display position.



12) **[Range]**

• [Bit]
Select this item when changing the display according to the on and off status of the bit device.
After selecting, set the bit device and device status (ON, OFF).
• [Word]
Select this item when changing the display according to the value of a word device.
After selecting, set the conditional expression for the value of the word device with [Range] button.

13) **[Detail Settings of Parts]**

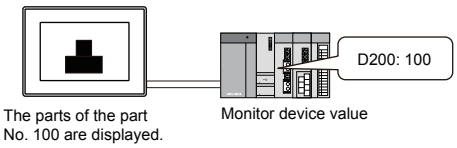
When an option other than [Indirect Device] is selected, conditions are required to be set.
The following shows how the parts are switched according to the setting of [Detail Settings of Parts] and set

conditions.

[Detail Settings of Parts]	Condition setting	
	Enabled	None
Indirect device	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Depending on the value of the parts switching device, parts are switched and displayed.	Set a condition as required. Depending on the monitor device value, parts are switched and displayed. Set a condition when switching parts according to the other conditions.
[Parts No.] [Mark Color]	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Displays the parts set for [Detail Settings of Parts].	Make sure to set a condition. Otherwise, only one type of parts is displayed continuously. Switching to another part cannot be performed.
[Hold]	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Holds the display of the parts set for the condition.	Make sure to set a condition. Without the setting of a condition, nothing is displayed.

For the details of conditions, refer to the following.

➟6.5.5 ■2 Setting conditions

Item	Description
[Indirect Device]	Display the [Parts No.] corresponding to the value of the parts switching device. When the value of the parts switching device is 0, deleted the part. When deleting the parts, set $V==0 for [Range]. 
[Parts No.]	Set the number that has been assigned to the part, base screen, or window screen to be displayed. Click the [Parts Data] button to check the registered parts, base screen, and window screen. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from white.
[Screen No.]	When selecting [Base Screen] or [Window Screen] for [Parts Type], specify the screen No. Click the [Screen] button to check the registered parts, base screen, and window screen.
[Image File No.]	Set the image file No. when you select [Image File] or [Image File (automatic update)] for [Part Type]. The setting range varies with the selection for [Parts Type] or [Digits] in the [Image File Setting] dialog. • Selecting [Image File] for [Parts Type] When [Digits] is [5]: [0] to [65535] [Digits] is [4]: [0] to [9999] [Digits] is [3]: [0] to [999] [Digits] is [2]: [0] to [99] [Digits] is [1]: [0] to [9] • Selecting [Image File (automatic update)] for [Parts Type] [0] to [4] When 0 is set for [Screen File No.], images are deleted. When displaying only images for the on status, set 0 for [Image File No.] for the off status.
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

14) **[Preview No.]**

Displays the part of the specified parts number on the screen of GT Designer3.

The setting range is [0] to [32767].

15) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

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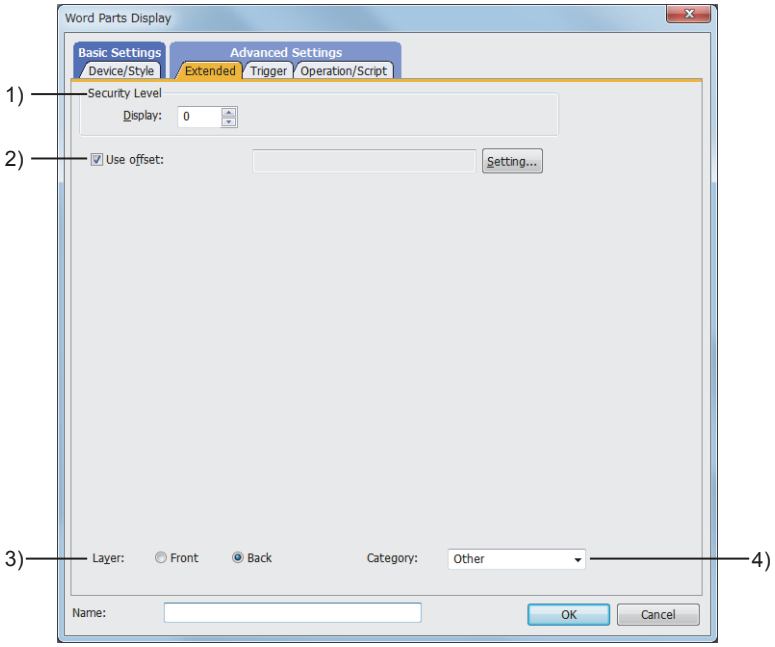

1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15]. If you do not use the security function, select [0].

2) **[Use offset]**

Select this item to monitor multiple devices by switching them.

Set the offset device with the [Setting] button.

3) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

4) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

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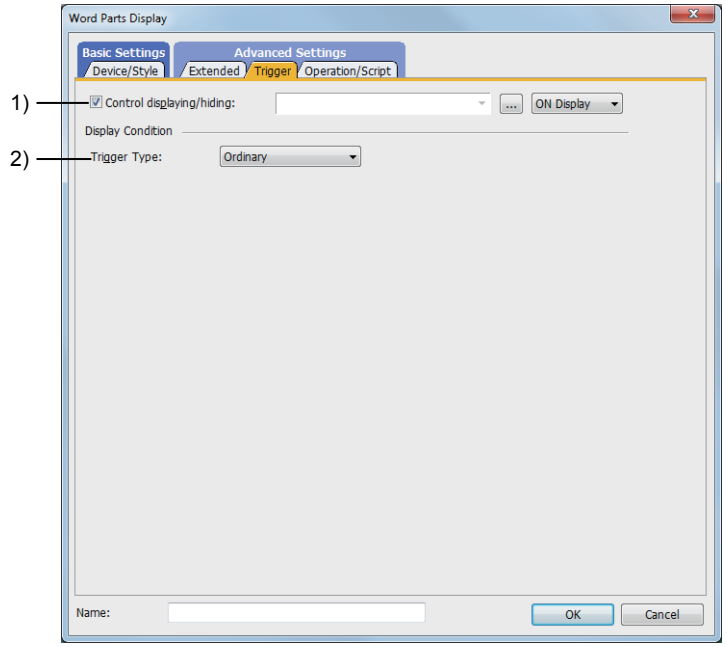

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■4 [Operation/Script] tab

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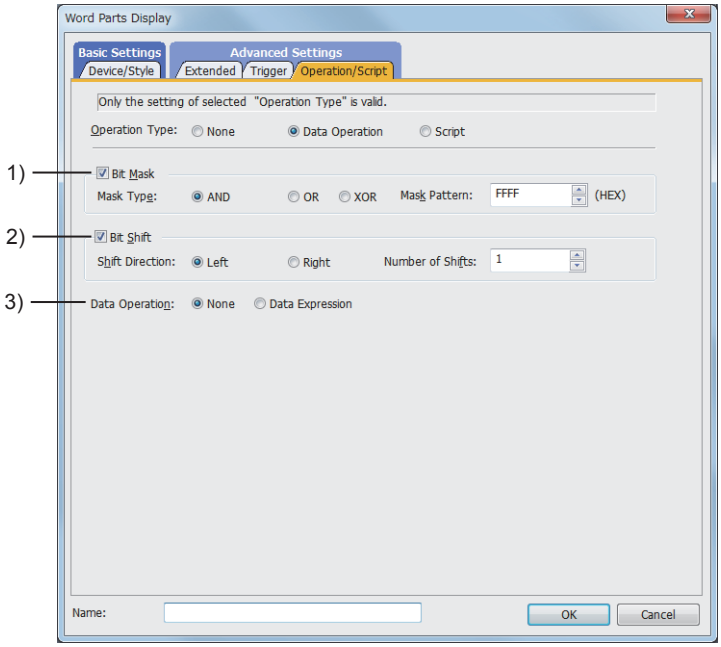
Depending on the selection for [Operation Type], the setting items are different.

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This item can be set only when [Operation Type] is [Data Operation].
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**
Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**
Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left] • [Right]
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**
Select the format of the expression operating with the data operation.
The following shows the items to be selected.

- [None]
- [Data Expression]

(2) [Script]

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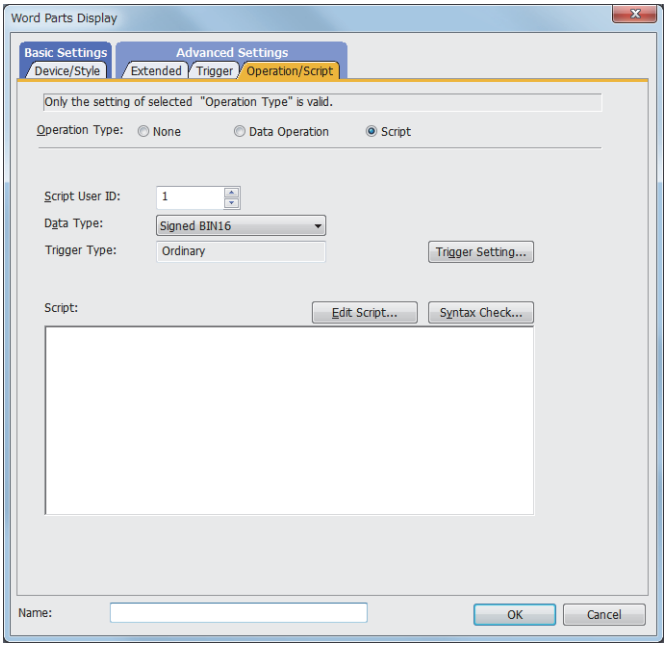
This item can be set only when [Operation Type] is [Script].
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.
○: Available
×: Not available
-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
[Device/Style]	[Display Mode]	draw_mode	○	○	When the object is updated	
	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.8.6 [Fixed Parts Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Parts Display] → [Fixed Parts] from the menu.

Step 2 Click the position to place a fixed parts display.

Step 3 Double-click the fixed parts display to display the setting dialog.

➟■1 [Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Style] tab

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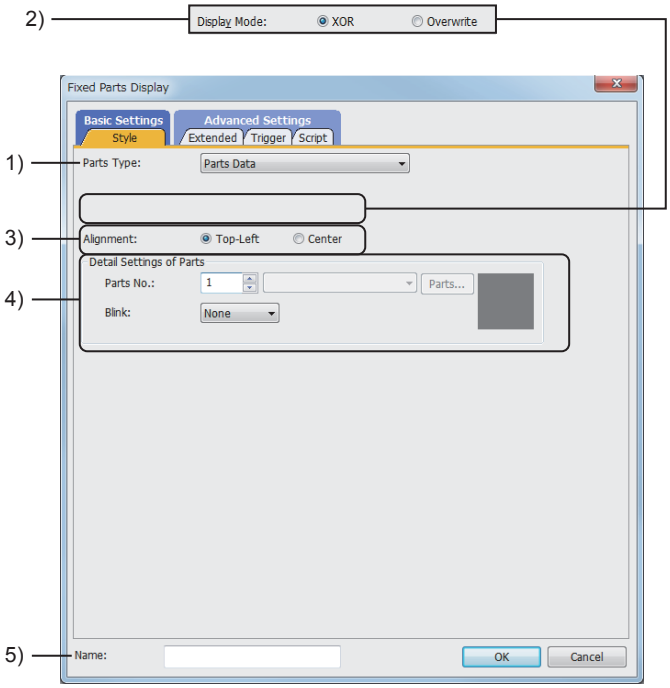


1) **[Parts Type]**

Select the type of the parts for the parts display.

Item	Description
[Parts]	Displays registered parts. When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Mark Data]	Switches the white area of the registered part to the color set for [Mark Color]. After selecting, set [Parts No.] to be displayed. The setting range is [0] to [32767]. Click the [Parts] button to check the type of the registered parts. For the parts that can be displayed by mark, refer to the following. ➟5.9 Registering Parts ([Parts]) When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled. For the method of enabling the transparent color setting of parts, refer to the following. ➟8.8.2 ■7 Setting the image data of parts to a transparent color
[Base Screen]	Displays the registered base screens as parts.
[Window Screen]	Displays the registered window screens as parts.

Item	Description
[Image File]	Select an image file registered in the data storage to display the file as a part. Click the [Setting] button and select an image file in the [Image File Setting] dialog. ➟8.8.4 ■1 (1) [Image File Setting] dialog
[Image File (automatic update)]	Available to GT27, GT25, GT SoftGOT2000, and GS25. Select an image file in drive V to display it as a part. When the file in drive V is updated, the image on the parts display object is automatically switched. For the image files that can be used, refer to the following. ➟8.8.2 ■5 Switching the image on a parts display object automatically Set the image file No. to be used in [Details Settings of Parts]. When [XOR] is selected for [Display Mode], even though an image file in drive V is updated, the image on the parts display object is not automatically switched.

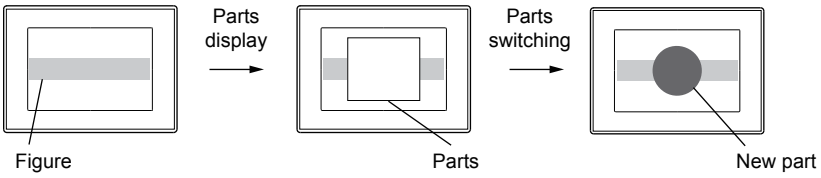
2) **[Display Mode]**

Select a method of displaying at parts switching.

• [Replace]

Deletes the parts displayed previously and displays the new parts.

When [Parts Type] is [Base Screen] or [Window Screen], this item cannot be set.

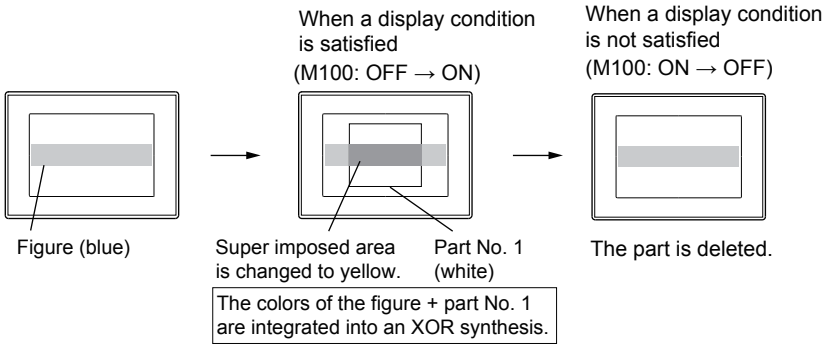


• [XOR]

Displays parts, base screens, and window screens with an XOR synthesis on figures or other parts displays.

When the display condition is not satisfied, the parts, base screens, and window screens are deleted.

Example) Display condition: While M100 is on

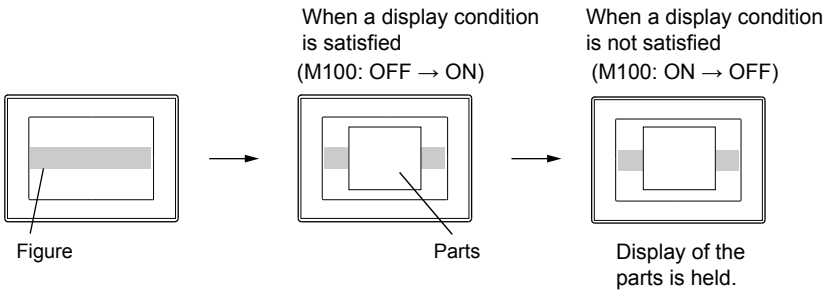


• [Overwrite]

Displays parts, base screens, and window screens on figures or other parts displays.

Even if the display condition is not satisfied, the display of the parts, base screens, and window screens are held.

Example) Display condition: While M100 is on



GOT Graphic Ver.2

As the setting is fixed to [Replace], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows selectable items.

- [XOR]
- [Overwrite]

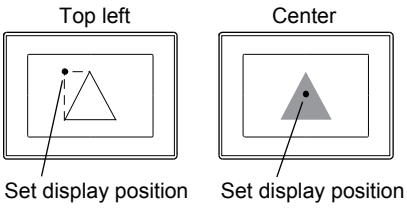
3) **[Alignment]**

Select the default display position of parts, base screens, and window screens.

- [Top-Left]

  Sets the top left of parts, base screens, and window screens as the default display position.
- [Center]

  Sets the center of parts, base screens, and window screens as the default display position.



4) **[Detail Settings of Parts]**

Item	Description
[Parts No.]	Set the number that has been assigned to the part, base screen, or window screen to be displayed. Click the [Parts Data] button to check the registered parts, base screen, and window screen. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from white.
[Screen No.]	When selecting [Base Screen] or [Window Screen] for [Parts Type], specify the screen No. Click the [Screen] button to check the registered parts, base screen, and window screen.
[Image File No.]	Set the image file No. when you select [Image File] or [Image File (automatic update)] for [Part Type]. The setting range varies with the selection for [Parts Type] or [Digits] in the [Image File Setting] dialog. • Selecting [Image File] for [Parts Type] When [Digits] is [5]: [0] to [65535] [Digits] is [4]: [0] to [9999] [Digits] is [3]: [0] to [999] [Digits] is [2]: [0] to [99] [Digits] is [1]: [0] to [9] • Selecting [Image File (automatic update)] for [Parts Type] [0] to [4] When 0 is set for [Screen File No.], images are deleted.
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

5) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

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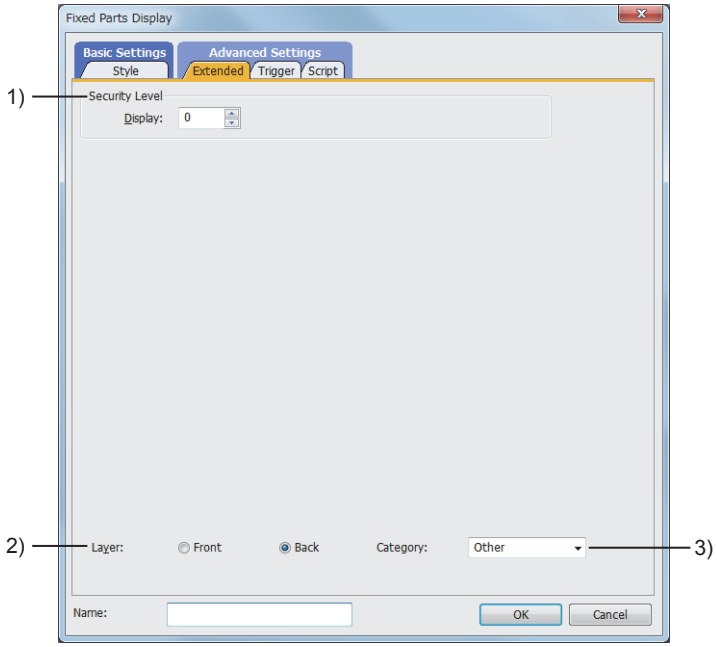


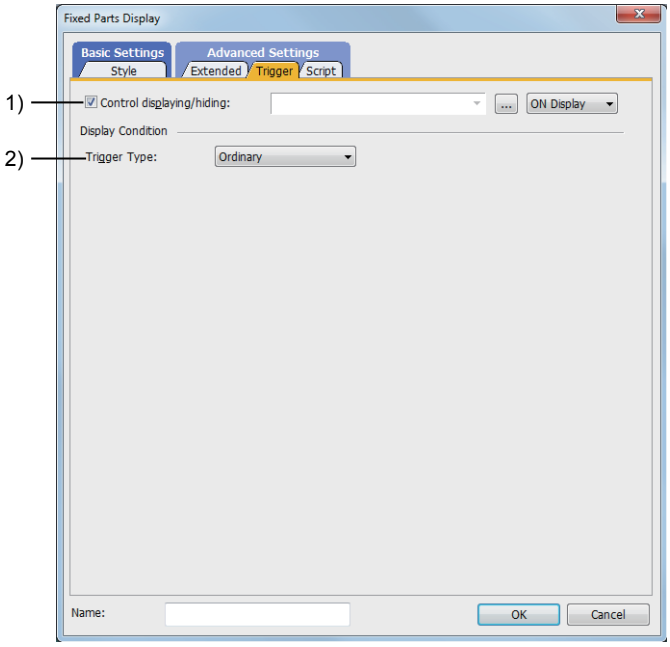
1) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15]. If you do not use the security function, select [0].

2) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.
- [Front]
- [Back]

3) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

For details of each item, refer to the following.

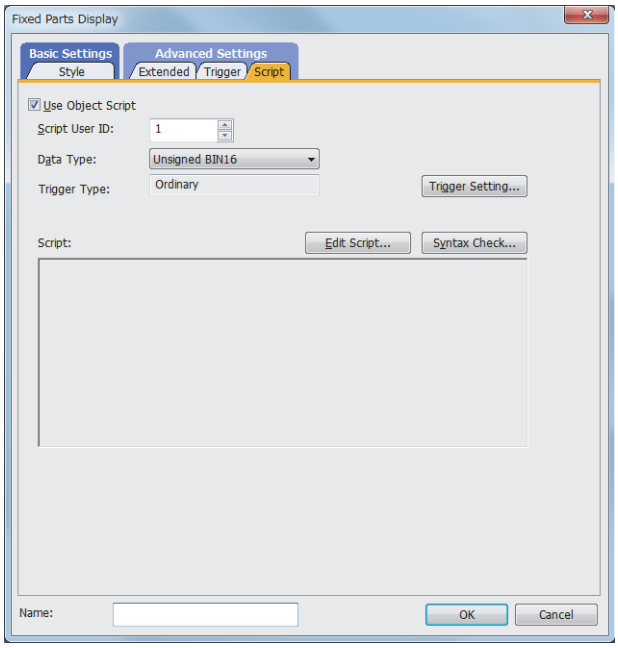
➟6.2 Setting Trigger Types

■4 [Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
[Style]	[Display Mode]	draw_mode	○	○	When the object is updated	
	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.8.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the parts display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 Parts setting

Select [Common] → [Parts] → [Parts Setting] from the menu to display the [Parts Setting] dialog.

➟5.9.6 [Parts Setting] dialog

Function	Setting item
When the display Mode of the parts display is XOR, integrating grouped figures into an XOR synthesis simultaneously	**GOT Graphic Ver.1** [Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR]
Setting whether to use image files in the data storage for parts displays or parts movements	[Show image files in the memory card when Parts No. 9001-9999 is specified]
When [Image File (automatic update)] is selected for [Parts Type], updating the image on the parts display object automatically when an image file stored in drive V is updated	[Enable the automatic update of image files]

■3 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Using image files in the data storage as parts for parts displays or parts movements (Read device)	GS450.b8

8.9 Placing a Parts Movement

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays the movement of parts by rearranging their positions based on the word device value.
The parts movement is displayed by the following two types of devices.

- Position device
  This device stores the destinations of parts.
  ➟8.9.2 ■4 How to move the parts (control with the position device)
- Parts switching device
  This device switches the types of parts to be displayed.

■1 Switching method of parts (controlled by parts switching devices)

The following shows the methods of switching parts.

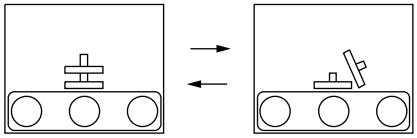
(1) Parts movement (bit)

➟8.8.4 ■1 [Device/Style] tab

This object displays two parts by switching between them.

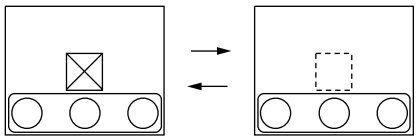
(a) Parts are switched according to the ON or OFF status of a bit device.

[Parts Switching Device]: M10



(b) A part is displayed or hidden according to the ON or OFF status of a bit device.

[Parts Switching Device]: M10



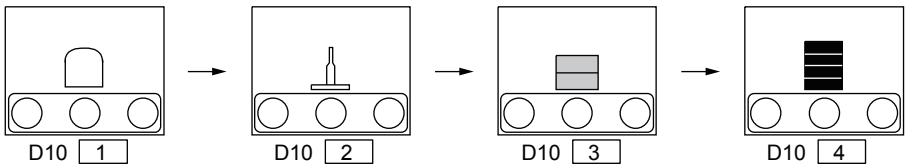
(2) Parts movement (word)

➟8.8.5 ■1 [Device/Style] tab

This object displays three or more parts by switching between them.

(a) Parts are switched based on the value of the word device that stores a part number.

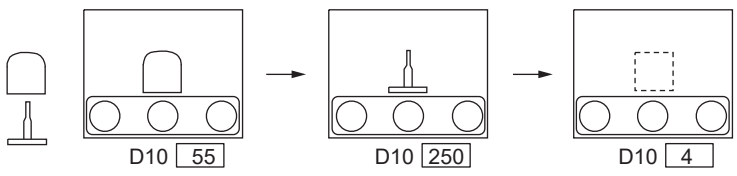
[Parts Switching Device]: D10



(b) The types of parts are switched based on the word device value.

- [Parts Switching Device]: D10
- [Trigger]

1) 50 <= D10 <= 100	Part No. 1
2) 100 < D10	Part No. 2
3) Normal (other than the above)	Part No. 0 (not displayed)

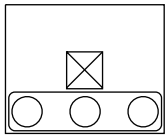


(3) Parts movement (fixed)

➟8.8.6 ■1 [Style] tab

Only one part is displayed.
The setting of [Parts Switching Device] is not required.

[Parts Switching Device]: No settings required



8.9.1 Specifications of the parts movement

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

Up to 1024 parts movement can be placed on each screen.

■2 Parts displayed by the parts movement

The following two types of parts can be displayed by the parts movement, and the parts need to be registered in advance.

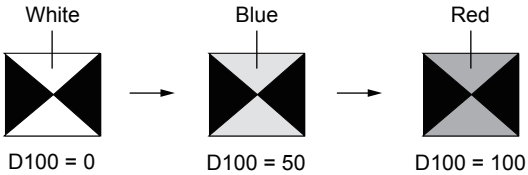
(1) The parts data registered as the parts in GT Designer3 (registered parts)

➟5.9 Registering Parts ([Parts])

(2) BMP file, JPEG file, and PNG file (BMP file parts, JPEG file parts, PNG file parts) which are stored in the data storage

➟5.9.3 ■6 Using the image file stored in the data storage as a part

■3 Types of parts which can be displayed

Type	Description	Remarks
Parts	Displays the figure registered as a part. Example) Registrable figures as parts Figure: Text: ABC: BMP file, JPEG file, PNG file	• The parts are required to be registered in advance. ➟5.9 Registering Parts ([Parts]) 5.9.3 ■6 Using the image file stored in the data storage as a part
Mark	Switches the figure colors which are registered as the parts corresponding to the change of device status. Because one part can display different images, the registration of multiple parts is not necessary and the capacity of the GOT memory can be saved.  White: D100 = 0; Blue: D100 = 50; Red: D100 = 100 The display color of the white space can be changed.	• The parts with BMP format, JPEG format, or PNG format cannot be used. • Draw the part whose color is to be switched in white. • While fixed parts are being displayed, switching to multiple colors cannot be executed. The display is only in a single color.

8.9.2 How to use the parts movement

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the parts movement

Place the parts movement on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing the parts movement

Edit the parts movement that has been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting the parts movement

Set the parts movement that has been placed on the screen editor.

Common setting of objects

➟6.5.5 Common setting for objects

Setting of the parts movement (bit)

➟8.9.4 [Bit Parts Movement] dialog

Setting of the parts movement (word)

➟8.9.5 [Word Parts Movement] dialog

Setting of the parts movement (fixed)

➟8.9.6 [Fixed Parts Movement] dialog

Setting of the parts movement route

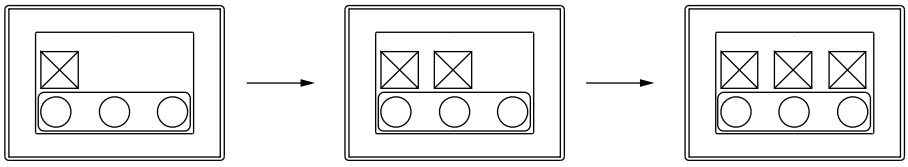
➟8.9.7 [Parts Move Route] dialog

■4 How to move the parts (control with the position device)

The following movement methods are available.

➟(1) Coordinate
(2) Line
(3) Circle
(4) Point specification

The locus display that leaves the locus can be used by setting [Display Mode] in the [Device/Style] or [Style] tab.



GOT Graphic Ver.2

Since [Display Mode] is fixed to [Movement], the locus display cannot be used.

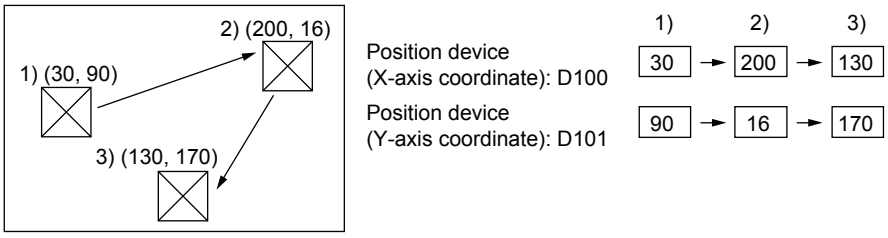
GOT Graphic Ver.1

Select [Locus] for [Display Mode] to use the locus display.

➟8.9.4 ■1 [Device/Style] tab
8.9.5 ■1 [Device/Style] tab
8.9.6 ■1 [Style] tab

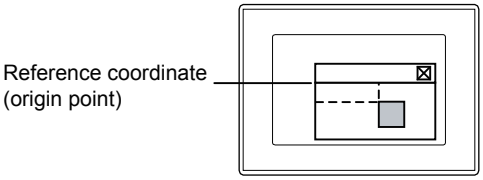
(1) Coordinate

Parts are displayed with the coordinates on one-dot basis.
For the coordinates, the values of two word devices are specified as X and Y.
By changing the value of the position device, the display position can be changed on one-dot basis.

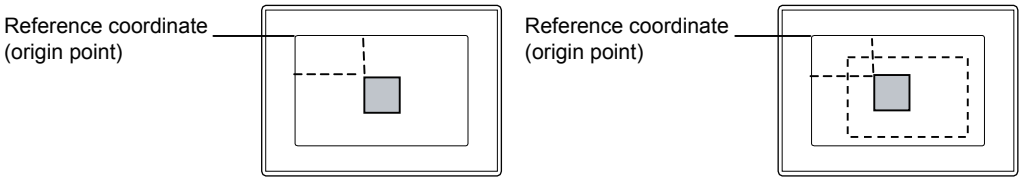


(a) Reference coordinate

For the parts which are displayed in an overlap window, the top left of the overlap window is the reference coordinate.
Example) For the overlap window

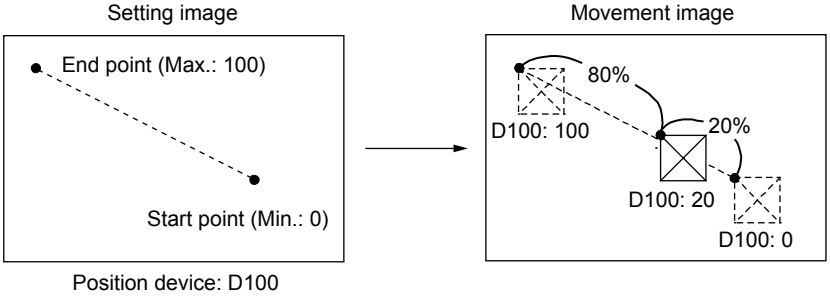


For other than the above (such as base screens and superimpose windows), the top left of the displayed base screen is the reference coordinate.



(2) Line

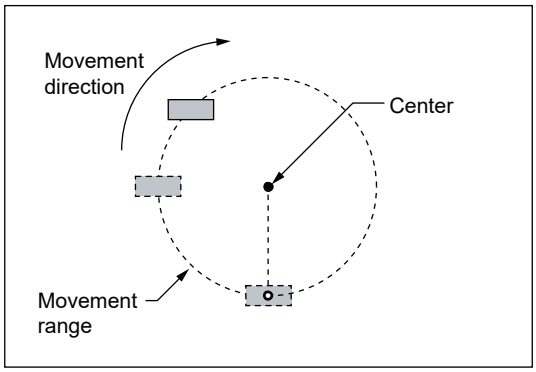
The part is moved across the set start point and end point.
Set the minimum value to the start point and the maximum value to the end point. The position of the part changes according to the position device value and is relative to the start and end points on the line across the two points.



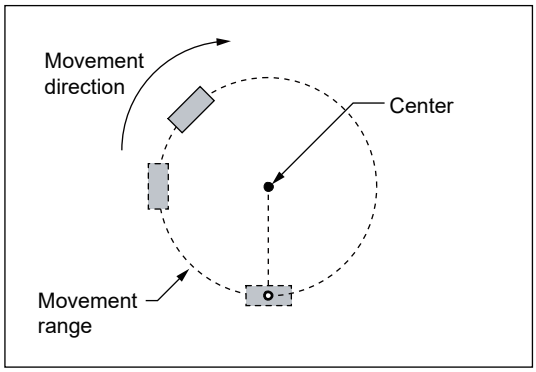
(3) Circle

GOT Graphic Ver.2

The displayed part can be moved on the circle around the specified center coordinates.



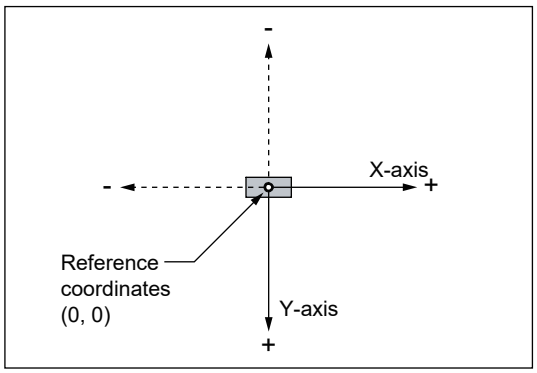
Displayed object moved in a circular direction
+
Rotation of the object disabled



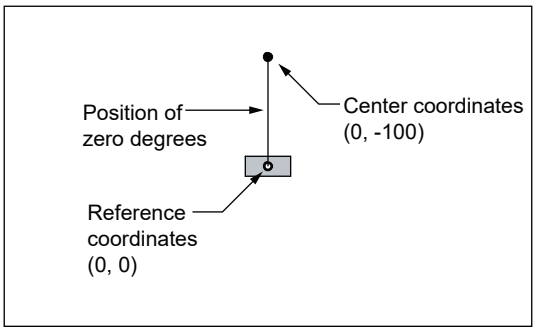
Displayed object moved in a circular direction
+
Rotation of the object enabled

(a) Center coordinates

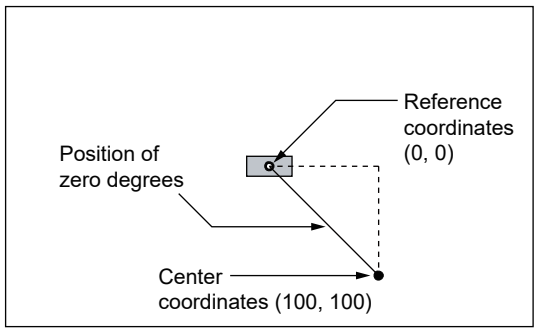
Regardless of the coordinates on the screen editor, define the reference coordinates (0, 0) at the position of the parts movement object and set the center coordinates relative to the center point.
To specify the center coordinates, note that the positive direction of the X axis is to the right, and the positive direction of the Y axis is downward from the reference point



The line formed between the reference point and the center is regarded as the zero-degree radius of the circle.

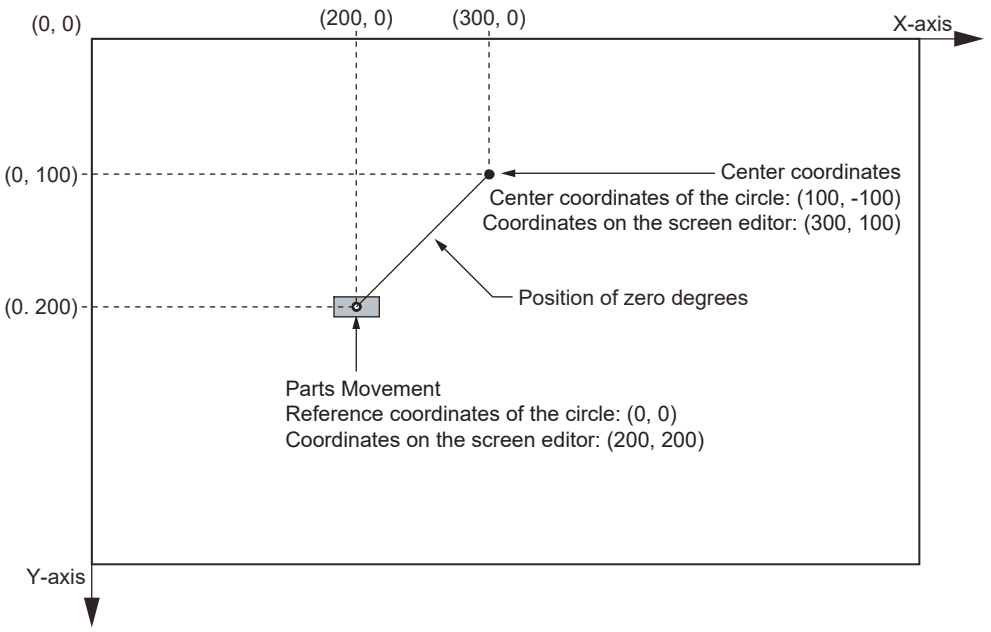


When the center coordinates are (0, -100)



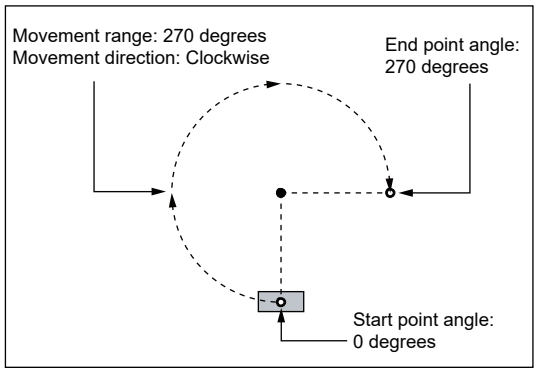
When the center coordinates are (100, 100)

Example) Placing a parts movement object at the coordinates (200, 200) on the screen editor and setting the center coordinates (100, -100)

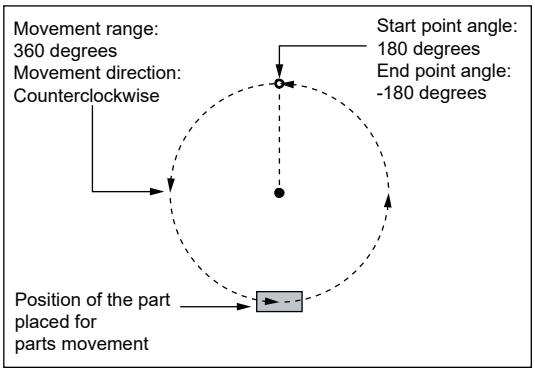


(b) **Movement range and direction**

Set the start and end point angles to set the movement range and direction.
The movement range is determined by subtracting the start point angle from the end point angle.
When the movement range is 0 or more, the part moves clockwise.
When the movement range is less than 0, the part moves counterclockwise.
Add the value of the position device to change the position of the part in the moving direction.



Start point angle: 0 degrees, end point angle: 270 degrees

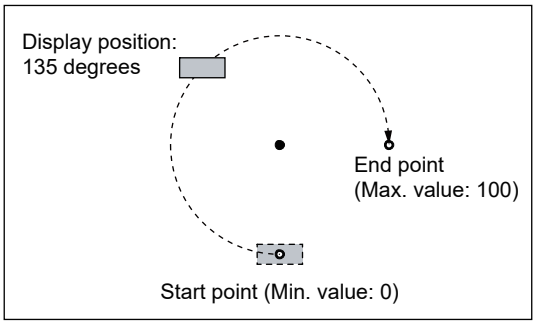


Start point angle: 180 degrees, end point angle: -180 degrees

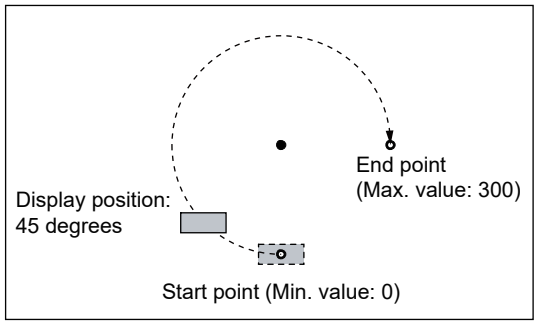
(c) **Changing the position of the part**

Change the position of the part using the value of the position device.
The minimum value set for the position device corresponds to the start point and the maximum value corresponds to the end point.
If you change the minimum and maximum values, the position of the part differs even through the value of the position device remains the same.
Set the value of the position device according to the minimum and maximum values.

Position device: D100
D100 = 50



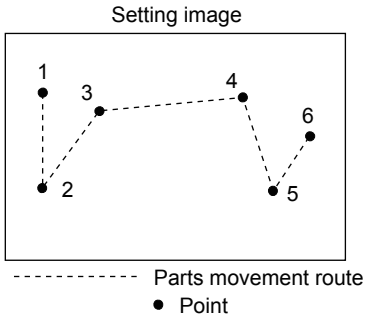
Min. value: 0, max. value: 100

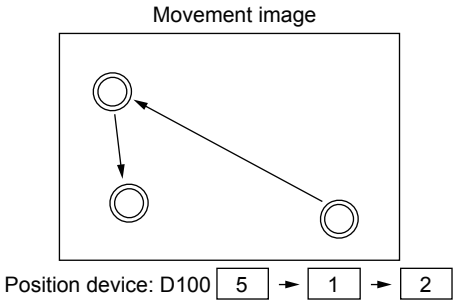


Min. value: 0, max. value: 300

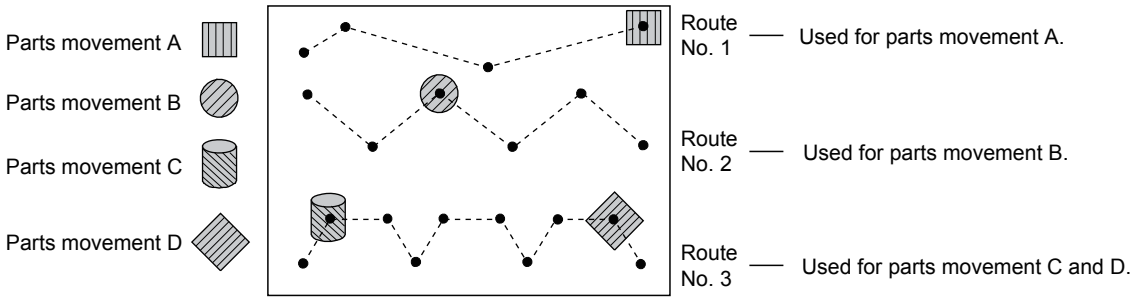
(4) Point specification

Parts are displayed at the specified display position (point).
To set points, register a polygonal line having several points (parts movement route).
The part is displayed at the position with the same point No. as the position device value.



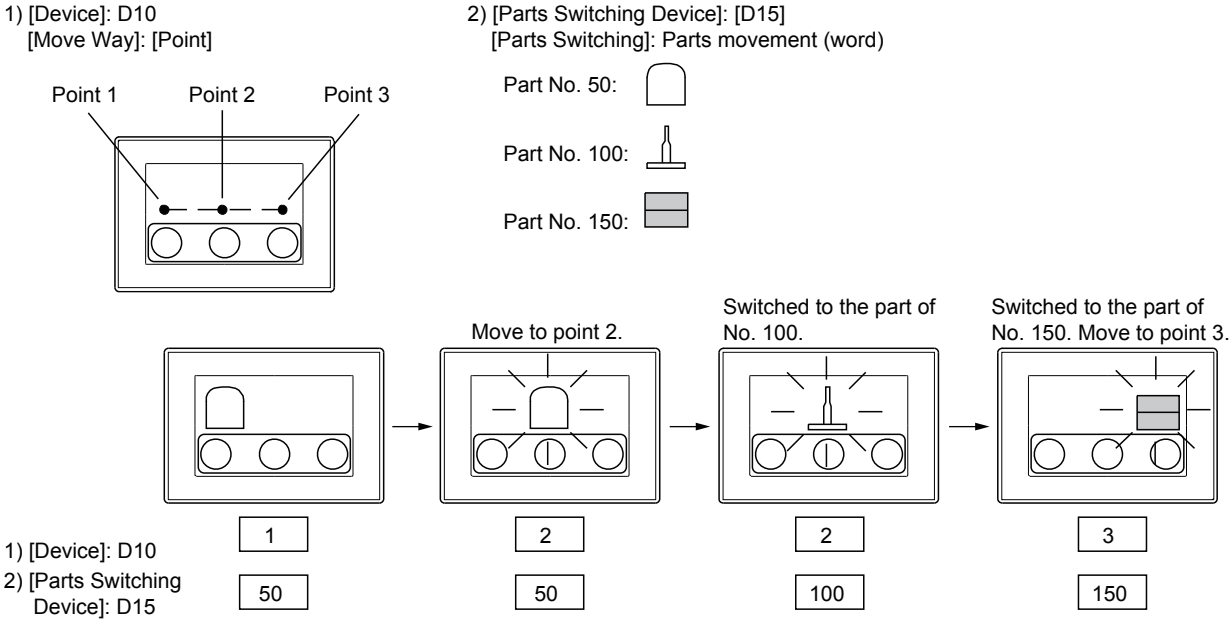


Set the parts movement route on screen basis. Up to 30 routes can be set for one screen.
One parts movement route can be used for multiple parts movements.



■5 Display example of the parts movement

Display the parts movement as follows using the position device and parts switching device.



■6 Setting procedure of the parts movement

To set an object for the parts movement, select [Parts Switching] and then [Move Way].

Step 1 Select the switching method of parts in the [Device/Style] tab (for the fixed parts, select it in the [Style] tab).

The switching method cannot be changed after an object for the parts movement.

Step 2 Select the movement method of parts in the [Device/Style] tab (for the fixed parts, select it in the [Style] tab).

The movement method can be changed after an object for the parts movement.

To operate the parts movement with the point specification, set [Parts Move Route] prior to the objects setting for the parts movement.

➟8.9.7 [Parts Move Route] dialog

■7 Method of displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage

BMP file parts, the JPEG file parts, and the PNG file parts can be displayed by object or project.

(1) Method of displaying by object (in the use of image files)

Specify a BMP file, JPEG file, or PNG file stored in the data storage at each object setting of the parts movement to display as parts.

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.

For the storing method, refer to the following.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 When the display condition set for a parts movement to display parts is satisfied, the specified BMP file part, JPEG file part, or PNG file part in the data storage is displayed.

Set the following items in each [Device/Style] tab and [Style] tab (fixed parts only) of the parts movement.

- Setting image files
- Setting image file numbers

(2) Method of displaying by project

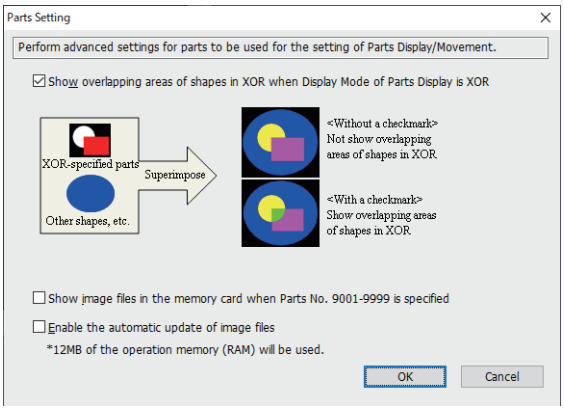
To display BMP file parts, JPEG file parts, or PNG file parts in the data storage, specify the parts No. from 9001 to 9999. To display the BMP file parts, the JPEG file parts, or the PNG file parts in the data storage when the parts No. from 9001 to 9999 is specified, follow the following procedure.

(a) Displaying the parts according to the setting of GT Designer3

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 Select [Show image files in the memory card when Parts No. 9001-9999 is specified] in the [Parts Setting] dialog and write the setting to the GOT.



Step 3 When the display condition (parts number: 9001 to 9999) set for the parts movement to display parts is satisfied, the BMP file part, JPEG file part, or PNG file part in the data storage is displayed.

(b) When displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage using GS450.b8

Not available to GT21 and GS21.

This method is applied to switch between the parts registered in GT Designer3 and BMP files, JPEG files, or PNG files in the data storage when the parts number 9001 to 9999 is specified.

To use GS450.b8, deselect [Show image files in the memory card when Parts No. 9001-9999 is specified] in the [Parts Setting] dialog.

If the above setting is valid, BMP files, JPEG files, or PNG files in the data storage can be used as parts regardless of the status of GS450.b8.

Parts No.	GS450.b8: ON	GS450.b8: OFF
9001 to 9999	Displays BMP file parts, JPEG file parts, and PNG file parts in the data storage.	Displays the parts registered in GT Designer3

Step 1 Save the BMP file, the JPEG file, or the PNG file to be displayed as parts in the data storage.

➟5.9.3 ■6 Using the image file stored in the data storage as a part

Step 2 Turn on GS450.b8.

Step 3 When the display condition (parts number: 9001 to 9999) set for the parts movement to display parts is satisfied, the BMP file part, JPEG file part, or PNG file part in the data storage is displayed.

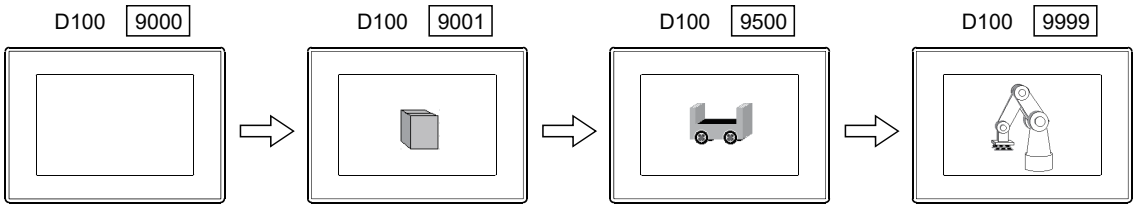
(c) Display example

The following shows a display example of when a BMP file part is stored in the data storage.

Example) Displaying BMP file parts in the parts movement (word part)

Write the parts numbers between 9001 and 9999 to a word device to display the BMP file parts.

• Word device to display the parts: D100



When specifying 0 or 9000 for the part No., BMP file parts are hidden.

BMP file part (IMG0001.BMP) is displayed.

BMP file part (IMG0500.BMP) is displayed.

BMP file part (IMG0999.BMP) is displayed.

Point

(1) **When specifying a parts number other than 9001 to 9999**

Even if BMP file parts, JPEG file parts, or PNG file parts in the data storage are set to be displayed, parts registered in GT Designer3 are displayed when a parts number out of the range between 9001 and 9999 is specified.

(2) **When switching to BMP file parts, JPEG file parts, or PNG file parts in the data storage that are given the same parts number (only when using GS450.b8)**

Not available to GT21 and GS21.

To switch to a part (BMP file part, JPEG file part, or PNG file part) in the data storage that has been given the same parts number while a part registered in GT Designer3 whose parts number is one of 9001 to 9999 is displayed, follow the following procedure.

Step 1. Turn on GS450.b8.

Step 2. Specify either the parts number 0 or 9000 and hide the displayed part.

Step 3. Specify the parts number of BMP file parts, JPEG file parts, or PNG file parts in the data storage to be displayed.

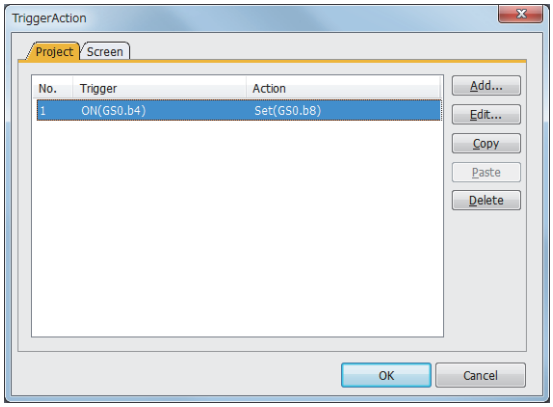
(3) **Example of cases where GS450.b8 is automatically turned on after the GOT is powered on**

The following shows an example of cases where GS450.b8 is automatically turned on after the GOT is powered on.

This method is useful when using GS450.b8 and displaying BMP file parts, JPEG file parts, and PNG file parts in the data storage from the beginning of operation.

Step 1. As a trigger action, make the GOT internal device (device always on: GS0.b4) as a trigger condition and make settings that store 1 to GS450.b8 while the trigger is on.

Step 2. Store 1 in GS450.b8 with the trigger action after the GOT is powered on.



- Set in the [Project] tab of [Trigger Action].
- Set this trigger action in the first row of the list.
  This stores 1 in GS450.b8 immediately after the GOT is powered on.
  Parts of parts displays or parts movements at a GOT startup may not be switched to BMP file parts, JPEG file part, or PNG file parts.
  (When the screen is switched, the parts are switched.)
  Design screens under consideration for the above description.
- Select [Ordinary] for [Trigger Type].

■8 Parts No.

Depending on the parts number, the parts that can be displayed and operations are different.
The following shows the relation between the parts numbers and the parts which can be displayed.

○: Can be displayed ×: Cannot be displayed -: Display is deleted

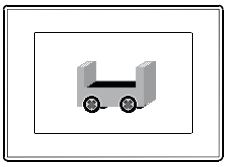
Parts No.	When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are set to be displayed		When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are not set to be displayed	
	Parts registered in GT Designer3	BMP file parts, JPEG file parts, and PNG file parts in the data storage	Parts registered in GT Designer3	BMP file parts, JPEG file parts, and PNG file parts in the data storage
0	-*1	-*1	-*1	×
1 to 8999	○	×	○	×
9000	×	-*1	○	×
9001 to 9999	×*2	○	○	×
10000 to 32767	○	×	○	×

*1 When [Indirect Device] is set for [Detail Settings of Parts] in the [Word Parts Movement] dialog, the parts are not hidden. (The current display is held.)
For the method of hiding parts in the [Word Parts Movement] dialog, refer to [Detail Settings of Parts] in the [Word Parts Movement] dialog.

➟8.9.5 ■1 [Device/Style] tab

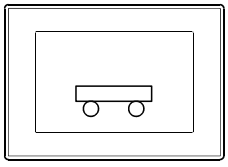
*2 Even if the parts registered in GT Designer3 are registered, they cannot be displayed.
Example) When a part registered in GT Designer3 is registered with the parts No. 9123

BMP file parts, JPEG file parts, and PNG file parts are displayed.



When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are set to be displayed.

The parts registered in GT Designer3 (parts No. 9123) are displayed.



When BMP file parts, the JPEG file parts, and PNG file parts in the data storage are not set to be displayed.

■9 Setting the image data of parts to a transparent color

When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled.
The following shows the method of enabling a transparent color setting for parts.

- Set a transparent color for the image data.
  (Transparent colors can be set only for the image data of BMP files.)
- Register the image data for which the transparent color has been set as parts or into the library.
- Set the registered parts or library as the parts.

➟6.5 Placing and Editing Figures and Objects

8.9.3 Precautions for a parts movement object

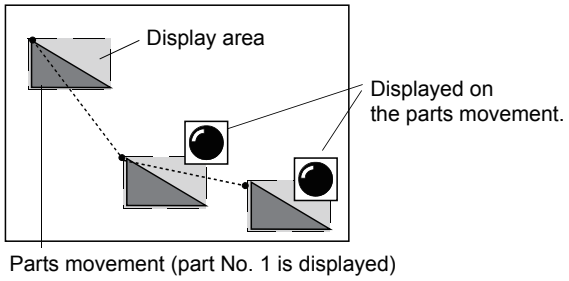
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for drawing

(1) When a part overlaps with another object

Set the parts movement in a way that does not make the part overlap with another object.
Otherwise, the overlapped object may not be displayed normally.
In such a case, set the parts movement and the object in different layers.

• When [Point] is set for [Move Way]



Parts movement (part No. 1 is displayed)

Part No. 1:

(2) Display when a part extends off the screen

If a part is placed so that it extends off the screen, the display on the GOT differs depending on the components of the part and [Graphics Setting].

Part components	[Graphics Setting]	Part display
Image data + figures	GOT Graphic Ver.2	The part within the screen is displayed.
	GOT Graphic Ver.1	The part within the screen is displayed. If a part extends above or left of the screen, the display differs depending on the model used as shown below. • Other than GT SoftGOT2000 The figures within the screen are displayed, whereas image data even within the screen is not displayed. • GT SoftGOT2000 or GT Simulator3 If the image file format is BMP or JPEG, image data within the screen is also displayed.
Image data only	GOT Graphic Ver.2	The part within the screen is displayed.
	GOT Graphic Ver.1	The part within the screen is displayed. When an image file in the data storage is used as a part and the part extends above or left of the screen, system alarm 537 is output in the following cases. The data will not be displayed. • Other than GT SoftGOT2000: A BMP file part, JPEG file part, or PNG file part is to be displayed. • GT SoftGOT2000 or GT Simulator3: A PNG file part is to be displayed.

■2 Precautions for use

(1) Values to be stored in the position devices

If the value stored in the position device is out of the available range, the operation differs depending on the selection for [Move Way] in the [Device/Style] or [Style] tab.

• When [Position], [Line], or [Point] is selected for [Move Way]
The part is not moved and the previous display is held.

• When [Circle] is selected for [Move Way]
If the value is smaller than the minimum value, the display position changes according to the value set as the minimum value.
If the value is larger than the maximum value, the display position changes according to the value set as the maximum value.

■3 Precautions when [Circle] is selected for [Move Way]

(1) Displaying an image file in a data storage as a part

The image file is displayed but cannot be moved in a circular direction.

(2) Displaying a part containing a character

If a character set in the [Text] dialog is contained, the character of the part is not displayed.

(3) Displaying a part containing a BMP file for which a transparent color is set

The color of the circumferential line of the BMP file may be changed due to antialiasing.
The color, if changed differently from a transparent color, does not become transparent.

(4) Display position of a part

Depending on the start or end point angle or the value of the position device, the position of the part may differ.

8.9.4 [Bit Parts Movement] dialog

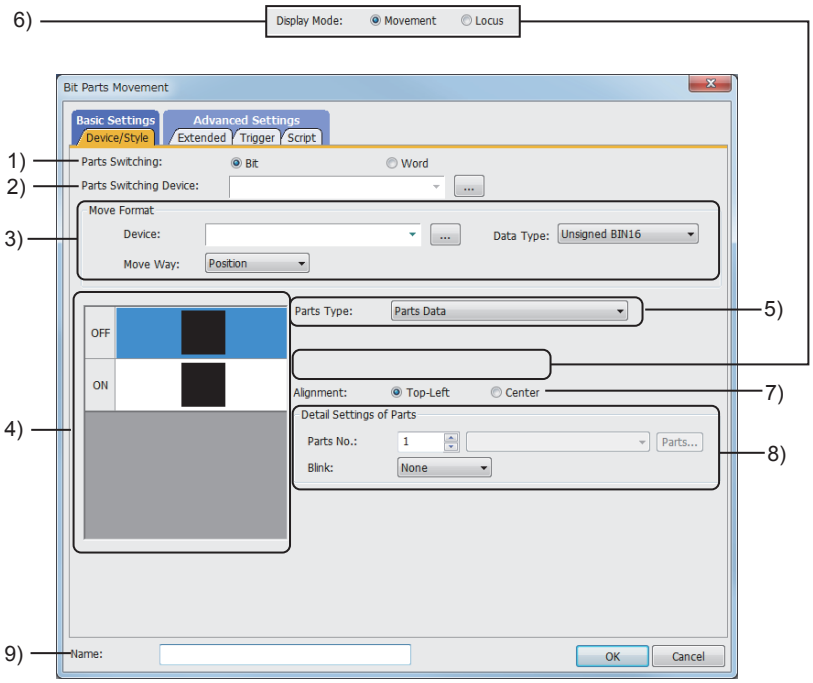
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Object] → [Parts Movement] → [Bit Parts] from the menu to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



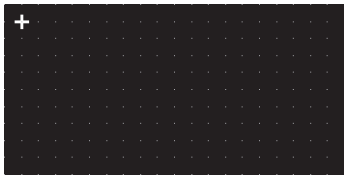
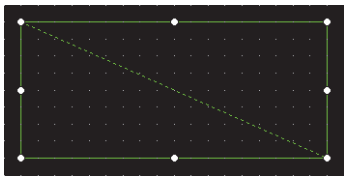
1) **[Parts Switching]**
Select the parts movement type.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Parts Switching Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

3) **[Move Format]**
Select the type of the parts for the parts movement.
For the details of the parts movement type, refer to the following.

➟8.9.2 ■4 How to move the parts (control with the position device)

Item	Description
[Device]	After setting [Move Way], set the position device that stores the destination of the part. ➟6.1 Device Settings Depending on [Move Way], the setting items differ. • [Position] Set the device that stores the values of X-axis and Y-axis. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis.) • [Line] Set a device that stores the relative value to the start point and end point. • [Circle] Set a device that stores the value relative to the start and end point angle. • [Point] Set a device that stores the display position (point).
[Data Type]	When selecting [Line] or [Circle] for [Move Way], select the data type of the word device. (When [Position] or [Point] is selected, the data type is fixed to [Unsigned BIN16].) The following shows the items to be selected. • [Unsigned BIN16] • [Signed BIN16]
[Move Way]	Select the movement method of the parts. • [Position] Select this item to use the values of two word devices as the coordinates of X-axis and Y-axis for the parts movement. After selecting this item, set the device that stores the coordinate position. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis.) ➟6.1 Device Settings • [Line] Select this item to display the parts movement on the line across the specified start point and end point. After selecting this item, set the minimum value for the start point and the maximum value for the end point. After the setting, perform the following operation on the screen editor. Click the start point on the drawing screen.  Move the cursor and click the end point. The line, which is the parts movement range, is set.  • [Circle] **GOT Graphic Ver.2** Select this item to display the circular movement of the part around the specified center coordinates. After selecting this item, set the minimum value for the start point angle and the maximum value for the end point angel, and then set the movement route in the [Circle Route Setting] dialog. For displaying the circular motion of a part, refer to the following. ➟8.9.2 ■4 (3) Circle Click the [Circle Route Setting] button to display the [Circle Route Setting] dialog. ➟(1) [Circle Route Setting] dialog After setting, place a parts movement object anywhere on the screen editor. • [Point] Select this item to display the part at the specified display position (point). After selecting this item, set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29]. Set the parts movement route on the screen prior to the operation. ➟8.9.7 [Parts Move Route] dialog

Item	Description
[Route No.]	Set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29].

4) **Preview list**

Displays the shapes for the on and off status.

5) **[Parts Type]**

Select the type of the parts for the parts movement.

When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled.

For the method of enabling the transparent color setting of parts, refer to the following.

➟8.9.2 ■9 Setting the image data of parts to a transparent color

This item is fixed to [Parts Data] when [Circle] is selected for [Move Way].

- [Parts Data]

  Displays registered parts.
- [Mark Data]

  Deletes the parts displayed previously and displays the new parts.

  Switches the white area of the part to another display color according to the change of the parts switching device status.

  After selecting, set [Parts No.] to be displayed as a mark.

  The setting range is [0] to [32767].

  Click the [Parts] button to check the type of the registered parts.

  For the parts that can be displayed by mark, refer to the following.

  ➟5.9 Registering Parts ([Parts])
- [Image File]

  Select an image file registered in the data storage to display the file as a part.

  Click the [Setting] button and select an image file in the [Image File Setting] dialog.

  ➟8.8.4 ■1 (1) [Image File Setting] dialog

6) **[Display Mode]**

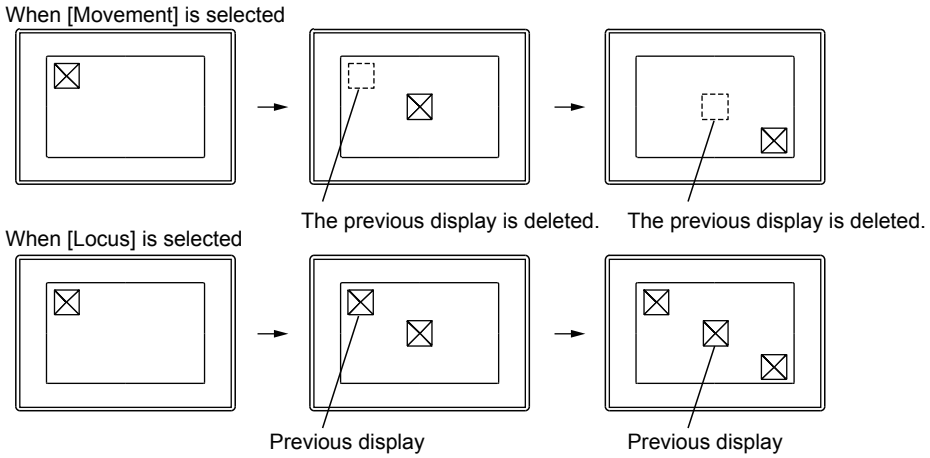
Select a display method for the parts movement.

- [Movement]

  Displays the parts movement deleting the displayed previously part.
- [Locus] (Not available to GT21 and GS21)

  Displays the parts movement without deleting the parts that have been displayed.

Example)



GOT Graphic Ver.2

As the setting is fixed to [Movement], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows selectable items.

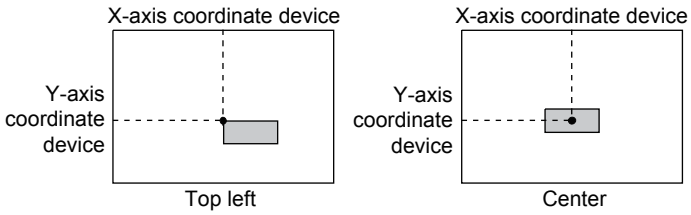
- [Movement]
- [Locus]

7) **[Alignment]**

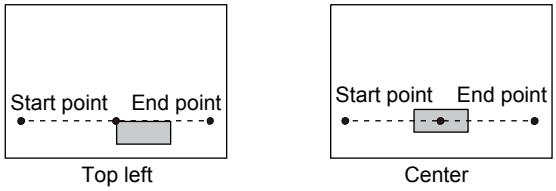
Select the reference of the parts display position.

• [Top-Left]
Displays the part using the top-left coordinate of the part as the reference.
• [Center]
Displays the part using the center coordinate of the part as the reference.

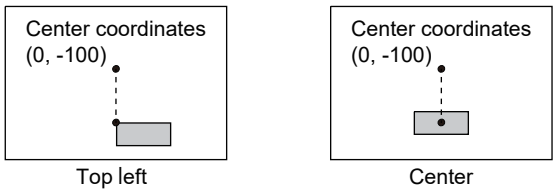
Example)
When [Position] is selected in [Move Way] (X-axis coordinate device = 320, Y-axis coordinate device = 240)



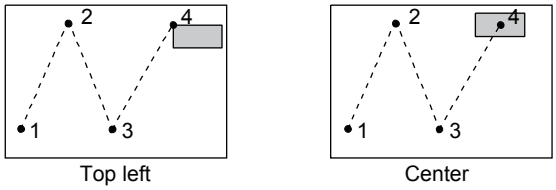
When [Line] is selected in [Move Way] (Device: D100 = 50)



When [Circle] is selected for [Move Way] (Center coordinates: 0, -100)



When [Point] is selected in [Move Way] (Device: D200 = 4)



8) **[Detail Settings of Parts]**
Select the type of the parts for the parts movement.

Item	Description
[Parts No.]	Set the parts number to be displayed. Click the [Parts] button to check the registered parts. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from the white.
[Image File No.]	Specify an image file number. The range which can be specified depends on [Digits] in the [Image File Setting] dialog. • When [Digits] is [5]: [0] to [65535] • When [Digits] is [4]: [0] to [9999] • When [Digits] is [3]: [0] to [999] • When [Digits] is [2]: [0] to [99] • When [Digits] is [1]: [0] to [9] When 0 is set for [Screen File No.], images are deleted. When displaying only images for the on status, set 0 for [Image File No.] for the off status.

Item	Description
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

9) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

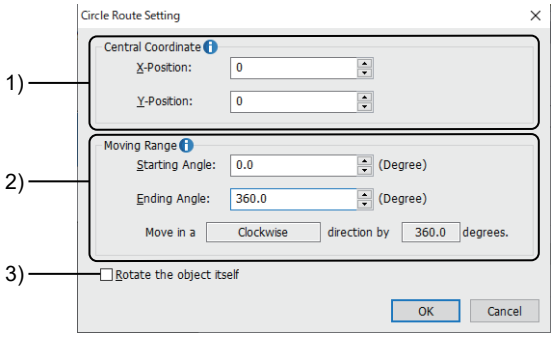
Up to 100 characters can be set.

(1) [Circle Route Setting] dialog

Set a movement route when moving a part circularly.

For how to use the center coordinates and movement range, refer to the following.

➟8.9.2 ■4 (3) Circle



1) **[Central Coordinate]**

Set the center coordinates of a circle.

The following shows the items to be selected.

- [X-Position]: [-5000] to [5000]
- [Y-Position]: [-5000] to [5000]

Set the center coordinates relative to the coordinates at which a parts movement object is placed.

The line formed between the points (coordinates of the parts display object and the center coordinates) is regarded as the zero-degree radius of the circle.

2) **[Moving Range]**

Set the start and end point angles to determine the movement range and direction for the part.

The following shows the items to be selected.

- [Starting Angle]: [-360.0] to [360.0]
- [Ending Angle]: [-360.0] to [360.0]

The angle is settable in units of 0.1 degree.

The angle increases clockwise from zero degrees.

3) **[Rotate the object itself]**

Rotates the part at the same angle in the same direction as the parts movement display settings based on the position selected for [Alignment] in the [Device/Style] or [Style] tab.

The minimum rotation angle of the part is one degree.

■2 [Extended] tab

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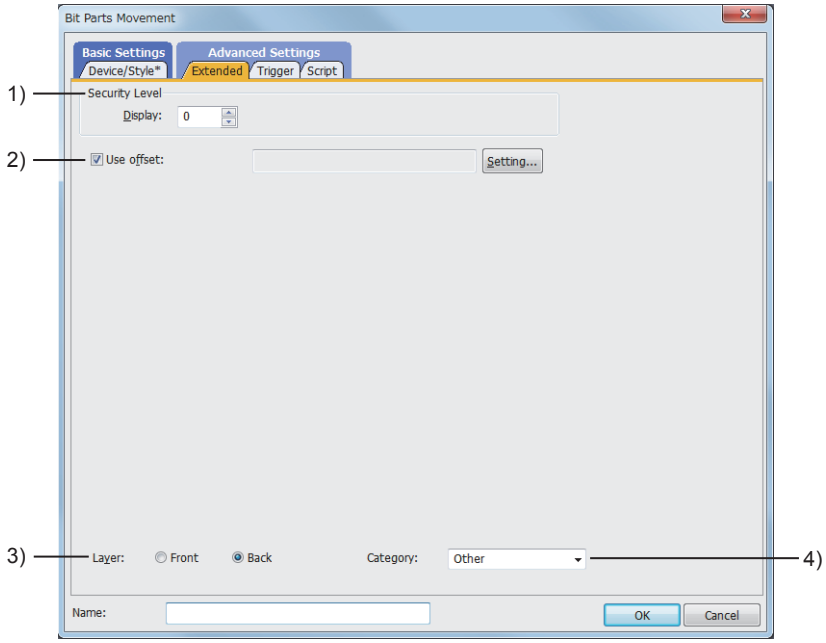

1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Set the offset device with the [Setting] button.

➟6.1.11 Offset

3) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.

- [Front]
- [Back]

4) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

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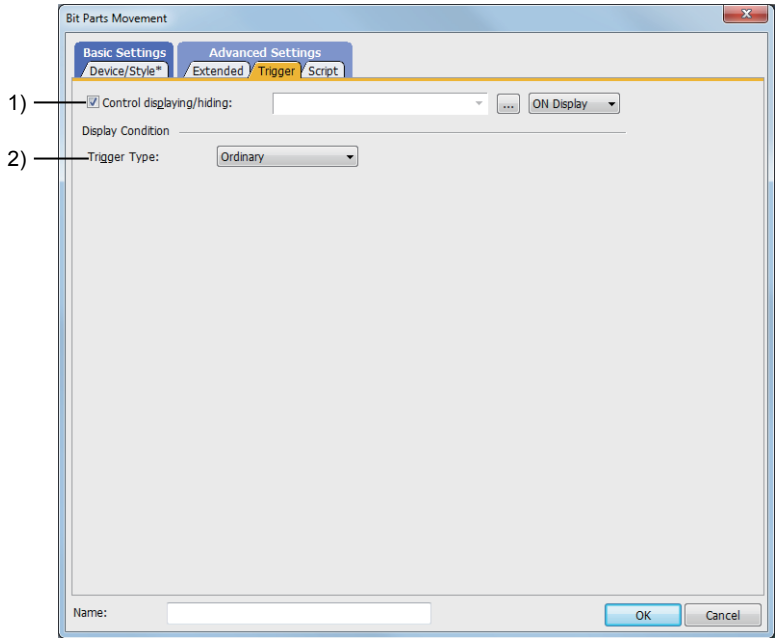

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■4 [Script] tab

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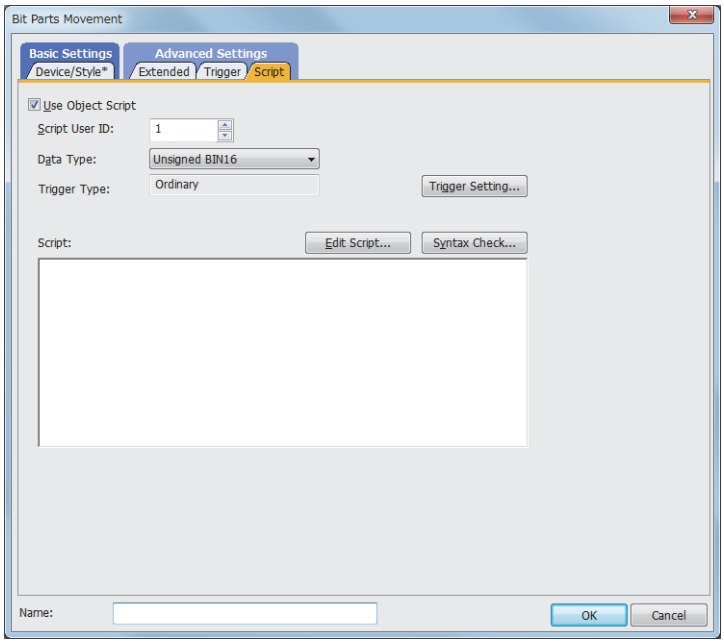
For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	Upon the setting change	
		y	○	○	Upon the setting change	
[Device/Style]	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.9.5 [Word Parts Movement] dialog

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Select [Object] → [Parts Movement] → [Word Parts] from the menu to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Operation/Script] tab

■1 [Device/Style] tab

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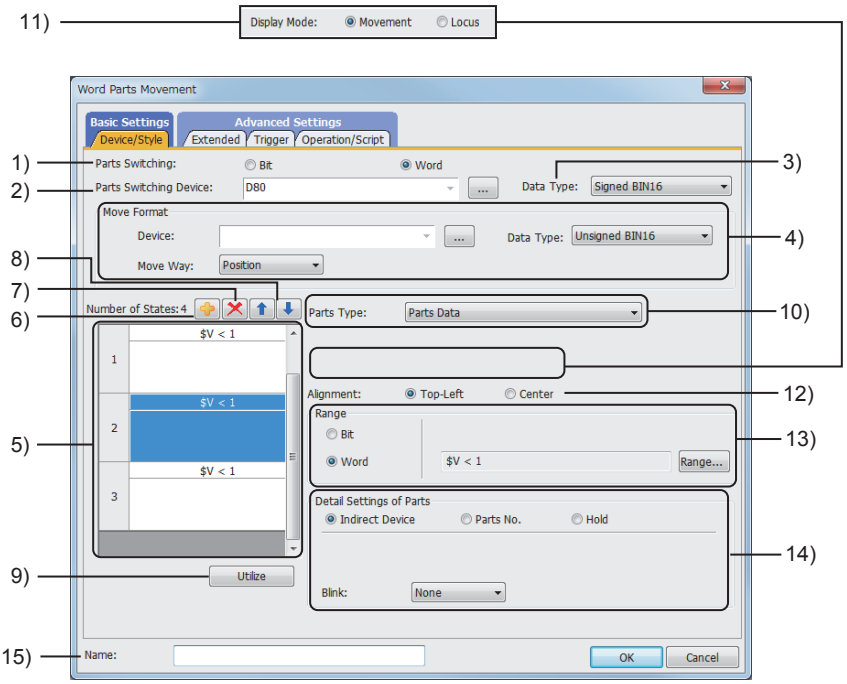
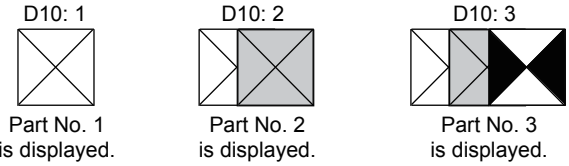


1) **[Parts Switching]**
Select the switching method of parts.
The following shows the items to be selected.
- [Bit]
- [Word]

2) **[Parts Switching Device]**
Set the device to be monitored.

➟6.1.2 How to set devices



3) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]

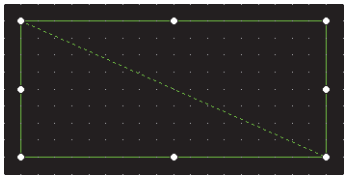
4) **[Move Format]**

Select a movement type for parts movement.

For the details of the parts movement type, refer to the following.

➟8.9.2 ■4 How to move the parts (control with the position device)

Item	Description
[Device]	After setting [Move Way], set the position device that stores the destination of the part. ➟6.1.2 How to set devices Depending on [Move Way], the setting items differ. • [Position] Set the device that stores the values of X-axis and Y-axis. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis.) • [Line] Set a device that stores the relative value to the start point and end point. • [Circle] Set a device that stores the value relative to the start and end point angle. • [Point] Set a device that stores the display position (point).
[Data Type]	When selecting [Line] or [Circle] for [Move Way], select the data type of the word device. (When [Position] or [Point] is selected, the data type is fixed to [Unsigned BIN16].) The following shows the items to be selected. • [Unsigned BIN16] • [Signed BIN16]

Item	Description
[Move Way]	Select the movement method of the parts. • [Position] Select this item to use the values of two word devices as the coordinates of X-axis and Y-axis for the parts movement. After selecting this item, set the device that stores the coordinate position. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis.) ➟6.1.2 How to set devices • [Line] Select this item to display the parts movement on the line across the specified start point and end point. After selecting this item, set the minimum value for the start point and the maximum value for the end point. After the setting, perform the following operation on the screen editor. Click the start point on the drawing screen. Move the cursor and click the end point. The line, which is the parts movement range, is set.  • [Circle] **GOT Graphic Ver.2** Select this item to display the circular movement of the part around the specified center coordinates. After selecting this item, set the minimum value for the start point angle and the maximum value for the end point angel, and then set the movement route in the [Circle Route Setting] dialog. For displaying the circular motion of a part, refer to the following. ➟8.9.2 ■4 (3) Circle Click the [Circle Route Setting] button to display the [Circle Route Setting] dialog. ➟8.9.4 ■1 (1) [Circle Route Setting] dialog After setting, place a parts movement object anywhere on the screen editor. • [Point] Select this item to display the part at the specified display position (point). After selecting this item, set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29]. Set the parts movement route on the screen prior to the operation. ➟8.9.7 [Parts Move Route] dialog
[Route No.]	Set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29].

5) **Preview list**
Displays set conditions.

6) **Add button**
Adds a new condition.

7) **Delete button**
Deletes the selected condition.

8) **Up button, down button**
Changes the order of priority of the selected condition.

9) **[Utilize] button**
Creates a new condition utilizing the selected condition.

10) **[Parts Type]**
Select the type of the parts for the parts movement.
When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled.
For the method of enabling the transparent color setting of parts, refer to the following.

➟8.9.2 ■9 Setting the image data of parts to a transparent color

This item is fixed to [Parts Data] when [Circle] is selected for [Move Way].

Item	Description
[Parts Data]	Displays registered parts.
[Mark Data]	Switches the white area of the registered part to another display color according to the change of the device status. After selecting, set [Parts No.] to be displayed. The setting range is [0] to [32767]. Click the [Parts] button to check the type of the registered parts. For the parts that can be displayed by mark, refer to the following. ➟5.9 Registering Parts ([Parts])
[Image File]	Select an image file registered in the data storage to display the file as a part. Click the [Setting] button and select an image file in the [Image File Setting] dialog. ➟8.8.4 ■1 (1) [Image File Setting] dialog

11) **[Display Mode]**

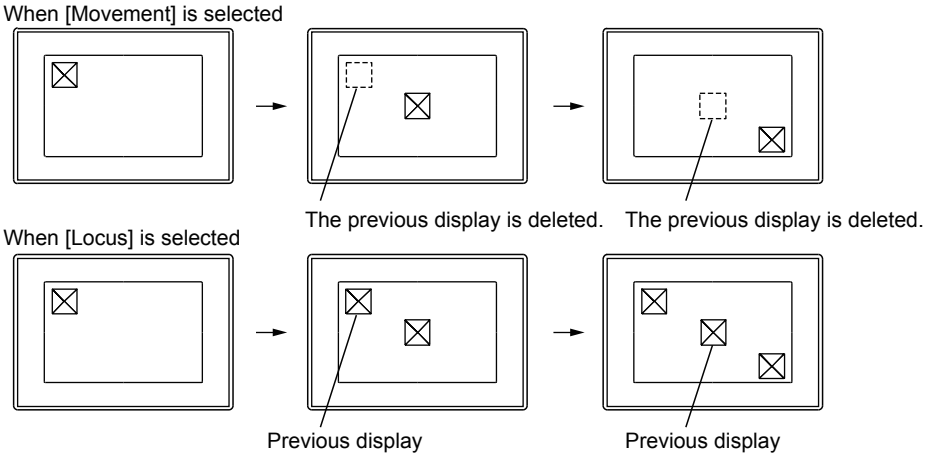
Select a display method for the parts movement.

- [Movement]

  Displays the parts movement deleting the displayed previously part.
- [Locus] (Not available to GT21 and GS21)

  Displays the parts movement without deleting the parts that have been displayed.

Example)



GOT Graphic Ver.2

As the setting is fixed to [Movement], no additional setting is required accordingly.

GOT Graphic Ver.1

The following shows selectable items.

- [Movement]
- [Locus]

12) **[Alignment]**

Select the reference of the parts display position.

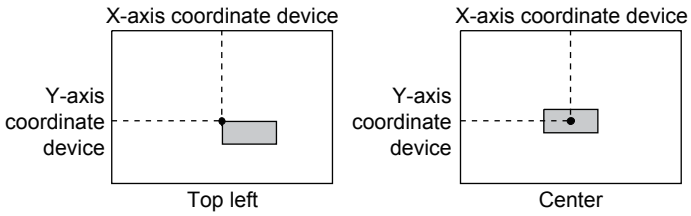
- [Top-Left]

  Sets the display position using the top-left coordinate of the part as the reference.
- [Center]

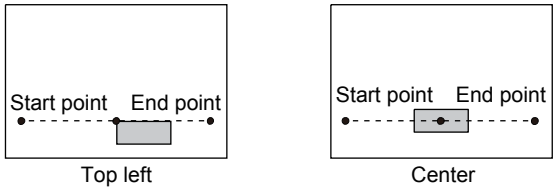
  Sets the display position using the center coordinate of the part as the reference.

Example)

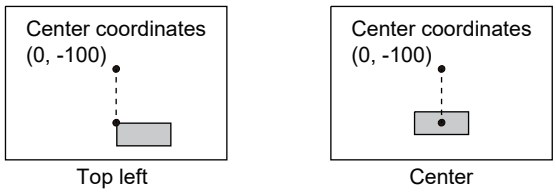
When [Position] is selected in [Move Way] (X-axis coordinate device = 320, Y-axis coordinate device = 240)



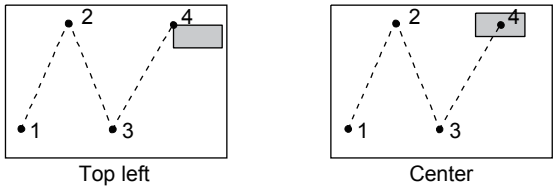
When [Line] is selected in [Move Way] (Device: D100 = 50)



When [Circle] is selected for [Move Way] (Center coordinates: 0, -100)



When [Point] is selected in [Move Way] (Device: D200 = 4)



13) **[Range]**

- [Bit]
  Select this item when changing the display according to the on and off status of the bit device.
  After selecting, set the bit device and device status (ON, OFF).
- [Word]
  Select this item when changing the display according to the value of a word device.
  After selecting, set the conditional expression for the value of the word device with [Range] button.

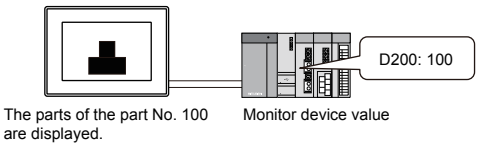
14) **[Detail Settings of Parts]**

When the setting of [Detail Settings of Parts] is not [Indirect Device], conditions are required to be set.
The following shows how the parts are switched according to the setting of [Detail Settings of Parts] and set conditions.

[Detail Settings of Parts]	Condition setting	
	Enabled	None
Indirect device	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Depending on the value of the parts switching device, parts are switched and displayed.	Set a condition as required. Depending on the monitor device value, parts are switched and displayed. Set a condition when switching parts according to the other conditions.
[Parts No.]	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Displays the parts set for [Detail Settings of Parts].	Make sure to set a condition. Otherwise, only one type of parts is displayed continuously. Switching to another part cannot be performed.
[Mark Color]		
[Hold]	Depending on a set condition, parts are displayed as follows. • When a condition is satisfied Displays the parts set for the condition. • When a condition is not satisfied Holds the display of the parts set for the condition.	Make sure to set a condition. Without the setting of a condition, nothing is displayed.

For the details of conditions, refer to the following.

➟6.5.5 ■2 Setting conditions

Item	Description
[Indirect Device]	Display the [Parts No.] corresponding to the value of the parts switching device. If the parts switching device value is 0 (0 or 9000 for the BMP file parts, JPEG file parts, PNG file parts in the data storage), the current display is held. When deleting the parts, set $V==0 for [Range].  The parts of the part No. 100 are displayed. Monitor device value
[Parts No.]	Set the parts to be displayed. Click the [Parts] button to check the registered parts. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from the white.
[Image File No.]	Specify an image file number. The range which can be specified depends on [Digits] in the [Image File Setting] dialog. • When [Digits] is [5]: [0] to [65535] • When [Digits] is [4]: [0] to [9999] • When [Digits] is [3]: [0] to [999] • When [Digits] is [2]: [0] to [99] • When [Digits] is [1]: [0] to [9] When 0 is set for [Screen File No.], images are deleted.
[Hold]	Select this item to hold the current display of the parts.
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

15) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

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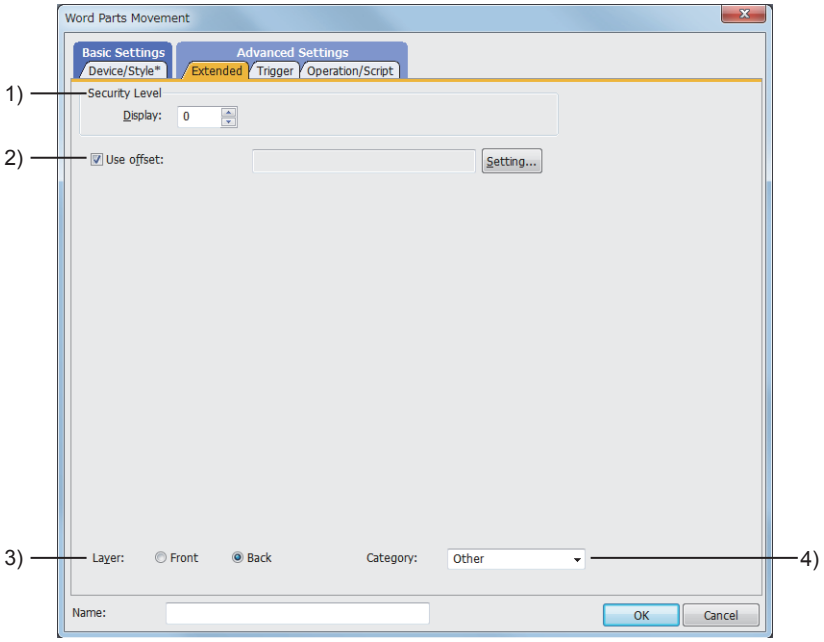

1) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15]. If you do not use the security function, select [0].

2) **[Use offset]**
Select this item to monitor multiple devices by switching them.
Set the offset device with the [Setting] button.

3) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.
- [Front]
- [Back]

4) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■3 [Trigger] tab

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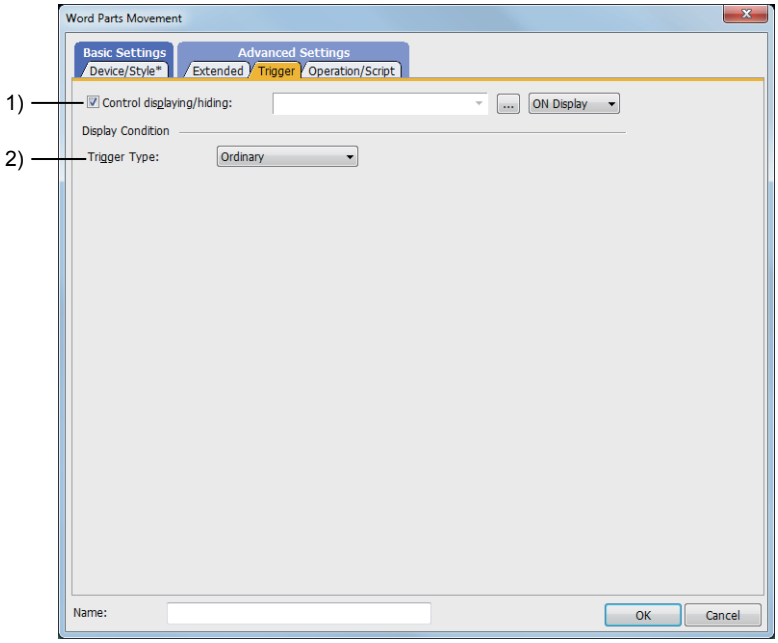

1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■4 [Operation/Script] tab

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Depending on the selection for [Operation Type], the setting items are different.

(1) [Data Operation]

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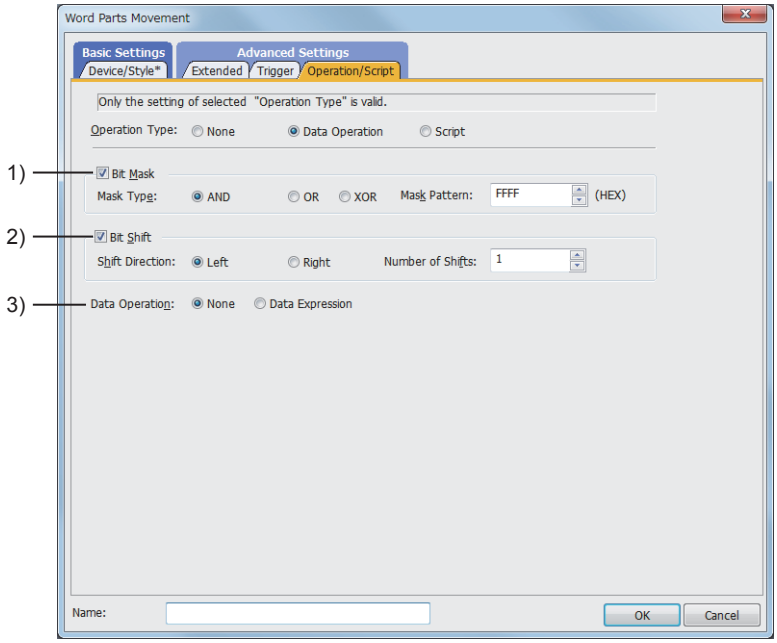
This item can be set only when [Operation Type] is [Data Operation].
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**
Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**
Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left] • [Right]
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**
Select the format of the expression operating with the data operation.
The following shows the items to be selected.

- [None]
- [Data Expression]

(2) [Script]

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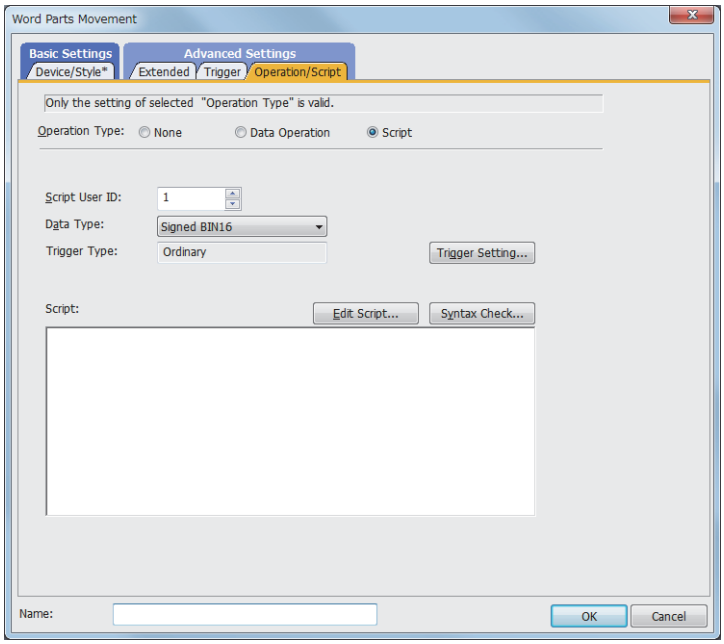
This item can be set only when [Operation Type] is [Script].
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.
○: Available
×: Not available
-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	Upon the setting change	
		y	○	○	Upon the setting change	
[Device/Style]	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.9.6 [Fixed Parts Movement] dialog

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Select [Object] → [Parts Movement] → [Fixed Parts] from the menu to display the setting dialog.

➥■1 [Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Script] tab

■1 [Style] tab

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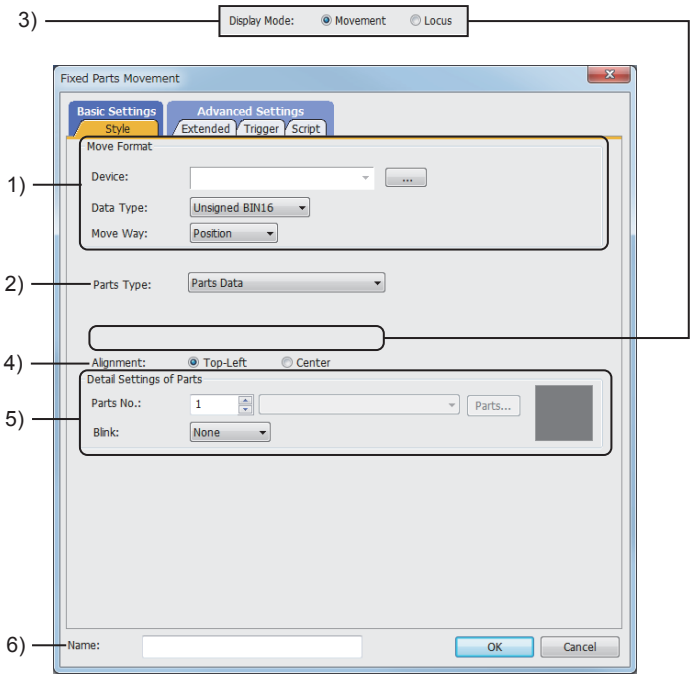


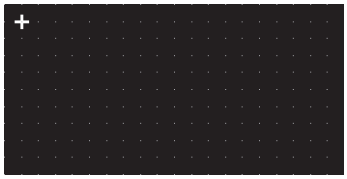
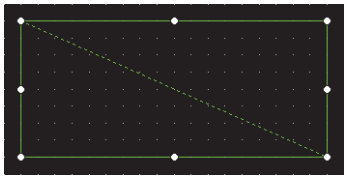
1) **[Move Format]**

Select a movement type for parts movement.

For the details of the parts movement type, refer to the following.

➥8.9.2 ■4 How to move the parts (control with the position device)

Item	Description
[Device]	After setting [Move Way], set the position device that stores the destination of the part. ➥6.1.2 How to set devices Depending on [Move Way], the setting items differ. • [Position] Set the device that stores the values of X-axis and Y-axis. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis) • [Line] Set a device that stores the relative value to the start point and end point. • [Circle] Set a device that stores the value relative to the start and end point angle. • [Point] Set a device that stores the display position (point).
[Data Type]	When selecting [Line] or [Circle] for [Move Way], select the data type of the word device. (When [Position] or [Point] is selected, the data type is fixed to [Unsigned BIN16].) The following shows the items to be selected. • [Unsigned BIN16] • [Signed BIN16]

Item	Description
[Move Way]	Select the movement method of the parts. • [Position] Select this item to use the values of two word devices as the coordinates of X-axis and Y-axis for the parts movement. After selecting this item, set the device that stores the coordinate position. The set device and the following device are set to store the coordinates of X-axis and Y-axis. (The set device is for storing the coordinate of X-axis) ➟6.1.2 How to set devices • [Line] Select this item to display the parts movement on the line across the specified start point and end point. After selecting this item, set the minimum value for the start point and the maximum value for the end point. After the setting, perform the following operation on the screen editor. Click the start point on the drawing screen.  Move the cursor and click the end point. The line, which is the parts movement range, is set.  • [Circle] **GOT Graphic Ver.2** Select this item to display the circular movement of the part around the specified center coordinates. After selecting this item, set the minimum value for the start point angle and the maximum value for the end point angel, and then set the movement route in the [Circle Route Setting] dialog. For displaying the circular motion of a part, refer to the following. ➟8.9.2 ■4 (3) Circle Click the [Circle Route Setting] button to display the [Circle Route Setting] dialog. ➟8.9.4 ■1 (1) [Circle Route Setting] dialog After setting, place a parts movement object anywhere on the screen editor. • [Point] Select this item to display the part at the specified display position (point). After selecting this item, set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29]. Set the parts movement route on the screen prior to the operation. ➟8.9.7 [Parts Move Route] dialog
[Route No.]	Set [Route No.] in the [Parts Move Route] dialog to display the parts movement. The setting range is [0] to [29].

2) **[Parts Type]**

Select the type of the parts for the parts movement.

When a transparent color is set for the image data of set parts, the setting of the transparent color is enabled.

For the method of enabling the transparent color setting of parts, refer to the following.

➟8.9.2 ■9 Setting the image data of parts to a transparent color

This item is fixed to [Parts Data] when [Circle] is selected for [Move Way].

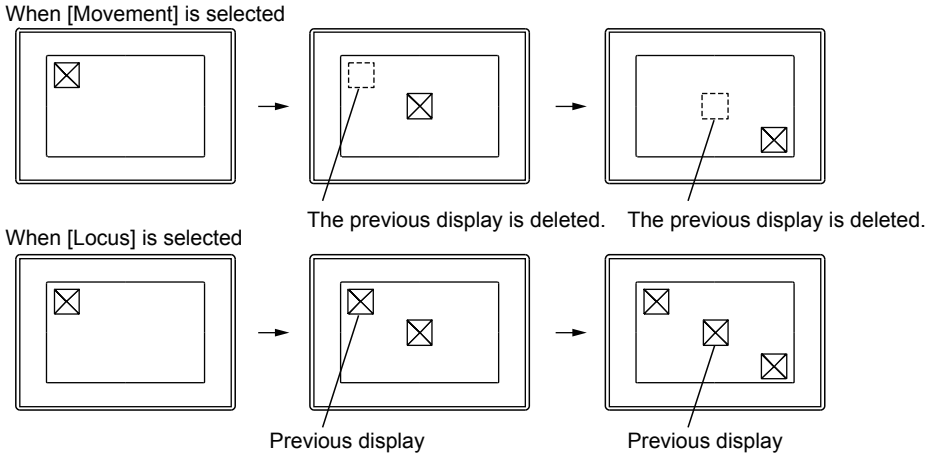
Item	Description
[Parts Data]	Displays registered parts.
[Mark Data]	Switches the white area of the registered part to the color set for [Mark Color]. After selecting, set [Parts No.] to be displayed. The setting range is [0] to [32767]. Click the [Parts] button to check the type of the registered parts. For the parts that can be displayed by mark, refer to the following. ➟5.9 Registering Parts ([Parts])

Item	Description
[Image File]	Select an image file registered in the data storage to display the file as a part. Click the [Setting] button and select an image file in the [Image File Setting] dialog. ➟8.8.4 ■1 (1) [Image File Setting] dialog

3) **[Display Mode]**

Select a display method for the parts movement.

- [Movement]
  Displays the parts movement deleting the displayed previously part.
- [Locus]
  Displays the parts movement without deleting the parts that have been displayed.
  Example)



GOT Graphic Ver.2

As the setting is fixed to [Movement], no additional setting is required accordingly.

GOT Graphic Ver.1

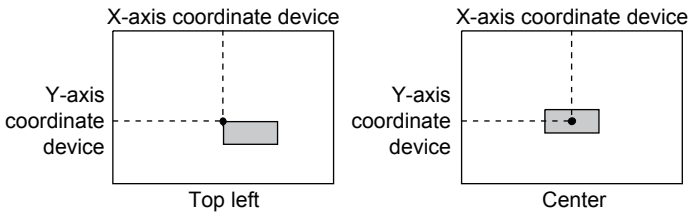
The following shows selectable items.

- [Movement]
- [Locus]

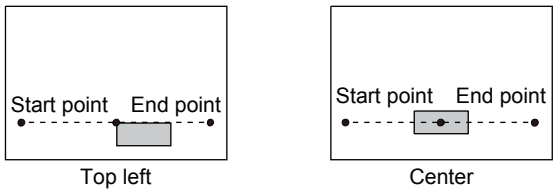
4) **[Alignment]**

Select the reference of the parts display position.

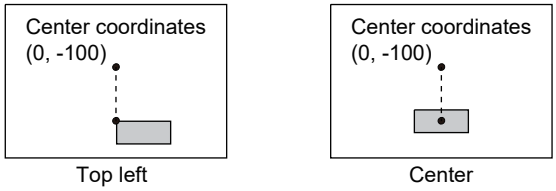
- [Top-Left]
  Displays the part using the top-left coordinate of the part as the reference.
- [Center]
  Displays the part using the center coordinate of the part as the reference.
  Example)
  When [Position] is selected in [Move Way] (X-axis coordinate device = 320, Y-axis coordinate device = 240)



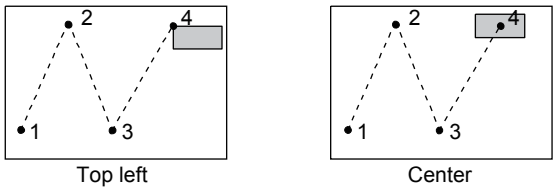
When [Line] is selected in [Move Way] (Device: D100 = 50)



When [Circle] is selected for [Move Way] (Center coordinates: 0, -100)



When [Point] is selected in [Move Way] (Device: D200 = 4)



5) **[Detail Settings of Parts]**

Item	Description
[Parts No.]	Set the parts number to be displayed. Click the [Parts] button to check the registered parts. The setting range is [0] to [32767]. When 0 is set for [Parts No.], the part is deleted. When displaying only parts and screens for the on status, set 0 for [Parts No.] for the off status.
[Mark Color]	When selecting [Mark Data] for [Parts Type], select the color of the area of the part to be switched from the white.
[Image File No.]	Specify an image file number. The range which can be specified depends on [Digits] in the [Image File Setting] dialog. • When [Digits] is [5]: [0] to [65535] • When [Digits] is [4]: [0] to [9999] • When [Digits] is [3]: [0] to [999] • When [Digits] is [2]: [0] to [99] • When [Digits] is [1]: [0] to [9] When 0 is set for [Screen File No.], images are deleted. When displaying only images for the on status, set 0 for [Image File No.] for the off status.
[Blink]	Select the blinking speed of the parts. The following shows the items to be selected. • [None] • [Low] • [Medium] • [High]

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Extended] tab

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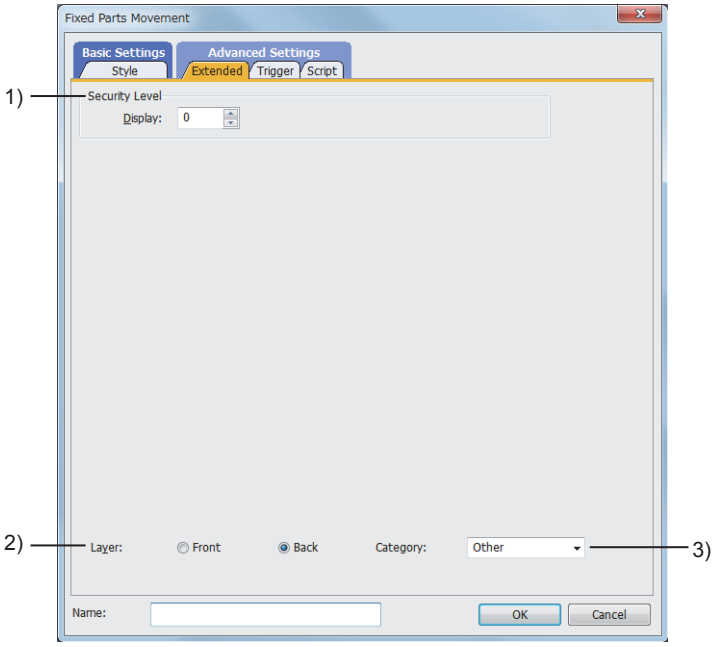


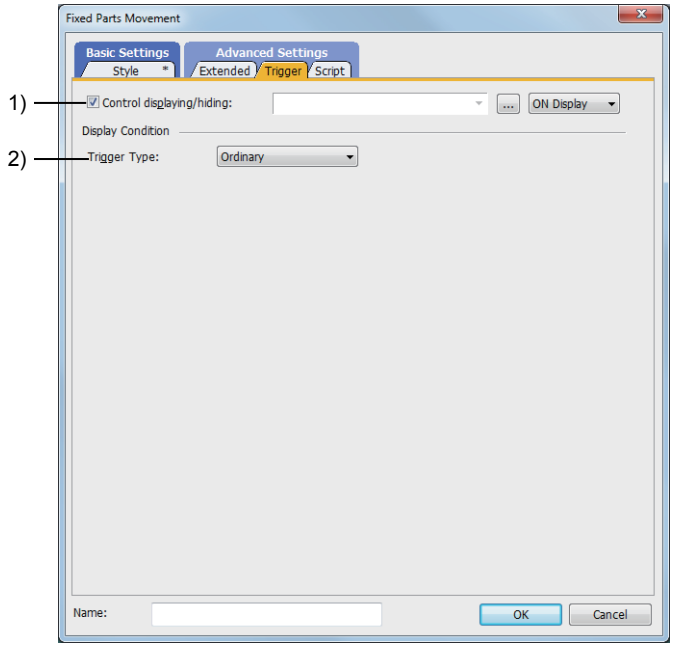
1) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15]. If you do not use the security function, select [0].

2) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.
- [Front]
- [Back]

3) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

For details of each item, refer to the following.

➟6.2 Setting Trigger Types

■4 [Script] tab

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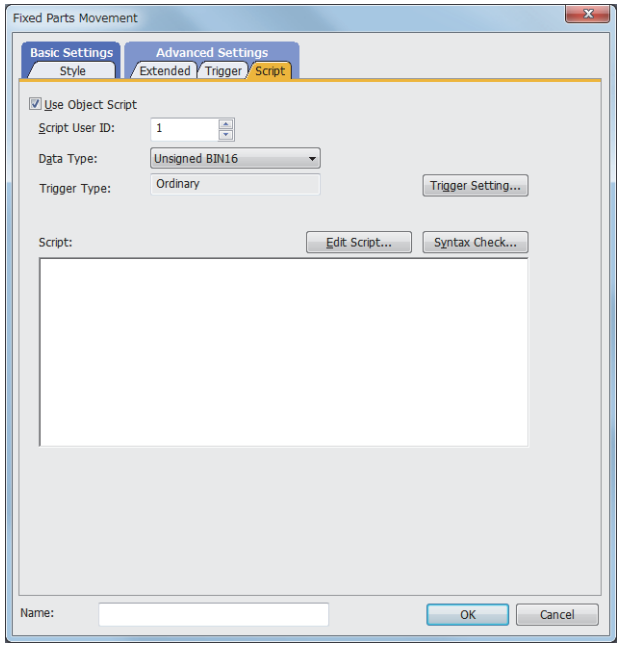
For the settings of scripts, refer to the following.

➟9.10 Object Script



(1) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 / GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	Upon the setting change	
		y	○	○	Upon the setting change	
[Style]	[Parts No.]	part_no	○	○	Upon the setting change	
	[Mark Color]	mark_color	○	○	Upon the setting change	
	[Blink]	blink	○	○	Upon the setting change	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.9.7 [Parts Move Route] dialog

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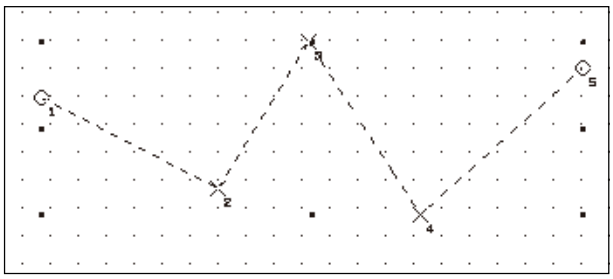
To operate [Move Way] using [Point], set the parts movement route, in which the parts are displayed.
Up to 30 routes can be set for one screen.
One parts movement route can be used for multiple parts movements.

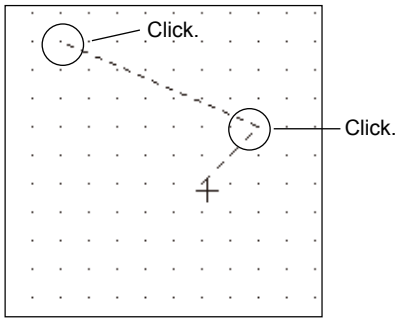


Step 1 Select [Object] → [Parts Movement] → [Parts Move Route] from the menu.

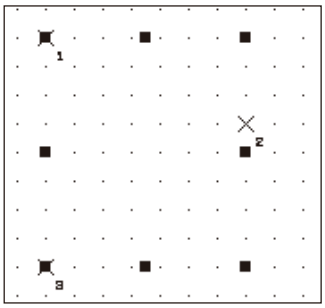
Step 2 The [Parts Move Route] dialog appears.

➟■1 [Parts Move Route] dialog

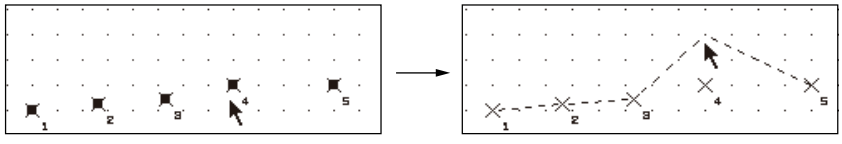
Step 3 Click the mark (+) which is displayed on the drawing screen to place point 1.
Click the mark to finish creating the necessary points.



Step 4 When the setting is completed, the point numbers are displayed on the set positions.



• Changing the point position
Click the parts movement route and select [Edit Points] from the right-click menu.
In the vertex edit mode, drag the point to change its position.

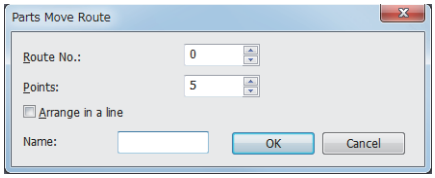


Vertex edit mode

Drag the point to change its position.

• Changing the number of points and the route No.
Double-click the parts movement route to display the setting dialog. Change [Points] and [Route No.].

■1 [Parts Move Route] dialog

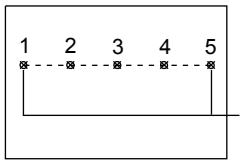


1) **[Route No.]**
Set [Route No.] of [Parts Move Route] to be created.
The setting range is [0] to [29].

2) **[Points]**
Set the number of points of the movement position (the position to display the parts).
The setting range is [1] to [100].

3) **[Arrange in a line]**
The parts are moved on a line.
Points are automatically placed for the number of points set in [Points] by specifying the start point and end point.

Example) Number of points: 5



Specify the start point and end point.
(Point 2 to point 4 are automatically placed.)

4) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

8.9.8 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the parts movement as required.
The following shows the functions that are available by the relevant settings.

■1 Parts setting

Select [Common] → [Parts] → [Parts Setting] from the menu to display the [Parts Setting] dialog.

➟5.9.6 [Parts Setting] dialog

Function	Setting item
Setting whether to use image files in the data storage for parts displays or parts movements	[Show image files in the memory card when Parts No. 9001-9999 is specified]

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

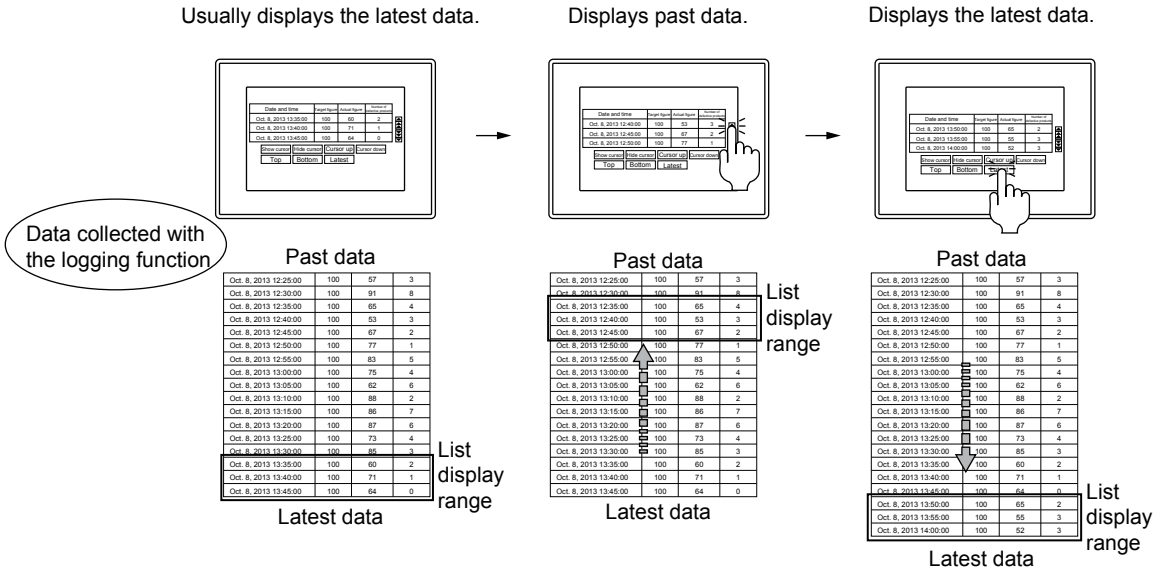
Function	Setting item
Using image files in the data storage as parts for parts displays or parts movements (Read device)	GS450.b8

8.10 Placing a Historical Data List Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With this function, device data can be displayed in a list in chronological order.

➟9.2 Collecting Device Data ([Logging])



8.10.1 Specifications of the historical data list display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to eight historical data list displays can be placed on one screen.
- For GT21 and GS21
  One historical data list display, trend graph, scatter graph, or historical trend graph can be placed on one screen.

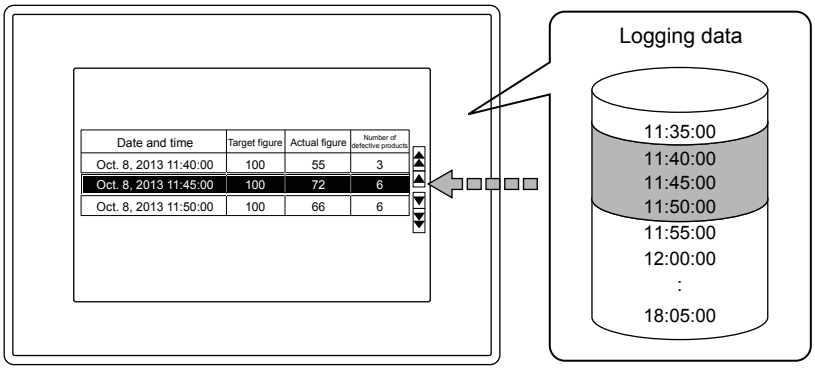
■2 Relation between historical data list displays and logging

For the logging, refer to the following.

➟9.2 Collecting Device Data ([Logging])

(1) Contents displayed by historical data list displays

The data collected or accumulated in buffering areas or data storage by the logging is displayed as a list with this function.
As the accumulated data are available, current and past information can be displayed as a list.



Displays accumulated data in a list.

(2) Logging data which can be displayed with historical data list displays

One historical data list display corresponds to only one logging ID number for the display of data.
To display multiple logging ID numbers, set the same number of historical data list displays.

(3) A logging setting required when historical data list displays are used

Make sure that the set value of [Number of Logs a file] in the relevant logging setting is equal to or larger than the set value of [Display Rows] in the historical data list display setting to secure performance.

➟8.10.4 ■1 [Display] tab

(4) Consistency check

The consistency between the setting of a historical data list display and the corresponding logging setting is checked at the following timing.

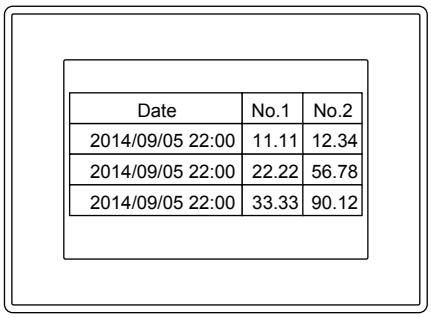
- When the dialog for a historical data list display is opened
- When devices of a historical data list are enabled and a data check is conducted

■3 Display when a data operation error occurs

For the data operation, if a BCD-BIN conversion error or a division by zero error occurs, the object displays hyphens corresponding to the number of displayed digits.

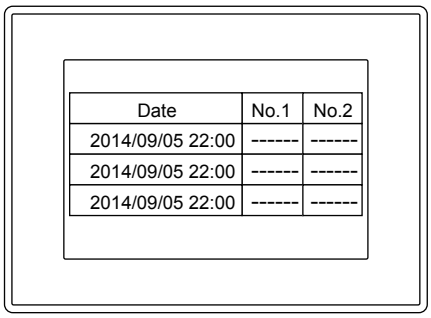
(1) Display of a value containing a symbol or decimal point

A symbol and a decimal point, which are contained in a value, are also displayed as hyphens.
Example) When the settings are configured as follows: display format: real, number of displayed digits: 5 (fractional portion: 2), and right alignment



Date	No.1	No.2
2014/09/05 22:00	11.11	12.34
2014/09/05 22:00	22.22	56.78
2014/09/05 22:00	33.33	90.12

Normal display



Date	No.1	No.2
2014/09/05 22:00	------	------
2014/09/05 22:00	------	------
2014/09/05 22:00	------	------

Display at an error occurrence

8.10.2 How to use the historical data list display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the historical data list display

Place historical data list displays on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing historical data list displays

Edit historical data list displays that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

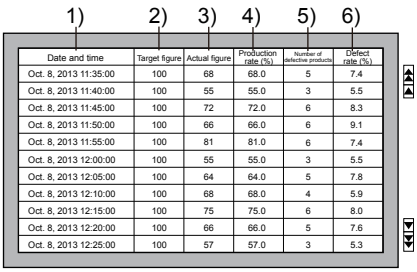
■3 Setting historical data list displays

Set historical data list displays that have been placed on the screen editor.
Common setting of objects

➟6.5.5 Common setting for objects

Setting historical data list displays
The following outlines the procedure for setting a historical data list display.
Example)
A historical data list display that displays target figures and actual figures
D10, D20, and D30 are logged in a trigger sampling cycle of 300000 ms.

➟8.10.4 [Historical Data List Display] dialog
9.2 Collecting Device Data ([Logging])



Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

1) Date and time: Displays the date and time when the logging data is obtained.

2) Target figure: Monitors the value in D10.

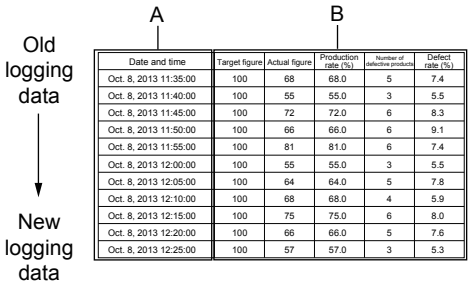
3) Actual figure: Monitors the value in D20.

4) Production rate: Displays the value that derives from "Actual figure ÷ Target figure × 100". (0 to 100.0%)

5) Number of defective products: Monitors the value in D30.

6) Defect rate: Displays the value that derives from "Number of defective products ÷ Actual figure × 100". (0 to 100.0%)

Step 1 Set the number of rows and columns to be displayed, the device to be monitored, and the items to be monitored in the [Display] tab.

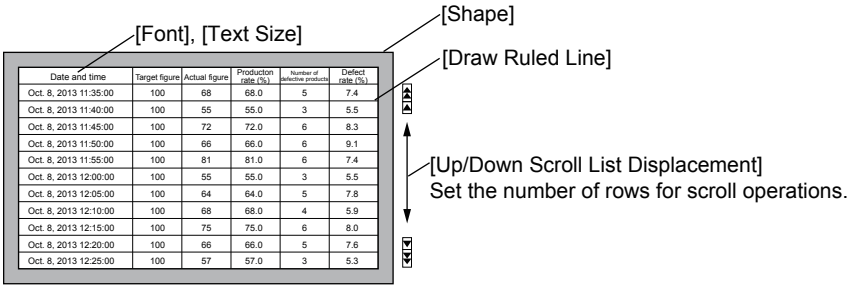


Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

A Date column
Date and time stored in the logging data

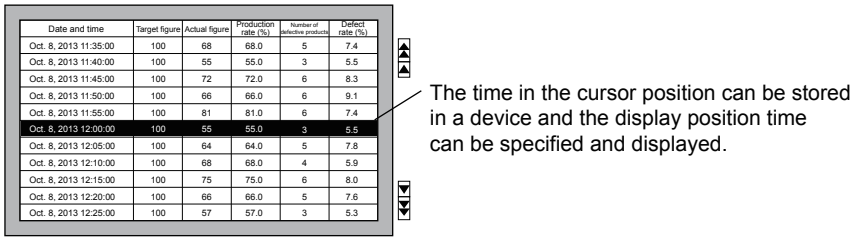
B Data column
Device values are displayed according to the device setting.

Step 2 Set the font, text size, ruled line, spacing, and figure in the [Text/Style] tab.



Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

Step 3 Set the security level, time of the cursor position, and time of the display position in the [Extended] tab if necessary.



Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

■4 Displaying and moving the cursor

The cursor can be displayed and moved in the list with a key code switch.
With the setting of [Single Touch Operation], the cursor can be displayed directly on and moved to a touched position.
When [Time Device] in the [Extended] tab of [Historical Data List Display] is set, a selected date and time are stored in a set device.

➟8.10.4 ■3 [Extended] tab

Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0

Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0

[Time Device]
Device value: Oct. 8, 2013 12:00:00

■5 Displaying data obtained at a specified time

The data obtained at a specified time can be displayed with a key code switch.
When [Display Position Time Device] in the [Extended] tab of the [Historical Data List Display] dialog is set, the data of a specified time is displayed in the center of the list of the historical data list display.

➟8.10.4 ■3 [Extended] tab

When the data of a specified time is displayed, the update of the list stops.

Time to be specified
Oct. 8, 2010 12:00:00

Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0

The data obtained at the specified time can be displayed in the center of the list.

■6 Conjunction with historical trend graphs

By setting the same device to [Time Device] of historical data list displays and [Display Position Time] of historical trend graphs, the data obtained at time specified with a historical data list display can be displayed in a historical trend graph.

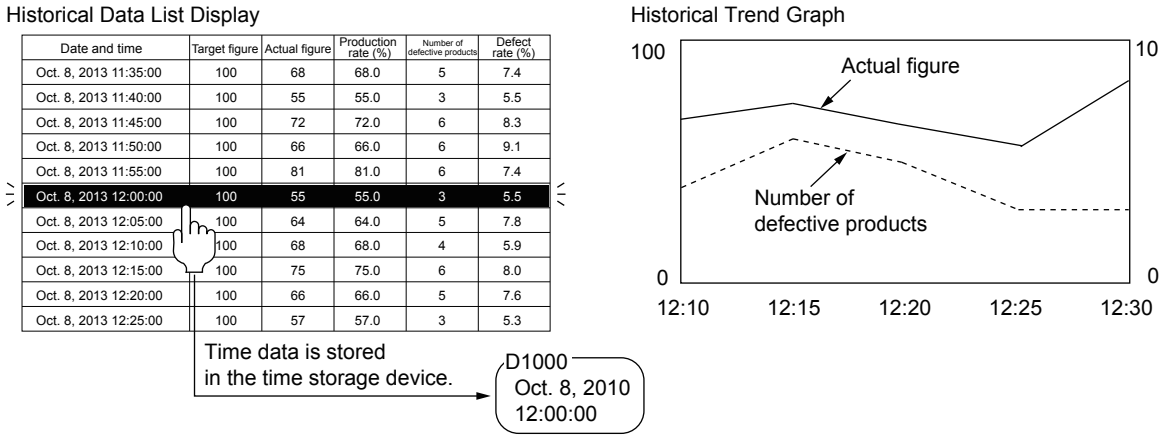
➟8.10.4 ■3 [Extended] tab
8.16 Placing a Trend Graph

Example) Displaying the data obtained at time specified with a historical data list display in a historical trend graph
Make the following settings.

- Set [D1000] for [Time Device] of the [Historical Data List Display] dialog.
- Set [D1000] for [Display Position Time] of the [Historical Trend Graph].

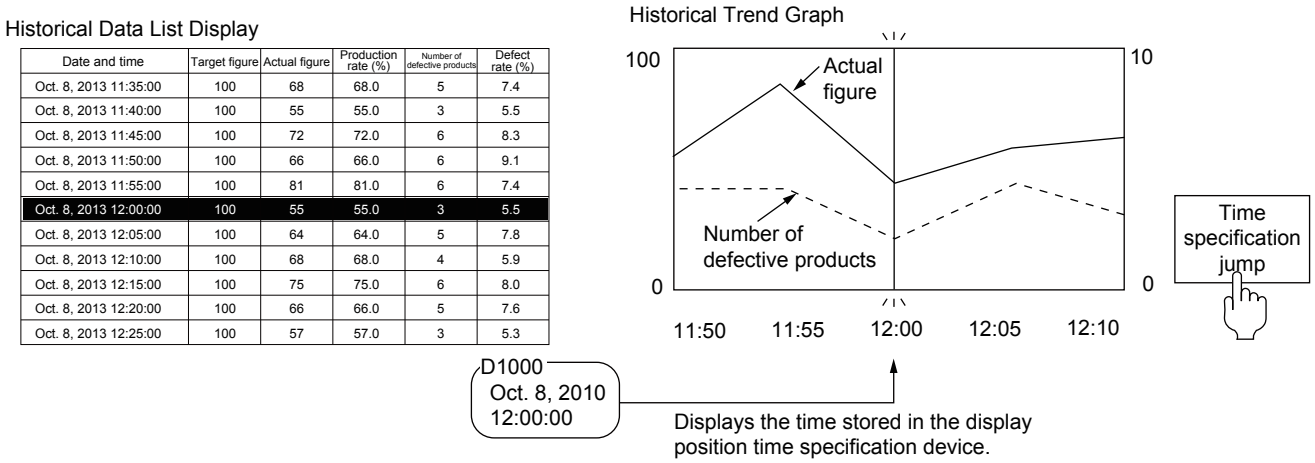
Step 1 Display the cursor in the historical data list display and move the cursor to the data to be displayed in the historical trend graph.

The time is stored in the time device (D1000). (Device value: specified time)



Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

Step 2 Enter the key code of the display position time specification jump (FFD4h) with a touch switch. The data obtained at the time stored in [Display Position Time Device] (D1000) is displayed in the historical trend graph.



Date and time	Target figure	Actual figure	Production rate (%)	Number of defective products	Defect rate (%)
Oct. 8, 2013 11:35:00	100	68	68.0	5	7.4
Oct. 8, 2013 11:40:00	100	55	55.0	3	5.5
Oct. 8, 2013 11:45:00	100	72	72.0	6	8.3
Oct. 8, 2013 11:50:00	100	66	66.0	6	9.1
Oct. 8, 2013 11:55:00	100	81	81.0	6	7.4
Oct. 8, 2013 12:00:00	100	55	55.0	3	5.5
Oct. 8, 2013 12:05:00	100	64	64.0	5	7.8
Oct. 8, 2013 12:10:00	100	68	68.0	4	5.9
Oct. 8, 2013 12:15:00	100	75	75.0	6	8.0
Oct. 8, 2013 12:20:00	100	66	66.0	5	7.6
Oct. 8, 2013 12:25:00	100	57	57.0	3	5.3

Point

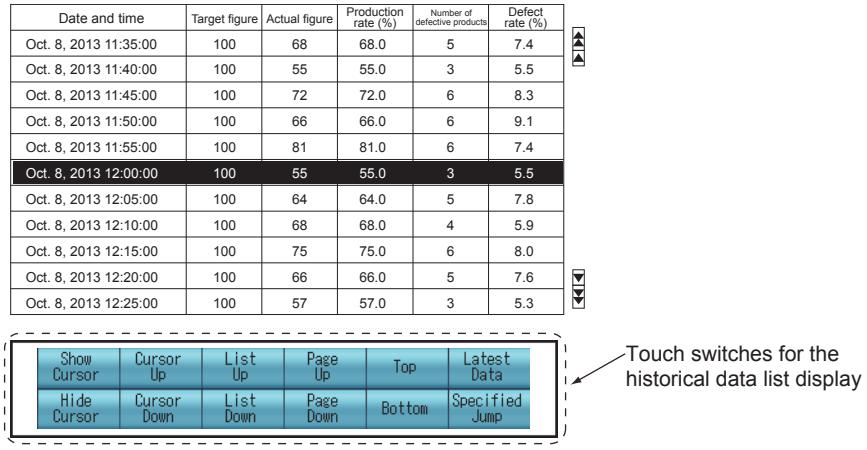
Displaying data of historical trend graphs in historical data list displays

By setting the same device to [Time Device] of historical trend graphs and [Display Position Time Device] of historical data list displays, the data obtained at time specified with a historical trend graph can be displayed in a historical data list display.

➟8.10.4 ■3 [Extended] tab
8.16 Placing a Trend Graph

■7 Touch switches for historical data list displays

Touch switches for the historical data list display are available by reading from the library of GT Designer3.
The characters and shapes on the touch switches can be changed by a user.
When key codes are set for touch switches, touch switches for the historical data list display can be created by a user.



Touch switch	Key code	Description
Show cursor	FFF0h	Displays or deletes the cursor. Displays the cursor in the center of the list.
Hide cursor	FFF1h	
List Cursor Up	FFF2h	Moves the cursor upward or downward.
List Cursor Down	FFF3h	
List Displacement Scroll Up	FFF4h	Scrolls the cursor to the row a specified number of rows below or above. By setting [Up/Down Scroll List Displacement], the number of the rows between the original position and destination can be changed. ➟8.10.4 ■2 [Text/Style] tab
List Displacement Scroll Down	FFF5h	
List Page Scroll Up	FFF6h	Scrolls the cursor to the row a specified number of rows displayed in the list below or above.
List Page Scroll Down	FFF7h	
Jump to the top of the list	FFD0h	Moves the cursor to the top of the list.
Jump to the bottom of the list	FFD1h	Moves the cursor to the bottom of the list.

Touch switch	Key code	Description
Latest Data	FFEFh	Displays the latest data.
Move display position to the specified time	FFD4h	Displays in the center the data obtained at the time stored in the display position time specification device. (Time specification jump function)

■8 Operations performed using the object gesture function

The display of objects can be operated using gestures.
For operations with gestures, refer to the following.

➟11.13 Operating Objects by the Gesture (Object Gesture Function)

8.10.3 Precautions for a historical data list display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 When changing the logging devices of the logging settings or utilizing data of another project for logging

If the logging devices of the logging settings are changed or the data of another project for logging is utilized after a historical data list display is set, the device of the logging setting may not match the device of the historical data list display.
In this case, set the device of the historical data list display again.
When the device type does not match, the historical data list display is not displayed.

■2 Placing historical data list displays when setting the single touch operation

When setting [Single Touch Operation] in the [Extended] tab of the [Historical Data List Display] dialog, set the size of the part displayed in the list to a multiple of 16.
If a set size is not a multiple of 16, or a point not in the succession of a multiple of 16 is touched, the following irregularities may occur.

- The cursor is displayed in a position away from a touched point.
- Touches do not receive any response.

■3 Display viewed when the bit is selected for the device type

When the bit is selected for the device type, the screen editor always displays the off status even if the display is switched to on.
In the GOT, the monitor device is displayed correctly.

■4 Displaying data which cannot be processed as real numbers

When [Real] is set for [Display Format] and the data to be displayed cannot be processed as real numbers, what are displayed depends on the values.

- If all the values are 0: [Inf] is displayed.
- If values are not 0: [NaN] is displayed.

For how to set [Display Format], refer to the following.

➟8.10.4 ■1 [Display] tab

■5 Displaying an integer as a real number

For a device capable of storing an integer only, configure the following settings to display the device value as a real number.

Item	Settings
[Device Type] in the logging setting	Select one of the following items. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8]
[Display Format] in the [Display Setting] dialog	Select [Real].
[Data Operation]	Set the operational expression: $$/(10 to the n-th power). The symbol $$ represents a device value, and the letter n represents the number of decimal places.

Example) When the number of decimal places is 2
In [Data Operation], set the operational expression: $$/100.
When the target device stores 12345, the displayed value is 123.45.

■6 Precautions for the use of the time specification jump function

(1) When using the time specification jump function

If the time specification jump function is used, the update processing of the list stops.
To resume the update processing, touch a touch switch for which the key code (FFEFh) is set.

(2) When carrying out another operation while a time specification jump is performed

While the data obtained at a specified time is searched with the time specification jump function, the operations with functions other than the historical data list display cannot be performed.

(3) When multiple values of logging data are obtained around a specified time

If logging data are not obtained at a specified time, the data obtained at the nearest time is searched.
When the multiple values are obtained at the nearest time, the first detected value is displayed.

(4) When displaying the data obtained at the start of logging and the data obtained around the time when the latest data is obtained

When the logging data obtained at a specified time is the one obtained at the start of the logging or the data obtained around the time when the latest data is obtained, the data to be displayed may not be displayed in the center of the historical data list display.

(5) When performing a time specification jump without specifying time

When performing a time specification jump without specifying time (all the settings of [Display Position Time Device] are 0), the update processing stops and the latest data is displayed.
To resume the update processing, touch a touch switch for which the key code (FFEFh) is set.

(6) When there is no logging data that can be displayed in historical data list displays

When there is no logging data that can be displayed in a historical data list display, no time specification jump is performed.

(7) When the logging data to be displayed are not shown in chronological order

When the logging data to be displayed are not shown in chronological order due to a time change of the GOT's clock, the data obtained at the time the nearest to a specified time may not be displayed.

8.10.4 [Historical Data List Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Historical Data List Display] from the menu.

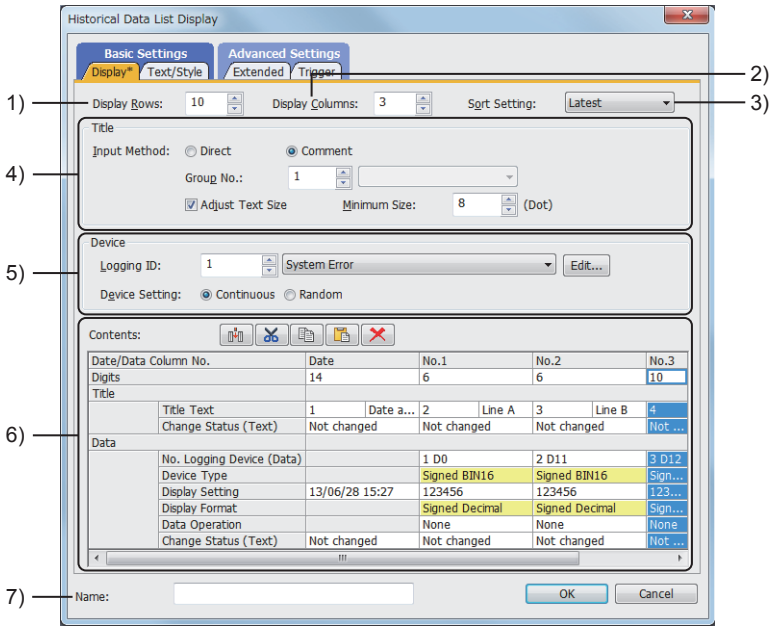
Step 2 Click the position where you place the historical data list display. Placing the historical data list display is complete.

Step 3 Double-click the historical data list display which has been placed to display the setting dialog.

➟■1 [Display] tab
■2 [Text/Style] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Display] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Display Rows]**
Set the number of rows excluding the title row.
The setting range is [1] to [47].

2) **[Display Columns]**
Set the number of the data columns.
The setting range is [1] to [32].

3) **[Sort Setting]**
Select the method of sorting out the rows to be displayed.
The following shows the items to be selected.
- [Latest]
- [Oldest]

4) **[Title]**

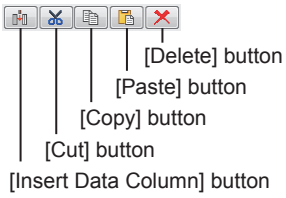
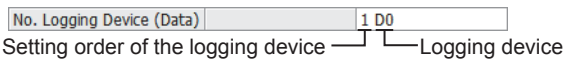
Item	Description
[Input Method]	Select the method of setting the text to be displayed in the title. The following shows the items to be selected. • [Direct] • [Comment]
[Group No.]	Only when [Comment] is selected for [Input Method], this item can be set. Set the comment group number to be used. The setting range is [1] to [500].

Item	Description
[Adjust Text Size]	Only when [Comment] is selected for [Input Method], this item can be set. The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	This item can be set only when [Adjust Text Size] is set. Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dots.

5) **[Device]**

Item	Description
[Logging ID]	Set the logging ID number to be displayed. The setting range is [1] to [32767]. When the [Edit] button is clicked, the [Logging] dialog appears and the logging ID number can be edited. ➟9.2 Collecting Device Data ([Logging])
[Device Setting]	Select the setting method for [No. Logging Device]. The following shows the items to be selected. • [Continuous]: Set the number of successive devices counted from a set first device. The number of successive devices is the same as that of logging blocks. • [Random]: Set the number of devices one by one.

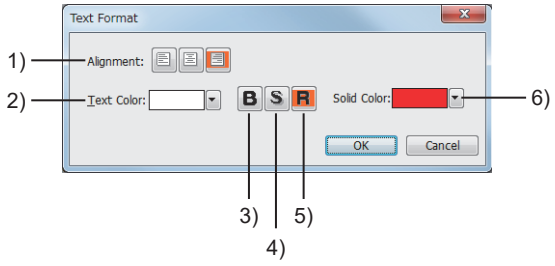
6) **[Display]**

Item	Description
Edit button	Edits display columns or others.  • [Insert Data Column] button Inserts a new column on the left of a selected data column. • [Cut] button Cuts a selected data column. • [Copy] button Copies a selected data column or character string. • [Paste] button Pastes a cut or copied data column or character string. • [Delete] button Deletes a selected data column.
[Date/Data Column No.]	Displays the data column numbers of the number of the columns set for [Date] and [Display Columns].
[Digits]	Set the number of the digits displayed in each column. The following shows the setting range. • [Date]: [5] to [100] • Data column No.: [1] to [100]
[Title Text]	Set the title of each column. Depending on the selection in [Input Method], the setting items are different. • If [Direct] is selected for [Input Method]: Enter the title in the text box directly. • If [Comment] is selected for [Input Method]: Set a comment No. or a comment. The setting range is [1] to [32767].
[Change Status (Text)]	Displays whether the format of the title has been changed or not. • [Changed] • [Not changed] Click the [...] button to display the [Text Format] dialog. The format of the title is user-changeable. ➟(1) [Text Format] dialog
[No. Logging Device]	In the [Device List] dialog, select a logging device of a selected logging ID number. When a logging device is selected in the [Device List] dialog, the order of the logging device and the device are displayed. 

Item	Description
[Device Type]	Displays the device type selected for [No. Logging Device].
[Display Setting]	Depending on the column to be set, the setting item differs. • If the [Date] column is set: Set the display format of the date and time for [Date/Time Setting]. ➟6.3 Date/Time Format Settings • If a data column is set: Set the display format of the device and numerical value in the [Display Setting] dialog. ➟(2) [Display Setting] dialog (historical data list display)
[Display Format]	Displays the setting of [Display Format] in the [Display Setting] dialog.
[Data Operation]	Set an expression in the [Edit Data Expression] dialog. Signed BIN16 is applied to the data type of the device set for the expression of this item. ➟6.5.5 ■4 Setting data operations When no expression is set, [None] is displayed. For a device capable of storing an integer only, refer to the following to display the device value as a real number. ➟8.10.3 ■5 Displaying an integer as a real number
[Change Status (Text)]	Displays whether the format of the data column has been changed or not. • [Changed] • [Not changed] When you select [Changed], the [Text Format] dialog appears. The format of the data column is user-changeable. ➟(1) [Text Format] dialog

7) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

(1) [Text Format] dialog



1) **[Alignment]**
Set the vertical or horizontal position of the text.

2) **[Text Color]**
Set the text color.
➟6.4.2 Color settings

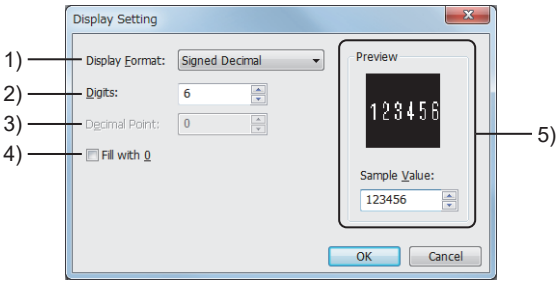
3) **[Bold] button**
Displays the text in bold.

4) **[Solid] button**
Displays the text with a shadow.

5) **[Raised] button**
Displays the text embossed.

6) **[Solid Color]**
When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

(2) [Display Setting] dialog (historical data list display)



1) **[Display Format]**

Select the display type of the device to be monitored.

The selectable items vary with the data type of the device.

○ : Available, ×: Not available

[Data Type]	[Format]					
	[Signed Decimal]	[Unsigned Decimal]	[Hexadecimal]	[Octal]	[Binary]	[Real]
[Signed BIN16]	○	○	○	○	○	○
[Unsigned BIN16]	○	○	○	○	○	○
[Signed BIN32]	○	○	○	×	○	○
[Unsigned BIN32]	○	○	○	×	○	○
[Signed BIN64]	○	○	○	×	×	○
[Unsigned BIN64]	○	○	○	×	×	○
[Signed BIN8]	○	○	○	○	○	○
[Unsigned BIN8]	○	○	○	○	○	○
[BCD16]	○	○	○	○	○	○
[BCD32]	○	○	○	×	○	○
[BCD64]	○	○	○	×	×	○
[Real(32bit)]	○	○	○	×	○	○
[Real(64bit)]	○	○	○	×	×	○

2) **[Digits]**

Set the number of the digits of the numerical values to be displayed.

The setting range depends on the setting of [Display Type].

- [Signed Decimal] or [Unsigned Decimal]: [1] to [21]
- [Hexadecimal]: [1] to [16]
- [Octal]: [1] to [6]
- [Binary] or [Real]: [1] to [32]

3) **[Decimal Point]**

Set the number of digits to the right of the decimal point to be displayed.

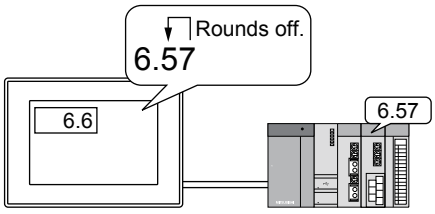
The setting range is [0] to [30].

This item can be set only when [Format] is [Real].

If there are digits to the right of a set rightmost digit, the value is rounded off and displayed.

When 0 is set, the value is rounded off to the first decimal place.

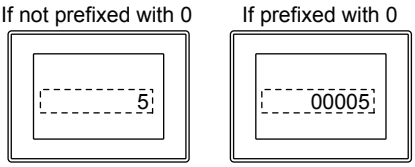
Example) When the device value is 6.57, and [Decimal Point] is set to [1]



4) **[Fill with 0]**

Prefixes a numerical value with 0 and displays it.

Example) When the device value is 5 and [Digits] is set to [5]



5) **[Preview]**
Displays the preview of the screen.

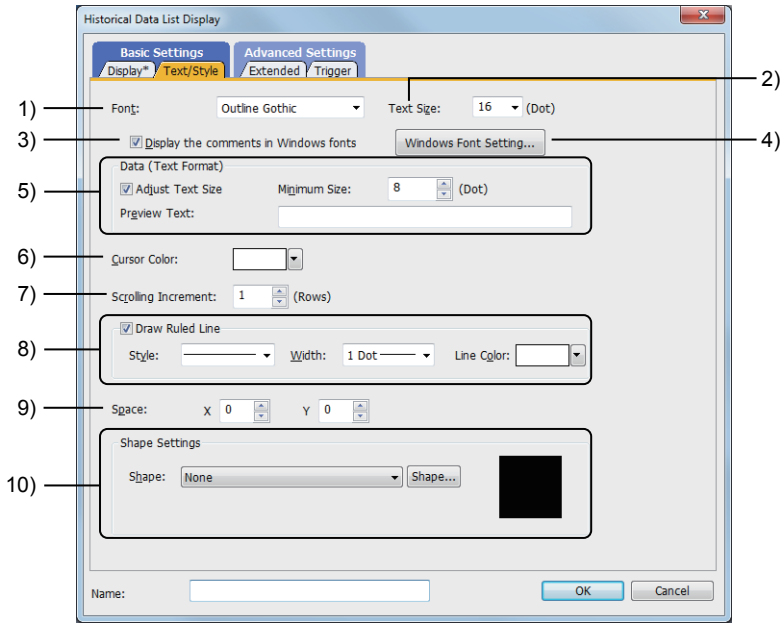
Item	Description
[Sample Value]	Set the numerical value to be displayed in the preview.

■2 [Text/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Font]**
Select the font of the displayed text.
The following shows the items to be selected.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

2) **[Text Size]**
Set the text size to be displayed.

➟1.2.5 Font specifications

3) **[Display the comments in Windows fonts]**
Displays the following registered comments in Windows fonts.

- Comments set for the titles in the [Display] tab (when [Comment] is selected for [Specification])

4) **[Windows Font Setting]**

Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.] in the [Display] tab.

Set [Windows Font] and [Character Set] for the target column of the comment group.

➟5.8.4 ■2 (1) [Comment Group Property] dialog

5) **[Data (Text Format)]**

This item is settable only when [String] is selected for [Device Type] in any column on the [Display] tab.

Item	Description
[Adjust Text Size]	Automatically adjusts the text size according to the object size. When this item is not selected, a line feed is automatically added to the text.
[Minimum Size]	Set the minimum text size applied when the text size is automatically adjusted. The setting range is [8] dots to [240] dots.
[Preview Text]	Set the text to be previewed on the screen editor.

6) **[Cursor Color]**

Select the color of the cursor used for selecting logging data.

➟6.4.2 Color settings

7) **[Scrolling Increment]**

Set the number of the rows for scroll operations on the list performed when the key cords for scrolling the list (up/down) (FFF4h, FFF5h) are entered.

The setting range is [1] to [27].

8) **[Draw Ruled Line]**

Item	Description
[Style]	Select the style of ruled lines. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line
[Width]	Select the width of ruled lines. • [1Dot] • [2Dot] • [3Dot] • [4Dot] • [5Dot] • [7Dot]
[Line Color]	Set the ruled line color. ➟6.4.2 Color settings

9) **[Space]**

Set the space between the text or time display to be displayed and the ruled line of the table.

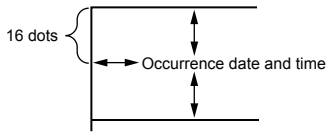
The setting range is [0] to [32].

The actually displayed space is defined by the setting of [Text Size] as follows.

Setting value of [Text Size] × setting value of [Space]

Example)

When setting [Text Size] to [2] and [Space] to [8]



10) **[Shape Settings]**

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 ■1 Setting object shapes
[Frame Color]	Select the frame color of the shape. ➟6.4.2 Color settings

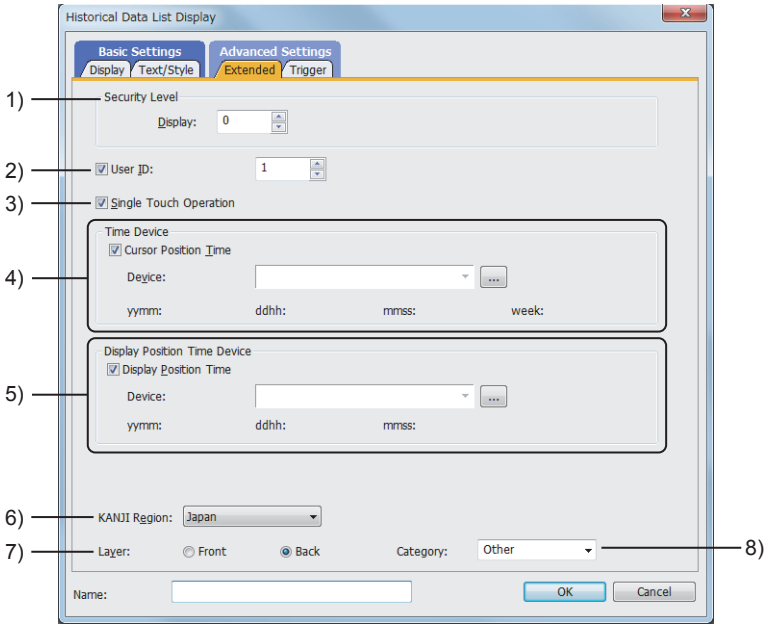
Item	Description
[Shape Color]	Select the color of the shape. ➟6.4.2 Color settings

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

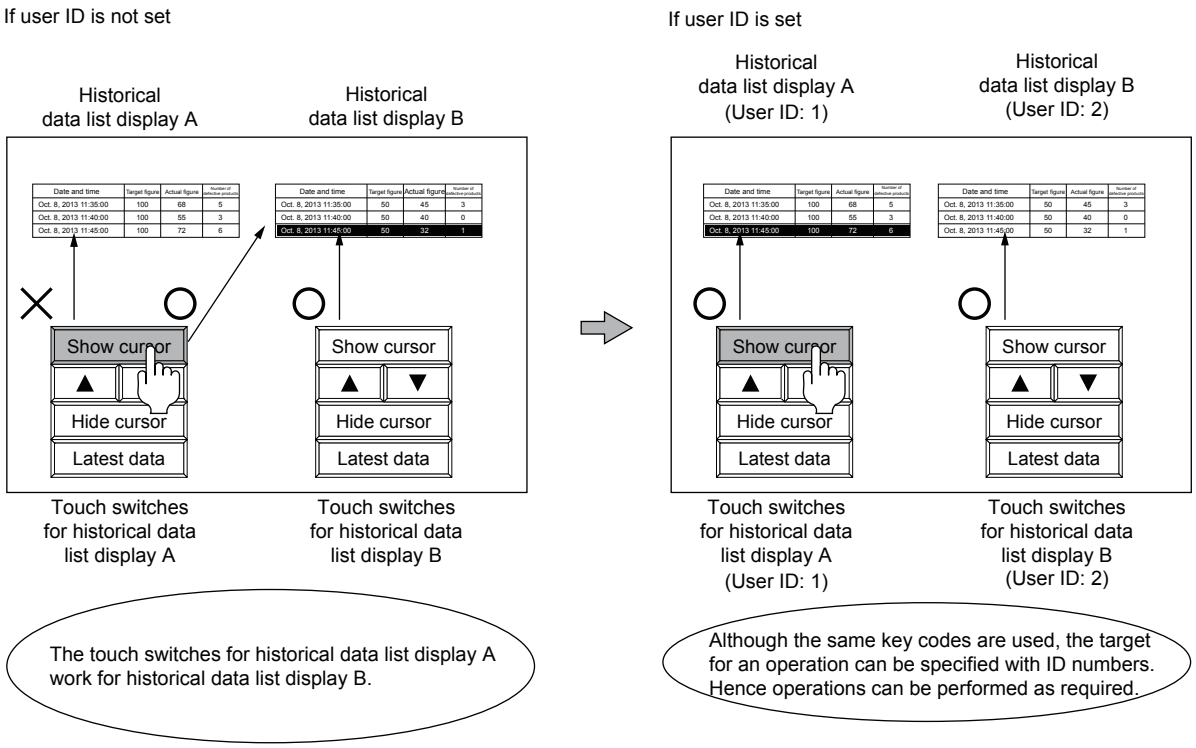
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].

2) **[User ID]**
Select this item to set the user ID.
The setting range is [1] to [65535].
With the setting of user ID, each object can have an ID number (user ID) and the target ID (object) for an operation can be specified with a touch switch. Hence touch switch operations can be performed as required.



Set the user ID of the object to be operated with a touch switch in [User ID for a key input] or [Individually set user ID for key input].

For touch switches, refer to the following.

➟8.2.4 [Switch] dialog
8.2.11 [Key Code Switch] dialog

3) **[Single Touch Operation]**

Displays the cursor in the touched position directly.

4) **[Time Device]**

Item	Description
[Cursor Position Time]	Writes the date and time displayed in the position where the cursor is displayed to a device as BCD data. Set a device for [Device] in which the date and time are stored.
[Device]	Set a device in which the date and time are stored.*1*2*3*4Set a GOT internal device for this item. When a controller device is used, the monitor speeds may become slow. ➟6.1.2 How to set devices 12.1 GOT Internal Device

*1 Method of storing in devices

Time is stored in the upper eight bits and lower eight bits of a set device.

Example) When setting D100

D100	b15 to b8	b7 to b0
	(Year)	(Month)
D101	b15 to b8	b7 to b0
	(Day)	(Time)
D102	b15 to b8	b7 to b0
	(Minute)	(Second)
D103	b15 to b8	b7 to b0
	Not used	(Day of the week)

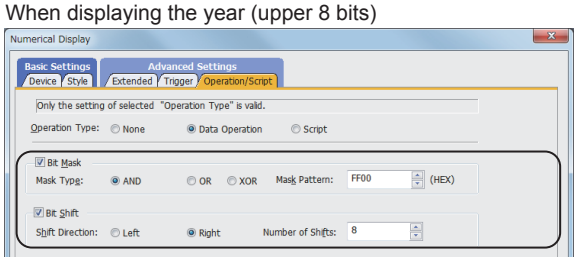
(0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday)

*2 Monitoring set devices

When monitoring a device with a numerical display, select [BCD16], [BCD32], or [BCD64] for [Data Type], and set [Bit Mask] and [Bit Shift] of [Data Operation] as follows.

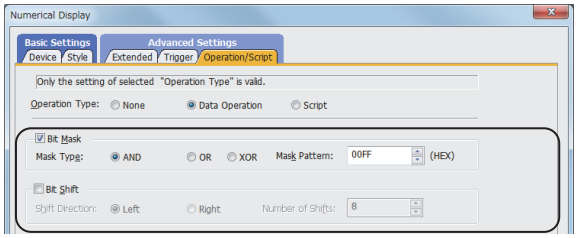
Example) Example of numerical display settings

When displaying the year (upper 8 bits)



Lower 8 bits of D100 (b7 to b0): Masked
Upper 8 bits of D100 (b15 to b8): Shifted to the right by 8 bits

When displaying the Month (Lower 8 bits)



Upper 8 bits of D100 (b15 to b8): Masked

*3 Timing with which data is stored in devices
With the following timings, data is stored.
· When the cursor is displayed in the list
· When the displayed cursor is moved
· When the cursor is displayed and the historical data list display is operated with a touch switch

*4 Values to be stored in devices
If the cursor is displayed in the list, the update processing of the list stops.
Into a device, the value of the data and time displayed in the position where the cursor is displayed at the processing stop is stored.
Example) Storing a date and time into a device

Example) Storing time in the device

Show cursor

Stores the time displayed where the cursor is placed.

Date and time	Target figure	Actual figure	Number of defective products
Oct. 8, 2013 11:35:00	100	68	5
Oct. 8, 2013 11:40:00	100	55	3
Oct. 8, 2013 11:45:00	100	72	6
Oct. 8, 2013 11:50:00	100	66	6
Oct. 8, 2013 11:55:00	100	81	6
Oct. 8, 2013 12:00:00	100	55	3
Oct. 8, 2013 12:05:00	100	64	5

Stores the time displayed where the cursor is placed.

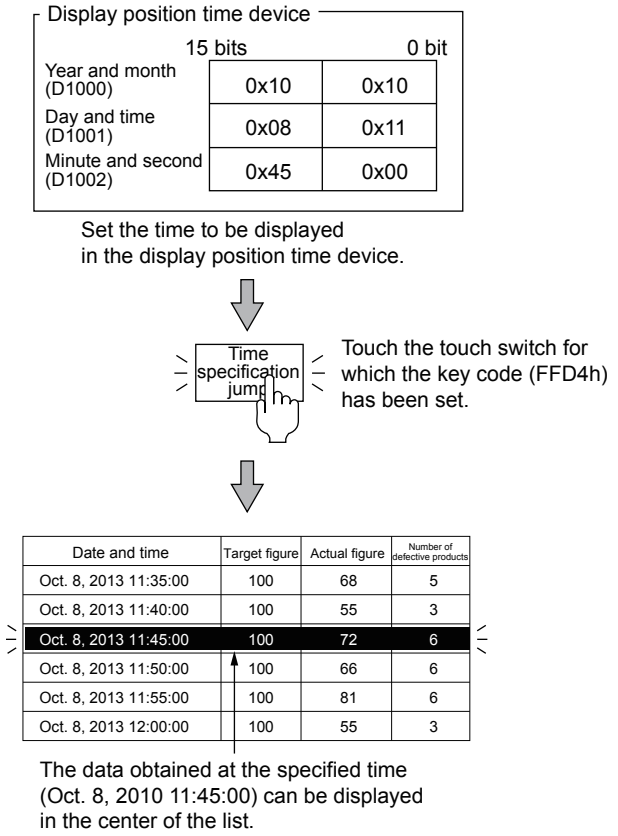
Cursor move

Date and time	Target figure	Actual figure	Number of defective products
Oct. 8, 2013 11:35:00	100	68	5
Oct. 8, 2013 11:40:00	100	55	3
Oct. 8, 2013 11:45:00	100	72	6
Oct. 8, 2013 11:50:00	100	66	6
Oct. 8, 2013 11:55:00	100	8	6
Oct. 8, 2013 12:00:00	100	55	3
Oct. 8, 2013 12:05:00	100	64	5

Data displayed where the cursor is placed at the instant when a draw processing stops is stored with the timing that the cursor is displayed/moved.

5) **[Display Position Time Device]**

Item	Description
[Display Position Time]	Displays the data of a specified date and time. (Time specification jump function) Set a device for [Device] in which a specified date and time are stored.

Item	Description
[Device]	Set a device in which a specified date and time are stored. ➟6.1.2 How to set devices The successive devices from a set device are set to store the data of year and month, day and hour, and minute and second. By using [Display Position Time Device] and a touch switch, the logging data obtained at a specified date and time can be displayed in the center of the historical data list display. (The cursor is displayed in the position of the logging data obtained at a specified time.) If logging data are not obtained at a specified date and time, the logging data obtained at the nearest date and time is displayed. • Specification of the time which can be set The data type is BCD16 (binary coded decimal). The data range varies with the GOT model. GT27, GT25, GT23, and GS25: Jan. 1, 2000 to Dec. 31, 2099 GT21 and GS21: Jan. 1, 2000 to Dec. 31, 2037 • Required settings*1 • Operation example The following shows an example of a time specification jump function operation. Example) When setting D1000 as the display position time specification device and displaying the data of Oct.8, 2010 11:45:00  For precautions of the time specification jump function, refer to the following. ➟8.10.3 Precautions for a historical data list display object

*1 Place the following objects on the screen and set them.

Object	Settings
Switch, key code switch	Read from the library of GT Designer3 or create them. ➟8.10.2 ■5 Displaying data obtained at a specified time When creating the objects, set [Action] of [Code Setting] to [Display Position Time Device] for each object. ➟8.2 Placing a Touch Switch
Historical Data List Display	Select [Display Position Time] in the [Extended] tab and set a device. ➟■3 [Extended] tab

6) **[KANJI region]**

Select the KANJI region of the displayed text.

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]

• [China(Big5)-Gothic]

7) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

• [Front]

• [Back]

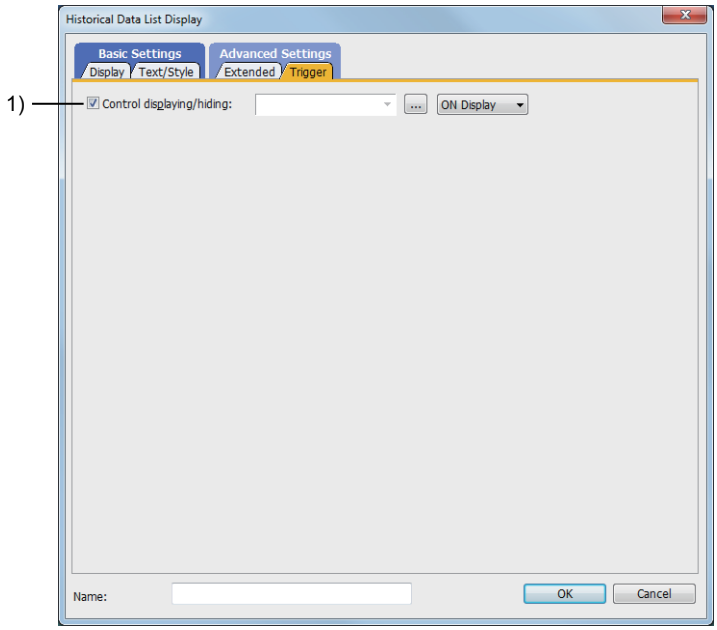
8) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

• [ON Display]

• [OFF Display]

➟6.1.2 How to set devices

8.10.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➡5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.11 Placing an Alarm Display

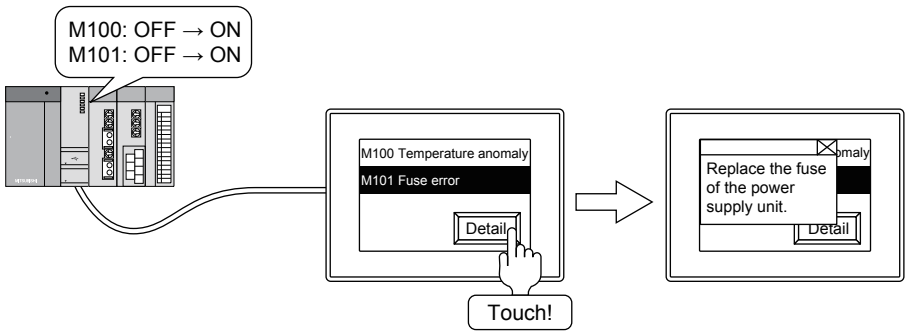
For how to place and set the alarm display, refer to the following.

➟9.1.5 Viewing alarm events (Alarm display)

8.12 Placing a Simple Alarm Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With this function, a user-created comment can be displayed as an alarm message when an alarm occurs.
When multiple devices turn on, a comment is displayed in the order in which comments are set.



For details of alarms, refer to the following.

➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])

8.12.1 Specifications of the simple alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 24 objects can be placed.
- For GT21 and GS21
  One object can be placed.

■2 Detecting alarm occurrences and resets

Alarm occurrences and resets are detected only while the GOT displays a screen on which a simple alarm display object is placed.
If you switch the screen having no simple alarm display object to another screen having a simple alarm display object, the time of screen switching is displayed as the time of occurrence of an alarm event.
To detect alarm events regardless of the displayed screen, use an alarm display (user) object.

➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])

■3 Displaying the time of occurrences

For the time of occurrences, the clock data of the GOT is used.
For the precautions and restrictions of the clock function which manages the GOT clock data, refer to the following.

➟5.3.5 Setting the GOT time setting method ([Time Setting])

■4 Comments displayed in simple alarm displays

For the comments to be displayed, use a comment group.
For details of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

8.12.2 How to use the simple alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the simple alarm display

Place simple alarm displays on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing simple alarm displays

Edit simple alarm displays that have been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting simple alarm displays

Set simple alarm displays that have been placed on the screen editor.

Common setting of objects

➟6.5.5 Common setting for objects

Simple alarm display settings

➟8.12.4 [Simple Alarm Display] dialog

■4 Number of alarms on display

Select whether to display just one of alarms that have occurred or display more.

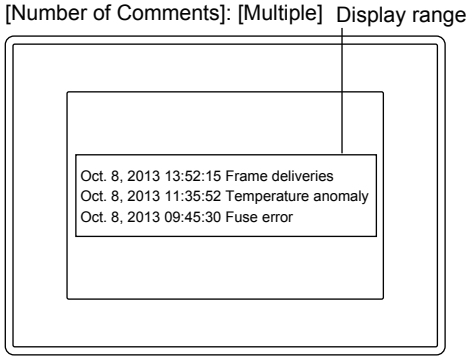
➟8.12.4 ■1 [Device] tab

• Displaying multiple alarms

One alarm is displayed in one row.

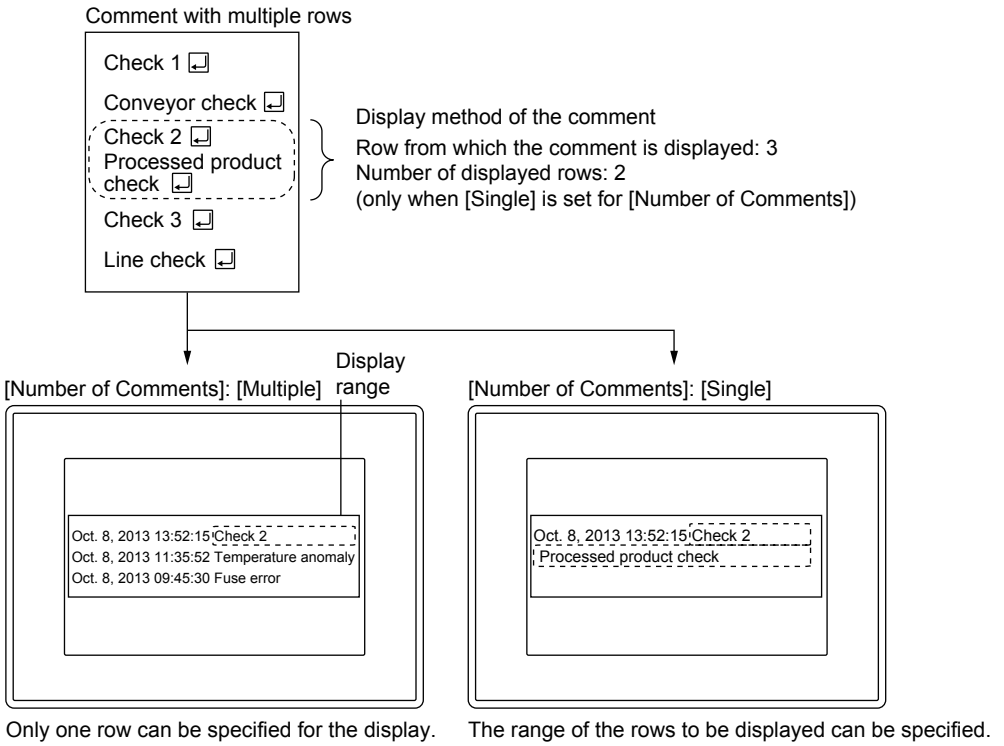
The part that cannot be displayed within a row is not displayed.

A comment that involves multiple rows cannot be displayed from its second row.



When multiple alarms are displayed, any one of multiple rows that a comment involves can be set as the target for the display.

Example) Displaying any one of six rows that a registered comment involves



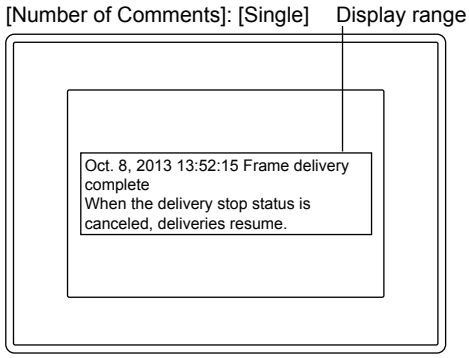
Only one row can be specified for the display.

The range of the rows to be displayed can be specified.

• Displaying one alarm

The part that overflows from the first row goes down to the next line.

A comment that involves multiple rows is displayed in more than two rows as long as the comment length is within the display range.



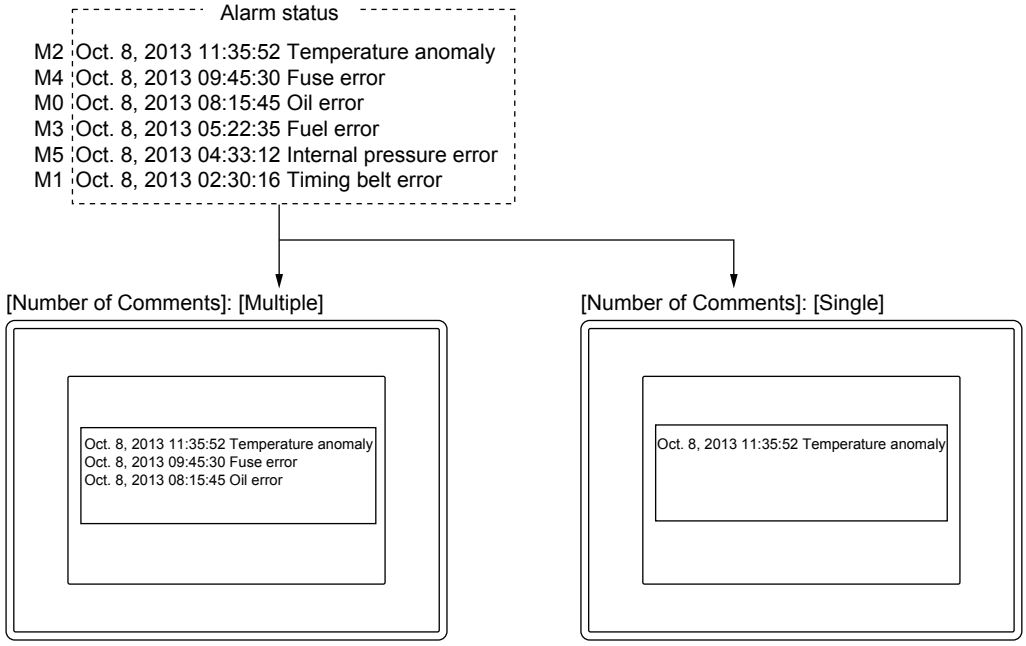
■5 Display order

Set the type of the order in which multiple alarms are displayed.

By the setting, alarms can be displayed in order of time of their occurrences or device number.

➟8.12.4 ■2 [Style] tab

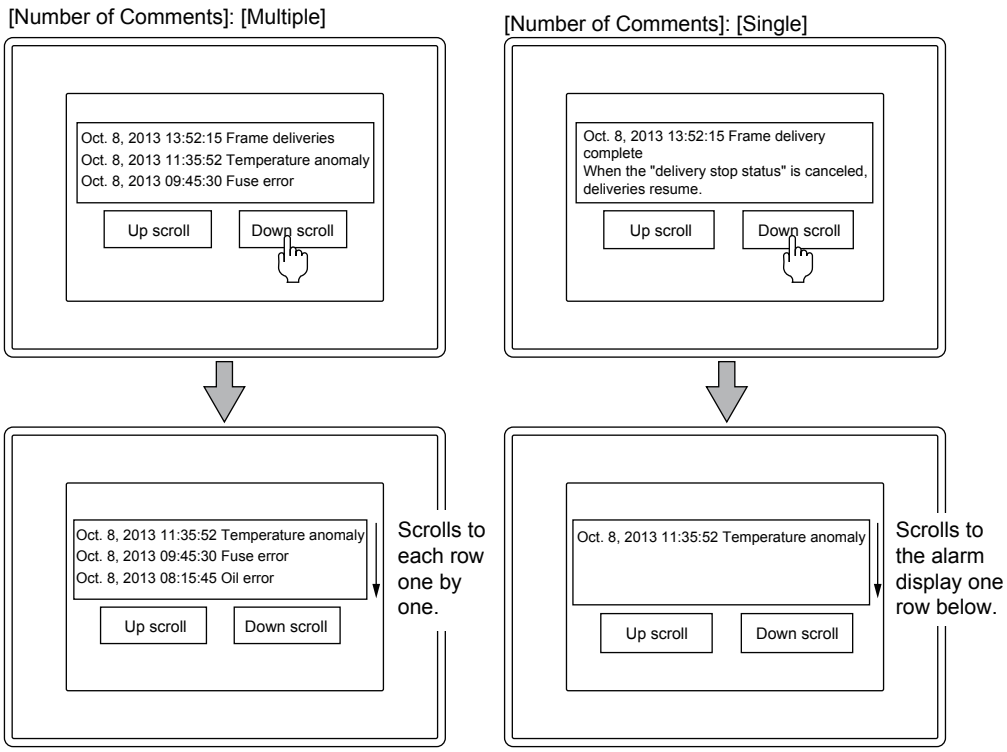
Example) When displaying alarms in order of time of occurrences from the latest



■6 Scroll

The part of a comment that extends off the display range can be checked by scrolling the simple alarm to the part.
To perform scrolling, create a touch switch for the system alarm.

➟■9 Touch switches for simple alarm displays



■7 About the detail display

The detail display can be set only when [Multiple] is selected for [Number of Comments] in the [Device] tab.

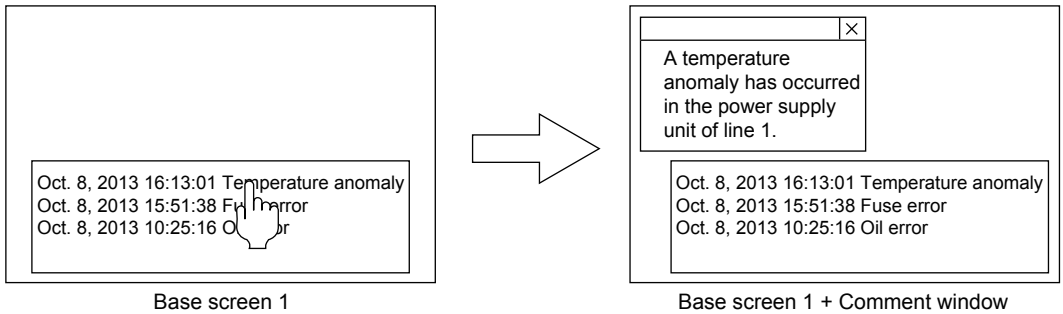
➟8.12.4 ■1 [Device] tab

(1) Available screens

When setting the causes of alarms and corrective actions as the target for the detail display, the screen used for the display can be selected from three types.

(a) Comment window

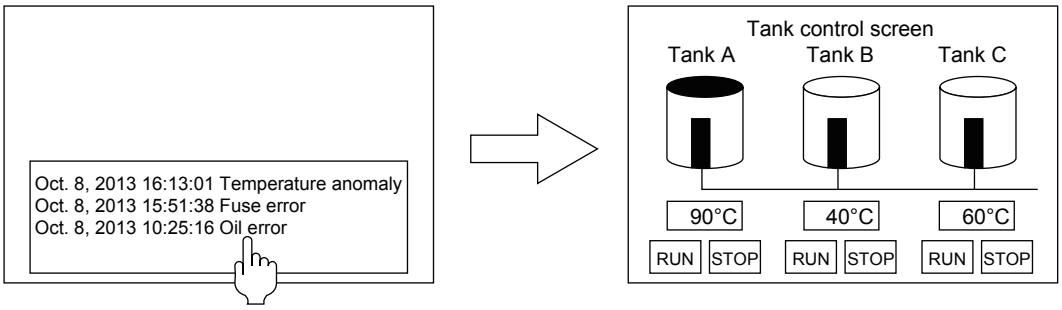
Displays a comment a user registers.
In the detail display, a comment different from the one for the simple alarm can be displayed.



Base screen 1 | Base screen 1 + Comment window

(b) **Base screen**

Displays a specified base screen.

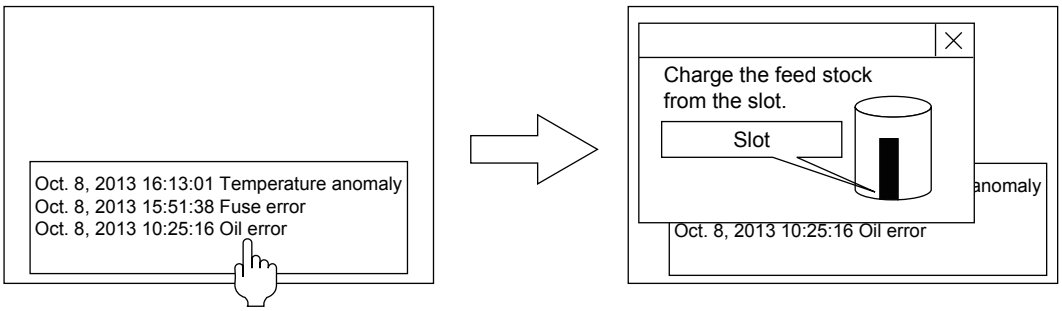


Base screen 1 Base screen 5

(c) **Window screen**

Displays a specified window screen.

A specified window screen can be displayed using overlap window 1.



Base screen 1 Base screen 1 + Window screen 10

(2) Relation between the screen where the simple alarm is set and the screen used for the detail display

Switching: Switches the screen where the simple alarm is set to the screen used for the detail display.

Simultaneous display: Leaves displayed the screen where the simple alarm is set and displays the screen used for the detail display.

Screen for which the simple alarm is set	Screen for the detail display		
	Comment window	Window screen	Base screen
Base screen	Simultaneous display	Simultaneous display	Switching
Overlap window 1		Switching	Simultaneous display
Overlap window 2		Simultaneous display	
Overlap window 3			
Overlap window 4			
Overlap window 5			
Superimpose window 1			
Superimpose window 2			

(3) Specify the comment number to be displayed or the offset value of the screen number

When [Detail No. Offset] in the [Device] tab is set, the offset value for the detail display can be specified.

➟8.12.4 ■1 [Device] tab

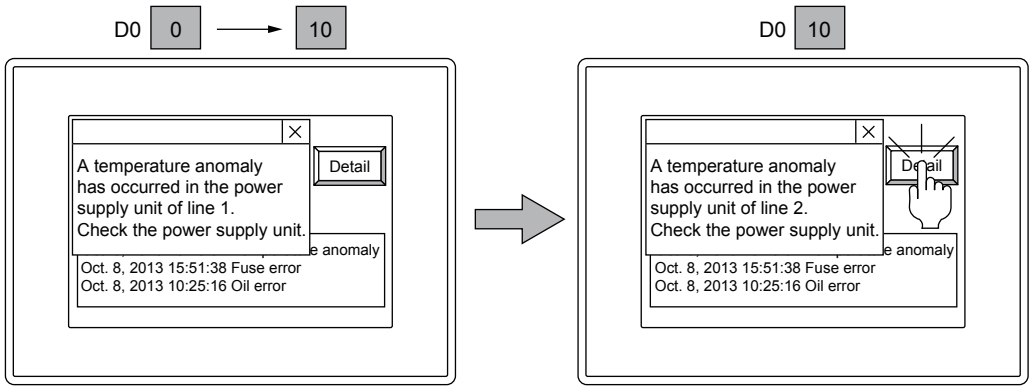
The targets which can be specified by the offset value for the detail display are as follows.

- Comment number to be displayed in the comment window
- Base screen numbers and window screen numbers

While monitoring with the GOT, you can switch the comment number or screen number with a device.

Example) When setting D0 for [Detail No. Offset] and registering comments as follows

Comment No.	Comment
1	A temperature anomaly has occurred in the power supply unit of line 1. Check the power supply unit.
2	Replace the fuse of the power supply unit of line 1.
. . .	. . .
11	A temperature anomaly has occurred in the power supply unit of line 2. Check the power supply unit.
12	Replace the fuse of the power supply unit of line 2.



Comment No.1 is displayed.

Comment No.11 is displayed.

Point

Changing comments of the simple alarm

Comments of the simple alarm cannot be changed in [Detail No. Offset].

When changing a comment of the simple alarm with an offset device, set [Comment No. Offset] in the [Extended] tab.

➟8.12.4 ■3 [Extended] tab

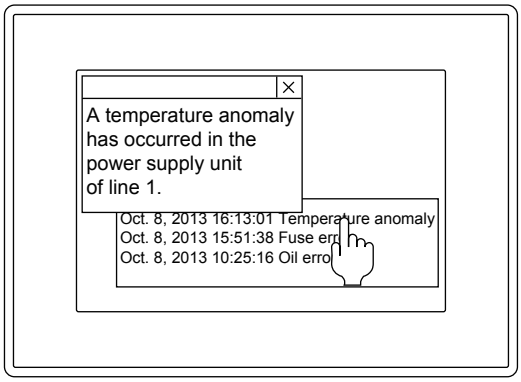
(4) Display method

Select the method of displaying the detail display from the following two types.

(a) **Touch operation**

Touch the simple alarm directly to display the detail display.

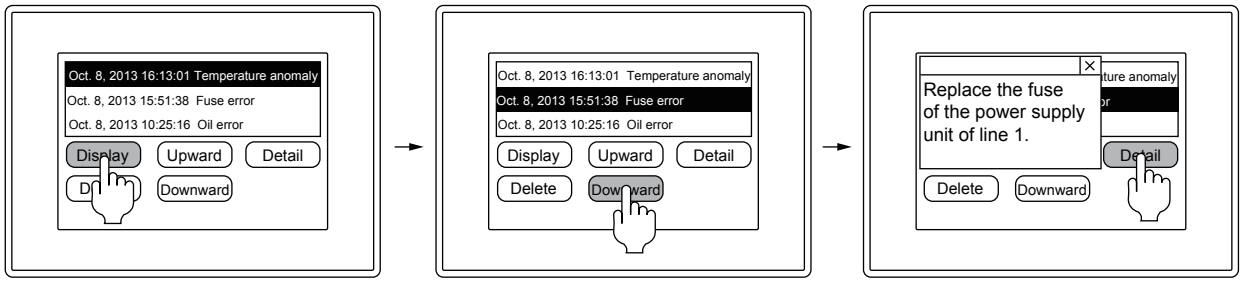
➥■8 Operating by touching the simple alarm directly



(b) **Touch switch**

Create a touch switch for the detail display to display the detail display.

➥■9 Touch switches for simple alarm displays



Display the cursor.

Move the cursor to the alarm for the detail display (upward/downward).

Display the detail display.

■8 Operating by touching the simple alarm directly

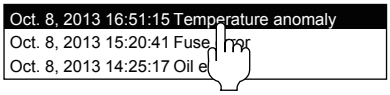
By setting [Touch Mode] in the [Device] tab, the following operations can be performed.

➥8.12.4 ■1 [Device] tab

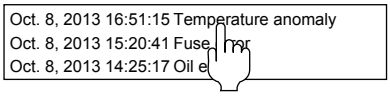
- Selecting [Selection] for [Touch Mode].

  An alarm can be selected at the direct touch of the simple alarm display.

The touched alarm is selected.



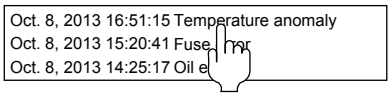
When the alarm is touched again, the selection of the alarm is canceled.



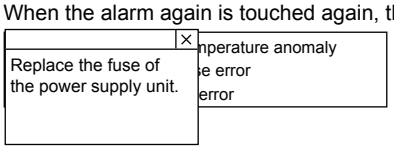
- Selecting [Operation] for [Touch Mode]

  The detail display can be displayed at the direct touch of the simple alarm display.

The touched alarm is selected.



When the alarm again is touched again, the detail display is displayed.

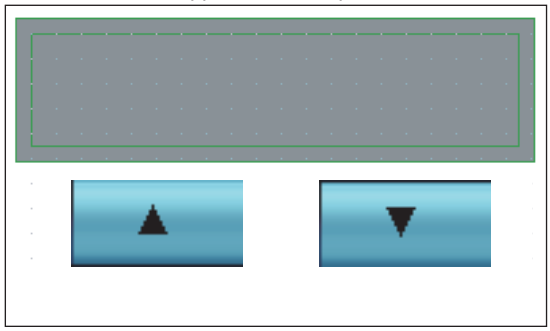


■9 Touch switches for simple alarm displays

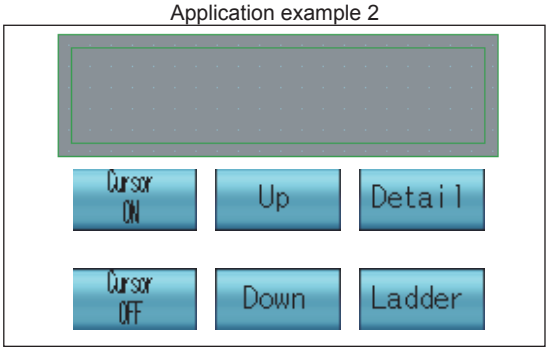
Touch switches for the simple alarm display is available by reading from the library of GT Designer3.
The characters and shapes on the touch switches can be changed by a user.
When key codes are set for touch switches, touch switches for the simple alarm display can be created by a user.

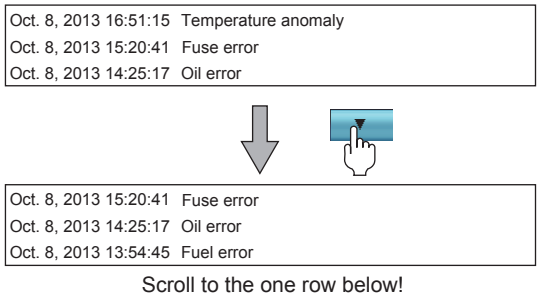
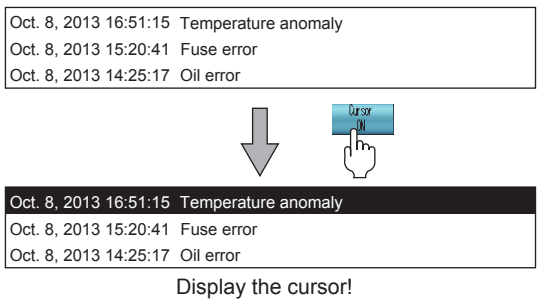
➟8.2.4 [Switch] dialog
8.2.11 [Key Code Switch] dialog

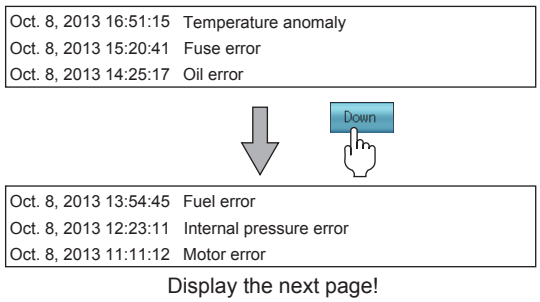
Application example 1

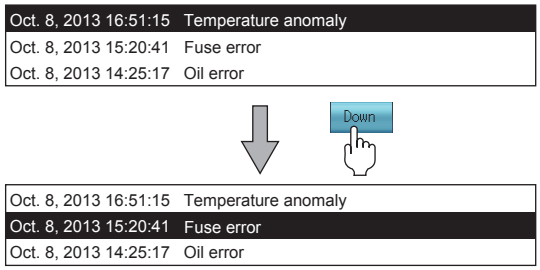
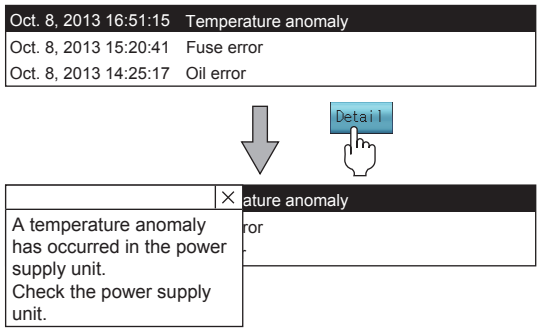


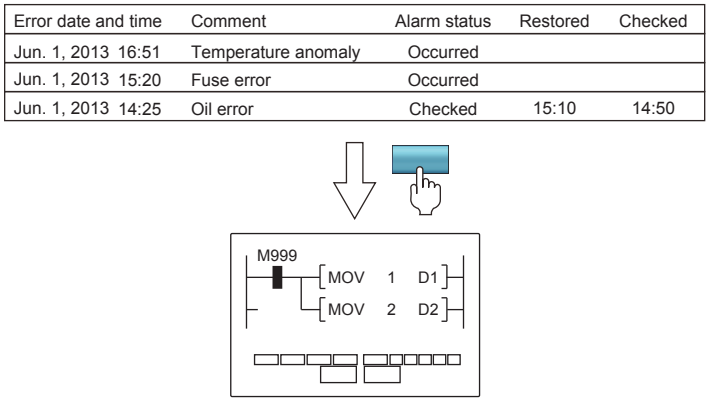
Application example 2

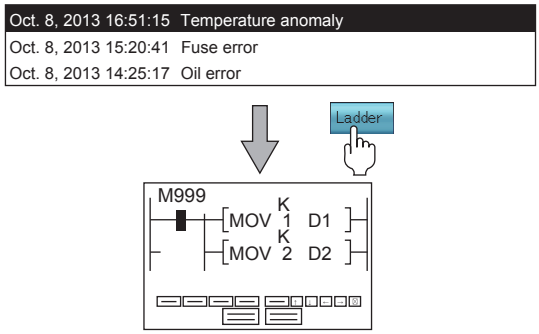
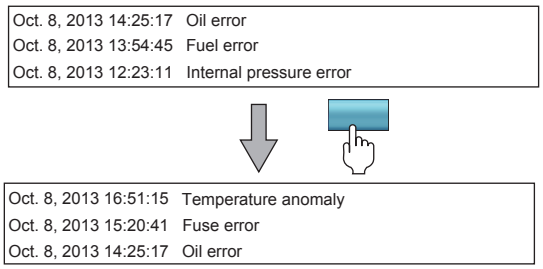


Touch switch	Key code	Description
Scroll up by one line	00F2h	Switches the display between one row above and one row below. This function is available only when the cursor is hidden.  Scroll to the one row below!
Scroll down by one line	00F3h	
Show cursor	FFB0h	Displays or deletes the cursor.  Display the cursor!
Hide cursor	FFB1h	

<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Move cursor upward
 </td><td>FFB2h</td><td rowspan="3">• When the cursor is hidden
Displays the previous page or next page. (by page)
 
Display the next page!

• While the cursor is displayed
Moves the cursor upward or downward. (by row)
 
Move the cursor!</td></tr>
<tr><td>Move cursor downward
 </td><td>FFB3h</td></tr>
<tr><td>Display detail
 </td><td>FFB8h</td><td>Displays the detail screen for a selected alarm.
 
Display the detail screen!</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (iQ-R/iQ-L Ladder))</td><td>FFBAh</td><td rowspan="3">Initiates the coil search and factor search for an alarm device automatically in a specified program file and displays the device in the sequence program monitor. (One-touch ladder jump function)
Specify the search mode and the program file to be searched in the [User Alarm Observation] dialog.
➟9.1.2 ■7 [User Alarm Observation] dialog

 
The ladder monitor screen of the specified device is displayed.</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (Ladder))</td><td>FFBDh</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (iQ-F Ladder))</td><td>FFC3h</td></tr>
</table>

Touch switch	Key code	Description
Display ladder Ladder	FFBCh	Not available to GT21 and GS21. Initiates the coil search and factor search for an alarm device automatically in a specified program file. The hit is displayed on one of the following screens. (One-touch ladder jump function) • Ladder monitor screen of the FX ladder monitor • Ladder monitor screen of the sequence program monitor (Ladder) Specify the search mode and the program file to be searched in the [User Alarm Observation] dialog. ➟9.1.2 ■7 [User Alarm Observation] dialog  Display the sequence program monitor! (The ladder of the specified device is displayed.)
Display first alarm	FFBFh	Displays the first of the alarms, which are sorted in the order set for [Sort], in the top row. While the cursor is being displayed, touching this touch switch hides the cursor. Example) When [Latest] is selected for [Sort]  Display the first alarm!

Point

Touch switches working differently depending on the display status

There are touch switches working differently depending on the display status.

When the cursor is hidden, the move cursor upward (FFB2h) and move cursor downward (FFB3h) display the previous page and next page respectively by page. When the cursor is hidden, they move the cursor upward and downward respectively by row.

■10 Operations performed using the object gesture function

The display of objects can be operated using gestures.

For operations with gestures, refer to the following.

➟11.13 Operating Objects by the Gesture (Object Gesture Function)

8.12.3 Precautions for a simple alarm display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Text display in the row where the cursor is inserted

If the pattern of the background color of the screen or [Shape Color] in the [Style] tab is set to white, the text color and cursor color are shown in the same color, and the text in the row where the cursor is inserted becomes invisible.
To display the text in the row where the cursor is inserted, set the background color of the screen or [Shape Color] in the [Style] tab to a color other than white.

➟8.12.4 ■2 [Style] tab
2.5.1 Creating a screen

■2 Monitoring array-type global labels

When [Continuous] is selected for [Device No.] in the [Simple Alarm Display] dialog ([Device] tab) and an array-type global label is set, the device assigned for monitoring may not be monitored properly.

- Directly set the device assigned to the global label for the simple alarm display.
- Select [Random] for [Device No.] in the [Simple Alarm Display] dialog ([Device] tab).
- Use a multiple of 8 to set the number of array elements for the global label on GX Works3.

■3 Monitoring a primitive data type global label set using the consecutive device setting (one point)

When [Continuous] is selected for [Device No.] in the [Simple Alarm Display] dialog ([Device] tab) and a primitive data type global label is set with one device point, the system alarm (326: The data type of labels/tags do not match.) occurs.
To solve the above problem, take one of the following corrective actions.

- Select [Random] for [Device No.] in the [Simple Alarm Display] dialog ([Device] tab).
- Set an array-type global label.

8.12.4 [Simple Alarm Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Alarm Display] → [Simple Alarm Display] from the menu.
Step 2 Click the position where you place the simple alarm display. Placing the simple alarm display is complete.
Step 3 Double-click the simple alarm display which has been placed to display the setting dialog.

➟■1 [Device] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab

■1 [Device] tab

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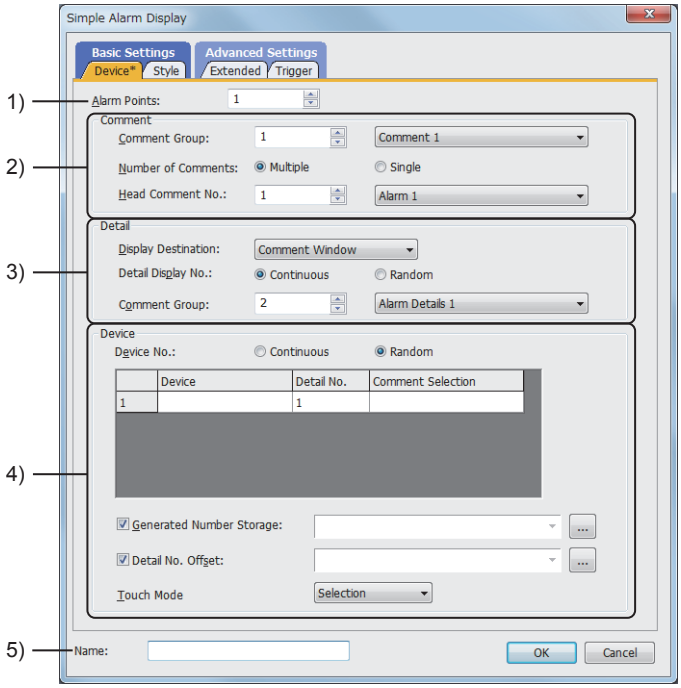


1) **[Alarm Points]**

Set the number of devices to be monitored.

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  The setting range is [1] to [8192].
- For GT21 and GS21

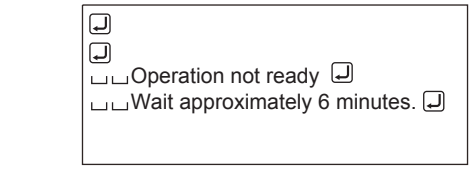
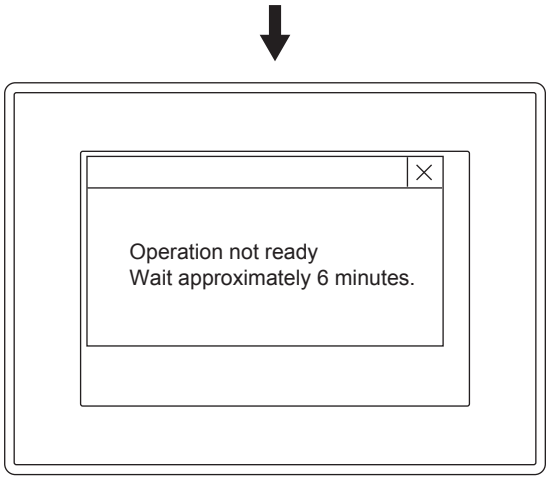
  When [Continuous] is selected for [Device No.], the setting range is [1] to [1024].

  When [Random] is selected for [Device No.], the setting range is [1] to [512].

2) **[Comment]**

Item	Description
[Comment Group]	Set the comment group number to be used. The setting range is [1] to [500].
[Number of Comments]	Select the number of comments to be displayed in the display frame. The following shows the items to be selected. • [Multiple] • [Single]
[Head Comment No.]	Set the comment number displayed when an alarm occurs. The setting range is [1] to [32767]. The comment number set for this item is assigned to the start device in the device tab. From the number set for this item, numbers are set successively. The number of the set successive numbers is the same as that of the devices to be monitored. Example) Start device: M100 [Head Comment No.]: 1 Monitored device — Comment No. (basic comment) M100 ..... 1 Temperature anomaly ——— Head comment No. M101 ..... 2 Fuse error M102 ..... 3 Oil error } The comments that have given the successive Nos. counted from the head comment No. are set.

3) **[Detail]**

Item	Description
[Display Destination]	This item can be selected only when [Multiple] is selected for [Comment]. Select the setting method of the detail display. The following shows the items to be selected. • [Not Display]: Does not display the detail display. • [Comment Window]: Displays the detail display in the window for the detail display. In the comment window, registered comments are displayed. • [Base Screen] Displays a base screen for the detail display. • [Window Screen] Displays a window screen for the detail display. The window screen is displayed using overlap window 1. The following shows the method of displaying the comment window. • Number of characters that can be displayed in a comment window • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 Up to 429 one-byte characters (11 lines of 39 characters) are displayed. Up to 209 one-byte characters (11 lines of 19 characters) are displayed. • For GT2107-W, GT2105-Q, GT2104-R, and GS21 Up to 161 one-byte characters (7 lines of 23 characters) are displayed. Up to 77 two-byte characters (7 lines of 11 characters) are displayed. • For GT21-P Up to 203 one-byte characters (7 lines of 29 characters) are displayed. Up to 98 two-byte characters (7 lines of 14 characters) are displayed. • Display position of the comment window A comment window is displayed on the base screen. The window can be moved and closed in the same way that operates window screens. • Display of comments Text size is fixed to one time high and one time wide. Regardless of the settings made when comments are registered, a blink and HQ characters are not displayed. • Display of comment rows From the top left of the comment window, the registered comments are displayed. When a comment is longer than the display range of the comment window, the comment is wrapped around to be displayed. To display the comment in the center of the comment window, adjust the position of the comment by inserting line feeds.  When the comment is registered  When the comment window is viewed

Item	Description
[Detail]	When [Comment Window], [Base Screen], or [Window Screen] is selected for [Display Destination], this item can be selected. Select the method of setting comment numbers, window screen numbers, or base screen numbers. The following shows the items to be selected. • [Continuous]: Sets successive comment numbers, window screen numbers, or base screen numbers starting from a set comment number, window screen number, or base screen number. • [Random] Sets numbers one by one.
[Comment Group]	This item can be selected only when [Comment Window] is selected for [Display Destination]. Set the comment group assigned to the comment to be displayed in the comment window. The setting range is [1] to [500].

4) **[Device]**

Item	Description
[Device No.]	Select the display method of the device to be monitored. The following shows the items to be selected. • [Continuous]: Sets successive devices starting from a set device. • [Random]: set device numbers one by one.
[Device]	Set the device to be monitored. ➟6.1.2 How to set devices
[Detail]	When [Comment Window], [Base Screen], or [Window Screen] is selected for [Display Destination], this item can be selected. Set a comment number, window screen number, and base screen number. The setting range is [1] to [32767].
[Comment Selection]	Displays the comment and screen title set for [Detail No.] of [Device]. A comment number, window screen number, or base screen number can be set by selecting a comment or screen title for this item.
[Generated Number Storage]	Set a device in which the number of alarms that have occurred (number of devices that have turned on) is stored. ➟6.1.2 How to set devices
[Detail No. Offset]	When [Comment Window], [Base Screen], or [Window Screen] is selected for [Display Destination], this item can be set. The display of the detail display can be switched with a single device value. The data length of the set device is fixed to 16 bits. The device value set for this item is added to the comment number, base screen number, or window screen number set for [Detail No.] of [Device]. ➟6.1.11 Offset
[Touch Mode]	This item can be selected only when [Multiple] is selected for [Comment]. Select the operation performed when the simple alarm display is touched. The following shows the items to be selected. • [None] Disables touch operations. • [Selection] Selects a touched alarm. • [Operation] Displays the detail screen of a touched alarm.

5) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Style] tab

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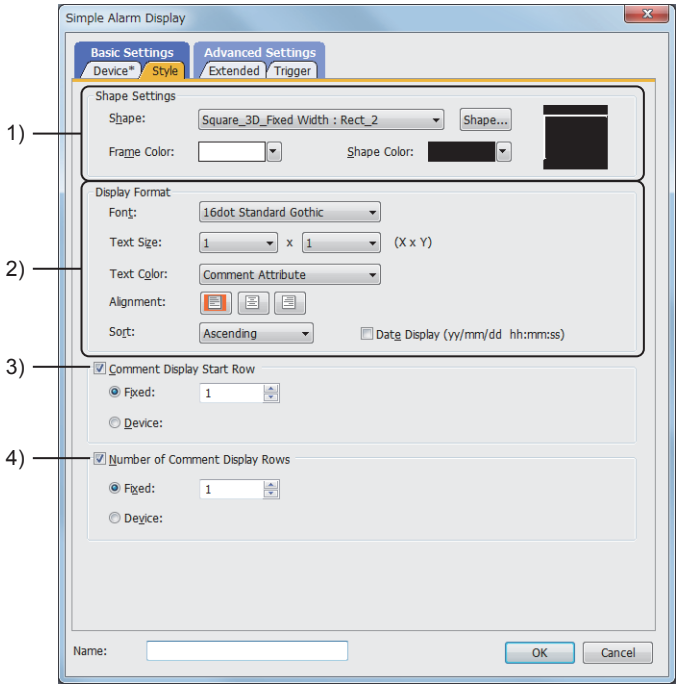

1) [Shape Settings]

Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 ■1 Setting object shapes
[Frame Color]	Select the frame color of the shape. ➟6.4 Color Settings
[Shape Color]	Select the color of the shape. ➟6.4 Color Settings
Preview	Displays the preview of the screen.

2) [Display Format]

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) When displaying a comment in HQ character, set [High Quality Font] for the comment group and set an even multiple of the text size. If an odd multiple of the text size is set, the comment is not displayed in HQ character.
[Text Size]	Set the text size to be displayed. ➟1.2.5 Font specifications
[Text Color]	Set the text color. ➟6.4 Color Settings The following shows the items to be selected. • [Fixed]: Displays comments only in the color set as a text color. • [Comment Attribute] Applies colors of comments according to the character attribute set for the comment group, and displays the comments.
[Alignment]	Set the horizontal position of the text.

Item	Description
[Sort]	Select the type of the order in which alarms are displayed. The following shows the items to be selected. • [Ascending] • [Descending] • [Oldest] • [Latest] When the devices to be monitored are set randomly and [Ascending] or [Descending] is selected, alarms are displayed in the order in which the devices are set.
[Date Display (yy/mm/dd hh:mm:ss)]	Displays the date and time of the occurrences of alarms in the simple alarm display. For the year, the lower 2 digits are displayed. The time is displayed in the 24-hour time format.

3) **[Comment Display Start Row]**

When setting a comment involving multiple rows, set the row from which the comment is displayed.
Depending on the selection, the method of setting the row from which the comment is displayed varies.

- [Fixed]

  Set by entering directly.
  The setting range is [1] to [32767].
- [Device]:

  Set the device value as the start row to be displayed.

  ➟6.1.2 How to set devices

  If the comment is displayed in blank characters, check if the row from which the comment is display is set outside the range of the comment rows.

4) **[Number of Comment Display Rows]**

The item can be set only when [Single] is selected for [Number of Comments] in the [Device] tab.
When setting a comment involving multiple rows, set the number of the rows to be displayed.
Depending on the selection, the method of setting the number of the rows to be displayed varies.

- [Fixed]

  Set by entering directly.
  The setting range is [1] to [32767].
- [Device]:

  Set the device value as the number of rows to be displayed.

  ➟6.1.2 How to set devices

■3 [Extended] tab

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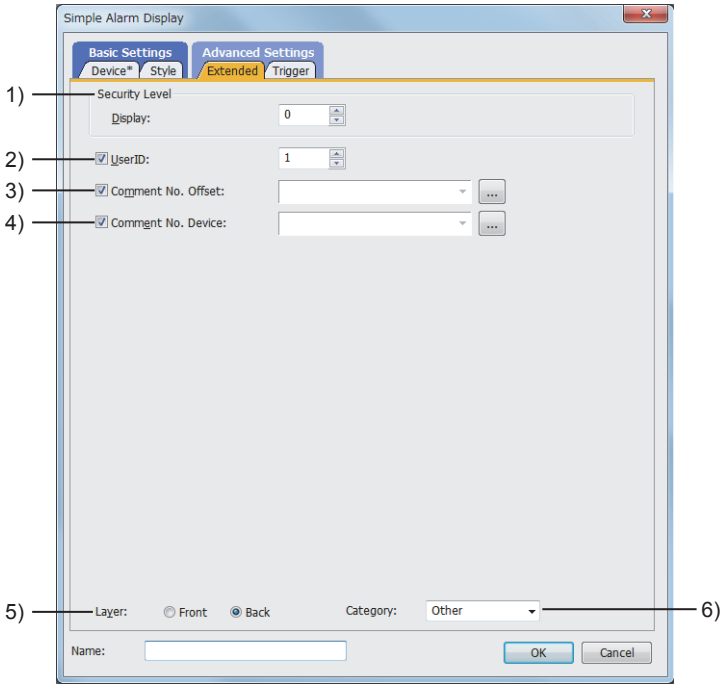


1) **[Security Level]**

Set a security level when using the security.

The setting range is [0] to [15].

If you do not use the security, select [0].

2) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

With the setting of user ID, the target ID (object) for an operation can be specified with a touch switch. Hence touch switch operations can be performed as required.

For secure operations of the touch switches for system alarm displays, set user ID.

Set the user ID of the object to be operated with a touch switch in [User ID for a key input] or [Individually set user ID for key input].

For touch switches, refer to the following.

➟8.2.4 [Switch] dialog
8.2.11 [Key Code Switch] dialog

3) **[Comment No. Offset]**

Comments displayed in the simple alarm can be switched with a single device value.

The device value set for this item is added to the comment number set for [Head Comment No.] of [Device].

➟6.1.11 Offset

4) **[Comment No. Device]**

Set a device that stores the comment number of an alarm.

Depending on the selection for [Number of Comments], the comment number assigned to the alarm to be stored in the device differs.

- If [Number of Comments] is [Multiple]
  The comment number assigned to the alarm with which the cursor is displayed is stored.
- If [Number of Comments] is [Single]
  The comment number assigned to the alarm on display is stored.

When displaying the cursor, make the following settings.

- Select [Selection] for [Touch Mode].
- Place the touch switches for the simple alarm display

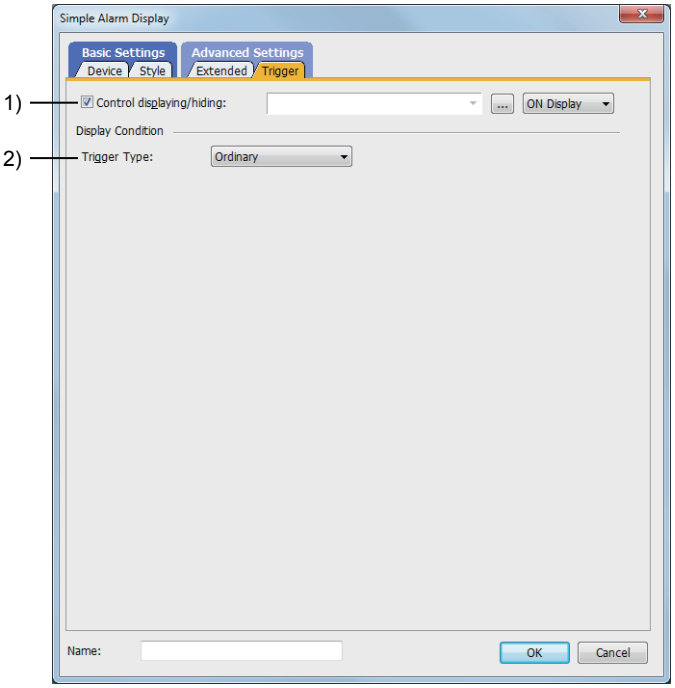
➟8.2.4 [Switch] dialog
8.2.11 [Key Code Switch] dialog

5) **[Layer]**
Not available to GT21 and GS21.
Switches layers to be placed.
The following shows the items to be selected.
- [Front]
- [Back]

6) **[Category]**
Select the category to assign the object.
➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

➟6.2 Setting Trigger Types

8.12.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the simple alarm display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

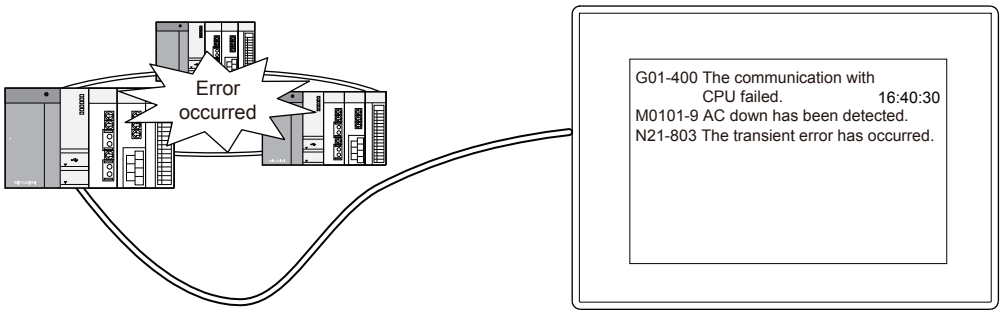
➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying the key codes set to the input keys when the keys are input to text input, touch switch, or other objects (Write device)	[Key Code Input]
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]

8.13 Placing a System Alarm Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With this function, error codes and error messages can be displayed when errors occur in the GOT, controllers, and networks.
The status an error causes and the cause of the error can be checked.
The registration of the comments to be displayed in the system alarm is not necessary. (They are registered in the GOT)



For details of alarms, refer to the following.

➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])

8.13.1 Specifications of the system alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects arrangeable on one screen

One system alarm display can be placed on one screen.

■2 Types of system alarms

There are the following three types of system alarms.

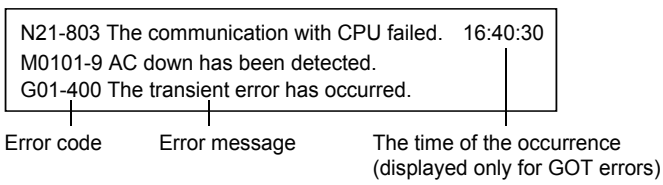
- CPU error
  Indicates an error of a controller.
- GOT error
  Indicates an error of the GOT.
  A GOT Mobile error, which occurs on a GOT Mobile function client, is categorized as a GOT error.
- Network error
  Indicates an error of the communication unit mounted on the GOT.

■3 How to collect data

The data of alarm status is always collected in the cycle of 3 seconds and retained in the GOT, even if a screen on which no system alarm is placed is displayed.

■4 Contents displayed in the system alarm

In the system alarm, error codes, error messages, and the time of occurrence are displayed.
The error codes and the error messages to be displayed are registered in the GOT as the default, so creating by a user is not necessary.



■5 Displaying the time of occurrences of alarms

For the time of occurrences, the clock data of the GOT is used.
For the precautions and restrictions of the clock function which manages the GOT clock data, refer to the following.

➟5.3.5 Setting the GOT time setting method ([Time Setting])

8.13.2 How to use the system alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing the system alarm display

Place the system alarm display on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing the system alarm display

Edit the system alarm display that has been placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Setting the system alarm display

Set the system alarm display that has been placed on the screen editor.

Common setting of objects

➟6.5.5 Common setting for objects

System alarm display settings

➟8.13.4 [System Alarm Display] dialog

■4 How to display alarms

(1) Maximum number of the alarms that can be displayed

The system alarm displays three types of alarms in different rows for each type, and up to three rows can be displayed.
When a new alarm is detected, the alarm display being displayed is updated.
Example) When a controller detects a new alarm (parameter error)

The error display of controllers is updated.
(M0101-9→M0101-104)

(2) Order of priority in which alarms are displayed

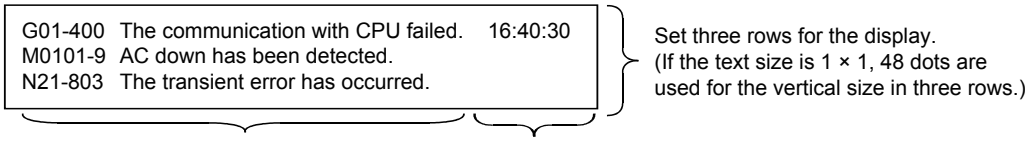
If the display range is two rows or less, alarms are displayed in the following order of priority.

1) GOT error
2) CPU error
3) Network error

When the number of the occurrences of alarms exceeds the display range, low-priority alarms cannot be displayed.
Also, an error code, error message, or time that cannot be displayed in one row of the display range is not displayed.

■5 How to adjust the display range

To set a display range in which alarm messages are fully displayed, adjust the range as shown below.
If the screen size of the GOT is smaller than the size with the following values, decrease the text size.



If the text size is 1 × 1, alarms are displayed with 576 dots.
Enlarge the size until the time of occurrences on the right is displayed.

■6 Corrective actions on the cause of the alarm of each type and error codes

For details, refer to the following manuals.

➟The instruction manual of the GOT to be used

8.13.3 Precautions for a system alarm display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for use

(1) Controllers for which system alarms are not displayed in the GOT

Errors which occur in the following controllers cannot be displayed in the system alarm of the GOT.
Check the errors with the software for the controllers.

- SIEMENS PLC CPU
- AZBIL equipment
- RKC temperature controller
- Inverter

(2) Deleting system alarms in the GOT

(a) **How to delete the messages of GOT errors**

GOT errors are not deleted from the system alarm even if the cause of the alarms is eliminated.
To delete the messages, turn on the following device for the system information function.

- GOT Error Reset signal (System signal 1-1.b13)

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

(b) **How to delete the messages of network errors**

The messages of network errors that occur in the CC-Link communication unit, MELSECNET/10 communication unit, and MELSECNET/H communication unit are not deleted even if the cause of the alarms is eliminated until the GOT is powered off or reset.

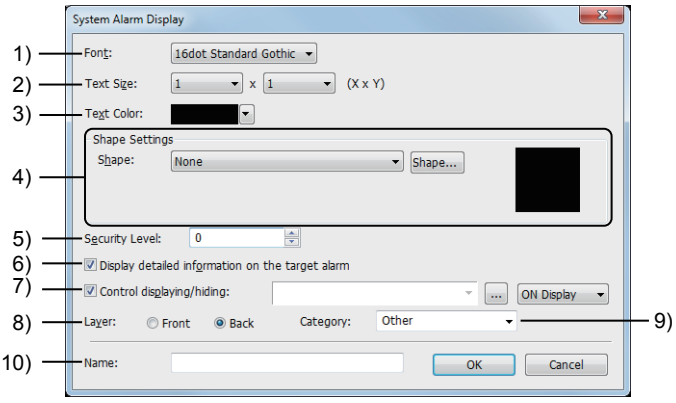
8.13.4 [System Alarm Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Alarm Display] → [System Alarm Display] from the menu.

Step 2 Click the position to place a system alarm display.

Step 3 Double-click the system alarm display to display the setting dialog.



1) **[Font]**

Select the font of the displayed text.

The following shows the items to be selected.

- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23 only)

2) **[Text Size]**

Set the text size to be displayed.

➟1.2.5 Font specifications

3) **[Text Color]**

Set the text color.

➟6.4 Color Settings

4) **[Shape Settings]**

Item	Description
[Shape]	Set a shape for an object. When [None] is selected, no figure is displayed. Click the [Shape] button to select shapes other than those in the list box. ➟6.5.5 ■1 Setting object shapes
[Frame Color], [Shape Color]	Select the color of the frame of the shape and shape.

5) **[Security Level]**

Set a security level when using the security.

The setting range is [0] to [15].

If you do not use the security, select [0].

6) **[Display detailed information on the target alarm]**

Displays detailed information added to system alarms.

7) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

8) **[Layer]**

Switches layers to be placed.
The following shows the items to be selected.

- [Front]
- [Back]

9) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

10) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

8.13.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the system alarm display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

■2 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Resetting system alarms and system information (GOT error code, GOT Error Detection signal) (Read device: System signal 1-1.b13)	[System Signal 1-1]

■3 GOT Internal Device

➟12.1.3 GOT special register (GS)

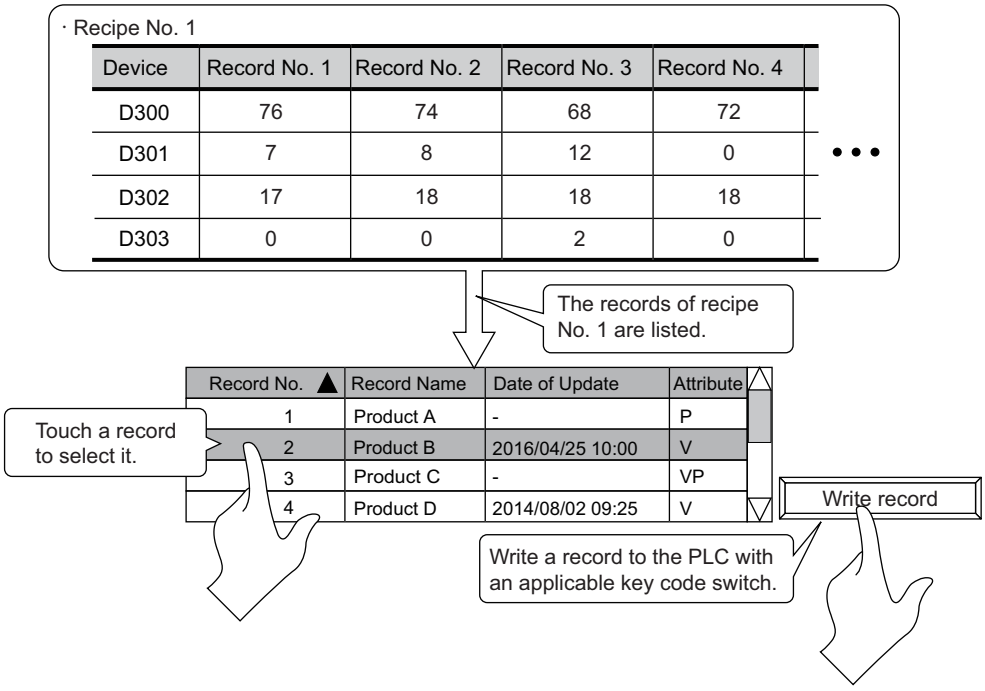
Function	Setting item
Storing the channel No. that has been assigned to the channel where a system alarm (GOT error) occurs (Write device)	GS262
Storing the channel No. that has been assigned to the channel where a system alarm (CPU error) occurs (Write device)	GS263
Storing the channel No. that has been assigned to the channel where a system alarm (network error) occurs (Write device)	GS264

8.14 Placing a Recipe Display (Record List)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The recipe display (record list) object lists the records of a recipe on the GOT.
You can perform the following manipulations on the records listed on the object by using applicable key code switches.

- Renaming a record
- Reading a record
- Writing a record
- Verifying a record
- Deleting a record



This object function must be used in combination with the recipe function.
For the details of the recipe function, refer to the following.

➟9.3 Executing the Batch Write or Batch Read on Multiple Devices ([Recipe])

8.14.1 Specifications of the recipe display (record list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the recipe display (record list).

■1 System application (extended function)

To use the recipe display (record list), a system application (extended function) of [Recipe Display (Record List)] is required.

Placing the recipe display (record list) incorporates the application into the package data automatically.

➟8.14.4 [Recipe Display (Record List)] dialog

To use the function on GT SoftGOT2000, the application is not required.

■2 Maximum number of objects on one screen

One recipe display (record list) object can be placed on one screen.

■3 Maximum number of objects displayed at one time

One recipe display (record list) object can be displayed at one time.

Multiple recipe display (record list) objects cannot operate simultaneously.

When a recipe display (record list) object is displayed on the GOT, even if you call up a screen having another recipe display (record list) object, the object does not appear on the GOT.

■4 Maximum numbers of recipes and record rows displayed on the object

The records of one recipe can be displayed on the recipe display (record list) object.

When the recipe number is specified using a device value, switching between recipes is available.

Up to 64 record rows can be displayed on the object.

■5 Key code switch

The recipe display (record list) is operable using key code switches.

Place the following key code switches on the screen as necessary.

Key code	Operation	Description
FFF0h	Show cursor	Display the cursor on a record row to select the row.
FFF1h	Hide cursor	Hide the cursor.
FFEFh	Update list	Update the list.
FFF4h	List Displacement Scroll Up	Scroll the list up the specified number of rows.
FFF5h	List Displacement Scroll Down	Scroll the list down the specified number of rows.
FFF6h	List Page Scroll Up	Scroll the list up one page.
FFF7h	List Page Scroll Down	Scroll the list down one page.
FFF2h	Move cursor upward	Move the cursor up one row.
FFF3h	Move cursor downward	Move the cursor down one row.
FFCAh	Rename record	Rename a record.
FFCBh	Save record	Read a record from the PLC.
FFCCh	Load record	Write a record to the PLC.
FFCDh	Verify record	Verify the device values of a record against those of the PLC.
FFB6h	Delete record	Delete a record.
FFCEh	Cancel recipe operation	Cancel the reading, writing, or verifying of a record.

8.14.2 How to use the recipe display (record list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting the recipe function

To use the recipe display (record list), the recipe function must be set.

➟9.3.3 How to use the recipe

■2 Placing a recipe display (record list)

The following shows the procedure for setting a recipe display (record list).

Step 1 Place a recipe display (record list) on the screen editor.

➟6.5.1 Placing figures and objects

Step 2 Upon placement of the recipe display (record list), key code switches are also placed.

The user ID of the recipe display (record list) is assigned to each key code switch.
Optionally delete unnecessary key code switches and place the necessary ones.

➟8.2.11 [Key Code Switch] dialog

Step 3 Configure the settings of the recipe display (record list).

➟8.14.4 [Recipe Display (Record List)] dialog

For the settings common to the objects, refer to the following.

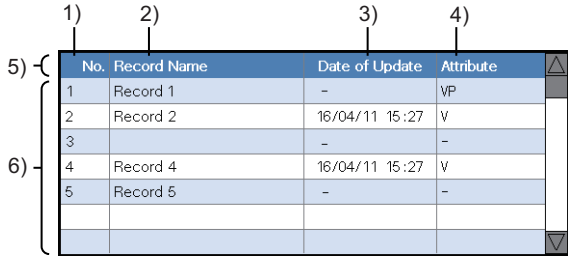
➟6.5.5 Common setting for objects

■3 Operating a recipe display (record list)

The following shows how to operate a recipe display (record list).

(1) List layout

The following shows the list layout of the recipe display (record list).



1) **[No.]**
Displays the record numbers.

2) **[Record Name]**
Displays the record names.
If the name of a record is unspecified, the relevant cell is left blank.

3) **[Date of Update]**
Displays the update date and time of each record.
If a record is not read from the PLC, a hyphen [-] is displayed.

4) **[Attribute]**
Displays the record attributes that indicate whether each record is readable or writable.
V: The record can be written to a PLC.
P: The record cannot be overwritten with the data read from a PLC. (Overwriting prohibited record)
VP: The record can be written to a PLC, but cannot be overwritten with the data read from a PLC.
-: The devices of the record store no values, and the record can be overwritten with the data read from a PLC.

5) **Title row**
Displays the column headers.
Touch a column header to sort the record list in ascending or descending order based on the column.

6) **Record rows**
Each row displays one record.
Touch a record row to select the record, and touch the row again to deselect the record.

(2) Moving a recipe display (record list) object with a slide operation

You can slide your finger on a recipe display (record list) object to move the object without using the object gesture function.

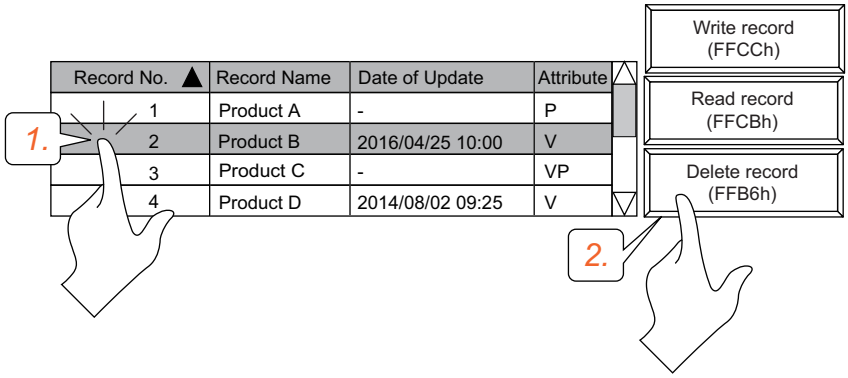
(3) Reading, writing, or deleting a record

You can read, write, or delete a record selected on the recipe display (record list).
To perform these operations, use applicable key code switches.
Place the following key code switches in advance.

- FFCBh: Read record
- FFCCh: Write record
- FFB6h: Delete record

Step 1 Touch a target record on the recipe display (record list) to select it.

Step 2 Touch an applicable key code switch to write, read, or delete the selected record.



You can specify the name of the target record by using specific devices. To do this, enable the setting for the Control Target Record Name devices.
For the details of the Control Target Record Name devices, refer to the following.

➟8.14.2 ■4 (1) Specifying the name of a manipulation target record by using specific devices

(4) Renaming a record

You can rename a record selected on the recipe display (record list).
Up to 32 ASCII or Unicode characters are usable for a record name.
To specify a new record name, use the Control Target Record Name devices.
Set the Control Target Record Name devices in advance.

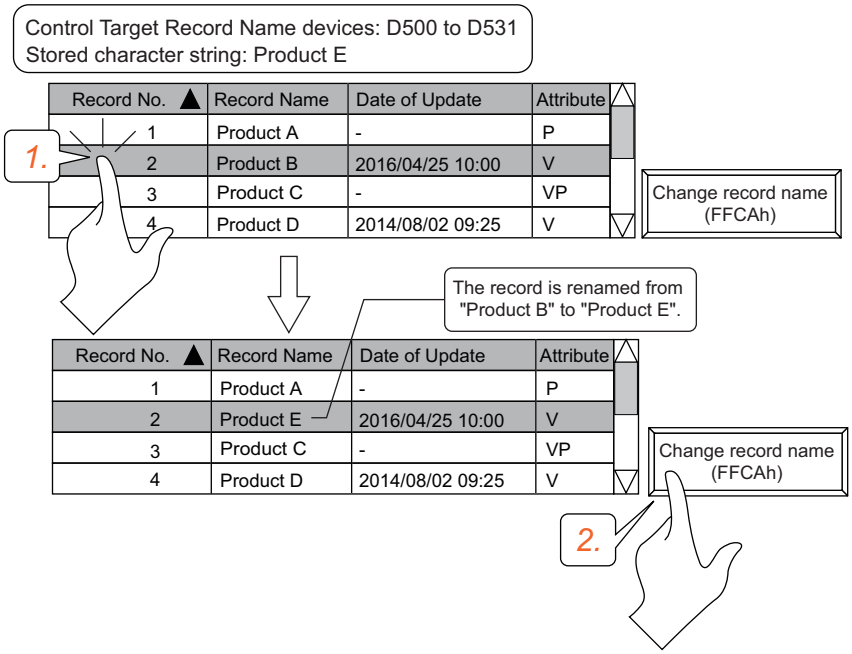
➟8.14.4 ■5 [Extended] tab
8.14.2 ■4 (1) Specifying the name of a manipulation target record by using specific devices

To perform the rename operation, use an applicable key code switch.
Place the following key code switch in advance.

- FFCAh: Change record name

Step 1 Touch a target record on the recipe display (record list) to select it.

Step 2 Touch the applicable key code switch to rename the selected record.



(5) Verifying a record

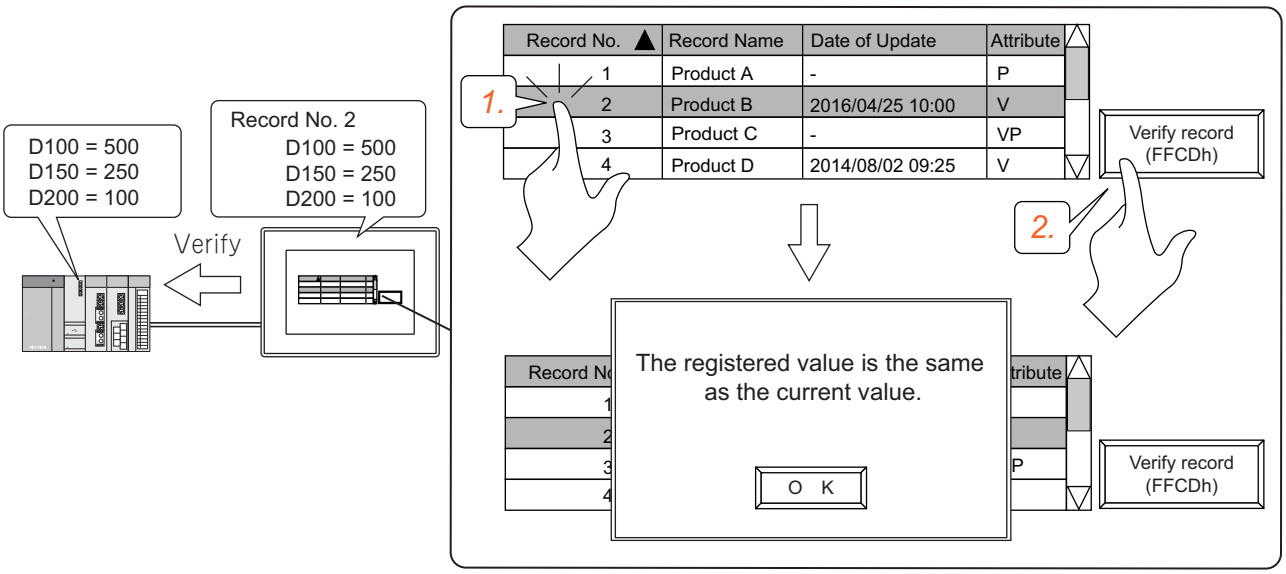
You can verify the device values of a record selected on the recipe display (record list) against those of the PLC.
To perform verification, use an applicable key code switch.
Place the following key code switch in advance.

- FFCDh: Verify record
- FFCDh: Verify record

Step 1 Touch a target record on the recipe display (record list) to select it.

Step 2 Touch an applicable key code switch to verify the device values of the selected record against those of the PLC.

The verification results are shown in a dialog.



You can specify the name of the target record by using specific devices. To do this, enable the setting for the Control Target Record Name devices.
For the details of the Control Target Record Name devices, refer to the following.

➟8.14.2 ■4 (1) Specifying the name of a manipulation target record by using specific devices

■4 Notification and control by using specific devices

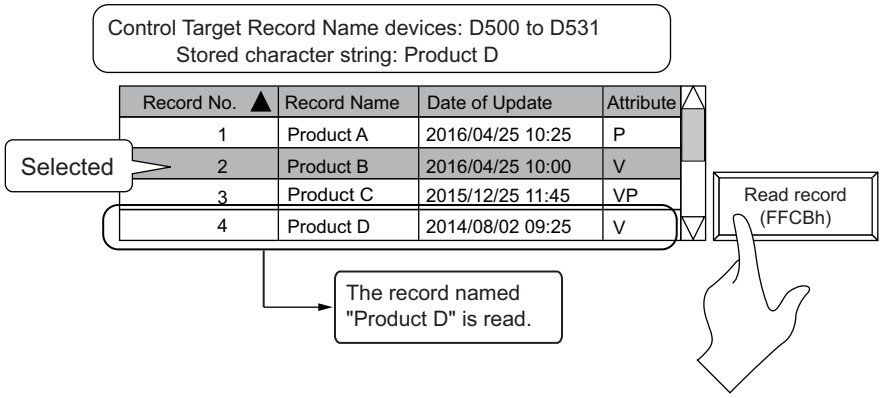
The following shows how to make notification or exercise control relevant to the recipe display (record list) by using specific devices.

(1) Specifying the name of a manipulation target record by using specific devices

To use specific devices to specify the name of a record targeted for manipulation with key code switches, enable the setting for the Control Target Record Name devices.

The record whose name is specified using the Control Target Record Name devices always becomes the manipulation target even if another record is selected on the recipe display (record list).

Example) Reading a record



To specify the Control Target Record Name devices, set [Control target record name] on the [Extended] tab in the [Recipe Display (Record List)] dialog.

➟ 8.14.4 ■5 [Extended] tab

You can specify a word device or word-specified bit device.

Specify the target record name within 32 ASCII or Unicode characters.

For storing ASCII characters as the record name, the number of consecutive devices to be used is half of the maximum number of characters set for [Control target record name].

For storing Unicode characters as the record name, the number of consecutive devices to be used equals to the maximum number of characters set for [Control target record name].

(a) Reading a record

The GOT reads the device values from the PLC to a target record when the applicable key code switch is touched. The character string stored in the Control Target Record Name devices is compared with the names of records in the target recipe. Consequently, the GOT reads the device values from the PLC to the record that has the exact match name.

If multiple records have the exact match name, the GOT reads the device values from the PLC to the lowest numbered record.

If no record has the exact match name, the GOT reads the device values from the PLC to the lowest numbered blank record (that has no name and device value).

In this case, the record is named with the character string stored in the Control Target Record Name devices.

If the Control Target Record Name devices store no character string, the GOT reads the device values from the PLC to the record selected on the recipe display (record list).

If no record is selected, the GOT does not perform record reading.

(b) Writing a record

The GOT writes the device values of a target record to the PLC when the applicable key code switch is touched. The character string stored in the Control Target Record Name devices is compared with the names of records in the target recipe. Consequently, the GOT writes the device values to the PLC from the record that has the exact match name.

If multiple records have the exact match name, the GOT writes the device values to the PLC from the lowest numbered record.

If the record selected on the recipe display (record list) has the exact match name, the GOT writes the device values to the PLC from the selected record.

If no record has the exact match name, the GOT does not perform record writing.

If the Control Target Record Name devices store no character string, the GOT writes the device values to the PLC from the record selected on the recipe display (record list).

If no record is selected, the GOT does not perform record writing.

(c) Verifying a record

The GOT verifies the device values of a target record against those of the PLC when the applicable key code switch is touched. The character string stored in the Control Target Record Name devices is compared with the names of records in the target recipe. Consequently, the GOT verifies the device values of the record that has the exact match name.

If multiple records have the exact match name, the GOT verifies the device values of the lowest numbered record.

If the record selected on the recipe display (record list) has the exact match name, the GOT verifies the device values of

the selected record.
If no record has the exact match name, the GOT does not perform record verification.
If the Control Target Record Name devices store no character string, the GOT verifies the device values of the record selected on the recipe display (record list).
If no record is selected, the GOT does not perform record verification.

(d) **Deleting a record**

The GOT deletes the contents of a target record when the applicable key code switch is touched. The character string stored in the Control Target Record Name devices is compared with the names of records in the target recipe. Consequently, the GOT deletes the contents of the record that has the exact match name.
If multiple records have the exact match name, the GOT deletes the contents of the lowest numbered record.
If the record selected on the recipe display (record list) has the exact match name, the GOT deletes the contents of the selected record.
If no record has the exact match name, the GOT does not perform record deletion.
If the Control Target Record Name devices store no character string, the GOT deletes the contents of the record selected on the recipe display (record list).
If no record is selected, the GOT does not perform record deletion.

(e) **Renaming a record**

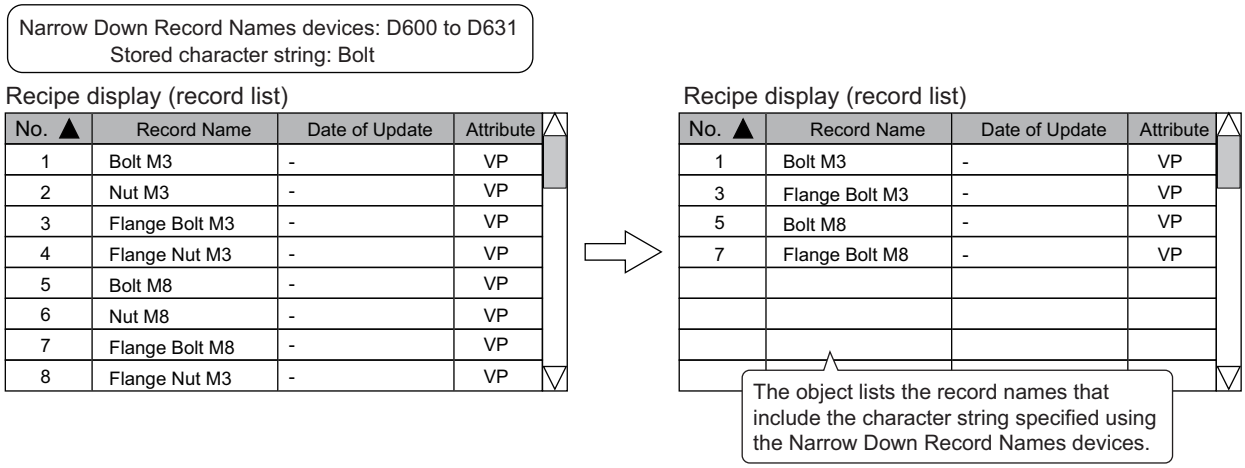
The GOT renames the record selected on the recipe display (record list) when the applicable key code switch is touched. The record is renamed with the character string stored in the Control Target Record Name devices.
The record rename is not performed in the following cases.

- The Control Target Record Name devices are not set.
- The Control Target Record Name devices store no character string.

(2) Narrowing down the records to be displayed

To narrow down the records to be displayed on the recipe display (record list) by specifying a character string included in the record names, enable the setting for the Narrow Down Record Names devices.

- Example



To specify the Narrow Down Record Names devices, set [Narrow down record names] on the [Extended] tab in the [Recipe Display (Record List)] dialog.

➥8.14.4 ■5 [Extended] tab

You can specify a word device or word-specified bit device.
Specify the character string (narrowing criteria) within 32 ASCII or Unicode characters.
For storing ASCII characters as the narrowing criteria, the number of consecutive devices to be used is half of the maximum number of characters set for [Narrow down record names].
For storing Unicode characters as the narrowing criteria, the number of consecutive devices to be used equals the maximum number of characters set for [Narrow down record names].

(3) Notifying the selected record name

To notify the name of a record selected on the recipe display (record list), enable the setting for the Cursor Row Record Name devices.
The Cursor Row Record Name devices store the name of a record selected on the recipe display (record list).
If you deselect the selected record on the recipe display (record list), the values of the Cursor Row Record Name devices are cleared.
To specify the Cursor Row Record Name devices, set [Cursor row record name] on the [Extended] tab in the [Recipe Display (Record List)] dialog.

➟8.14.4 ■5 [Extended] tab

You can specify a word device or word-specified bit device.
The record name is notified within 32 ASCII or Unicode characters.

- For the record name using ASCII characters

  The number of consecutive devices to be used is half of the maximum number of characters set for [Cursor row record name].
  If the number of the stored characters is less than the maximum number of characters, the stored characters are padded with NULL characters.
  If the consecutive devices store an odd number of characters from lower-order bytes, 0 is stored in the higher-order bytes of the device that stores the last character.
  If the consecutive devices store an odd number of characters from higher-order bytes, 0 is stored in the lower-order bytes of the device that stores the last character.
- For the record name using Unicode characters

  The number of consecutive devices to be used equals the maximum number of characters set for [Cursor row record name].
  If the number of the stored characters is less than the maximum number of characters, the stored characters are padded with NULL characters.

(4) Notifying the record manipulation status

To notify the execution status of the manipulation performed on the recipe display (record list), enable the setting for the Notify Recipe Status device.
The Notify Recipe Status device notifies the execution status as shown below.

Bit number	Description
b0	Turns on when the GOT writes a record to the PLC by using the recipe display (record list). Turns off after the record writing is complete.
b1	Turns on when the GOT reads a record from the PLC by using the recipe display (record list). Turns off after the record reading is complete.
b2	Turns on when the GOT verifies the device values of a record selected on the recipe display (record list) against those of the PLC. Turns off after the record verification is complete.
b3	Turns on when the GOT acquires the records to be displayed on the recipe display (record list). Turns off after the record acquisition is complete.
b4 to b15	Use prohibited

To specify the Notify Recipe Status device, set [Notify the recipe status] on the [Extended] tab in the [Recipe Display (Record List)] dialog.

➟8.14.4 ■5 [Extended] tab

You can specify a signed 16-bit binary word device or word-specified bit device.

(5) Notifying the number of displayable records

To notify the number of records displayable on the recipe display (record list), enable the setting for the Number of Currently Displayed Records device.
To specify the Number of Currently Displayed Records device, set [Number of currently displayed records] on the [Extended] tab in the [Recipe Display (Record List)] dialog.

➟8.14.4 ■5 [Extended] tab

You can specify a signed 16-bit binary word device or word-specified bit device.

8.14.3 Precautions for a recipe display (record list) object

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The following shows the precautions for the recipe display (record list).

■1 Precautions for drawing

(1) User ID assigned to the key code switches

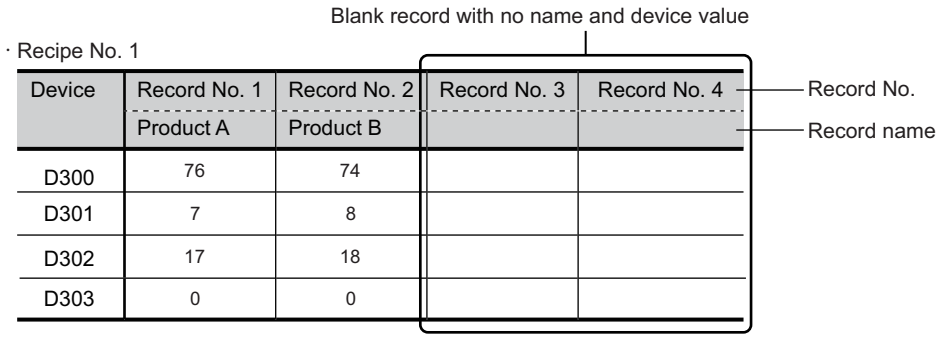
Upon placement of the recipe display (record list) on the screen editor, key code switches are also placed.
The user ID of the recipe display (record list) is automatically assigned to each key code switch ([User ID for a key input]).
If you change the user ID of the recipe display (record list), also change the set value of [User ID for a key input] for each switch.
Otherwise, the recipe display (record list) is inoperable using the switches.

➟8.2.11 [Key Code Switch] dialog

(2) Record used for record reading

When you use the Control Target Record Name devices to read a record, preset a blank record that has no name and device value.
If the record specified with the Control Target Record Name devices is nonexistent, the read data is written to the blank record.
If a blank record is nonexistent, a system alarm occurs in the above case.
Moreover, the number of records in the recipe is unchangeable on the GOT.
However, if you preset several blank records, you can write the read data to the blank records on the GOT.

➟9.3.3 How to use the recipe



(3) Precautions for placing a recipe display (record list) by operation in the [Recipe] dialog

If you place a recipe display (record list) by using the [Create a new recipe display (record list)] button in the [Recipe] dialog, the settings of the following items in the [Options] dialog are not applied.

- Place figures/objects sequentially
- Deselect figures/objects once they are placed
- Display the setting dialog once figures/objects are placed

➟9.3.7 [Recipe] dialog
11.10.4 Customizing the settings related to editing operations

(4) When using a recipe display (record list) on GT21

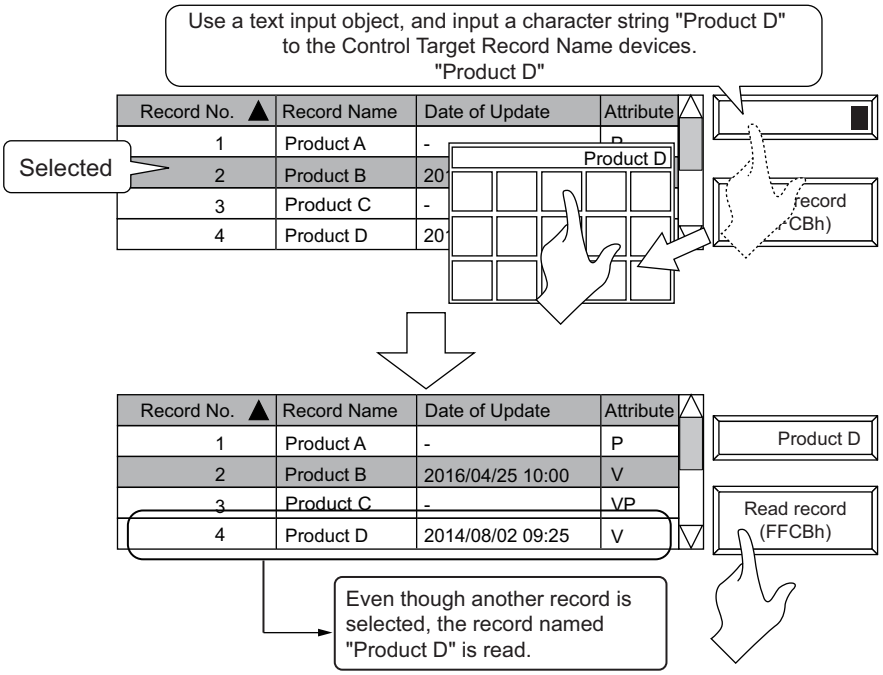
If the save destination of recipe data is set to [D:Built-in SRAM] or [C:Built-in Flash Memory], the recipe display (record list) cannot be used.

■2 Precautions for use

(1) Changing the values of the Control Target Record Name devices

When the record name selected on the recipe display (record list) differs from the one specified using the Control Target Record Name devices, the latter is always targeted for manipulation using the key code switches.
To manipulate a record selected on the recipe display (record list), clear the values of the Control Target Record Name devices first.

Example) When reading a record



Record No.	Record Name	Date of Update	Attribute
1	Product A	-	P
2	Product B	2016/04/25 10:00	V
3	Product C	-	VP
4	Product D	2014/08/02 09:25	V

(2) Precautions while the recipe operation window is being displayed

While the recipe operation window is being displayed, the recipe display (record list) is inoperable and displayed incorrectly.
Close the recipe operation window, and then operate the recipe display (record list).

(3) Precautions for specifying a record name with Control Target Record Name devices

You cannot specify a record name ending with a one-byte space by using Control Target Record Name devices. (The one-byte space is deleted.)
When you set a record name in the [Recipe] dialog on GT Designer3 or the recipe operation window on the GOT, do not append a one-byte space to the record name.

(4) Precautions for using the Recipe Display (Record List) Record Manipulation Result (GS1016)

If you manipulate a record while GS1016 is on, you cannot distinguish between the previous and current manipulation results.
Before manipulation, turn on the Recipe Display (Record List) Control device (GS1809.b15) to turn off GS1016.

8.14.4 [Recipe Display (Record List)] dialog

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Step 1 Select [Object] → [Recipe Display (Record List)] from the menu.

Step 2 Click the position to place a recipe display (record list).

Step 3 Double-click the recipe display (record list) to display the setting dialog.

➟■1 [Recipe Setting] tab
■2 [Display] tab
■3 [Text] tab
■4 [Style] tab
■5 [Extended] tab
■6 [Trigger] tab

■1 [Recipe Setting] tab

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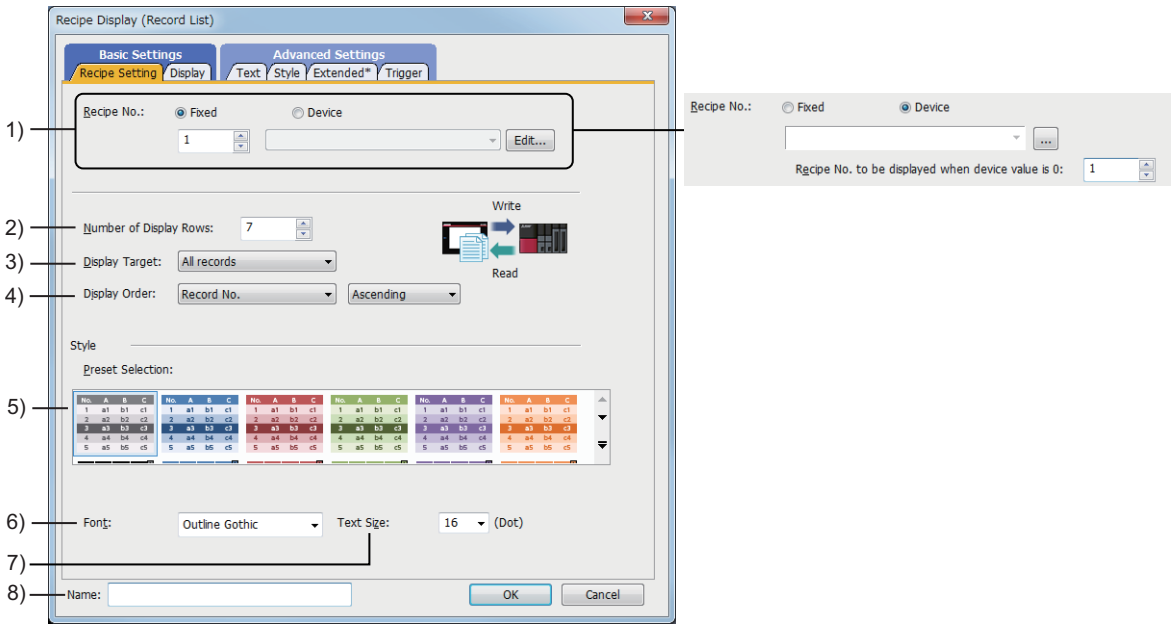


1) **[Recipe No.]**

Set the method of specifying a recipe number to display records on the recipe display (record list).

Item	Description
[Fixed]	Displays the records of a recipe with a fixed recipe number. Select this item and enter a recipe number. The setting range is [1] to [32767].
[Device]	Displays the records of a recipe whose recipe number is specified with a device value. Select this item and set a device. ➟6.1.2 How to set devices
[Recipe No. to be displayed when device value is 0]	When selecting [Device] for [Recipe No.], set this item. Specify a recipe number to display target records when the set device stores 0. The setting range is [1] to [32767].

2) **[Number of Display Rows]**

Set the maximum number of record rows to be displayed.

The setting range is [1] row to [64] rows.

3) **[Display Target]**

Select the records targeted for display.

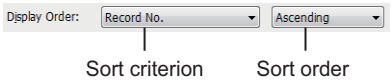
- [All records]: Displays all records of a recipe.
- [Writable records]: Displays the writable records of a recipe.
- [Readable records]: Displays the readable records of a recipe.

4) **[Display Order]**

Set the order in which records are displayed for the first time.

The selectable sort criteria are [Record No.], [Record Name], [Date of Update], and [Attribute].

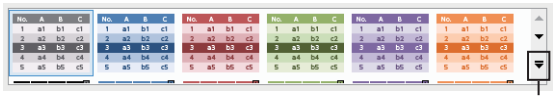
The selectable sort orders are [Ascending] and [Descending].



5) **[Preset Selection]**

Select the design of the recipe display (record list).

Click the pull-down menu button to display all designs.



6) **[Font]**

Select a font of the displayed text.

The following shows the items to be selected.

- [6x8dot]
- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

7) **[Text Size]**

For the details of each font and size, refer to the following.

➟1.2.5 Font specifications

8) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Display] tab

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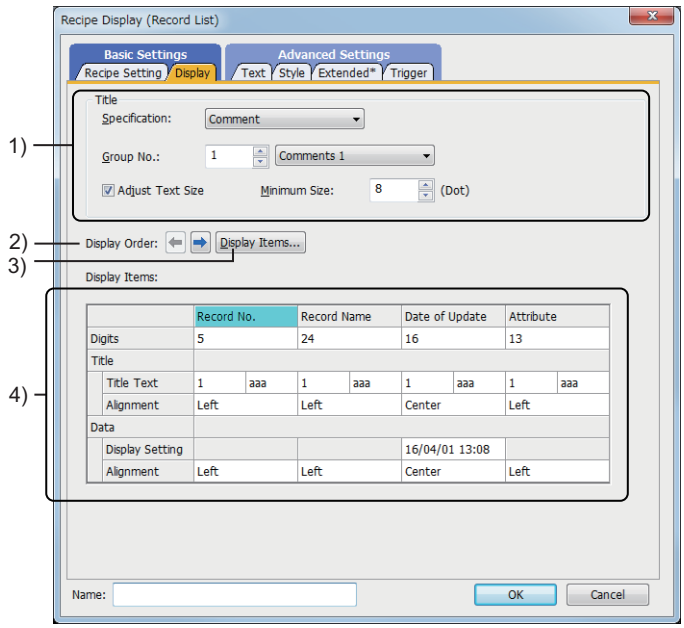
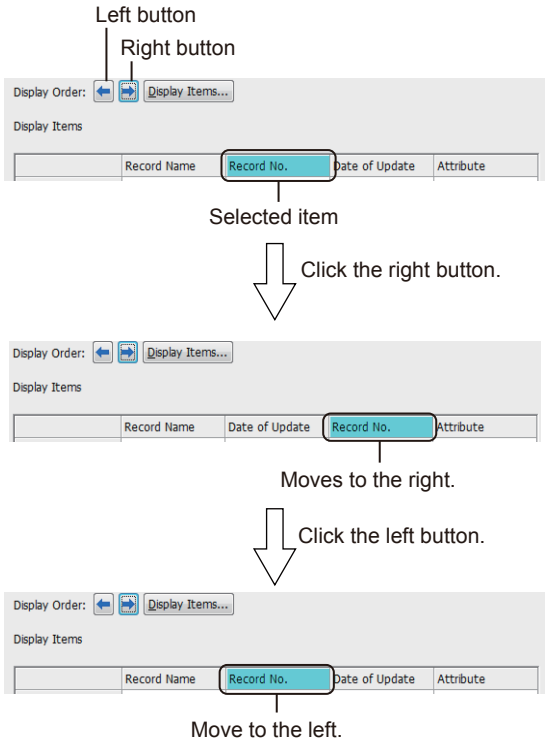


1) [Title]

Item	Description
[Specification]	Select the method of specifying the text to be displayed in the title. The following shows selectable items. • [Direct]: Select this item to input the text to be displayed in the title directly into [Title] in [Contents]. • [Comment]: Select this item to display the text to be displayed in the title using the comment in the comment group. • [None]: Select this item not to display the title.
[Group No.]	Only when [Comment] is selected for [Specification], this item can be set. Set the comment group in which the text to be displayed in the title is registered.
[Adjust Text Size]	The text size is adjusted according to the width of the title. When [Adjust Text Size] is not selected, the text size is adjusted by inserting a line feed.
[Minimum Size]	Only when [Comment] is selected for [Specification] and [Adjust Text Size] is selected,this item can be set. Set the minimum text size for adjustment. The setting range is [8] to [240] dot(s).

2) [Display Order]

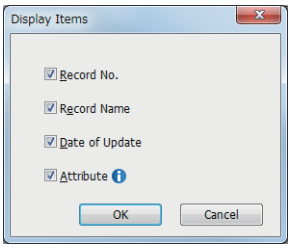
Set the order in which the columns of [Display Items] are displayed.
Click the right or left arrow button to move the selected column.



3) **[Display Items] button**

Displays the [Display Items] dialog.

Select an item to be displayed on the recipe display (record list).



- [Record No.]
  Lists the record numbers.
- [Record Name]
  Lists the record names.
- [Date of Update]
  Lists the update date and time of each record.
- [Attribute]
  Displays the record attributes that indicate whether each record is readable or writable.

4) **[Display Items]**

Set the details of the display items.

Item		Description
[Digits]		Set the number of digits to be displayed in each column. The setting range is [1] digit to [128] digits.
[Title]	[Title Text]	Set the column headers to be displayed in the title row. This setting depends on the selection for [Specification]. • [Direct] Enter text directly. The number of the characters must be within the set value of [Digits]. • [Comment] Set a comment No. or comment. • [None] Not settable
	[Alignment]	Select the horizontal position to align the text to be displayed in the title row. The following shows the items to be selected. • [Left] • [Center] • [Right]
[Data]	[Display Setting]	Set the display format of the update date and time. Click the [...] button to set the date and time format in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings
	[Alignment]	Select the horizontal position to align the text to be displayed in the record rows. The following shows the items to be selected. • [Left] • [Center] • [Right]

■3 [Text] tab

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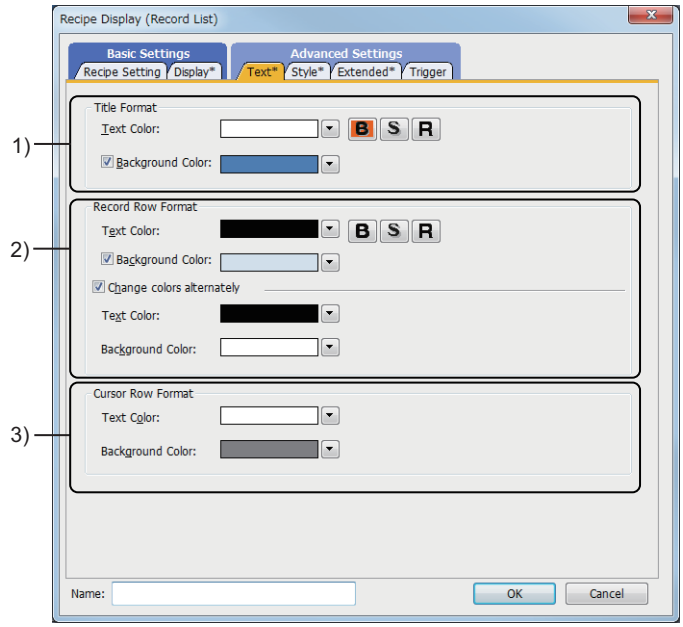
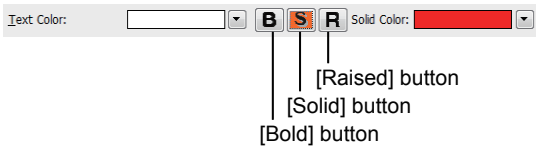


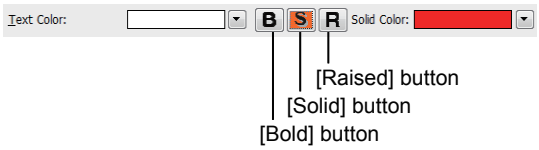
1) **[Title Format]**

Set the format of the title row.

Item	Description
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4.2 Color settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow. ➟6.4.2 Color settings
[Background Color]	Set the background color of the title row.

2) **[Record Row Format]**

Set the format of the record rows.

Item	Description
[Text Color]	Set the color and style of the text to be displayed in the record rows. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4.2 Color settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow. ➟6.4.2 Color settings
[Background Color]	Set the background color of the record rows.
[Change colors alternately]	Set [Text Color] and [Background Color] for the even-numbered record rows. ➟6.4.2 Color settings

3) **[Cursor Row Format]**

Set the format of the selected row.

Item	Description
[Text Color]	Set the color of the text to be displayed in the selected row. ➟6.4.2 Color settings
[Background Color]	Set the background color of the selected row. ➟6.4.2 Color settings

■4 [Style] tab

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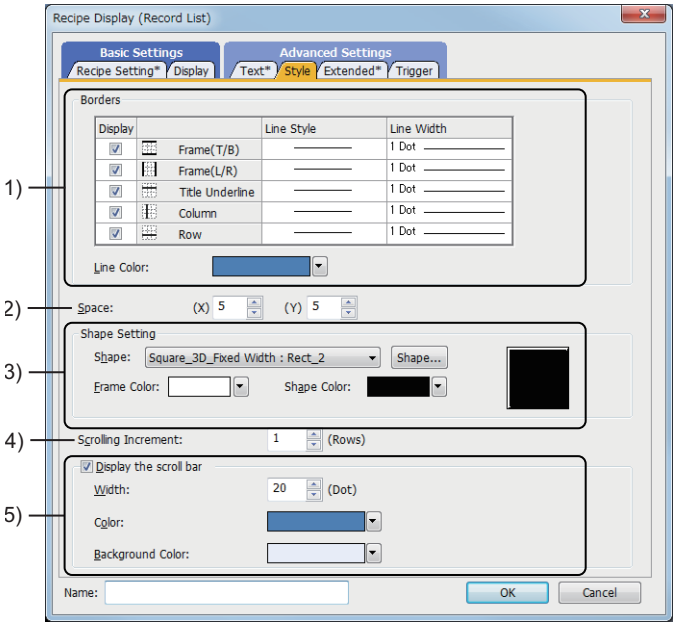
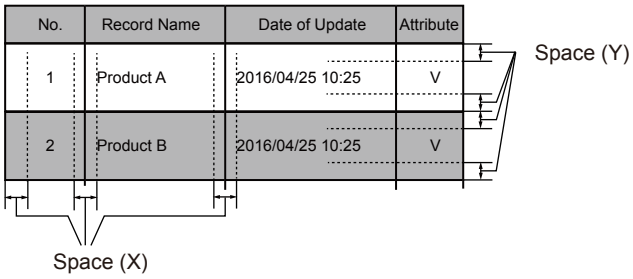


1) **[Borders]**

Item	Description
[Display]	Displays a border in the selected position. The following shows display items. • [Frame (T/B)] • [Frame (L/R)] • [Title Underline] • [Column] • [Row]
[Line Style]	Select the style of ruled lines. The following shows the items to be selected. • Straight line • Fine broken line • Coarse broken line • Speck chain line • Two-dot long and two short dashes line
[Line Width]	Set the ruled line color. The following shows the items to be selected. • [1Dot] • [2Dot] • [3Dot] • [4Dot] • [5Dot] • [7Dot]
[Line Color]	Select the color of the frame. ➟6.4.2 Color settings

2) **[Space]**

Set the space between the text to be displayed and the ruled lines of the table.
The setting range is [0] to [32].
The following illustrates the space [X] and [Y].



3) **[Shape Setting]**

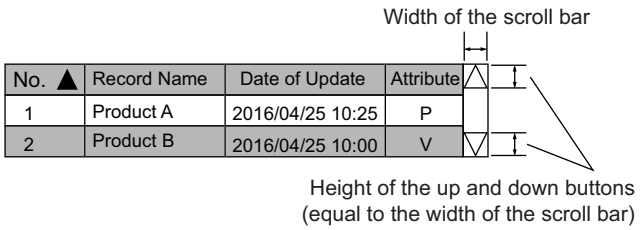
Item	Description
[Shape]	Select the shape to be set for the object from the list or with the [Shape] button. ➟6.5.5 ■1 Setting object shapes
[Frame Color]	Select the frame color of the shape. ➟6.4.2 Color settings
[Shape Color]	Select the color of the shape. ➟6.4.2 Color settings

4) **[Scrolling Increment]**

Set the number of rows to be scrolled in the recipe display (record list) when an arrow key on the scroll bar or a key code switch (FFF4h or FFF5h) is touched.
The setting range is [1] row to [64] rows.

5) **[Display the scroll bar]**

Displays the scroll bar.

Item	Description
[Width]	Specify the width of the scroll bar. The up or down button on the scroll bar is a square. Accordingly, the width and height of the button equal the width of the scroll bar. The setting range is [16] dots to [64] dots. 
[Color]	Set the color of the scroll bar. ➟6.4.2 Color settings
[Background Color]	Set the background color of the scroll bar. ➟6.4.2 Color settings

■5 [Extended] tab

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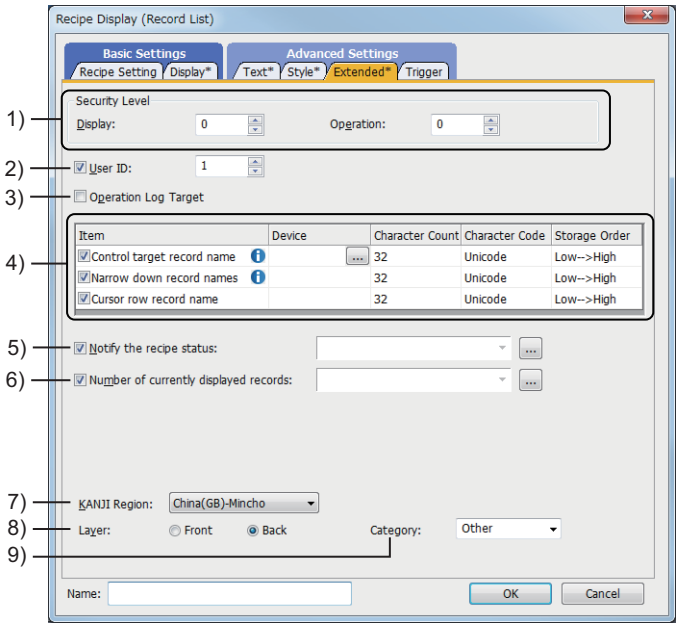


1) **[Security Level]**
Set a security level when using the security.
The setting range is [0] to [15].
If you do not use the security, select [0].
The value of [Operation] must be greater than the value of [Display].
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[User ID]**
Select this item to set the user ID.
The setting range is [1] to [65535].
The following operations can be performed when user ID numbers are set.
- Identifying the object that is operated with a key code switch
  ➟8.2.11 [Key Code Switch] dialog
- Setting the position where the cursor is displayed at screen switching
  ➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])
- Identifying the object that is targeted for the operation log function
  ➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

3) **[Operation Log Target]**

Only available to GT2107-W for GT21.

Only available to GS21-W-N for GS21.

Select this item to target the object for the operation log.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

4) **Setting the devices for control and notification**

Set the control and notification devices for the recipe display (record list).

Item	Description
[Item]	Select necessary items for control or notification. • [Control target record name] Enables the setting for the Control Target Record Name devices. ➟8.14.2 ■4 (1) Specifying the name of a manipulation target record by using specific devices • [Narrow down record names] Enables the setting for the Narrow Down Record Names devices. ➟8.14.2 ■4 (2) Narrowing down the records to be displayed • [Cursor row record name] Enables the setting for the Cursor Row Record Name devices. ➟8.14.2 ■4 (3) Notifying the selected record name
[Device]	Set the first device of consecutive devices to be used for control or notification. You can specify a word device or word-specified bit device. The number of the consecutive devices varies with the settings of [Character Count] and [Character Code]. When [Character Code] is set to [ASCII], the number of the consecutive devices equals half of the set value of [Character Count]. When [Character Code] is set to [Unicode], the number of the consecutive devices equals the set value of [Character Count]. ➟6.1.2 How to set devices
[Character Count]	Set the maximum number of characters to be stored in the devices for control or notification. The setting range is [1] to [32].
[Character Code]	Select the character code of the character string to be stored in the devices for control. The following shows the items to be selected. • [ASCII] • [Unicode]
[Storage Order]	Select the order in which character codes are stored. The following shows the items to be selected. • [Low-->High] • [High-->Low]

5) **[Notify the recipe status]**

Enables the setting for the Notify Recipe Status device.

➟8.14.2 ■4 (4) Notifying the record manipulation status

Select this item and specify the Notify Recipe Status device.

➟6.1.2 How to set devices

6) **[Number of currently displayed records]**

Enables the setting for the Number of Currently Displayed Records device.

➟8.14.2 ■4 (5) Notifying the number of displayable records

Select this item and specify the Number of Currently Displayed Records device.

➟6.1.2 How to set devices

7) **[KANJI region]**

Select the KANJI region of the displayed text.

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

8) **[Layer]**

Not available to GT21 and GS21.

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

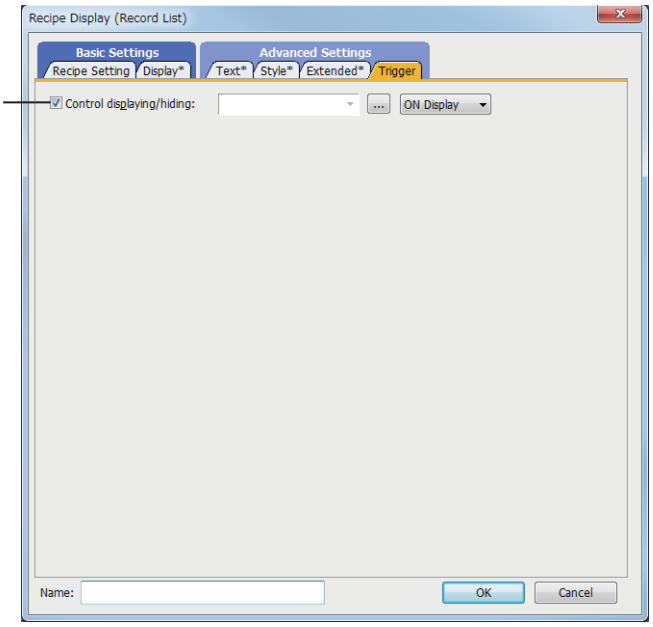
9) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■6 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

8.14.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the recipe display (record list) as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying that the recipe process (reading or writing) is being executed (Write device: System signal 2-1.b10)	[System Signal 2-1]

■3 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying the recipe number for the records displayed on the recipe display (record list) *1 (Write device)	GS1013
Notifying the record number selected on the recipe display (record list) *1 (Write device)	GS1014
Storing the record number of the manipulated record while GS1809.b0 is on. (Write device)	GS1015
Notifying the record manipulation result while GS1809.b0 is on. (Write device)	GS1016.b0 to GS1016.b2 GS1016.b11 to GS1016.b15
Displaying no confirmation or notification dialog during a record manipulation. (Read device)	GS1809.b0
Clearing the record manipulation result that has been notified by GS1016. (Read device)	GS1809.b15

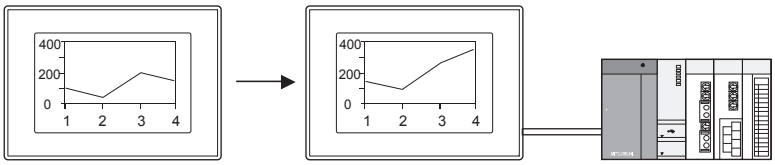
*1 For information on how to link the recipe function with the recipe display (record list) by using GS1013 and GS1014, refer to the following.

➟9.3.3 ■9 Link with the recipe display (record list) by using GOT special registers

8.15 Placing a Line Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

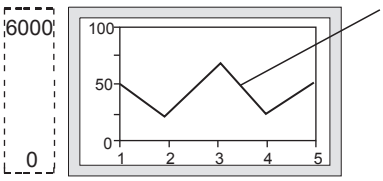
This function collects multiple word device values in a batch and displays the values in a line graph.



D10 = 100
D11 = 50
D12 = 200
D13 = 150

D10 = 150
D11 = 100
D12 = 250
D13 = 350

Application example) Displaying the production quantity of multiple lines



Production quantity for each line (1 to 5)
(D10 to 14)

Scale value
Y: Indicates the achievement rate.
X: Indicates the line numbers in which the production quantity is monitored.

Lower limit value, upper limit value
Set the production quantity.

8.15.1 Specifications of the line graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the line graph.

■1 Number of line graphs that can be set

(1) Number of line graphs that can be placed

Up to 32 line graphs can be placed on one screen.

(2) Number of lines that can be displayed

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to eight lines can be displayed on one line graph.
- For GT21 and GS21
  Up to four lines can be displayed on one line graph.

(3) Number of settable points

Up to 500 points can be set on one line.

8.15.2 How to use the line graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the line graph.

■1 Placing the line graph

The following shows how to place the line graph.

Step 1 Select [Object] → [Graph] → [Line Graph] from the menu.

Step 2 Click the position where you place the line graph. Placing the line graph is complete.

Step 3 Adjust the frame size of the line graph.

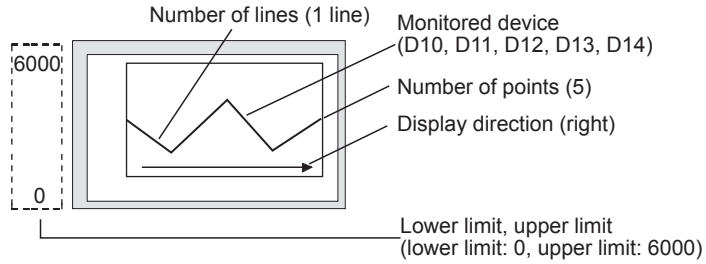
Step 4 Double-click the placed line graph to display the setting dialog.

➟8.15.4 [Line Graph] dialog

Step 5 Display the [Data] tab.

➟8.15.4 ■1 [Data] tab

Step 6 Set the number of lines and points.



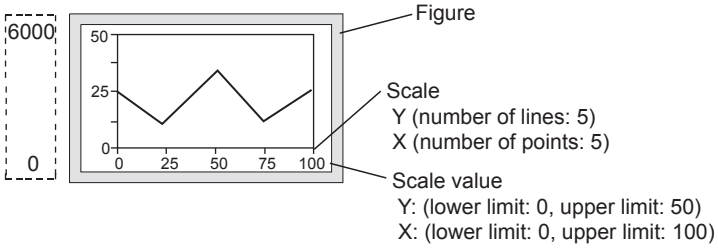
Step 7 Set a device to be monitored.

➟6.1.2 How to set devices

Step 8 Set [Lower Limit] and [Upper Limit].

Step 9 Set the scale and figure in the [Style] tab.

➟8.15.4 ■2 [Style] tab



Step 10 Click the [OK] button to complete the line graph settings.

■2 Setting [Collect data only when trigger conditions are satisfied]

Not available to GT21 and GS21.

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced.

Step 1 Select [Object] → [Graph] → [Line Graph] from the menu.

Step 2 Click the position where you place the line graph. Placing the line graph is complete.

Step 3 Double-click the placed line graph to display the setting dialog.

➟8.15.4 [Line Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.15.4 ■4 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

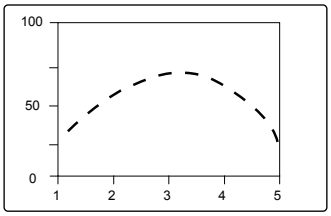
■3 Combining graphs

Multiple graphs can be combined into one.

Select the two graphs you want to combine.

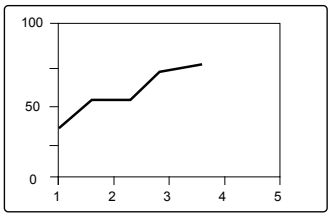
Example) Combining the line graph and trend graph

Trigger type : Rise
Collect data only when trigger conditions are satisfied : Enabled
Object : Line graph

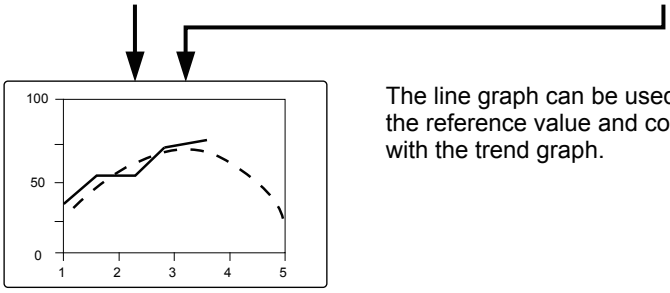


Displays the graph (communicates) only at startup.

Trigger type : Sampling (3 seconds)
Collect data only when trigger conditions are satisfied : Disabled
Object : Trend graph



Communicates in the set cycle and refreshes the display frequently.



The line graph can be used as the reference value and compared with the trend graph.

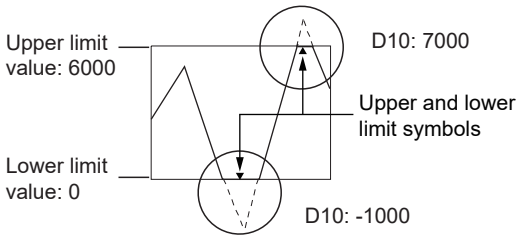
8.15.3 Precautions for a line graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the line graph.

■1 When the monitored device value exceeds the upper or lower limit value

When the monitored device value exceeds the lower limit value, the display of the lower limit value is applied.
When the monitored device value exceeds the upper limit value, the display of the upper limit value is applied.
In such a case, the upper or lower limit symbol appears at the position where the device value is hidden from view.



■2 Cause for when the graph display is not refreshed in the set cycle set and measure against it

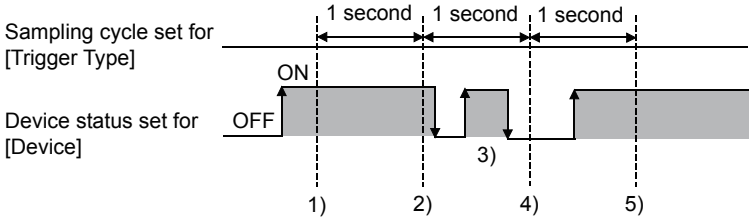
Not available to GT21 and GS21.

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

The graph display may not be refreshed in the set cycle.

(a) **Cause**

The device status is checked in the sampling cycles set for [Trigger Type].
If the condition is not satisfied at the timing of the check, the display is not refreshed.
Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the line graph is refreshed at timing 1).
- The display of the line graph is refreshed at timing 2).
- At timing 3), the display of the line graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
- At timing 4), the display of the line graph is not refreshed because the device condition is not satisfied.
- The display of the line graph is refreshed at timing 5).

(b) **Measure**

The sampling cycle set for [Trigger Type] does not depend on the device status.
(The sampling cycle does not change whether the device is turned on or off.)
The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

(2) Refresh timing when [Sampling], [ON Sampling], or [OFF Sampling] is selected

The sampling cycle count starts and is reset at the following timing.

- When the line graph is displayed (in screen switching, a security level change, or other possible cases)
- When the language switches
- When the security level changes

After the execution of any of the events, the display is refreshed at the start timing of the sampling cycle.

8.15.4 [Line Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The line graph is an object that collects multiple word device values in a batch and displays the values in a graph.

Step 1 Select [Object] → [Graph] → [Line Graph] from the menu.

Step 2 Click the position where you place the line graph. Placing the line graph is complete.

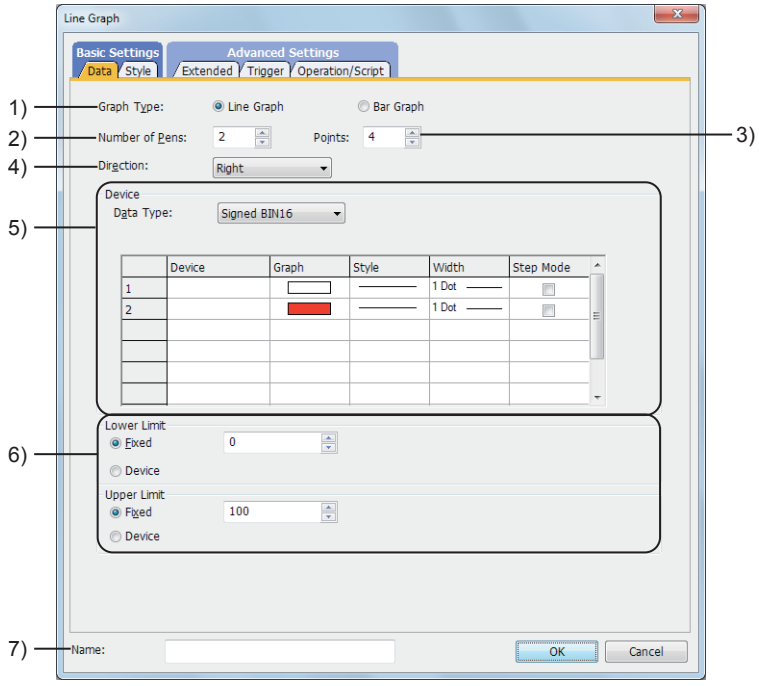
Step 3 Double-click the placed line graph to display the setting dialog.

➟■1 [Data] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Data] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the device to be monitored and the line graph status corresponding to the device value.



1) **[Graph Type]**

Select the graph to be set.

The following shows the items to be selected.

- [Line Graph]
- [Bar Graph]

Select [Line Graph] in this section.

2) **[Number of Pens]**

Set the number of lines to be displayed.

The setting range depends on the GOT model.

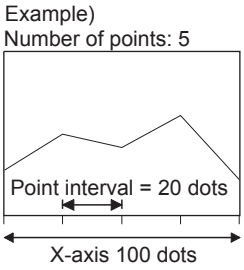
- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  The setting range is [1] to [8].
- For GT21 and GS21
  The setting range is [1] to [4].

3) **[Points]**

Set the number of points to be displayed on a line (the number of devices to be monitored).

The setting range is [2] to [500].

Depending on the number of points and X-axis display range, the interval between points is adjusted automatically.

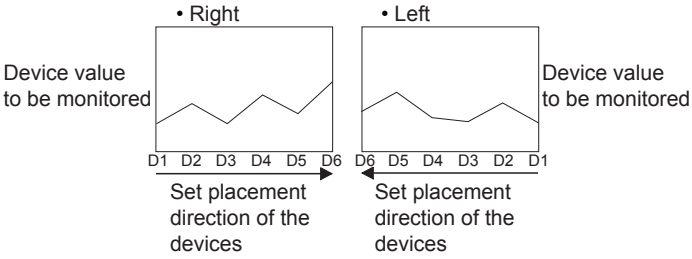


4) **[Direction]**

Select the display direction of the graph.

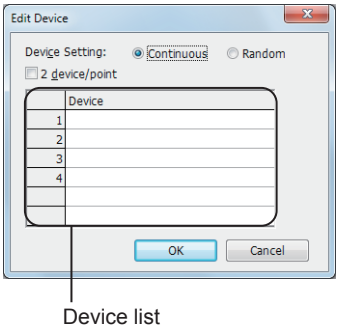
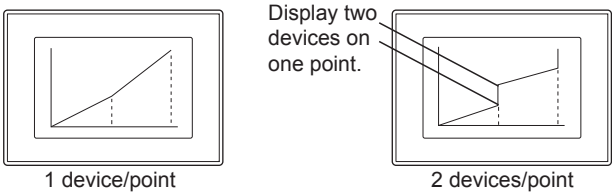
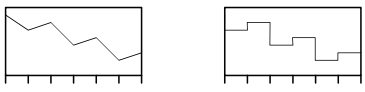
The following shows the items to be selected.

- [Right]
- [Left]



5) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]

Item	Description
[Device]	Click the [Edit] button to display the [Edit Device] dialog.  Device list • **[Device Setting]** Select how to set the device. The following shows the items to be selected. • [Continuous] When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random] Not available to GT21 and GS21. Select this item when setting devices one by one. • **[2 Device/point]** Not available to GT21 and GS21. Select this item when displaying two device values (placed on the vertical axis) on one point (placed on the horizontal axis). If this item is set, [Step Mode] cannot be set.  1 device/point 2 devices/point ➟6.1.2 How to set devices
[Graph]	Select the color of the line.
[Line Style]	Select the style of the line. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line
[Width]	Select the width of the line. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Step Mode]	Select this item to display the line by steps.  Displayed by no steps Displayed by steps If this item is set, [2 Device/point] cannot be set.

6) **[Lower Limit] and [Upper Limit]**

Select whether to specify the display range (lower and upper limit values) of the line graph with the fixed value or with the device value.

The following shows the items to be selected.

• [Fixed]:

Specify a constant.

• [Device]:

Specify a device value.

➡6.1.2 How to set devices

The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

7) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

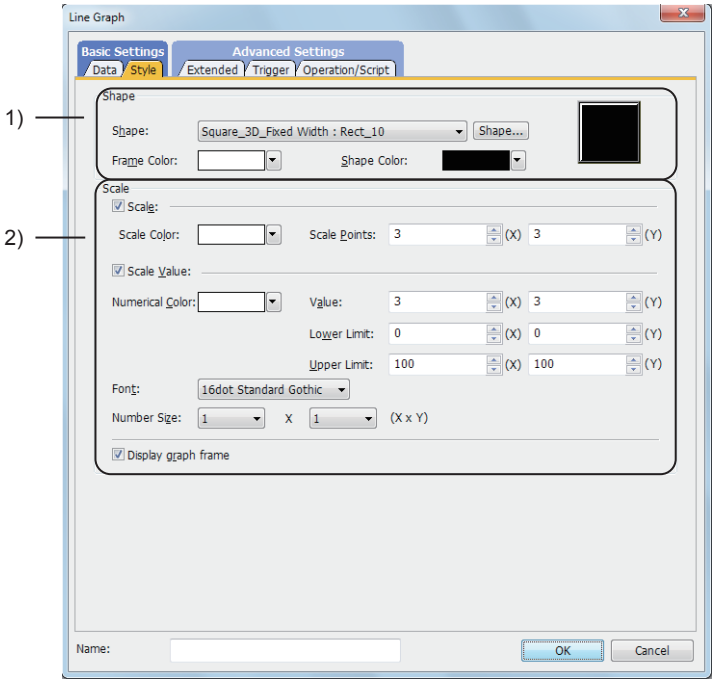
Up to 100 characters can be set.

■2 [Style] tab

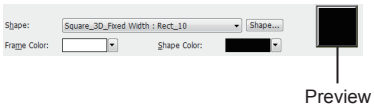
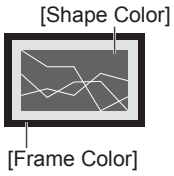
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➡10.19.2 ■2 Usable functions

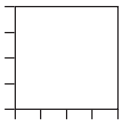


1) **[Shape]**

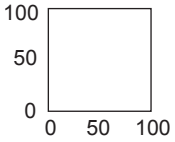
Item	Description
[Shape]	Set the shape of the line graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.4 ■1 Lamp attribute setting When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  Preview • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

2) **[Scale Settings]**

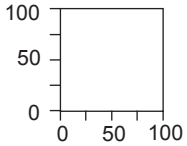
Displays the line or scale value in the line graph.



Line
(X: 5)
(Y: 5)

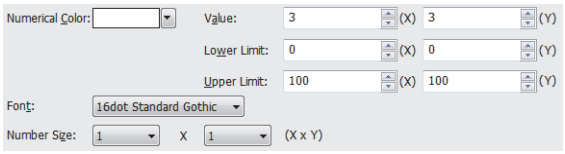
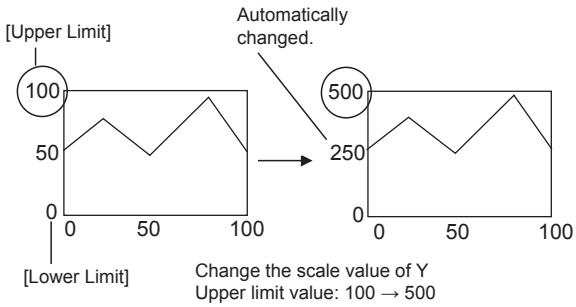
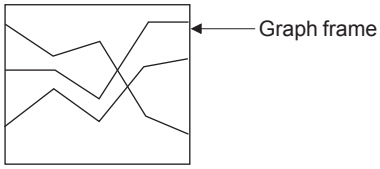


Scale value
(X: 3)
(Y: 3)



Displays both the lines
and scale values.

Item	Description
[Scale]	Set this item to display lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [0] and [2] to [101]. • **[Color]** Set the color of lines on the scale.

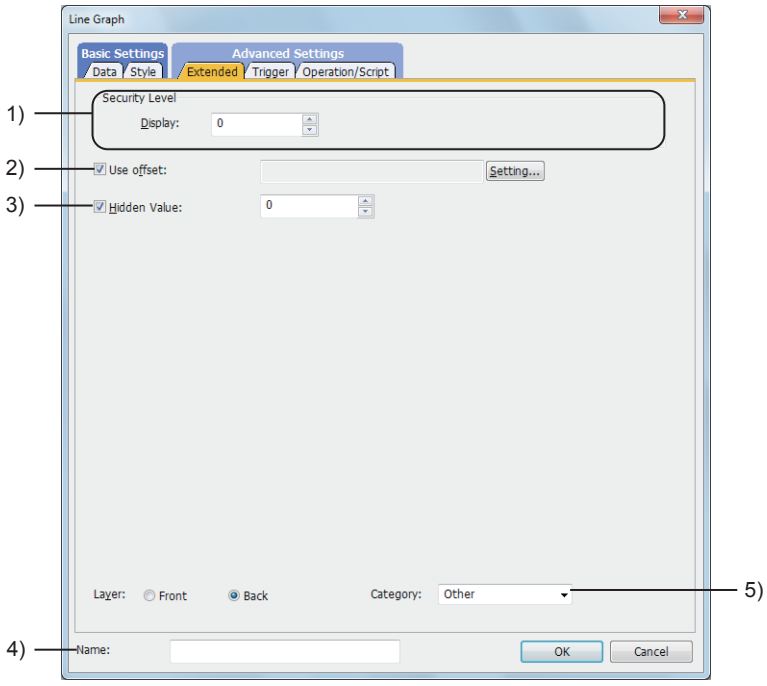
Item	Description
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value] ([Horizontal] and [Vertical])** Set the number of numeric characters. The setting range is [0] and [2] to [101]. • **[Lower Limit] ([Horizontal] and [Vertical]) and [Upper Limit] ([Horizontal] and [Vertical])** Set the lower limit and upper limit of the numerical value. Changes in this setting are automatically applied to the display.  Depending on the item selected for [Data Type] in the [Data] tab, the setting range is different. The setting range of 64-bit devices is the same as that of 32-bit devices. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.
[Display the graph frame]	Select this item to display the frame of the graph. 

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

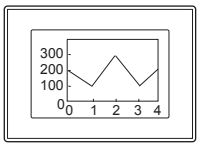
After selecting this item, set the offset device.

➟6.1.11 Offset

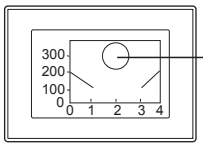
3) **[Hidden Value]**

Select this item not to connect a specified device value with other values with the line during monitoring.

After selecting this item, set the device value.



When [Hidden Value] is not selected



When [300] is set for [Hidden Value]

4) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

5) **[Category]**

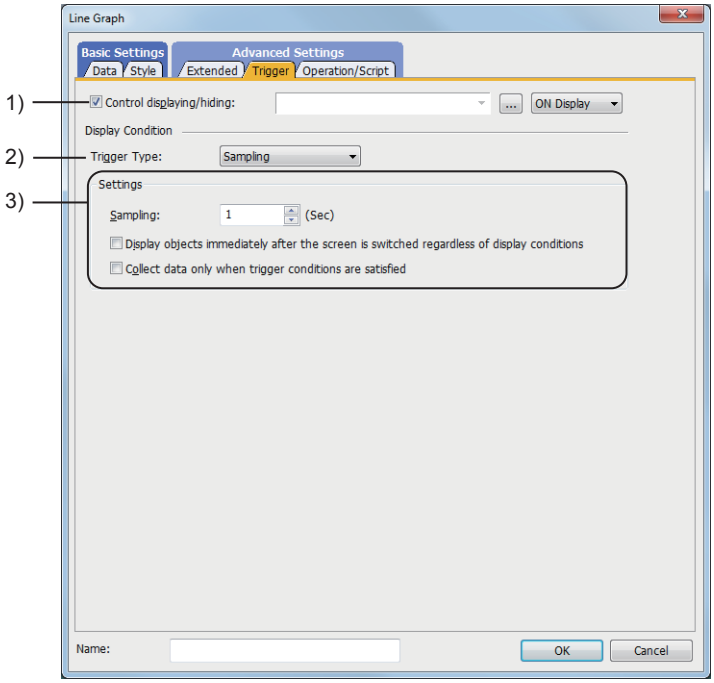
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger type]**
Select the condition of displaying the object.
The following shows the items to be selected.
- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**
For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Not available to GT21 and GS21. Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

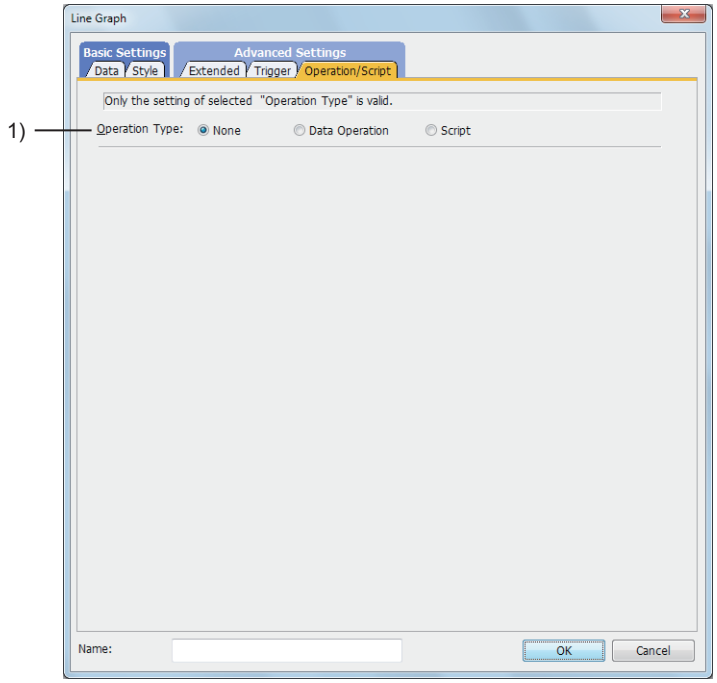
■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.

- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]

- [Script]

  Not available to GT21 and GS21.

  Set the expression used for the script function.

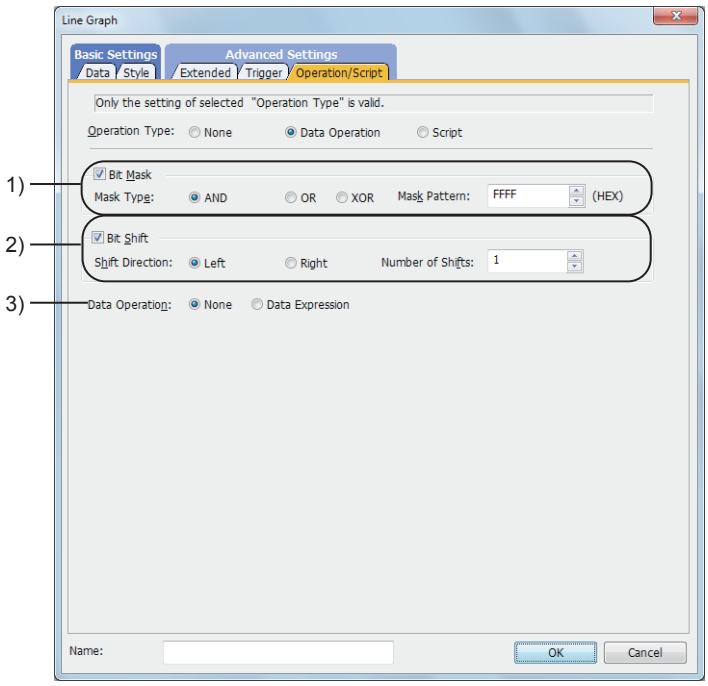
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

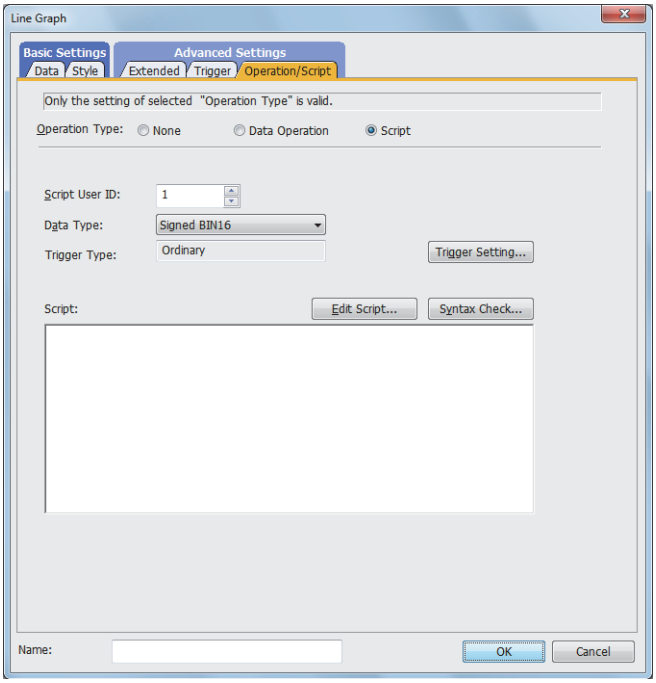
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Style]	[Frame Color]	frame_color	○	○	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
	[Lower Limit] (X)	scale_min[0]	○	○	When the screen is updated	
	[Lower Limit] (Y)	scale_min[1]	○	○	When the screen is updated	
	[Upper Limit] (X)	scale_max[0]	○	○	When the screen is updated	
	[Upper Limit] (Y)	scale_max[1]	○	○	When the screen is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.15.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the line graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

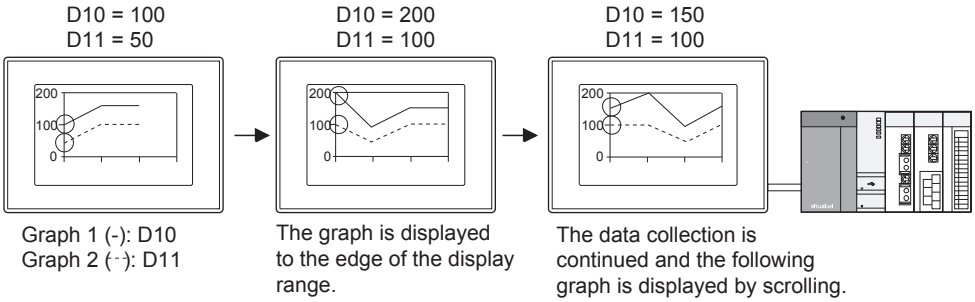
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.16 Placing a Trend Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Data in a word device can be collected continuously and are displayed in a graph.



8.16.1 Specifications of the trend graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the trend graph.

■1 Number of trend graphs that can be set

(1) Maximum number of trend graphs on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 32 trend graphs and/or historical trend graphs can be placed on one screen.
- For GT21 and GS21
  One historical data list display, trend graph, scatter graph, or historical trend graph can be placed on one screen.

(2) Maximum number of lines in one trend graph

The maximum number of lines in one trend graph depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 32 lines can be displayed on one graph.
- For GT21 and GS21
  Up to 4 lines can be displayed on one graph.

(3) Maximum number of points

The maximum number of points on one line of a trend graph depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 1024 points are displayable.
- For GT21 and GS21
  Up to 500 points are displayable.

■2 Difference between trend graphs and historical trend graphs

Historical trend graphs displays data collected and accumulated with logging as graphs.
To accumulate data, use historical trend graphs.

➟8.21 Placing a Historical Trend Graph
9.2 Collecting Device Data ([Logging])

Trend graphs do not accumulate collected data.

8.16.2 How to use the trend graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the trend graph.

■1 Placing the Trend Graph

The following shows how to place the trend graph.

Step 1 Select [Object] → [Graph] → [Trend Graph] from the menu.

Step 2 Click the position where you place the trend graph. Placing the trend graph is complete.

Step 3 Adjust the frame size of the trend graph.

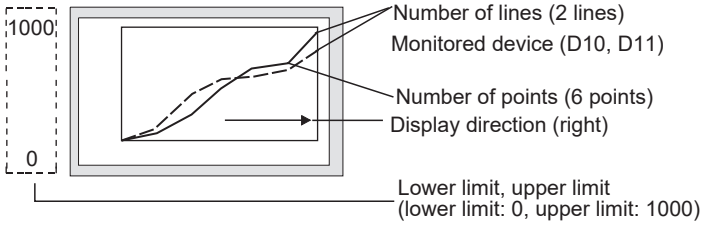
Step 4 Double-click the placed trend graph to display the setting dialog.

➟8.16.4 [Trend Graph] dialog

Step 5 Display the [Data] tab.

➟8.16.4 ■1 [Data] tab

Step 6 Set the number of lines and points to be displayed in the trend graph.



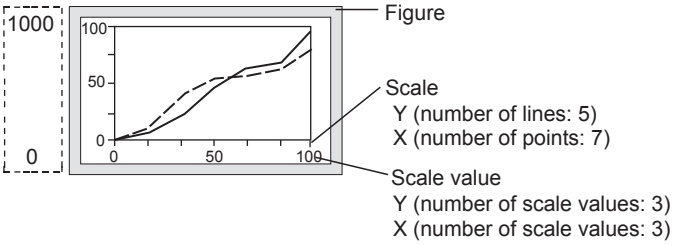
Step 7 Set a device to be monitored.

➟6.1.2 How to set devices

Step 8 Set [Lower Limit] and [Upper Limit].

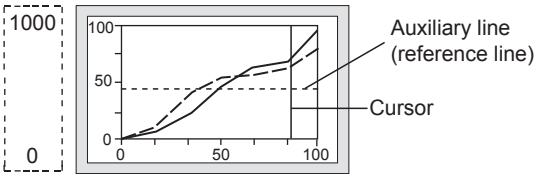
Step 9 Set the scale and figure in the [Style] tab.

➟8.16.4 ■2 [Style] tab



Step 10 Set the graph assistance line and cursor attribute in the [Auxiliary Line/Cursor] tab.

➟8.16.4 ■3 [Auxiliary Line/Cursor] tab

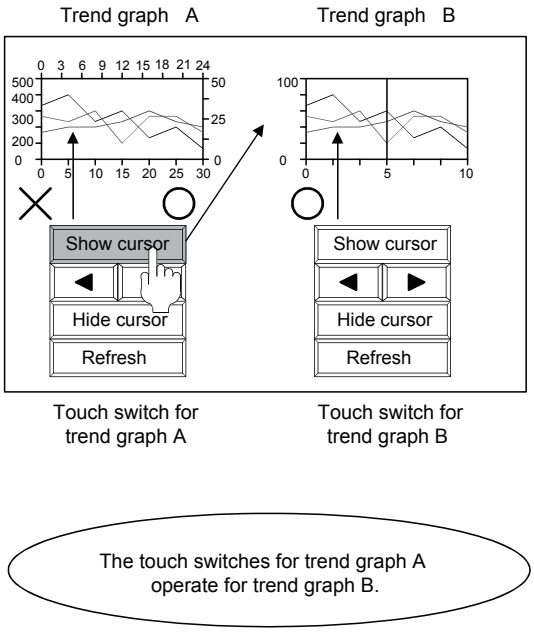


Step 11 Click the [OK] button to complete the trend graph settings.

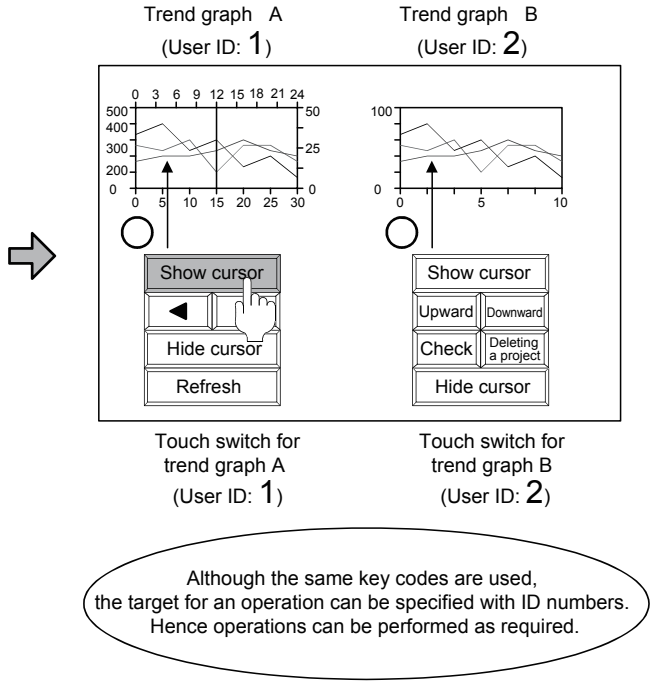
■2 Identifying multiple graphs (setting user IDs)

When multiple objects that are operated by the touch switch to which the key code are assigned placed on one screen, touching the touch switch may operate the object that is not the target.
Setting a user ID limits the objects operated when the touch switch is touched.

When no user ID is set



When the user ID is set



The following shows the setting procedure.

(1) Setting of the trend graph

Step 1 Double-click the trend graph placed on the screen editor.
The [Trend Graph] dialog appears.
➟8.16.4 [Trend Graph] dialog

Step 2 Enable [User ID] in the [Extended] tab, and specify the number.
➟8.16.4 ■4 [Extended] tab
The number is used to define the target object as the object that operates when the touch switch is touched.
Do not set [User ID] that is already used for other objects.

(2) Settings of touch switches

Step 1 Display the [Switch] dialog.
For the details of the switch, refer to the following.
➟8.2 Placing a Touch Switch

Step 2 Click the [Key Code] button in the [Action] tab.

Step 3 Enable [Individually set user ID for a key input] and specify a number.
Set the same number as the number specified in [User ID] of [Trend Graph].

■3 Storing graph data in devices

The following values displayed in each graph can be stored in devices.

- Value at the cursor
- Maximum value
- Minimum value
- Average value

Even though data operation is set, the value before the data operation is stored.

(1) How to store the data in devices

Set the devices to store the values in [Graph Information] in the [Data] tab.
Set the devices and select the options of data you want to collect.

➡8.16.4 ■1 [Data] tab

(2) Timing with which values are stored in the devices

The timing depends on the model.
For GT27, GT25, GT23, GT SoftGOT2000, and GS25
Values are stored to the devices at the following timings.

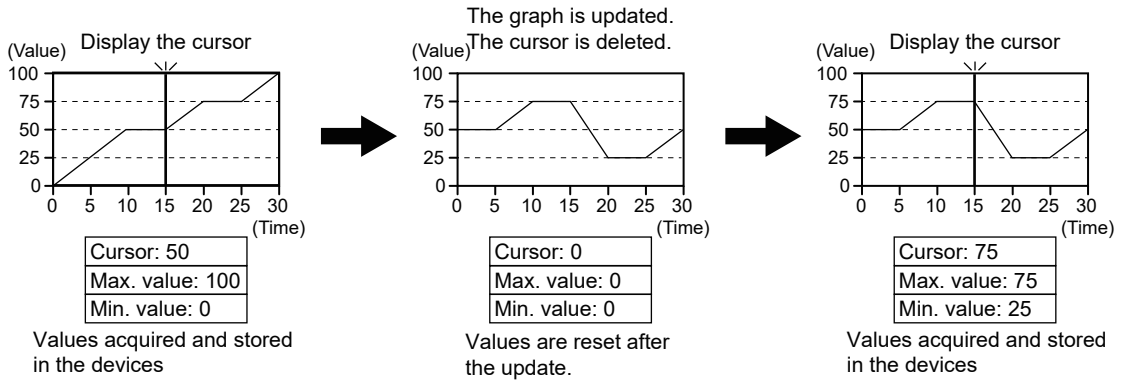
- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

GT21 and GS21
The value at the cursor is stored to the device at the following timings.

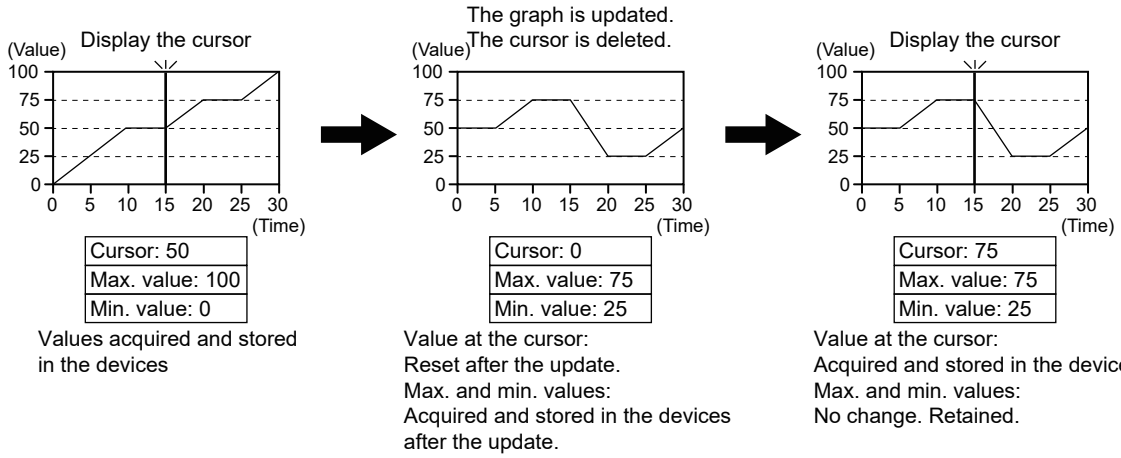
- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

The maximum, minimum, and average values are constantly acquired and stored to the devices.

Example) Storing the value at the cursor, maximum value, and minimum value in GT27



Example) Storing the value at the cursor, maximum value, and minimum value in GT21



■4 Storing time data in devices

The time of the cursor display position, display range beginning position, and display range end position of the graph can be stored to the device by using the Time device.

(1) How to store the data to the device

Data is stored in the upper eight bits and lower eight bits of set devices.
Numerical values are stored in BCD.
Example) When [Device] is set to [D100]

Item	Device	Description
[yymm]	D100	• b15 to b8: The year is stored. • b7 to b0: The month is stored.
[ddhh]	D101	• b15 to b8: The day is stored. • b7 to b0: The time (hour) is stored.
[mmss]	D102	• b15 to b8: The time (minute) is stored. • b7 to b0: The time (second) is stored.
[Day]	D103	• b15 to b8: None • b7 to b0: The day of the week is stored as a numerical value. The following shows the numerical values corresponding to the days. • 0: Sunday • 1: Monday • 2: Tuesday • 3: Wednesday • 4: Thursday • 5: Friday • 6: Saturday

(2) Storage timing and values stored to devices

(a) Timing when the value is stored

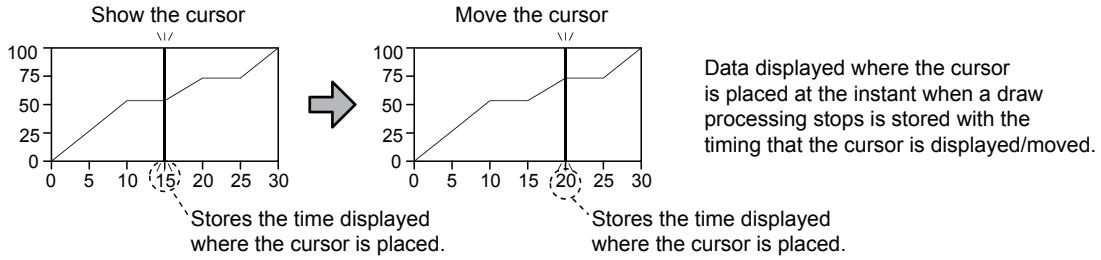
With the following timings, values are stored to devices.

- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

(b) Values to be stored

When a cursor is displayed on the graph, the drawing processing of the graph stops.
The values at the stop of the draw processing are stored to devices.

Example) Storing a time in the device



Data displayed where the cursor is placed at the instant when a draw processing stops is stored with the timing that the cursor is displayed/moved.

(3) Displaying time data in the numerical display

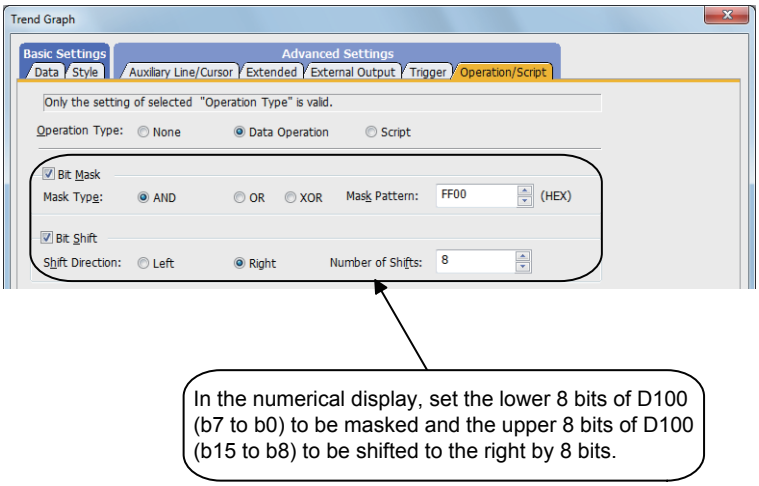
Time data can be displayed in the numerical display.
The following shows the setting procedure.

Step 1 Display the setting dialog for the placed numerical display ([Numerical Display] dialog).
For the details of the numerical display, refer to the following.
➟8.4 Placing a Numerical Display and Numerical Input

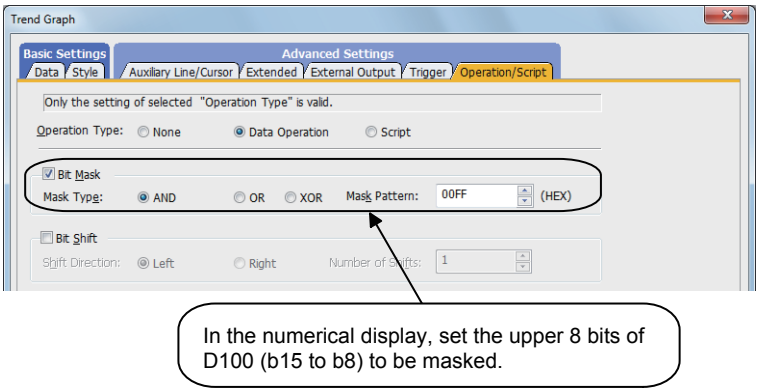
Step 2 Select [BCD16], [BCD32], or [BCD64] in [Data Type] in the [Device] tab.

Step 3 Set the mask processing and shift processing in the [Operation/Script] tab.

- When displaying upper 8 bits (year)



• When displaying lower 8 bits (month)



■5 Displaying the data obtained at specified time in the center (time specification jump function)

By using the display position time device and a touch switch, the data obtained at specified time can be displayed in the center of the trend graph.
When no time is obtained at the specified time, the data which has the nearest specified date is displayed.
When the multiple values are obtained at the nearest time, the first detected value is displayed.

(1) How to store the data to the device

Set a device to store the data in the upper eight bits and lower eight bits.
Numerical values are stored in BCD16.
Example) When [Device] is set to [D100]

Item	Device	Description
[yymm]	D100	• b15 to b8: The year is stored. • b7 to b0: The month is stored.
[ddhh]	D101	• b15 to b8: The day is stored. • b7 to b0: The time (hour) is stored.
[mmss]	D102	• b15 to b8: The time (minute) is stored. • b7 to b0: The time (second) is stored.

(2) Setting procedure

(a) Settings of touch switches

To use time specification jump function, the following touch switches are required.

- Touch switch for displaying the specified time
- Touch switch for restarting the drawing processing of the graph

If the time specification jump function is used, the drawing processing of the graph stops.
A touch switch for restarting the drawing processing of the graph is required.
The following shows the setting procedure.

Step 1 Display the setting dialog for the placed switch ([Switch] dialog).
For the details of the switch, refer to the following.

➟8.2 Placing a Touch Switch

Step 2 Click the [Key Code] button in the [Action] tab.

Step 3 Set the key cord according to the touch switch to be created.

- When setting a touch switch for displaying the specified time
  Set [Code Setting] to [FFD4].
- When setting a touch switch for restarting the drawing processing of the graph
  Set [Code Setting] to [FFEF].

Point

Using the library data

Touch switches are registered in the library.

➟8.1 Using Objects in the Library

(b) Setting of the trend graph

Step 1 Double-click the trend graph placed on the screen editor.

The [Trend Graph] dialog appears.

➟8.16.4 [Trend Graph] dialog

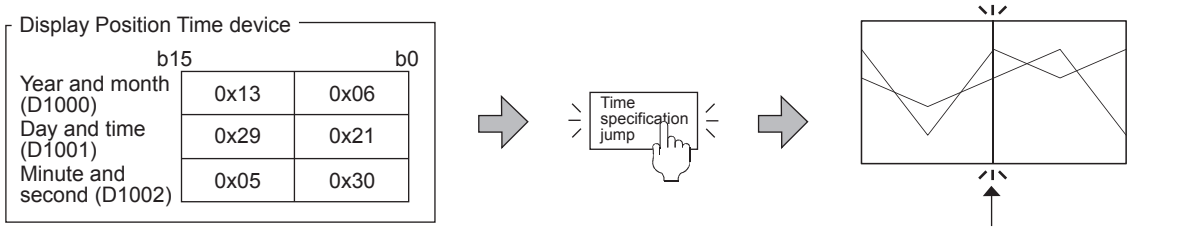
Step 2 Enable [Display Position Time] in the [Extended] tab, and specify a device.

➟8.16.4 ■4 [Extended] tab

(3) Operation example

The following shows the operation examples.

Example) When setting [D1000] in [Display Position Time Device] and displaying the data of Jun.29, 2013 21:05:30



Set the time to be displayed in the Display Position Time device.

Touch the touch switch for which the key code (FFD4h) has been set.

The data obtained at the specified time (Jun. 29, 2013 21:5:30) can be displayed in the center of the list.

(4) Precautions

(a) When time data is being searched for

When time data is being searched for, the historical trend graph cannot be operated.

(b) When no data can be displayed on the trend graph

When no data can be displayed on the trend graph, the time specification jump function is not executed.

(c) When displaying the data displayed near the start or end point

If the data obtained at specified time is near the start or end point, it may not be displayed in the center of the graph.

■6 Setting [Collect data only when trigger conditions are satisfied]

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced.

The following shows the setting procedure.

Step 1 Select [Object] → [Graph] → [Trend Graph] from the menu.

Step 2 Click the position where you place the trend graph. Placing the trend graph is complete.

Step 3 Double-click the placed trend graph to display the setting dialog.

➟8.16.4 [Trend Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.16.4 ■6 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

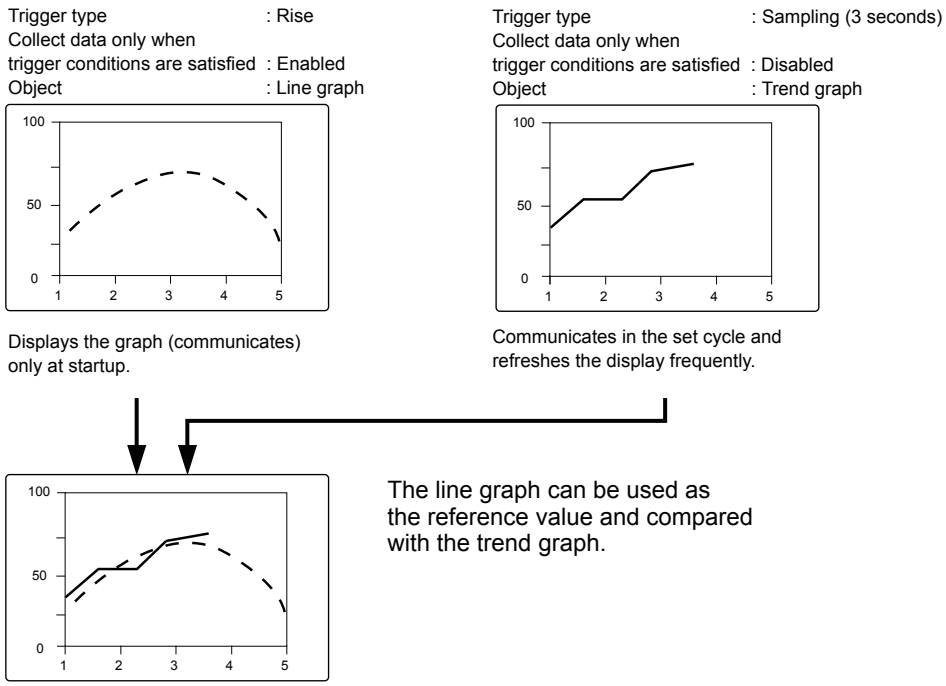
The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

■7 Combining graphs

Multiple graphs can be combined into one.

Select the two graphs you want to combine.

Example) Combining the line graph and trend graph



8.16.3 Precautions for a trend graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the precautions for the trend graph.

■1 Cause for when the graph display is not refreshed in the set cycle set and measure against it

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

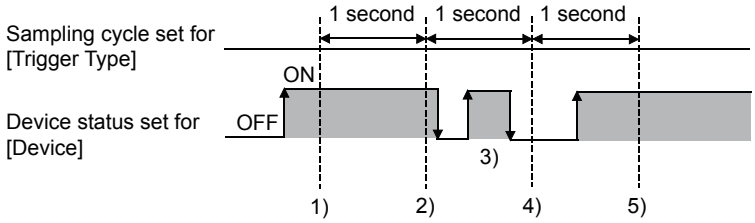
The graph display may not be refreshed in the set cycle.

(a) **Cause**

The device status is checked in the sampling cycles set for [Trigger Type].

If the condition is not satisfied at the timing of the check, the display is not refreshed.

Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the trend graph is refreshed at timing 1).
- The display of the trend graph is refreshed at timing 2).

• At timing 3), the display of the trend graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
• At timing 4), the display of the trend graph is not refreshed because the device condition is not satisfied.
• The display of the trend graph is refreshed at timing 5).

(b) **Measure**

The sampling cycle set for [Trigger Type] does not depend on the device status.
(The sampling cycle does not change whether the device is turned on or off.)
The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

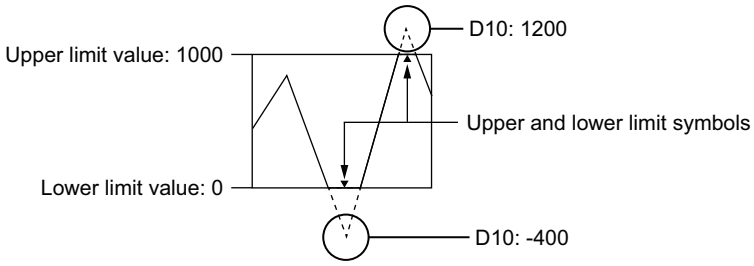
■2 Operation to clear the collected data

The following shows the operation to clear the display of the graph or the collected data (to clear the device value to 0).

• The screen is switched.
• The utility screen is displayed.
• The language is switched.
• The security level is switched.
• The station number is switched.
• When the trend graph is displayed in the superimpose window, the base screen is switched.

■3 When the monitored device value is above the upper limit or below the lower limit

The trend graph does not display a device value that is above the upper limit or below the lower limit.
In such a case, the upper or lower limit symbol appears at the position where the device value is hidden from view.



To hide the upper and lower limit symbols, turn on GS450.b10.

➟12.1.3 GOT special register (GS)

8.16.4 [Trend Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The trend graph is an object that constantly collects data in word devices and display it in a graph.

Step 1 Select [Object] → [Graph] → [Trend Graph] from the menu.

Step 2 Click the position where you place the trend graph. Placing the trend graph is complete.

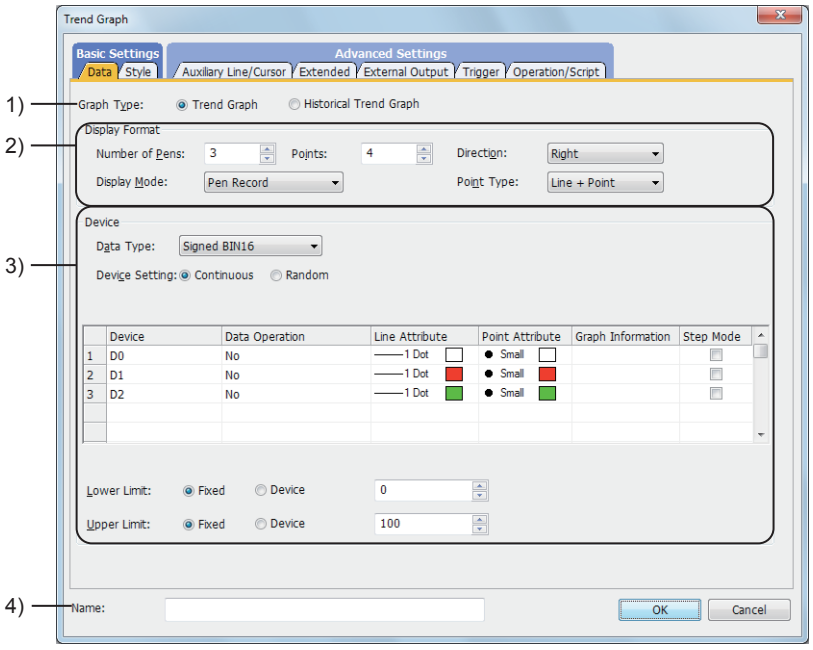
Step 3 Double-click the placed trend graph to display the setting dialog.

➥■1 [Data] tab
■2 [Style] tab
■3 [Auxiliary Line/Cursor] tab
■4 [Extended] tab
■5 [External Output] tab
■6 [Trigger] tab
■7 [Operation/Script] tab

■1 [Data] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the trend graph status corresponding to the device value.



1) **[Graph Type]**

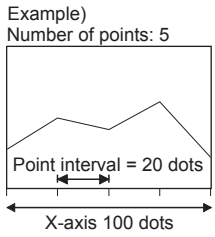
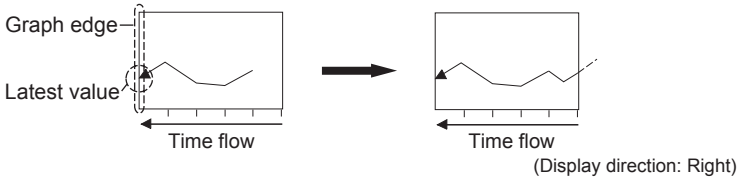
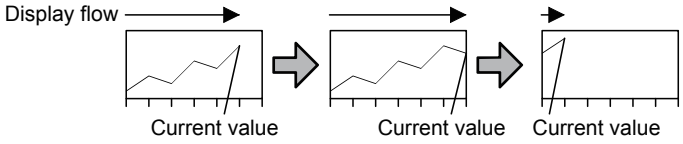
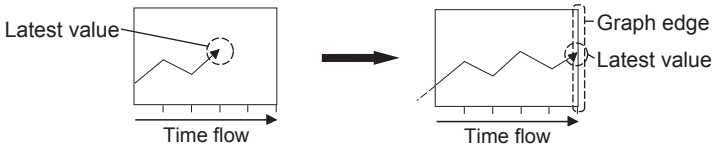
Select the graph to be set.

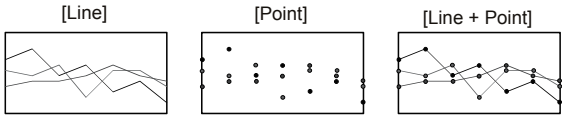
The following shows the items to be selected.

- [Trend Graph]
- [Historical Trend Graph]

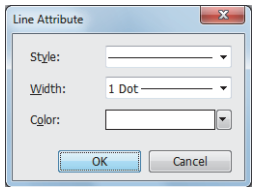
2) **[Display Format]**

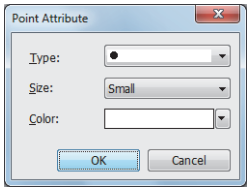
Item	Description
[Number of Pens]	Set the number of lines to be displayed in the trend graph. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 The setting range is [1] to [32]. • For GT21 and GS21 The setting range is [1] to [4].

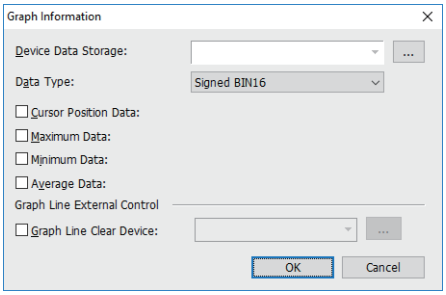
Item	Description
[Points]	Set the number of points to be displayed on a line of the trend graph. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 The setting range is [2] to [1024]. • For GT21 and GS21 The setting range is [2] to [500]. Depending on the number of points and X-axis display range, the interval between points is adjusted automatically. 
[Direction]	Select the display direction of the graph. The following shows the items to be selected. • [Up] • [Right] • [Down] • [Left]
[Display Mode]	The following shows how to draw the trend graph. The following shows the items to be selected. • [Pen Record]: The line of the graph is drawn by moving the whole graph to [Direction]. The point indicating the latest value is always drawn at the graph edge.  (Display direction: Right) • [One by One] The current value is displayed in the display direction. When the graph is drawn fully in a display range, the graph being displayed is cleared and a new graph is drawn.  • [Next Point Movement] The line of the graph is drawn to [Direction]. The point indicating the latest value moves to the display direction. Once the point indicating the latest value reaches to the graph edge, the point is drawn at the graph edge constantly.  (Display direction: Right)

Item	Description
[Point Type]	Select the point type. The following shows the items to be selected. • [Line] • [Point] • [Line + Point] 

3) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Device Setting]	Select how to set the device. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random]: Select this item when setting devices one by one.
[Device]	Set the device to be monitored. ➟6.1.2 How to set devices
[Data Operation]	Set this item to execute the data operation. ➟6.5.5 ■4 (3) [Edit Data Expression] dialog
[Line Attribute]	Set the attribute of the line. When [Line] or [Line + Point] is selected for [Point Type], set this item.  • [Line Style] Select the style of the line. The following shows the items to be selected. · Solid line · Dotted line · Broken line · One-dot chain line · Two-dot chain line • [Width] Select the width of the line. The following shows the items to be selected. · [1 Dot] · [2 Dot] · [3 Dot] · [4 Dot] · [5 Dot] · [7 Dot] • [Line Color] Select the color of the line.

Item	Description
[Point Attribute]	Set the attribute of the points. When [Point] or [Line + Point] is selected for [Point Type], set this item.  • [Type] Select the style of the point. The following shows the items to be selected. 0: ●, 1: ■, 2: ▲, 3: +, 4: ○, 5: □ 6: △, 7: ×, 8: ▼, 9: ◀, 10: ▶, 11: ◆ 12: ▽, 13: ◁, 14: ▷, 15: ◇ • [Size] Select the size of the point. The following shows the items to be selected. · [Large]: 9 dots · [Medium]: 7 dots · [Small]: 5 dots · [Very small]: 3 dots · [Point]: 1 dot Only when [0] is selected for [Type], [Very small] or [Point] can be selected. • [Color] Set the color of the point.

Item	Description
[Graph Information]	Set the device in which the information displayed on the graph is stored or device that clears the line of the graph. For the timings with which values are stored in the devices set for [Maximum Data], [Minimum Data], and [Average Data], refer to the following. ➟8.16.2 ■3 Storing graph data in devices  • [Device Data Storage] Set the device in which the graph information is stored. The successive devices following the device set in this item are assigned automatically to [Cursor Position Data] or later items. Set each item optionally. Using the GOT internal device is recommended for this setting. Even though data operation is set, the value before the data operation is stored. • [Data Type] Select the data type of the word device in which graph information is stored. Select the same data type as that of the device to be monitored. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] • [Cursor Position Data] Select this item to store the value of device positioned by the cursor. The device is assigned automatically. • [Maximum Data] Select this item to store the maximum value of the device values displayed on the graph is to be stored. The device is assigned automatically. • [Minimum Data] Select this item to store the minimum value of the device values displayed on the graph. The device is assigned automatically. • [Average Data] Select this item to store the average value of the device values displayed on the graph. The device is assigned automatically. • [Graph Line External Control] · [Graph Line Clear Device] Select this item to clear the line of the graph using a device. After selecting this item, set the device.
[Step Mode]	Select this item to display the line of the trend graph by steps. Displayed by no steps Displayed by steps

Item	Description
[Lower Limit] and [Upper Limit]	Select whether to specify the display range (lower and upper limit values) of the trend graph with the fixed value or with the device value. The following shows the items to be selected. • [Fixed]: Specify a constant. • [Device]: Specify a device value. ➟6.1.2 How to set devices The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

4) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

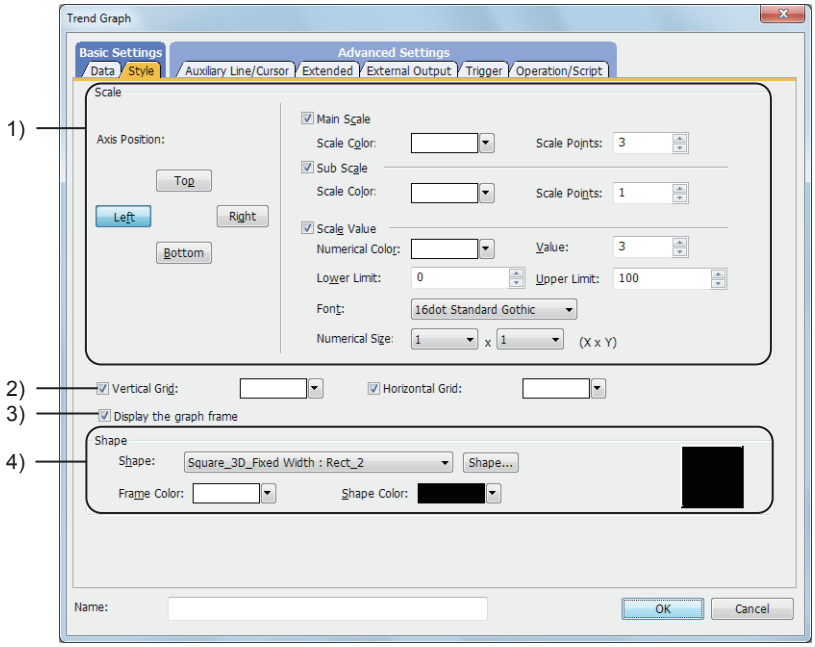
Up to 100 characters can be set.

■2 [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

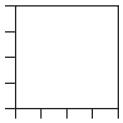
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

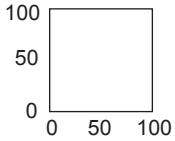


1) **[Scale Settings]**

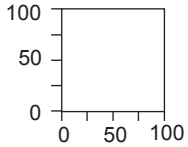
Displays the line or scale value in the trend graph.



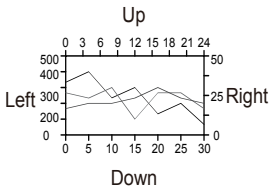
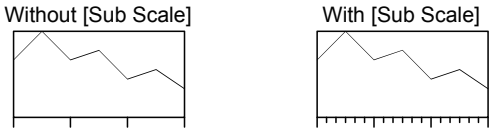
Line
(X: 5)
(Y: 5)

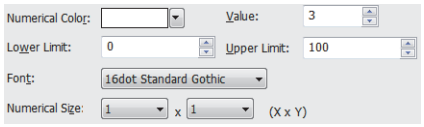
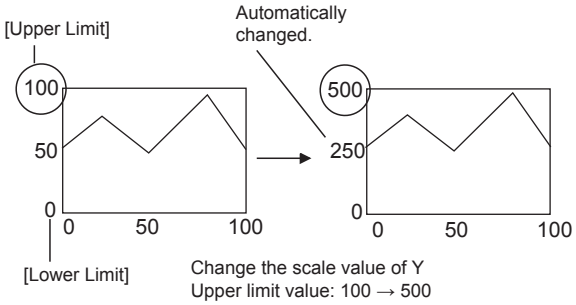


Scale value
(X: 3)
(Y: 3)



Displays both the lines and scale values.

Item	Description
[Axis Position]	Select the position where the line or scale value is displayed. The following shows the items to be selected. • [Left] button • [Right] button • [Top] button • [Bottom] button After selecting the position, set the line or scale value. 
[Main Scale]	Set this item to display lines on the scale. • **[Color]** Set the color of lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [2] to [101].
[Sub Scale]	Set this item to place lines between the lines set in [Main Scale].  • **[Color]** Set the color of sub lines on the scale. • **[Scale Points]** Set the number of sub lines on the scale. The setting range is [1] to [9].

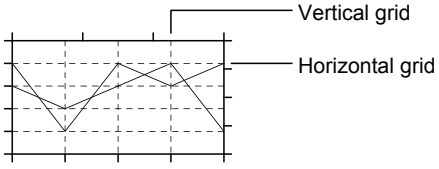
Item	Description
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value]** Set the number of numeric characters. The setting range is [2] to [11]. • **[Lower Limit] and [Upper Limit]** Set the lower limit and upper limit of the numerical value. Changes in this setting are automatically applied to the display.  Depending on the item selected for [Data Type] in the [Data] tab, the setting range is different. The setting range of 64-bit devices is the same as that of 32-bit devices. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. 1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.

2) **[Vertical Grid] and [Horizontal Grid]**

Select this item to display the horizontal or vertical grid.

The number of grids is the same as the number set in [Scale Points] of [Main Scale] and [Sub Scale].

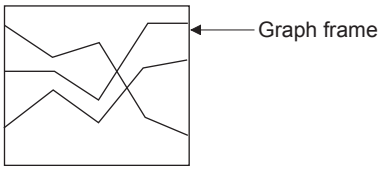
The bottom and left setting in [Axis Position] is prioritized.



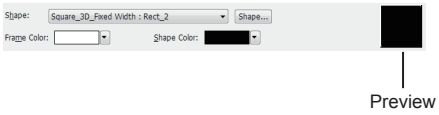
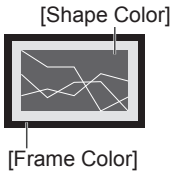
After setting this item, select the color of the grid.

3) **[Display the graph frame]**

Select this item to display the frame of the graph.



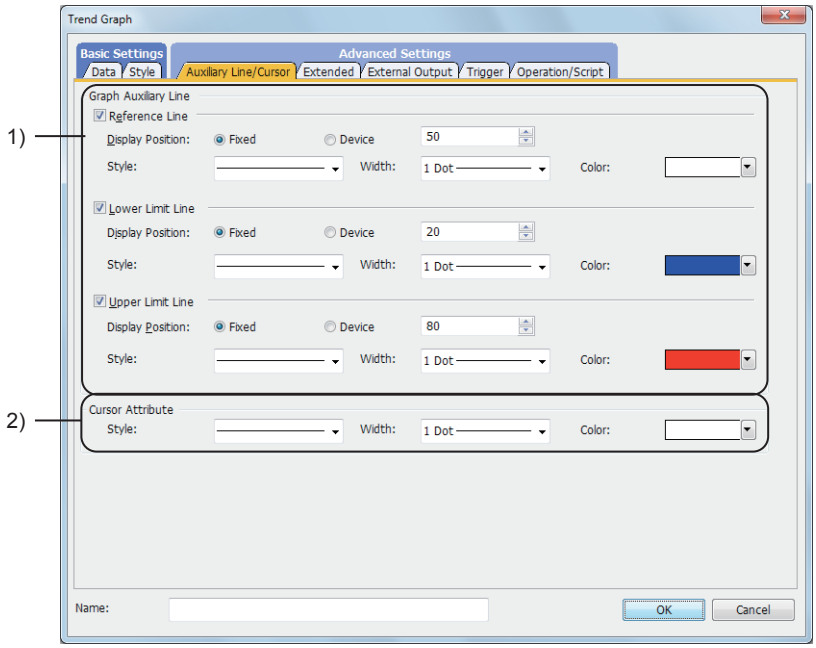
4) **[Shape]**

Item	Description
[Shape]	Set the shape of the trend graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

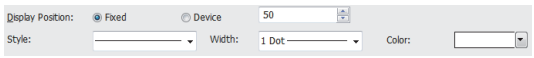
■3 [Auxiliary Line/Cursor] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the auxiliary line and attribute of the cursor.



1) [Graph Auxiliary Line]

Item	Description
[Reference Line], [Lower Limit Line], and [Upper Limit Line]	Set this item to place a reference line on the graph.  • **[Display Position]** Select whether to specify the line position using a fixed value or device value. The following shows the items to be selected. • [Fixed]: Specify a constant. • [Device]: Specify a device value. ➟6.1.2 How to set devices • **[Line Style]** Select the style of the line. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line • **[Width]** Select the width of the line. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot] • **[Line Color]** Select the color of the line.

2) **[Cursor Attribute]**

Set the attribute of the cursor.

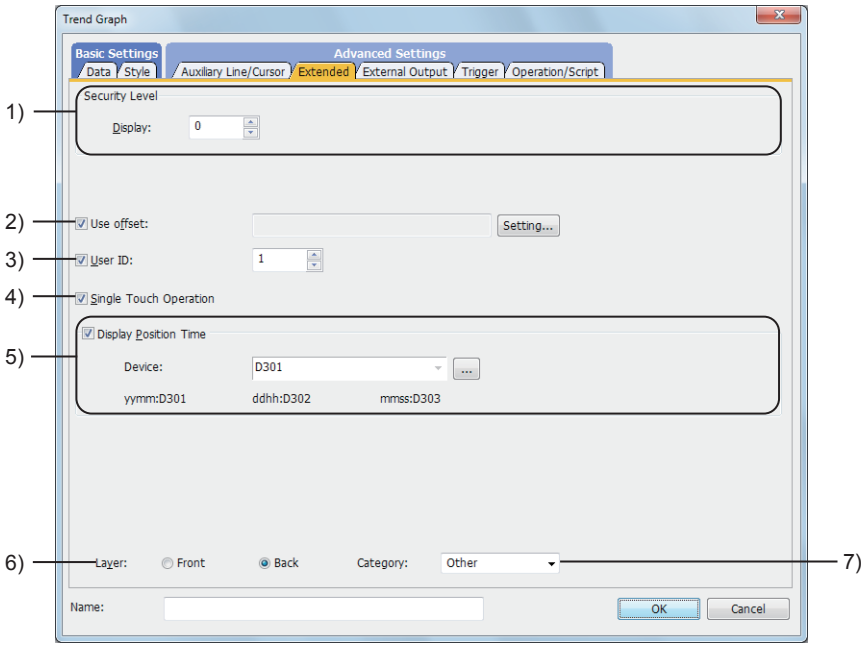
Item	Description
[Line Style]	Select the style of the line. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line
[Width]	Select the width of the line. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Line Color]	Select the color of the line.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

➟8.16.2 ■2 Identifying multiple graphs (setting user IDs)

4) **[Single Touch Operation]**

Select this item to display a cursor at the touched place.

5) **[Display Position Time]**

Set this item to display the data obtained at specified time in the center of the graph when the touch switch is touched.

Item	Description
[Device]	Set the device in which the time data is stored. The three successive devices following the device set in this item are automatically assigned to [yymm], [ddhh], and [mmss]. The time data is stored in the upper eight bits and lower eight bits of each set device. The data type of the devices is BCD. ➟8.16.2 ■5 Displaying the data obtained at specified time in the center (time specification jump function)

6) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

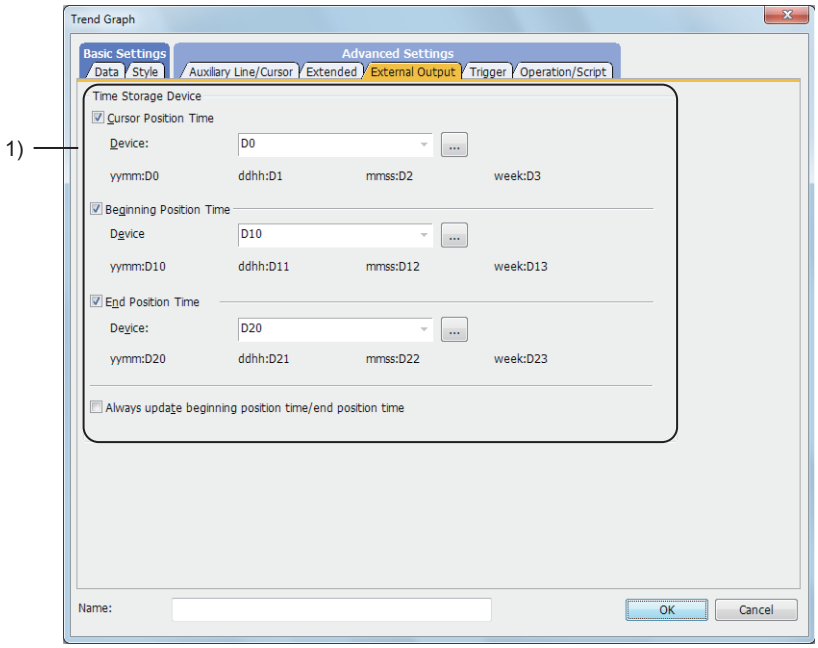
7) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Time Device]**

Stores each time data.

The four successive devices following the device set in this item are automatically assigned to [yymm], [ddhh], [mmss], and [Day].

The time data is stored in the upper eight bits and lower eight bits of each set device.

The data type of the devices is BCD.

For how to display the time data stored in the device in the numerical display, refer to the following.

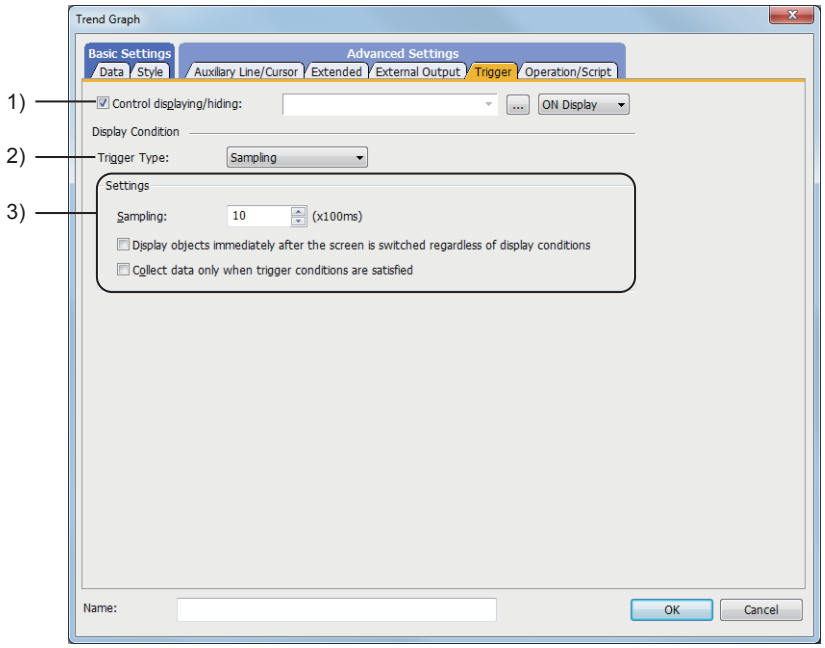
➟8.16.2 ■4 Storing time data in devices

Item	Description
[Cursor Position Time]	Set this item to store the time of the cursor display position. After selecting this item, set the device.
[Beginning Position Time]	Set this item to store the time at the beginning position of the graph. After selecting this item, set the device.
[End Position Time]	Set this item to store the time at the end position of the graph. After selecting this item, set the device.
[Always update Beginning Position Time/End Position Time]	Select this item to constantly store the latest value in the Time device (beginning position time and end position time). New data obtained at specified time is stored every graph refresh.

■6 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

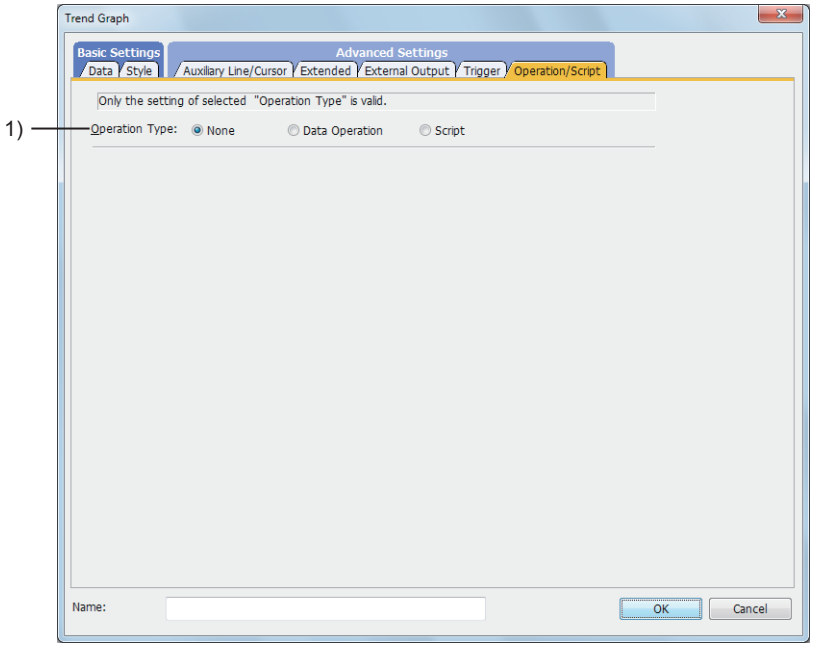
■7 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

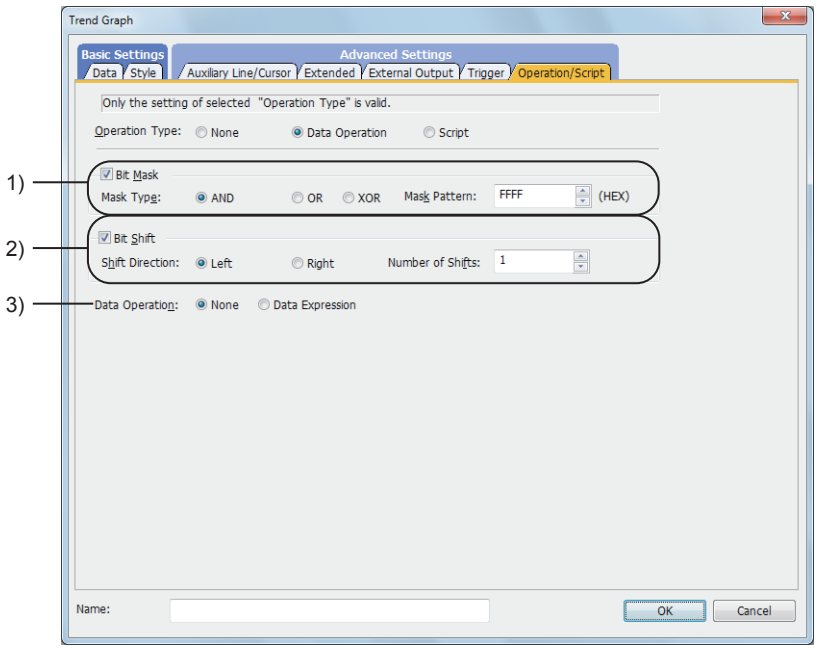
- [None]
  Select this item if the data operation and script are unnecessary.
- [Data Operation]
  Set the expression used for the data operation.
  ➟(1) [Data Operation]
- [Script]
  Set the expression used for the script function.
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Set the format of the expression.

The following shows the items to be selected.

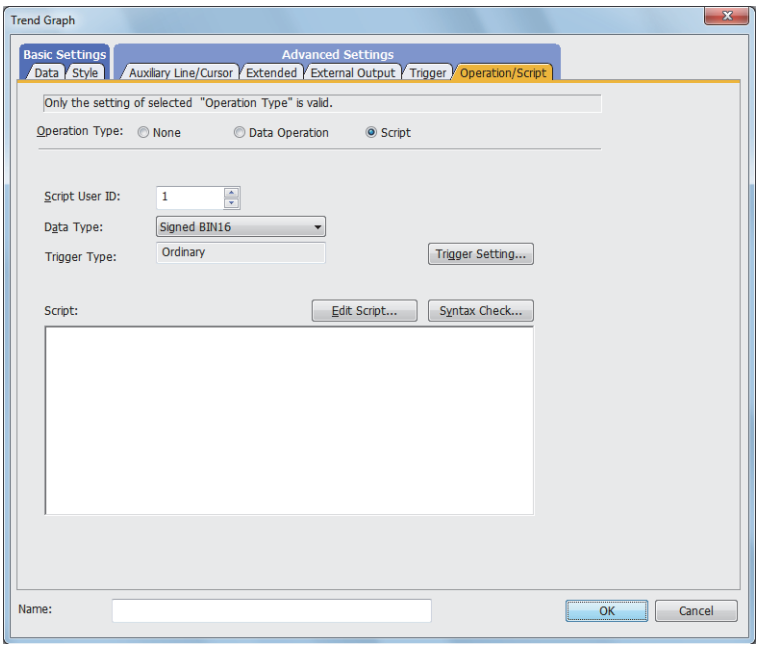
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Data]	[Lower Limit] (X (lower side))	scale_min[0]	○	○	When the screen is updated	
	[Lower Limit] (Y (left side))	scale_min[1]	○	○	When the screen is updated	
	[Lower Limit] (Y (upper side))	scale_min[2]	○	○	When the screen is updated	
	[Lower Limit] (Y (right side))	scale_min[3]	○	○	When the screen is updated	
	[Upper Limit] (X (lower side))	scale_max[0]	○	○	When the screen is updated	
	[Upper Limit] (Y (left side))	scale_max[1]	○	○	When the screen is updated	
	[Upper Limit] (Y (upper side))	scale_max[2]	○	○	When the screen is updated	
	[Upper Limit] (Y (right side))	scale_max[3]	○	○	When the screen is updated	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the screen is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.16.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the trend graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. (Not available to GT21 and GS21) GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT Internal Device

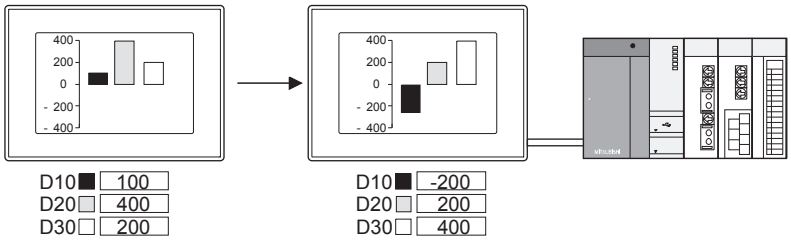
➟12.1.3 GOT special register (GS)

Function	Setting item
Hiding the upper and lower limit symbols	GS450.b10

8.17 Placing a Bar Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function collects multiple word device values in a batch and displays the values in a bar graph.



8.17.1 Specifications of the bar graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the bar graph.

■1 Number of bar graphs that can be set

(1) Number of bar graphs that can be placed

Up to 1024 bar graphs can be placed on one screen.
Up to 256 objects for which [Collect data only when trigger conditions are satisfied] is set can be placed for one project.

(2) Number of bars that can be displayed (number of word devices that can be monitored)

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 500 bars can be displayed on one bar graph.
- For GT21 and GS21
  Up to eight bars can be displayed on one bar graph.

8.17.2 How to use the bar graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the bar graph.

■1 Placing the bar graph

The following shows how to place the bar graph.

Step 1 Select [Object] → [Graph] → [Bar Graph] from the menu.

Step 2 Click the position where you place the bar graph. Placing the bar graph is complete.

Step 3 Adjust the frame size of the bar graph.

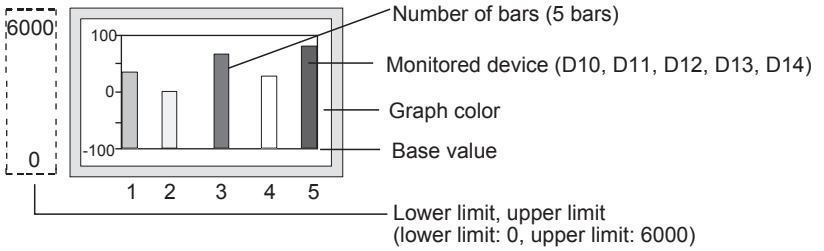
Step 4 Double-click the placed bar graph to display the setting dialog.

➟8.17.4 [Bar Graph] dialog

Step 5 Display the [Data] tab.

➟8.17.4 ■1 [Data] tab

Step 6 Set the number of bars (the number of monitored word devices).



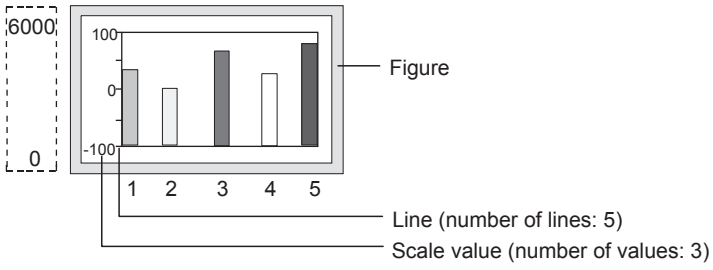
Step 7 Set a device to be monitored.

➟6.1.2 How to set devices

Step 8 Set [Lower Limit], [Upper Limit], and [Base Value].

Step 9 Set the scale and figure in the [Style] tab.

➟8.17.4 ■2 [Style] tab



Step 10 Click the [OK] button to complete the bar graph settings.

■2 Setting [Collect data only when trigger conditions are satisfied]

Not available to GT21 and GS21.

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced.

Step 1 Select [Object] → [Graph] → [Bar Graph] from the menu.

Step 2 Click the position where you place the bar graph. Placing the bar graph is complete.

Step 3 Double-click the placed bar graph to display the setting dialog.

➟8.17.4 [Bar Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.17.4 ■4 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

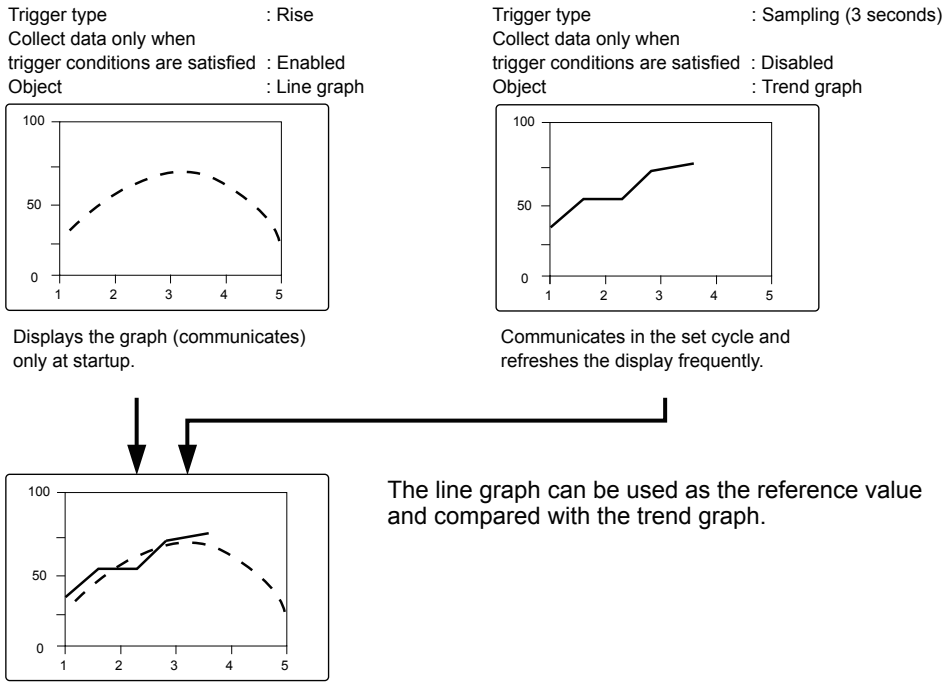
The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

■3 Combining graphs

Multiple graphs can be combined into one.

Select the two graphs you want to combine.

Example) Combining the line graph and trend graph

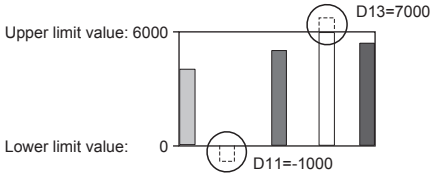


8.17.3 Precautions for a bar graph

This section explains the precautions for the bar graph.

■1 When the monitored device value exceeds the upper or lower limit value

When the monitored device value exceeds the lower limit value, the display of the lower limit value is applied.
When the monitored device value exceeds the upper limit value, the display of the upper limit value is applied.



■2 When upper and lower limits are specified using device values

When upper and lower limits are specified using device values, an error will occur if the reference value exceeds either limit.

■3 Cause for when the graph display is not refreshed in the set cycle set and measure against it

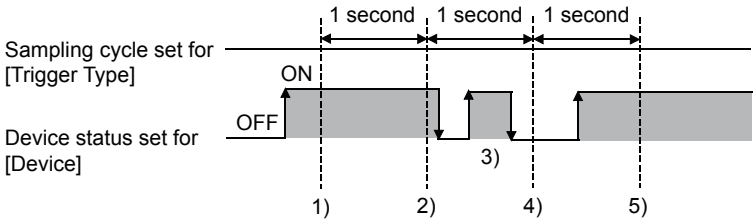
Not available to GT21 and GS21.

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

The graph display may not be refreshed in the set cycle.

(a) **Cause**

The device status is checked in the sampling cycles set for [Trigger Type].
If the condition is not satisfied at the timing of the check, the display is not refreshed.
Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the bar graph is refreshed at timing 1).
- The display of the bar graph is refreshed at timing 2).
- At timing 3), the display of the bar graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
- At timing 4), the display of the bar graph is not refreshed because the device condition is not satisfied.
- The display of the bar graph is refreshed at timing 5).

(b) **Measure**

The sampling cycle set for [Trigger Type] does not depend on the device status.
(The sampling cycle does not change whether the device is turned on or off.)
The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

(2) Refresh timing when [Sampling], [ON Sampling], or [OFF Sampling] is selected

The sampling cycle count starts and is reset at the following timing.

- When the bar graph is displayed (in screen switching, a security level change, or other possible cases)
- When the language switches
- When the security level changes

After the execution of any of the events, the display is refreshed at the start timing of the sampling cycle.

■4 Monitoring a primitive data type global label set using the consecutive device setting (one point)

When [Continuous] is selected for [Device Setting] in the [Bar Graph] dialog ([Data] tab) and a primitive data type global label is set with one device point, the system alarm (326: The data type of labels/tags do not match.) occurs.
To solve the above problem, take one of the following corrective actions.

- Select [Random] for [Device Setting] in the [Bar Graph] dialog ([Data] tab).
- Set an array-type global label.

8.17.4 [Bar Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The bar graph is an object that collects multiple word device values in a batch and displays the values in a graph.

Step 1 Select [Object] → [Graph] → [Bar Graph] from the menu.

Step 2 Click the position where you place the bar graph. Placing the bar graph is complete.

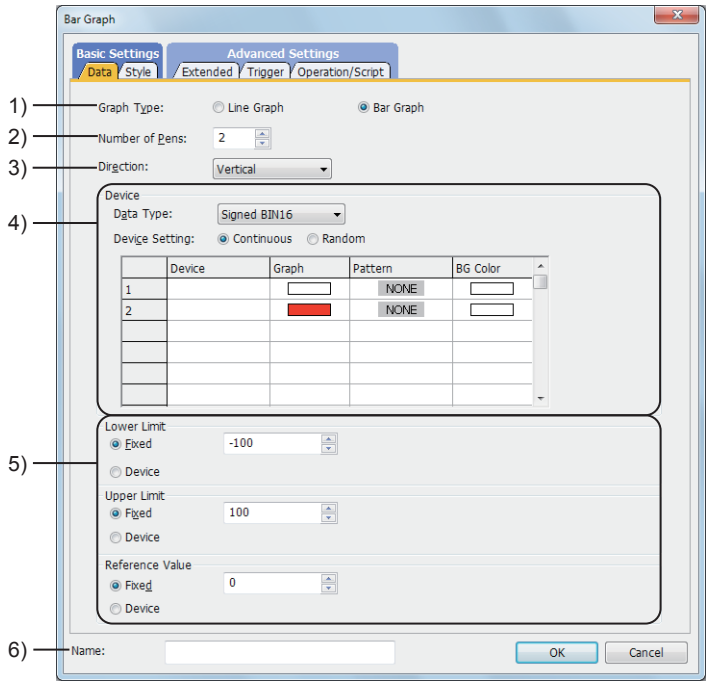
Step 3 Double-click the placed bar graph to display the setting dialog.

➟■1 [Data] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Data] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the device to be monitored and the bar graph status corresponding to the device value.



1) **[Graph Type]**
Select the graph to be set.
The following shows the items to be selected.

- [Line Graph]
- [Bar Graph]

2) **[Number of Pens]**
Set the number of bars to be displayed.
The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

The setting range is [1] to [500].

• For GT21 and GS21

The setting range is [1] to [8].

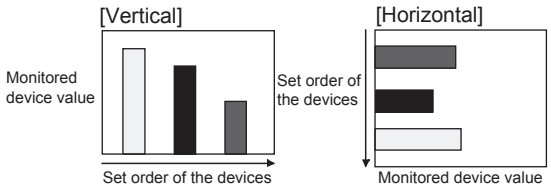
3) **[Direction]**

Select the display direction of the graph.

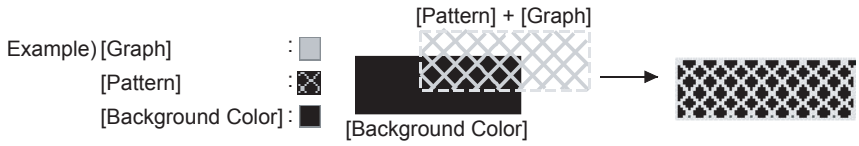
The following shows the items to be selected.

• [Vertical]

• [Horizontal]



4) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Device Setting]	Select how to set the device. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random]: Select this item when setting devices one by one.
[Device]	Set the device to be monitored. ➟6.1.2 How to set devices
[Graph]	Select the color of the bar.
[Pattern], [Background Color]	Select the pattern and the background color to be used for the bar. 

5) **[Lower Limit], [Upper Limit], and [Base Value]**

Select whether to specify the display range (lower and upper limit values and a base value) of the line graph with the fixed value or with the device value.

The following shows the items to be selected.

• [Fixed]:

Specify a constant.

• [Device]:

Specify a device value.

➟6.1.2 How to set devices

The setting range of [Lower Limit], [Upper Limit], and [Base Value] differs depending on the item selected for [Data type].

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

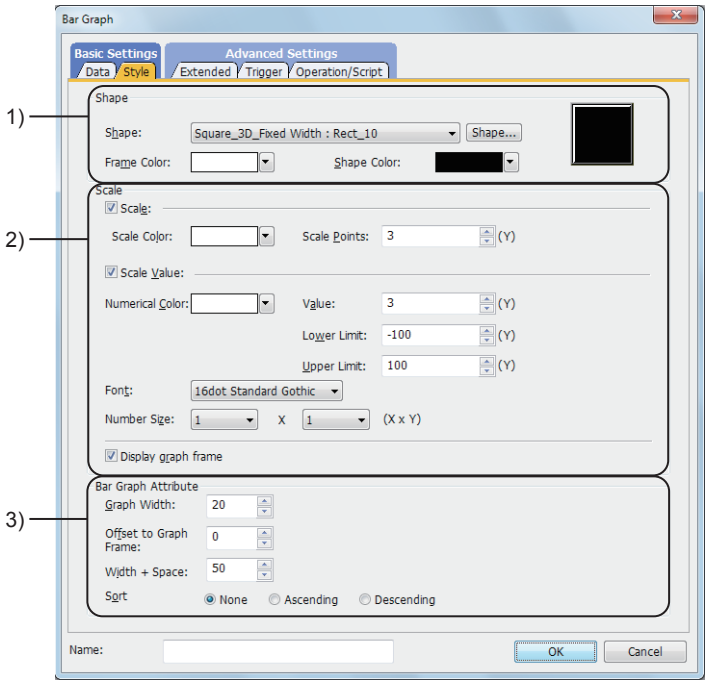
Up to 100 characters can be set.

■2 [Style] tab

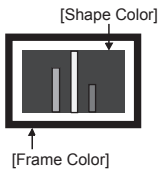
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

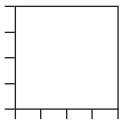


1) [Shape]

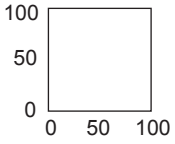
Item	Description
[Shape]	Set the shape of the bar graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape. Preview • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  [Shape Color] [Frame Color] • **Preview** Displays a preview of the set shape.

2) [Scale Settings]

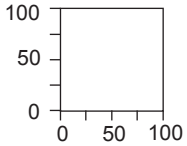
Displays the line or scale value in the bar graph.



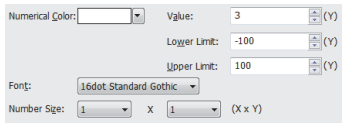
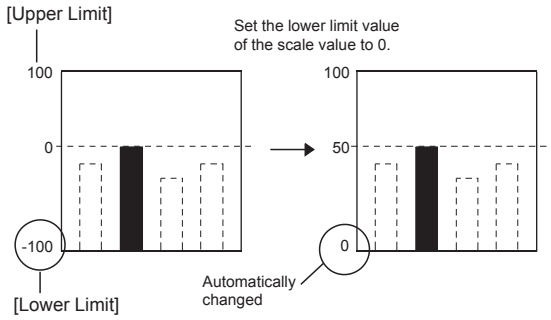
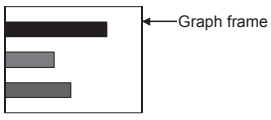
Line
(X: 5)
(Y: 5)



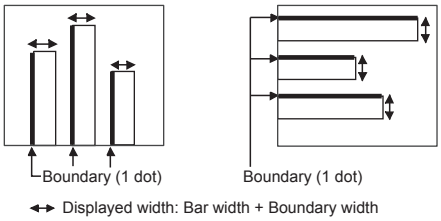
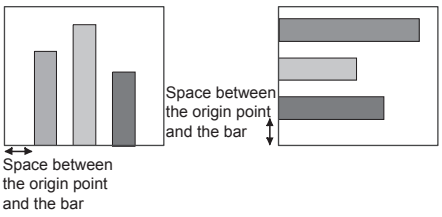
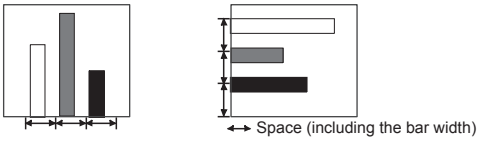
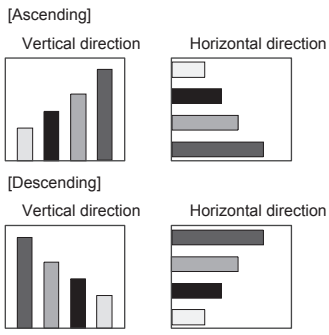
Scale value
(X: 3)
(Y: 3)



Displays both the lines and scale values.

Item	Description
[Scale]	Set this item to display lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [0] and [2] to [101]. • **[Color]** Set the color of lines on the scale.
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value] ([Horizontal] and [Vertical])** Set the number of numeric characters. The setting range is [0] and [2] to [101]. • **[Lower Limit] ([Horizontal] and [Vertical]) and [Upper Limit] ([Horizontal] and [Vertical])** Set the lower limit and upper limit of the numerical value. Changes in this setting are automatically applied to the display.  Depending on the item selected for [Data Type] in the [Data] tab, the setting range is different. The setting range of 64-bit devices is the same as that of 32-bit devices. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.
[Display the graph frame]	Select this item to display the frame of the graph. 

3) **[Bar Graph Attribute]**

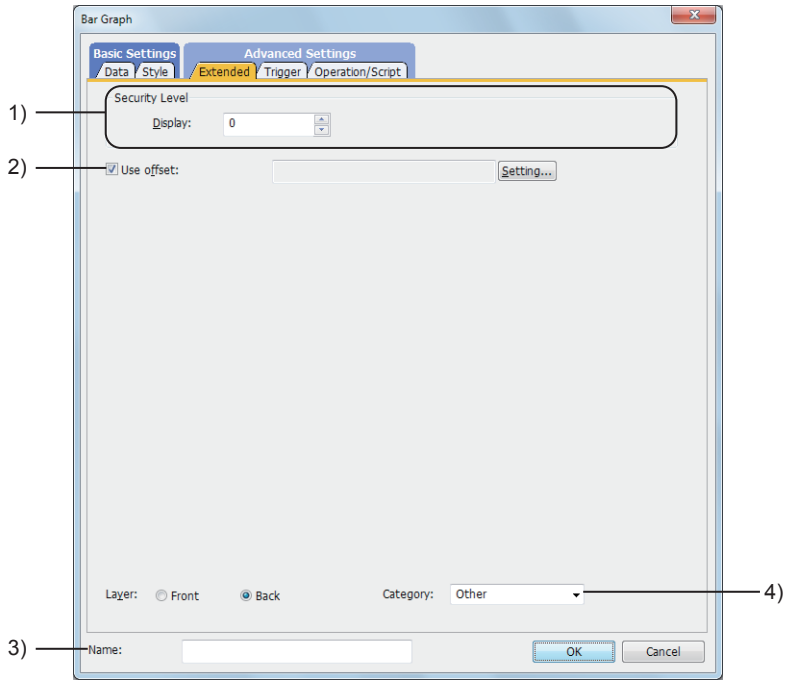
Item	Description
[Graph Width]	Set the width of the bar. The setting range is [1] to [500] dot(s). In the actual display, one dot of the boundary width is added to the value set for this item. ([Vertical]: Left, [Horizontal]: Top) 
[Offset to Frame]	Set the space between the origin point and the bar nearest to the origin point. The setting range is [0] to [100] dot(s). 
[Width + Space]	Set the space between adjoining bars. The setting range is [1] to [500] dot(s). The setting value includes the displayed width. 
[Sort]	Select the sorting order when sorting bars according to the device values. The following shows the items to be selected. • [None] • [Ascending] • [Descending] 

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

4) **[Category]**

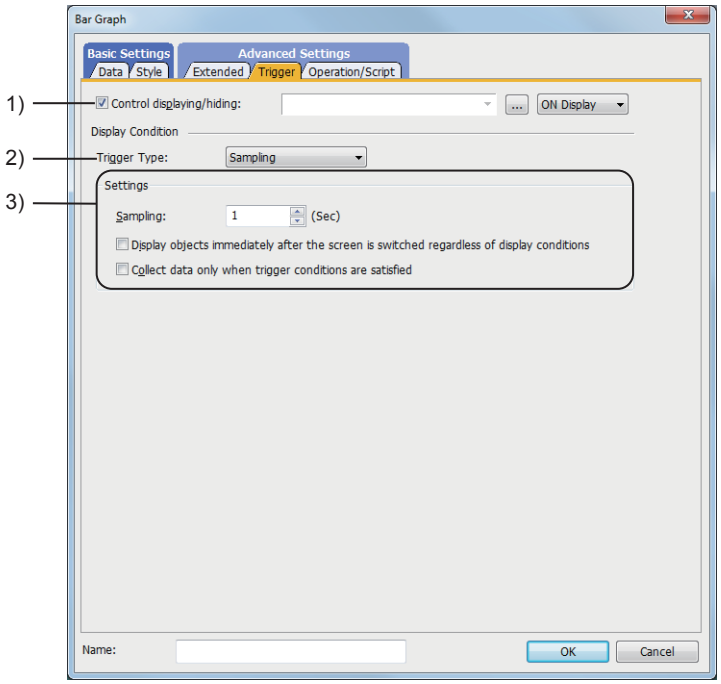
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Not available to GT21 and GS21. Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

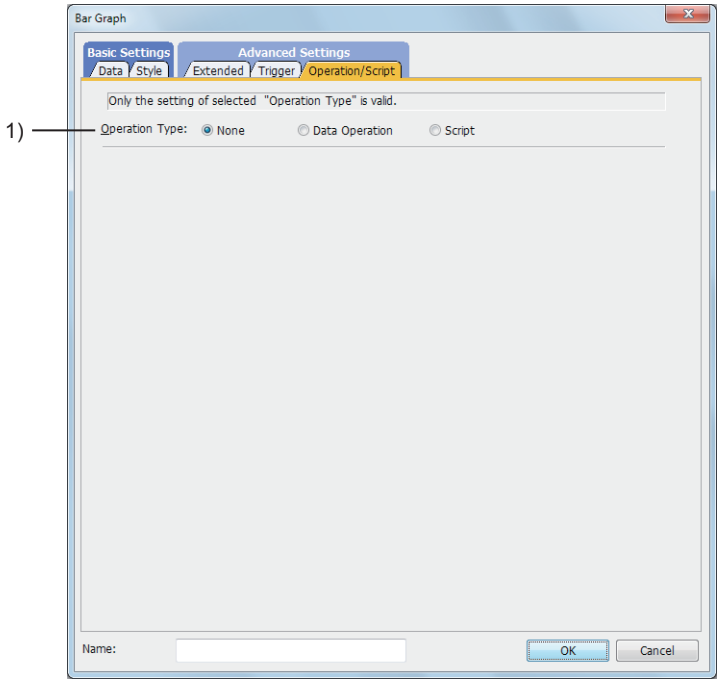
■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.

- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]

- [Script]

  Not available to GT21 and GS21.

  Set the expression used for the script function.

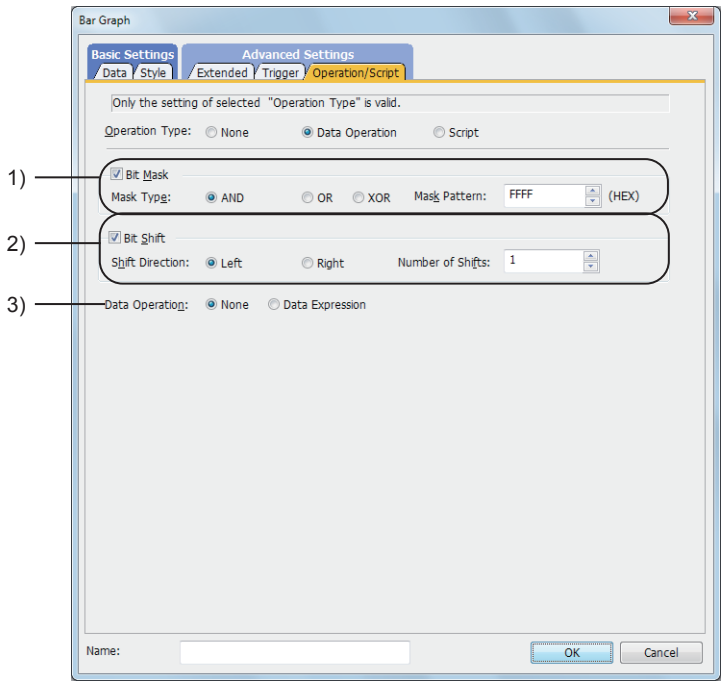
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

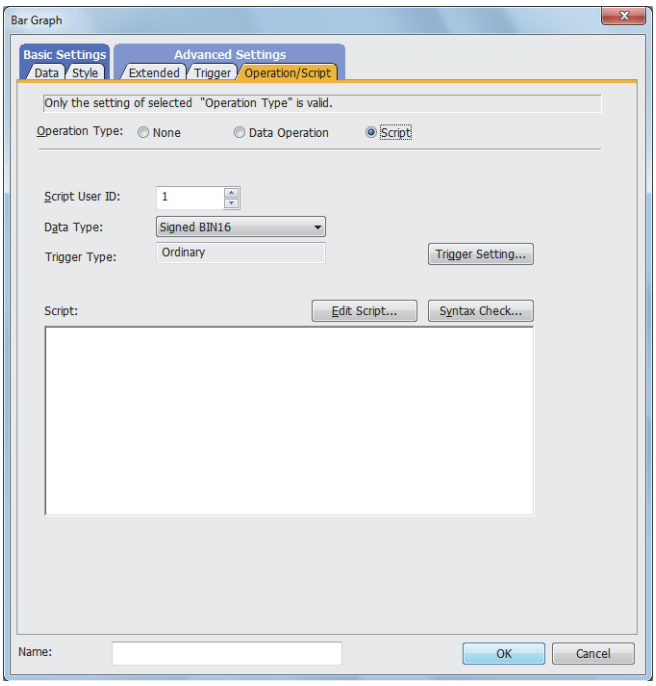
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
	[Lower Limit] (X)	scale_min[0]	○	○	When the screen is updated	
	[Lower Limit] (Y)	scale_min[1]	○	○	When the screen is updated	
	[Upper Limit] (X)	scale_max[0]	○	○	When the screen is updated	
	[Upper Limit] (Y)	scale_max[1]	○	○	When the screen is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.17.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the bar graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

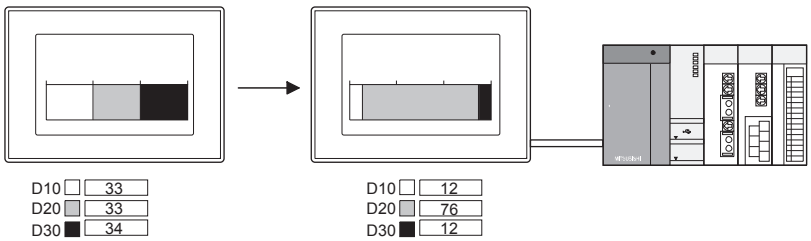
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.18 Placing a Statistics Bar Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function collects multiple word device values in a batch and displays the ratio of each value to the total of all the collected values in a bar graph.



■1 Application examples

(1) Displaying the graph on the same screen as the historical data list display

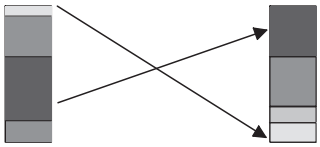
By displaying the graph on the same screen as the historical data list display, the device status can be described more effectively.

➟8.10 Placing a Historical Data List Display

No.	Name	Target qty	Product qty
1	Machine 1	5000	2000
2	Machine 2	5000	1200
3	Machine 3	5000	1000

(2) Sorting the graph according to the device values

The graph can be sorted in ascending or descending order of the device values.



8.18.1 Specifications of the statistics bar graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the statistics bar graph.

■1 Number of statistics bar graphs that can be set

(1) Number of statistics bar graphs that can be placed

Up to 32 statistics bar graphs can be placed on one screen.
Up to 256 objects for which [Collect data only when trigger conditions are satisfied] is set can be placed for one project.

(2) Number of values that can be displayed (number of word devices that can be monitored)

Up to 32 values can be displayed in one statistics bar graph.

8.18.2 How to use the statistics bar graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the statistics bar graph.

■1 Placing the statistics bar graph

The following shows how to place the statistics bar graph.

Step 1 Select [Object] → [Graph] → [Statistics Bar Graph] from the menu.

Step 2 Click the position where you place the statistics bar graph. Placing the statistics bar graph is complete.

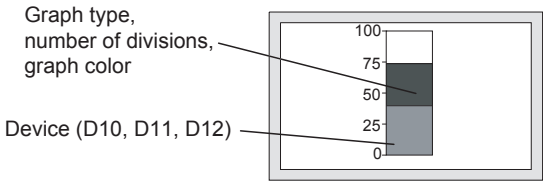
Step 3 Adjust the frame size of the statistics bar graph.

Step 4 Double-click the placed statistics bar graph to display the setting dialog.

➟8.18.4 [Statistics Bar Graph] dialog

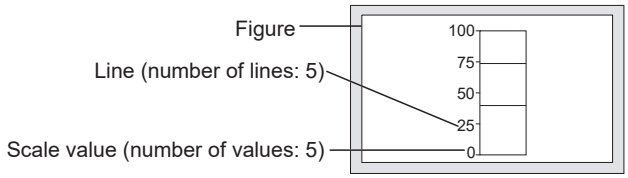
Step 5 Set the number of divisions (number of the word device to be monitored), device to be monitored, and the color of the graph in the [Data] tab.

➟8.18.4 ■1 [Data] tab



Step 6 Set the scale and figure in the [Style] tab.

➟8.18.4 ■2 [Style] tab



Step 7 Click the [OK] button to complete the statistics bar graph settings.

■2 Setting [Collect data only when trigger conditions are satisfied]

Not available to GT21 and GS21.

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced. Various graphs can be combined.

Step 1 Select [Object] → [Graph] → [Statistics Bar Graph] from the menu.

Step 2 Click the position where you place the statistics bar graph. Placing the statistics bar graph is complete.

Step 3 Double-click the placed statistics bar graph to display the setting dialog.

➟8.18.4 [Statistics Bar Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.18.4 ■4 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

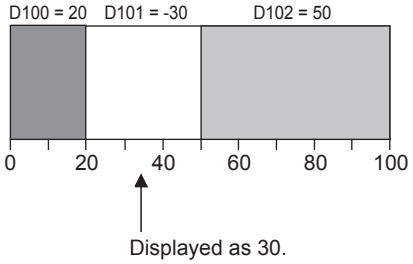
8.18.3 Precautions for a statistics bar graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the statistics bar graph.

■1 When the monitored device value is minus

In the statistics bar graph, the absolute value is displayed when the monitored device value is minus.
Example) When D101 is -30



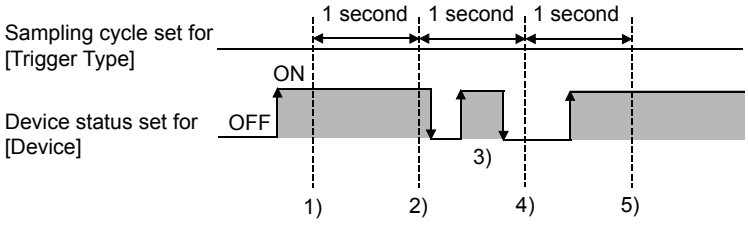
■2 Cause for when the graph display is not refreshed in the set cycle set and measure against it

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

The graph display may not be refreshed in the set cycle.

(a) **Cause**

The device status is checked in the sampling cycles set for [Trigger Type].
If the condition is not satisfied at the timing of the check, the display is not refreshed.
Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the statistics bar graph is refreshed at timing 1).
- The display of the statistics bar graph is refreshed at timing 2).
- At timing 3), the display of the statistics bar graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
- At timing 4), the display of the statistics bar graph is not refreshed because the device condition is not satisfied.
- The display of the statistics bar graph is refreshed at timing 5).

(b) **Measure**

The sampling cycle set for [Trigger Type] does not depend on the device status.
(The sampling cycle does not change whether the device is turned on or off.)
The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

(2) Refresh timing when [Sampling], [ON Sampling], or [OFF Sampling] is selected

The sampling cycle count starts and is reset at the following timing.

- When the statistics bar graph is displayed (in screen switching, a security level change, or other possible cases)
- When the language switches
- When the security level changes

After the execution of any of the events, the display is refreshed at the start timing of the sampling cycle.

8.18.4 [Statistics Bar Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The statistics bar graph is an object that collects multiple word device values in a batch and displays the ratio of each value to the total of the collected values in a bar graph.

Step 1 Select [Object] → [Graph] → [Statistics Bar Graph] from the menu.

Step 2 Click the position where you place the statistics bar graph. Placing the statistics bar graph is complete.

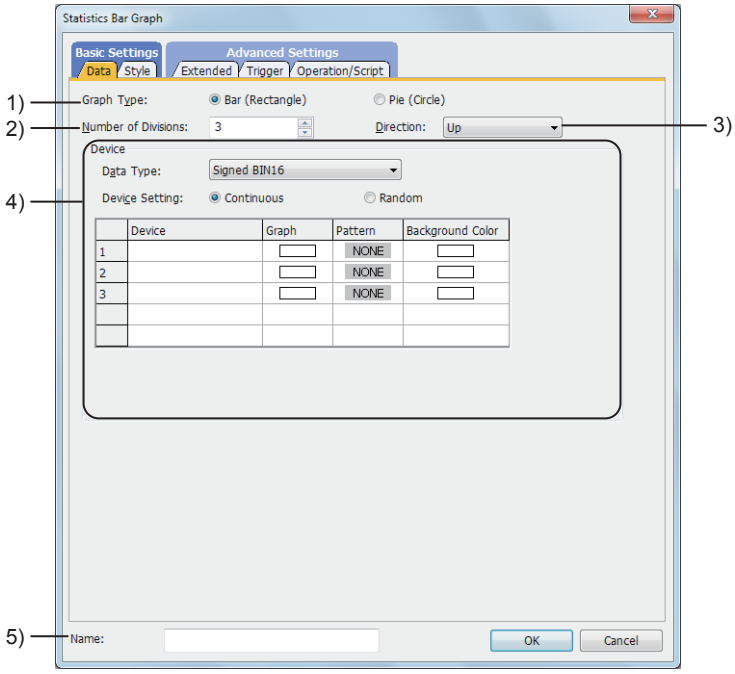
Step 3 Double-click the placed statistics bar graph to display the setting dialog.

➥■1 [Data] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Data] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

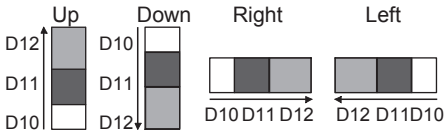
Set the target device to be monitored and the statistics bar graph status corresponding to the device value.



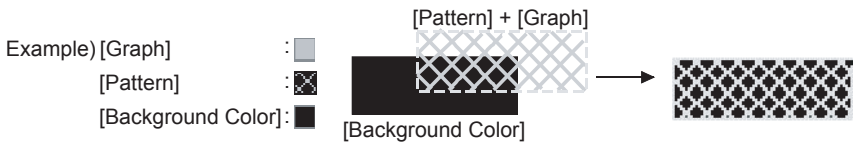
1) **[Graph Type]**
Select the graph to be set.
The following shows the items to be selected.
- [Bar (Rectangle)]
- [Pie (Circle)]

2) **[Number of Divisions]**
Set the number of values that can be displayed (number of word devices that can be monitored).
The setting range is [2] to [32].

3) **[Direction]**
Select the display direction of the graph.
The following shows the items to be selected.
- [Up]
- [Down]
- [Right]
- [Left]



4) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Device Setting]	Select how to set the device. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random]: Select this item when setting devices one by one.
[Device]	Set the device to be monitored. ➟6.1.2 How to set devices
[Graph]	Select the color of the bar.
[Pattern], [Background Color]	Select the pattern and the background color to be used for the bar. 

5) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

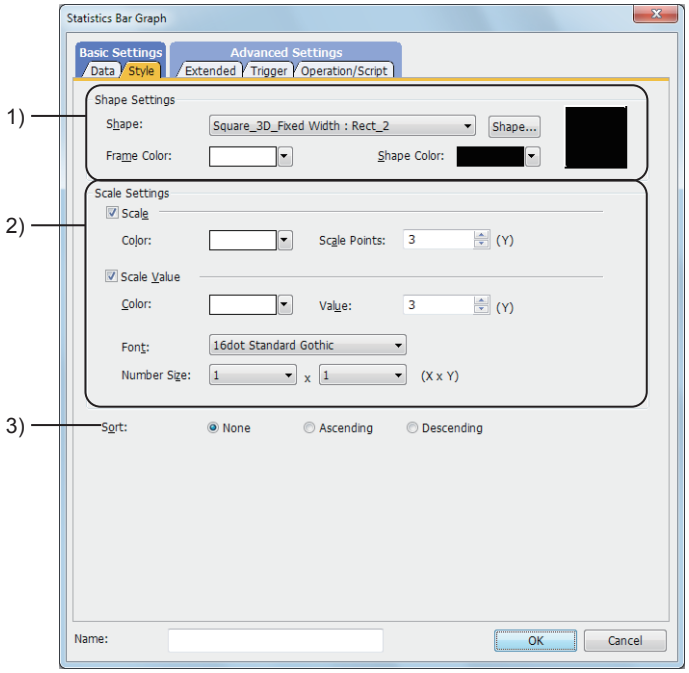
Up to 100 characters can be set.

■2 [Style] tab

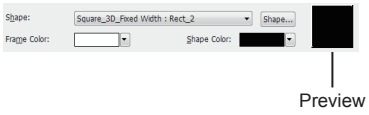
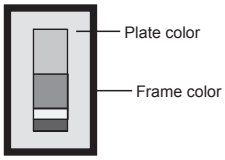
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

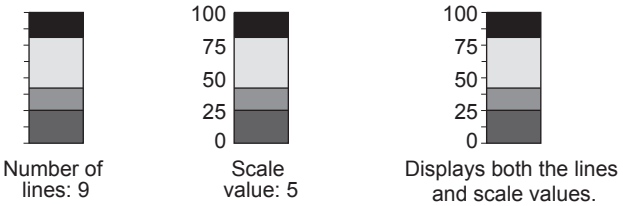


1) [Shape]

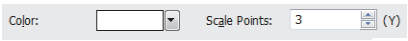
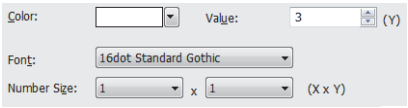
Item	Description
[Shape]	Set the shape of the statistics bar graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

2) **[Scale Settings]**

Displays the line or scale value in the statistics bar graph.



Number of lines: 9 | Scale value: 5 | Displays both the lines and scale values.

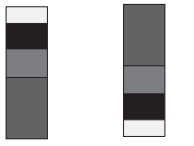
Item	Description
[Scale]	Set this item to display lines on the scale.  • **[Color]** Set the color of lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [0] and [2] to [101].
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value]** Set the number of numeric characters. The setting range is [0] and [2] to [101]. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.

3) **[Sort]**

Select the sorting order when sorting the graph in ascending or descending order of the device values.

The following shows the items to be selected.

- [None]
- [Ascending]
- [Descending]

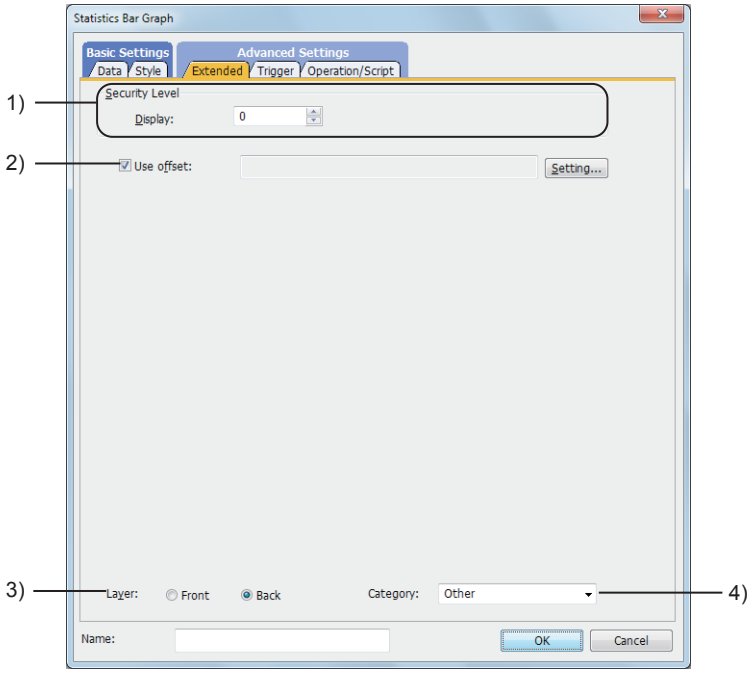


■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

4) **[Category]**

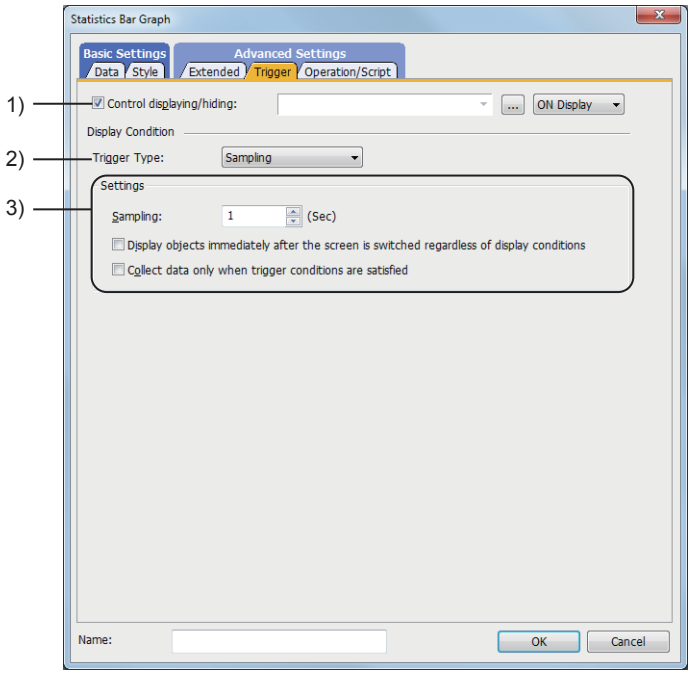
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Not available to GT21 and GS21. Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

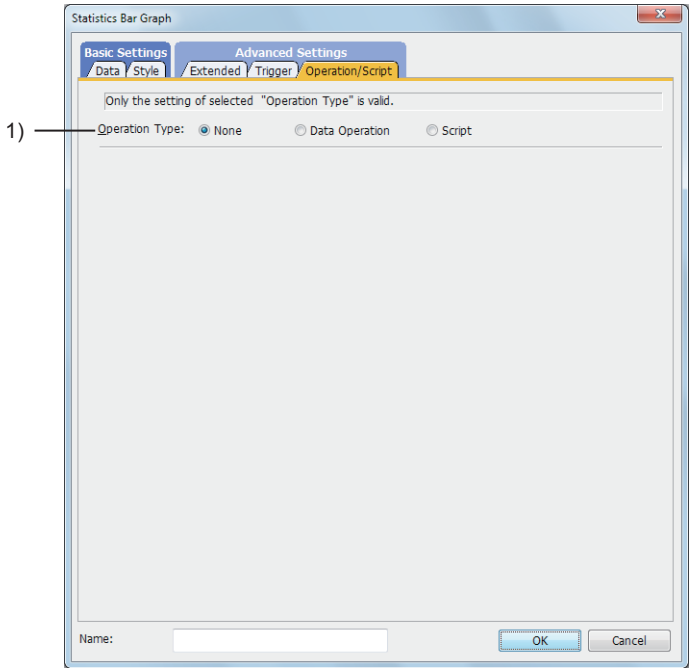
■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Set the expression used for the script function.

  ➟(2) [Script]

(1) [Data Operation]

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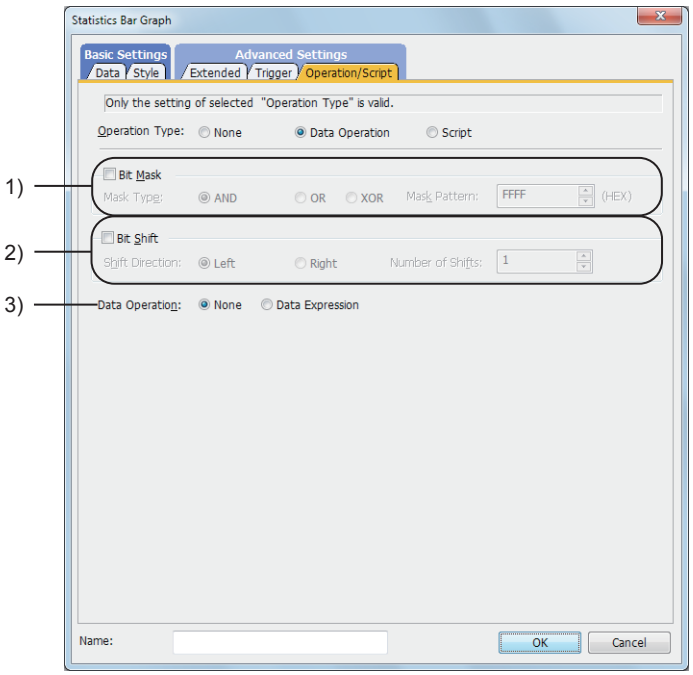
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

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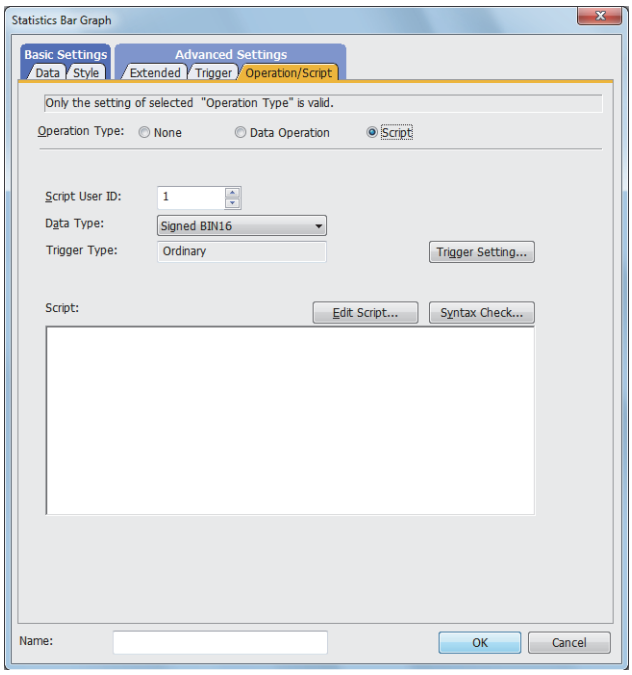
For the settings of scripts, refer to the following.

➟9.10 Object Script



You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.
The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.
○: Available
×: Not available
-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.18.5 Relevant settings

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Set the relevant settings other than the specific settings for the statistics bar graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

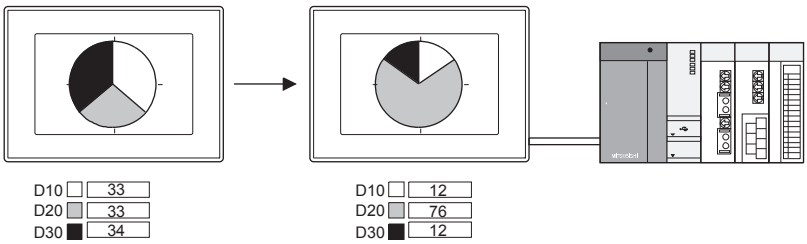
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3]

8.19 Placing a Statistics Pie Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function collects multiple word device values in a batch and displays the ratio of each value to the total of all the collected values in a pie graph.

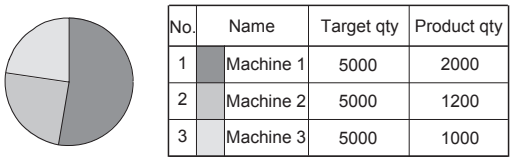


■1 Application examples

(1) Displaying the graph on the same screen as the historical data list display

By displaying the graph on the same screen as the historical data list display, the device status can be described more effectively.

➟8.10 Placing a Historical Data List Display



No.	Name	Target qty	Product qty
1	Machine 1	5000	2000
2	Machine 2	5000	1200
3	Machine 3	5000	1000

(2) Sorting the graph according to the device values

The graph can be sorted in ascending or descending order of the device values.

8.19.1 Specifications of the statistics pie graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the statistics pie graph.

■1 Number of statistics pie graphs that can be set

(1) Number of statistics pie graphs that can be placed

Up to 32 statistics pie graphs can be placed on one screen.
Up to 256 objects for which [Collect data only when trigger conditions are satisfied] is set can be placed for one project.

(2) Number of values that can be displayed (number of word devices that can be monitored)

Up to 32 values can be displayed on one statistics pie graph.

8.19.2 How to use the statistics pie graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the statistics pie graph.

■1 Placing the statistics pie graph

The following shows how to place the statistics pie graph.

Step 1 Select [Object] → [Graph] → [Statistics Pie Graph] from the menu.

Step 2 Click the position where you place the statistics pie graph. Placing the statistics pie graph is complete.

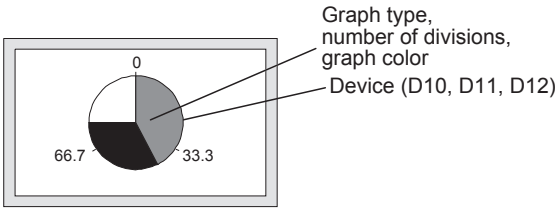
Step 3 Adjust the frame size of the statistics pie graph.

Step 4 Double-click the placed statistics pie graph to display the setting dialog.

➟8.19.4 [Statistics Pie Graph] dialog

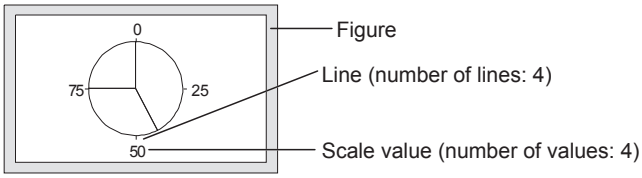
Step 5 Set the number of divisions (number of the word device to be monitored), device to be monitored, and the color of the graph in the [Data] tab.

➟8.19.4 ■1 [Data] tab



Step 6 Set the scale and figure in the [Style] tab.

➟8.19.4 ■2 [Style] tab



Step 7 Click the [OK] button to complete the statistics pie graph settings.

■2 Setting [Collect data only when trigger conditions are satisfied]

Not available to GT21 and GS21.

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced. Various graphs can be combined.

Step 1 Select [Object] → [Graph] → [Statistics Pie Graph] from the menu.

Step 2 Click the position where you place the statistics pie graph. Placing the statistics pie graph is complete.

Step 3 Double-click the placed statistics pie graph to display the setting dialog.

➟8.19.4 [Statistics Pie Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.19.4 ■4 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

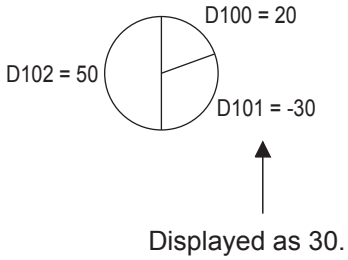
8.19.3 Precautions for a statistics pie graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the statistics pie graph.

■1 When the monitored device value is minus

In the statistics pie graph, the absolute value is displayed when the monitored device value is minus.
Example) When D101 is -30



■2 Cause for when the graph display is not refreshed in the set cycle set and measure against it

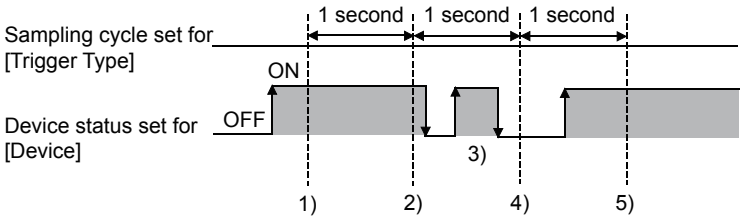
Not available to GT21 and GS21.

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

The graph display may not be refreshed in the set cycle.

(a) **Cause**

The device status is checked in the sampling cycles set for [Trigger Type].
If the condition is not satisfied at the timing of the check, the display is not refreshed.
Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the statistics pie graph is refreshed at timing 1).
- The display of the statistics pie graph is refreshed at timing 2).
- At timing 3), the display of the statistics pie graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
- At timing 4), the display of the statistics pie graph is not refreshed because the device condition is not satisfied.
- The display of the statistics pie graph is refreshed at timing 5).

(b) **Measure**

The sampling cycle set for [Trigger Type] does not depend on the device status.
(The sampling cycle does not change whether the device is turned on or off.)
The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

(2) Refresh timing when [Sampling], [ON Sampling], or [OFF Sampling] is selected

The sampling cycle count starts and is reset at the following timing.

- When the statistics pie graph is displayed (in screen switching, a security level change, or other possible cases)
- When the language switches
- When the security level changes

After the execution of any of the events, the display is refreshed at the start timing of the sampling cycle.

8.19.4 [Statistics Pie Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The statistics pie graph is an object that collects multiple word device values in a batch and displays the ratio of each value to the total of the collected values in a pie graph.

Step 1 Select [Object] → [Graph] → [Statistics Pie Graph] from the menu.

Step 2 Click the position where you place the statistics pie graph. Placing the statistics pie graph is complete.

Step 3 Double-click the placed statistics pie graph to display the setting dialog.

➥■1 [Data] tab
■2 [Style] tab
■3 [Extended] tab
■4 [Trigger] tab
■5 [Operation/Script] tab

■1 [Data] tab

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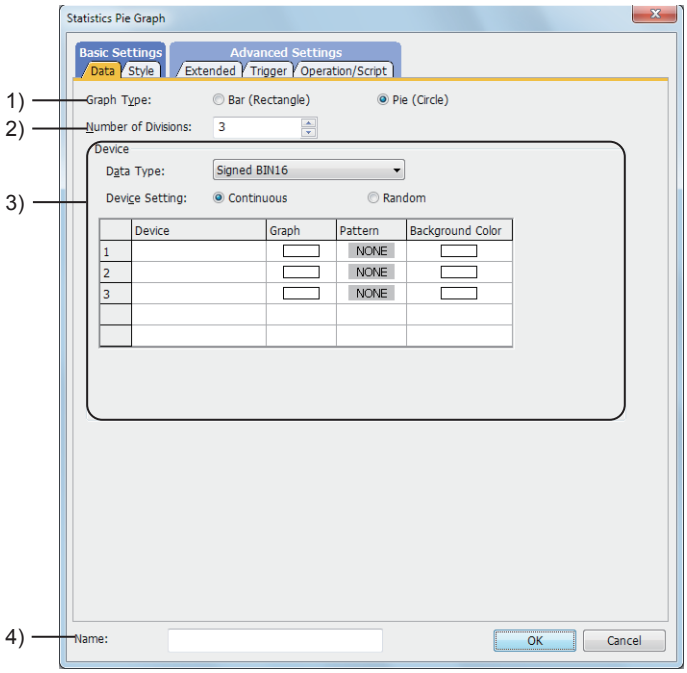
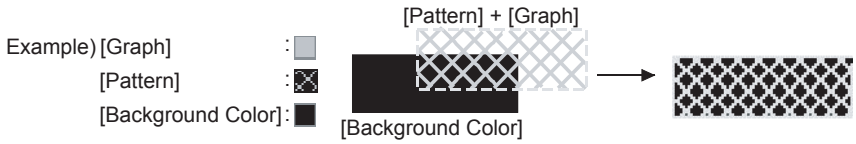
Set the target device to be monitored and the statistics pie graph status corresponding to the device value.



1) **[Graph Type]**
Select the graph to be set.
The following shows the items to be selected.
- [Bar (Rectangle)]
- [Pie (Circle)]

2) **[Number of Divisions]**
Set the number of values that can be displayed (number of word devices that can be monitored).
The setting range is [2] to [32].

3) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Device Setting]	Select how to set the device. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random]: Select this item when setting devices one by one.
[Device]	Set the device to be monitored. ➟6.1.2 How to set devices
[Graph]	Select the color of the pie.
[Pattern], [Background Color]	Select the pattern and the background color to be used for the pie. 

4) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

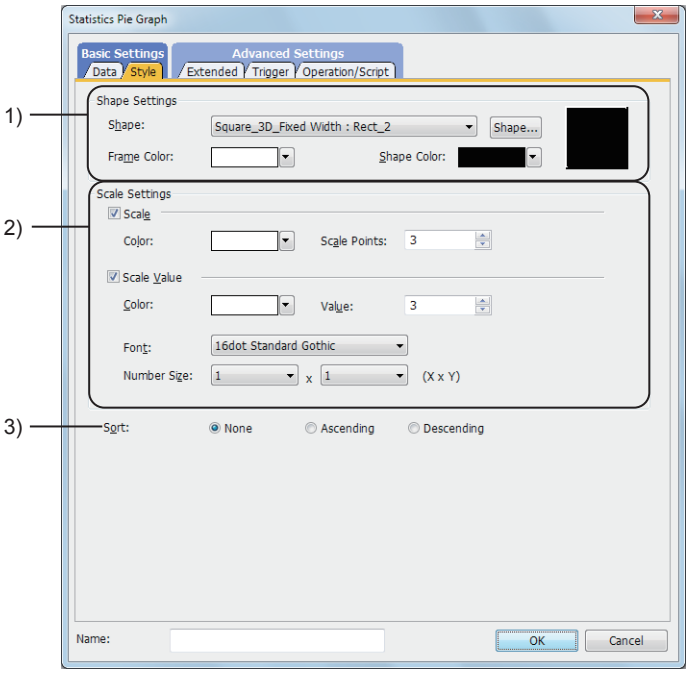
Up to 100 characters can be set.

■2 [Style] tab

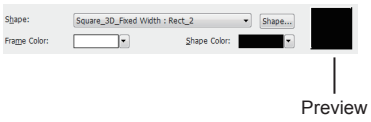
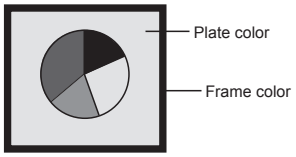
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

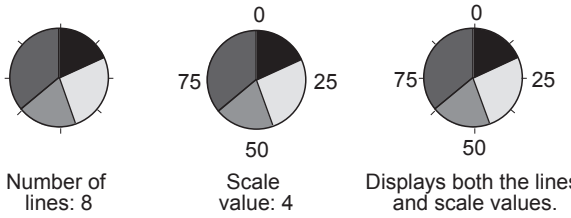


1) [Shape]

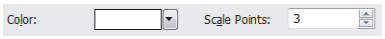
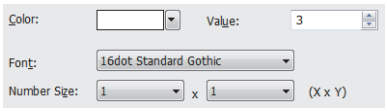
Item	Description
[Shape]	Set the shape of the statistics pie graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

2) **[Scale Settings]**

Displays the line or scale value in the statistics pie graph.



Number of lines: 8 | Scale value: 4 | Displays both the lines and scale values.

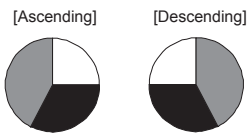
Item	Description
[Scale]	Set this item to display lines on the scale.  • **[Color]** Set the color of lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [0] and [2] to [101].
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value]** Set the number of numeric characters. The setting range is [0] and [2] to [101]. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.

3) **[Sort]**

Select the sorting order when sorting the graph in ascending or descending order of the device values.

The following shows the items to be selected.

- [None]
- [Ascending]
- [Descending]

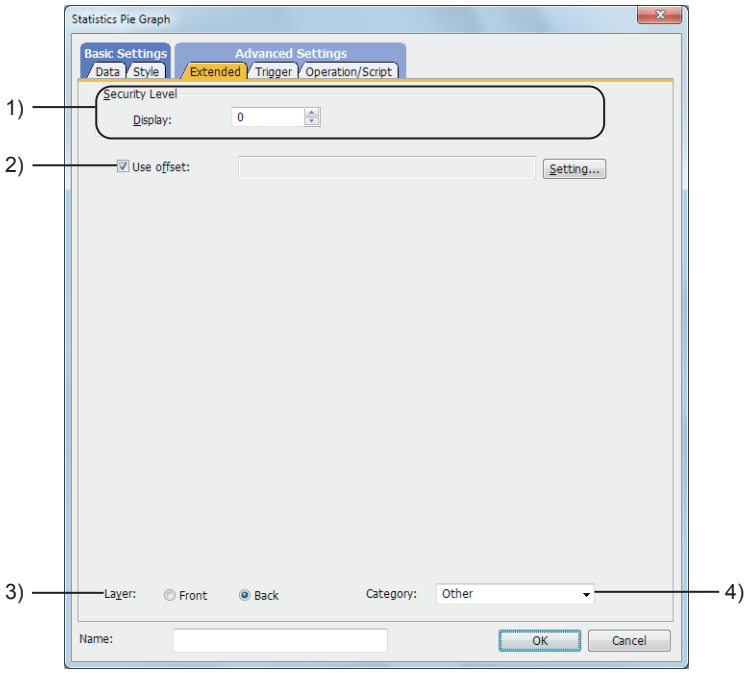


■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

4) **[Category]**

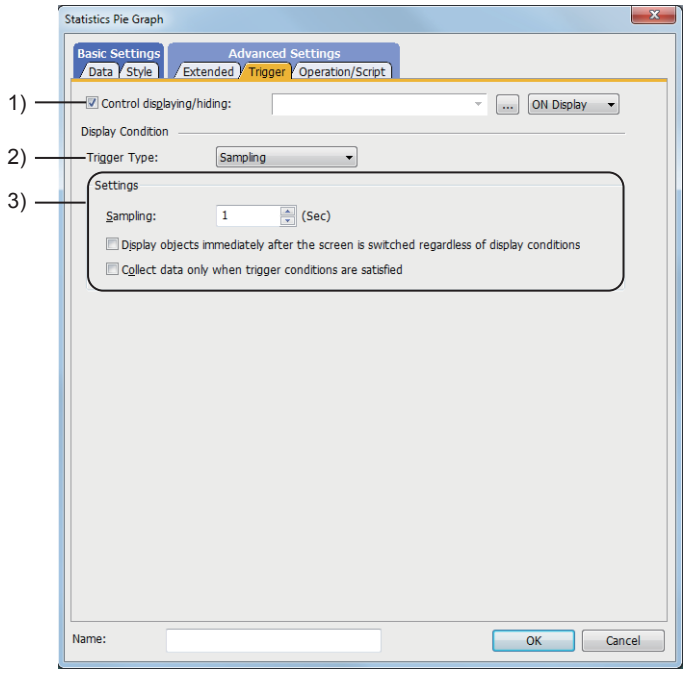
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

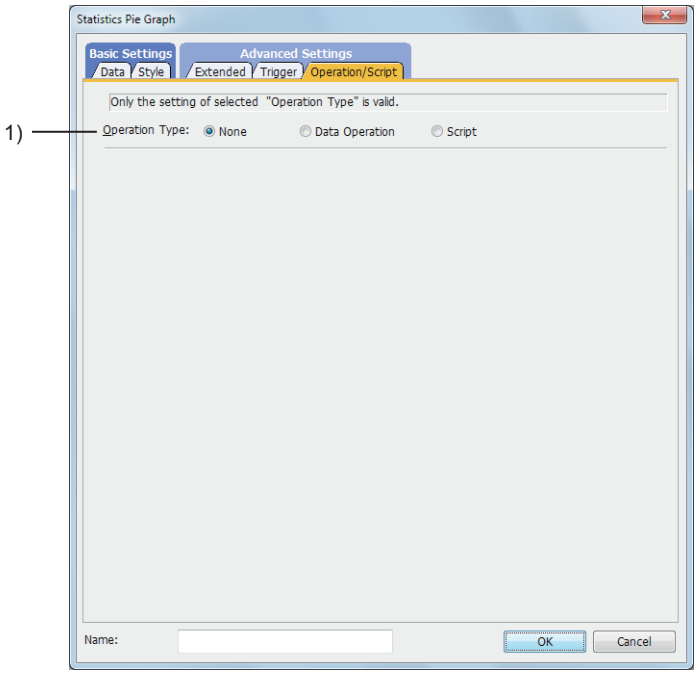
■5 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Not available to GT21 and GS21.

  Set the expression used for the script function.

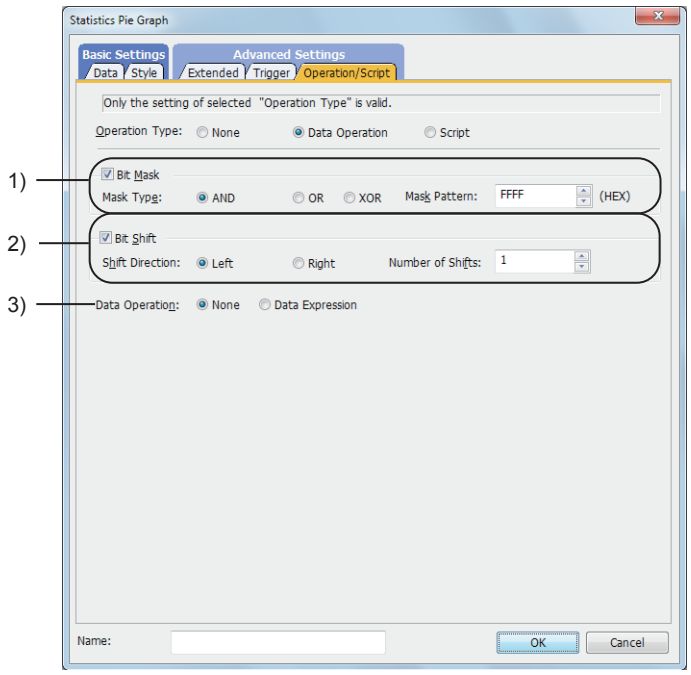
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Set the format of the expression.

The following shows the items to be selected.

- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

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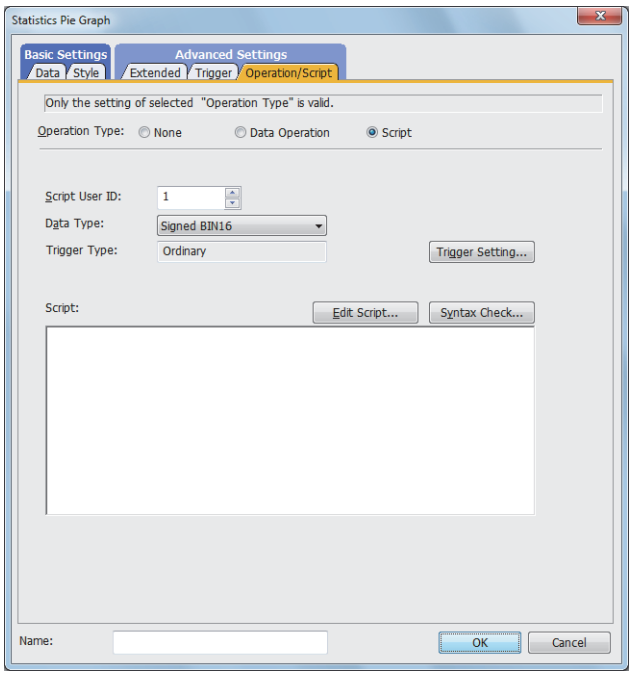
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.19.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the statistics pie graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.20 Placing a Scatter Graph

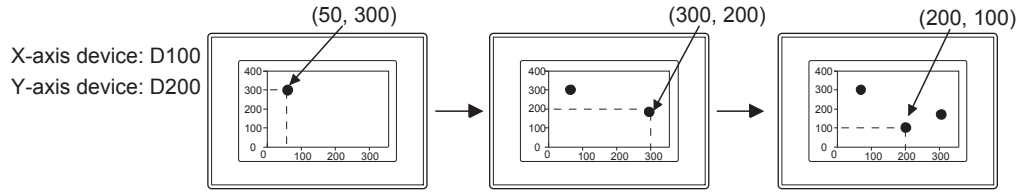
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays a graph using the values of two word devices as the coordinates of X-axis and Y-axis.
The following two types of the scatter graph are available.

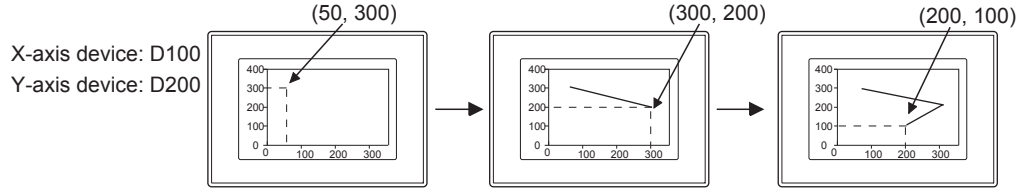
■1 Sample

Collects two word device values and displays the values as a single point.
When the graph is refreshed, the new point is displayed with the previously displayed points. (Locus)

(1) When the display attribute is set to "point"



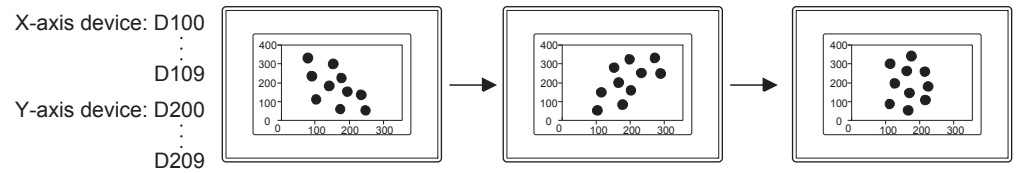
(2) When the display attribute is set to "line"



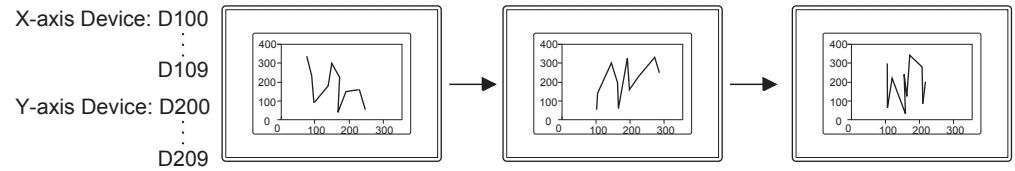
■2 Batch display

Collects multiple sets of two word device values and displays them as multiple points.
You can select whether the points displayed previously are held or deleted when updating the display of the graph.

(1) When the display attribute is set to "point"



(2) When the display attribute is set to "line"



8.20.1 Specifications of the scatter graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the scatter graph.

■1 Number of scatter graphs that can be set

(1) Maximum number of scatter graphs on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  Up to 24 scatter graphs can be placed on one screen.
  Up to 16 scatter graphs for which [Store Memory] is set can be placed for one project.
  Up to 256 objects for which [Collect data only when trigger conditions are satisfied] is set can be placed for one project.
- For GT21 and GS21

  One historical data list display, trend graph, scatter graph, or historical trend graph can be placed on one screen.

(2) Number of points that can be displayed (by two word device values)

Up to 500 points can be displayed on one scatter graph.

8.20.2 How to use the scatter graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the scatter graph.

■1 Placing the scatter graph

The following shows how to place the scatter graph.

Step 1 Select [Object] → [Graph] → [Scatter Graph] from the menu.

Step 2 Click the position where you place the scatter graph. Placing the scatter graph is complete.

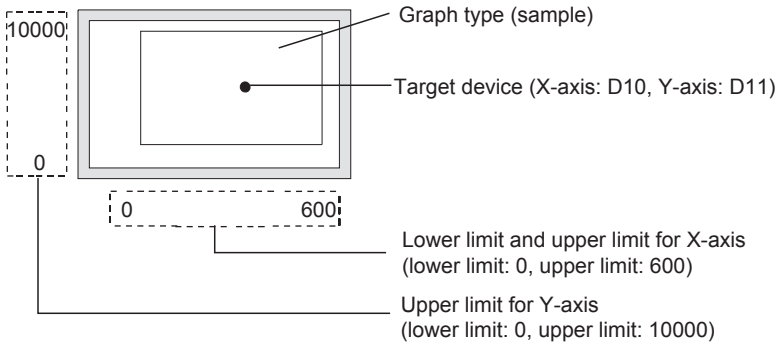
Step 3 Adjust the frame size of the scatter graph.

Step 4 Double-click the placed scatter graph to display the setting dialog.

➟8.20.4 [Scatter Graph] dialog

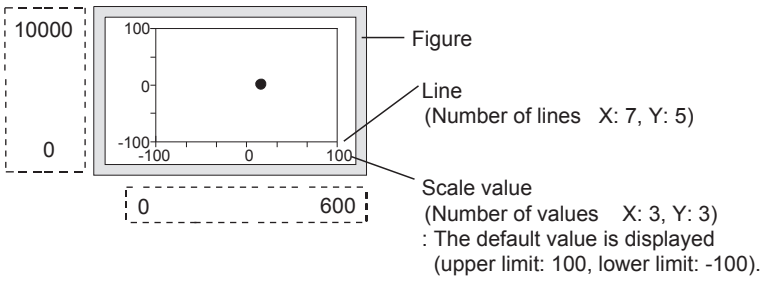
Step 5 Set the graph type, device, upper limit value, and lower limit value in the [Data] tab.

➟8.20.4 ■1 [Data] tab



Step 6 Set the scale and figure in the [Style] tab.

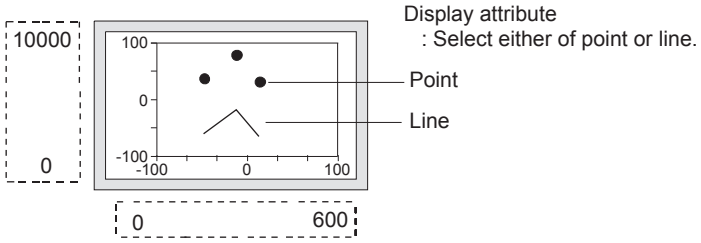
➟8.20.4 ■2 [Style] tab



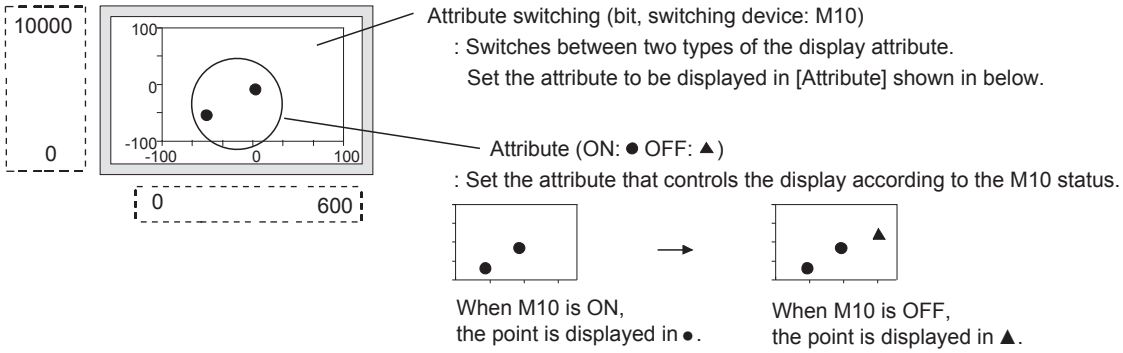
Step 7 Set the display type and attribute switching of the graph in the [Point/Line Attribute] tab.

➟8.20.4 ■3 [Point/Line Attribute] tab

• Display type



• Attribute switching



Step 8 Click the [OK] button to complete the scatter graph settings.

■2 Setting [Collect data only when trigger conditions are satisfied]

With the setting of [Collect data only when trigger conditions are satisfied], the number of communication can be reduced. The following shows the setting procedure.

Step 1 Select [Object] → [Graph] → [Scatter Graph] from the menu.

Step 2 Click the position where you place the scatter graph. Placing the scatter graph is complete.

Step 3 Double-click the placed scatter graph to display the setting dialog.

The [Scatter Graph] dialog appears.

➟8.20.4 [Scatter Graph] dialog

Step 4 Display the [Trigger] tab.

➟8.20.4 ■5 [Trigger] tab

Step 5 Select either of [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] in [Trigger Type].

Step 6 Set [Collect data only when trigger conditions are satisfied].

[Collect data only when trigger conditions are satisfied] setting is effective for the graph that does not require frequent refresh.

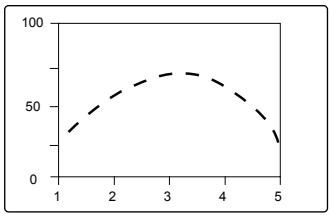
However, if successive graph refresh and display are required, it is recommended to disable [Collect data only when trigger conditions are satisfied] (device values are collected through continuous communication).

The setting of [Collect data only when trigger conditions are satisfied] may cause the delay of the screen refresh or incorrect display of the screen.

■3 Combining graphs

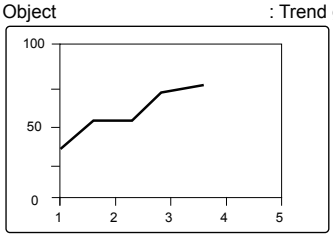
Multiple graphs can be combined into one.
Select the two graphs you want to combine.
Example) Combining the line graph and trend graph

Trigger type : Rise
Collect data only when trigger conditions are satisfied : Enabled
Object : Line graph

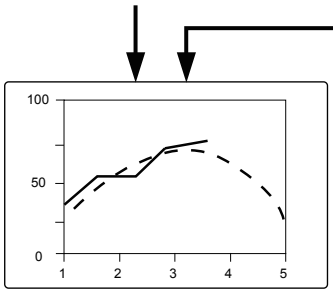


Displays the graph (communicates) only at startup.

Trigger type : Sampling (3 seconds)
Collect data only when trigger conditions are satisfied : Disabled
Object : Trend graph



Communicates in the set cycle and refreshes the display frequently.



The line graph can be used as the reference value and compared with the trend graph.

■4 Memory storage

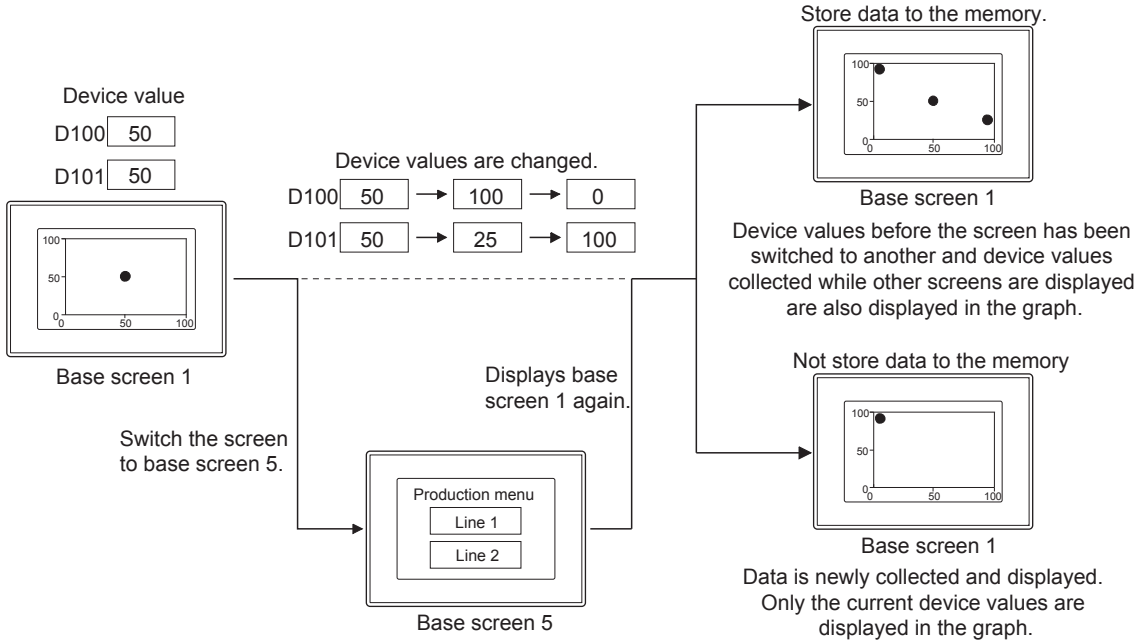
The following operations clear the display of the graph or data (device value: 0). To save the data, set [Store Memory]. Set [Store Memory] in the [Extended] tab.

Item		[Store Memory] is deselected	[Store Memory] is selected
Switching the screen or utility	Switching from the screen for which a scatter graph is set to the screen for which no scatter graph is set	The device value is held.	The device value is held.
	Switching from the screen for which no scatter graph is set to the screen for which a scatter graph is set	• The display is cleared. • The device value is cleared to 0.	• The display is held. • The device value is held.
Switching the language switching device			
Switching the base screen while a scatter graph is displayed on the superimpose window			
Switching the security level*1			
Switching the station No. switching device			

*1 When the memory storage is not set, switching the security level by selecting [Common] → [GOT Environmental Setting] → [Security] from the menu or the value of the device set as a level device clears the display and the device value to 0.

Example) Action at screen switching

- [Graph Type]: [Sample]
- X-axis device: D100
- Y-axis device: D101



(1) Maximum number of displayed points that can be saved to the memory

Up to 4096 points displayed in the scatter graph can be saved in the internal memory.
(For GT21 and GS21, up to 500 displayed points of data are saved.)
The maximum number of data collections to the memory varies with the selection for [Graph Type] on the [Data] tab in the [Scatter Graph] dialog.
The following shows the maximum number of data collections.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  When [Sample] is selected: 4096
  When [Batch] is selected: 4096/Number of displayed points (The fractional portion is rounded off.)
- For GT21 and GS21
  When [Sample] is selected: 500
  When [Batch] is selected: 500/Number of displayed points (The fractional portion is rounded off.)

In [Operation at frequency over time] on the [Extended] tab, set the operation to be executed when the number of displayed points exceeds the upper limit.

- [Interrupt]: Interrupts the data collection.
- [Initialize and Continue]: Clears the data in the internal memory and the display on the scatter graph, and resumes the data collection.

Point

Using the system alarm

You can use the system alarm to display an error code and error message when the number of collections of device values saved in the memory exceeds the upper limit.

➟9.1.3 Collecting alarms by monitoring the system

(2) Clear timing of the display contents stored in the memory

The following shows the clear timing of the display contents stored in the memory.

- The condition of the clear trigger is satisfied.
- When [Initialize and Continue] is selected in [Operation at frequency over time], the number of collected points that can be stored in the memory exceeds the maximum.
- The GOT is reset or turned off.
- Package data is written into the GOT.
- The drive information is displayed.
- An operation that causes the GOT reset at the setup of the utility is executed.

■5 Writing the cumulative count and average value

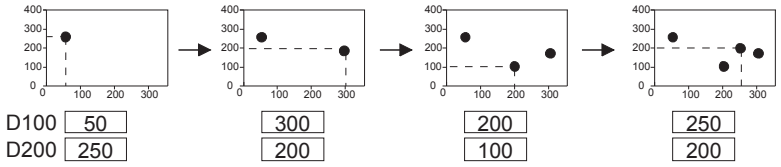
The cumulative collection count and average value of the data, maximum value, and minimum value collected in the scatter graph can be written to a device.
The following shows an example.

• X-device (horizontal): D100
• Y-device (vertical): D200

Detail		Written value
Cumulative count		4
X-axis	Average value*1	200
	Maximum value*2	300
	Minimum value*2	50
Y-axis	Average value*1	187
	Maximum value*2	250
	Minimum value*2	100

*1 The value rounded down after the decimal point is written to [Average Value Write].
When [Data Type] (in the [Data] tab) of the device to be monitored is a real number, a value including the decimal is written.
An average value is calculated from the values collected at each collection, and an error may occur.

*2 The device value exceeding the maximum value or minimum value of the scatter graph to be monitored is written as the maximum value or minimum value.



(1) Maximum number of collections that can be counted in the cumulative count or average value

Depending on the device's [Data Type] set in the [Data] tab in the [Scatter Graph] dialog, the maximum number of collections that can be counted in the cumulative count or average value is different.

[Data Type]	Maximum number of collections
[Signed BIN16] [Unsigned BIN16] [Signed BIN32] [Unsigned BIN32] [Signed BIN64] [Unsigned BIN64] [Signed BIN8] [Unsigned BIN8] [BCD32] [BCD64] [Real(32bit)] [Real(64bit)]	65535 *1
[BCD16]	9999

*1 For [Signed BIN8] or [Unsigned BIN8], data is written to the lower-order byte (0 to 255) of the device.

Set the operation that is executed when the cumulative count exceeds the maximum number of collections in [Operation at frequency over time] in the [Extended] tab.

• Interrupt: Data collection is interrupted.
• Initialize and continue: The internal memory and display of the scatter graph are initialized, and new data is collected.

Point

Using the system alarm

You can use the system alarm to display an error code and error message when the cumulative count exceeds the upper limit.

➟9.1.3 Collecting alarms by monitoring the system

(2) Initialization timing of the cumulative count, average value, maximum value, and minimum value

The value 0 is written to the cumulative count, average value, maximum value, and minimum value.
The following shows the initialization timing.

• The condition of the clear trigger (in the [Trigger] tab) is satisfied.
• When [Operation at frequency over time] is set to [Initialize and Continue], the cumulative count exceeds the limit.
• The screen is switched.

When the screen for which a scatter graph is placed (base screen or window screen) is switched, the cumulative count

and average value are held. However, the cumulative count and average value is initialized when the screen is switched to the screen for which a scatter graph is placed.
The scatter graph placed on the superimpose window is initialized when the base screen is switched.

- The security level is switched.
- The station number is switched.

(3) When the cumulative count and average value are written and the memory storage are used simultaneously

Use [Cumulative/Average] and [Store Memory] simultaneously to collect the cumulative count and average value continuously, regardless of the screen switching.
Up to the maximum number of collections for the memory storage, the cumulative count and average value can be written.
For the maximum number of collections for the memory storage, refer to the following.

➟8.20.2 ■4 (1) Maximum number of displayed points that can be saved to the memory

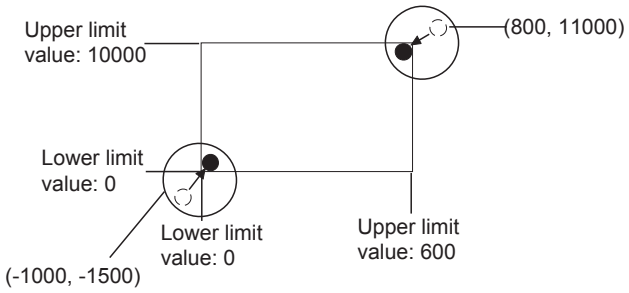
8.20.3 Precautions for a scatter graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the scatter graph.

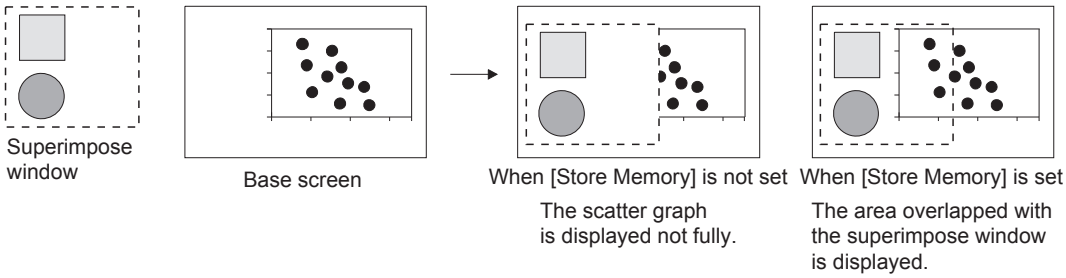
■1 When the monitored device value exceeds the upper or lower limit value

When the monitored device value exceeds the lower limit value, the display of the lower limit value is applied.
When the monitored device value exceeds the upper limit value, the display of the upper limit value is applied.



■2 When displaying the superimpose window

Place the superimpose window not to overlap with the scatter graph.
The area of the scatter graph overlapped with the superimpose window is hidden.
To display the scatter graph fully, set [Store Memory] for the scatter graph.



■3 Cause for when the graph display is not refreshed in the set cycle set and measure against it

(1) Refresh timing when [ON Sampling] or [OFF Sampling] is selected

Not available to GT21 and GS21.

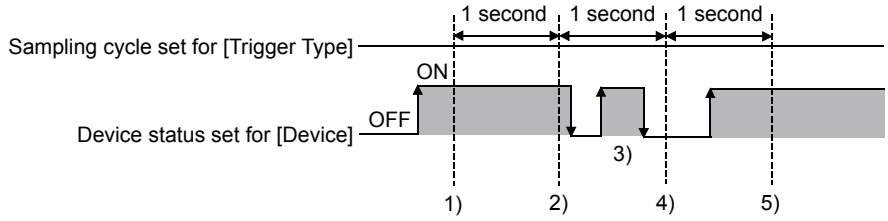
The graph display may not be refreshed in the set cycle.

(a) Cause

The device status is checked in the sampling cycles set for [Trigger Type].

If the condition is not satisfied at the timing of the check, the display is not refreshed.

Example) [Trigger Type] is set to [ON Sampling] and [Sampling] is set to [1] second



- The display of the scatter graph is refreshed at timing 1).
- The display of the scatter graph is refreshed at timing 2).
- At timing 3), the display of the scatter graph is not refreshed because the timing does not match the end of one cycle and thus the condition is not checked.
- At timing 4), the display of the scatter graph is not refreshed because the device condition is not satisfied.
- The display of the scatter graph is refreshed at timing 5).

(b) Measure

The sampling cycle set for [Trigger Type] does not depend on the device status.

(The sampling cycle does not change whether the device is turned on or off.)

The following shows the setting procedure to start the cycle according to the device status.

Step 1 Select [Rise] or [Fall] for [Trigger Type].

Step 2 Create a sequence program that turns the device on or off when the display should be refreshed.

(2) Refresh timing when [Sampling], [ON Sampling], or [OFF Sampling] is selected

[ON Sampling] and [OFF Sampling] are not available to GT21 and GS21.

Depending on the setting of [Store Memory], the refresh timing is different.

(a) When the memory storage is to be executed

The following shows the start and reset timing of the count of the cycle.

- When the scatter graph is displayed (in screen switching, a security level change, or other possible cases)
- The language is switched.
- The station number is switched.
- The security level is switched.

After the execution of any of the events above, the display is refreshed at the start timing of the sampling cycle.

(b) When the memory storage is not to be executed

The following shows the start and reset timing of the count of the cycle.

- The GOT is started.
- Package data is written into the GOT.
- The drive information is displayed.
- An operation that resets the GOT is executed in the utility.

After the execution of any of the events above, the display is refreshed at the start timing of the sampling cycle.

■4 Number of the plotted points or lines

GOT Graphic Ver.2

Under the following conditions, if the number of the plotted points or lines exceeds 1000, the oldest point or line is deleted and a new one is plotted.

- [Graph Type] is set to [Sample], and [Store Memory] is deselected.
- [Graph Type] is set to [Batch], [Display Mode] is set to [Locus], and [Store Memory] is deselected.

8.20.4 [Scatter Graph] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The scatter graph is an object that displays a graph using the values of two word devices as the coordinates of X-axis and Y-axis.

Step 1 Select [Object] → [Graph] → [Scatter Graph] from the menu.

Step 2 Click the position where you place the scatter graph. Placing the scatter graph is complete.

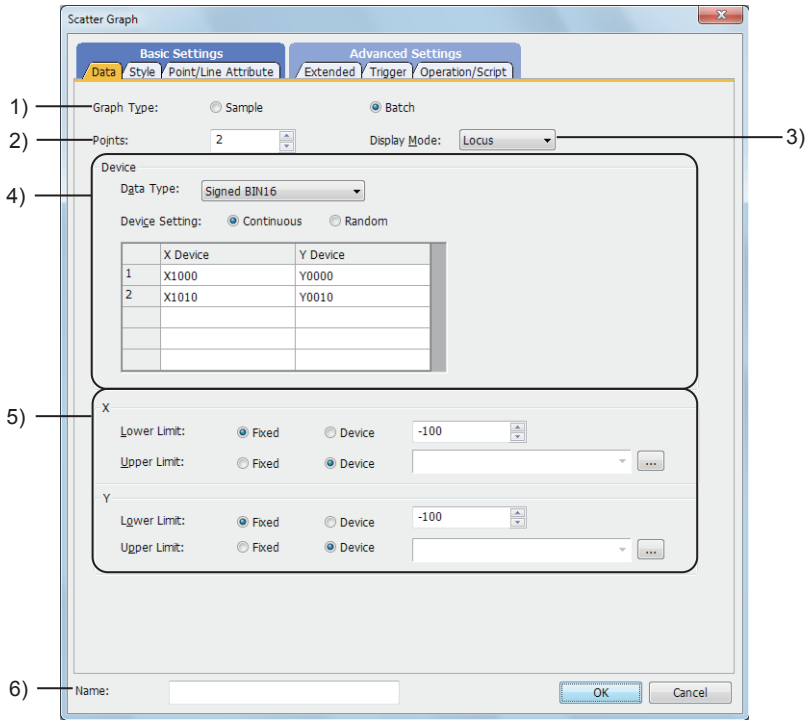
Step 3 Double-click the placed scatter graph to display the setting dialog.

➟■1 [Data] tab
■2 [Style] tab
■3 [Point/Line Attribute] tab
■4 [Extended] tab
■5 [Trigger] tab
■6 [Operation/Script] tab

■1 [Data] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the trend graph status corresponding to the device value.



1) **[Graph Type]**

Select the graph to be set.

The following shows the items to be selected.

- [Sample]
- [Batch]

2) **[Points]**

Set this item when [Batch] is selected for [Graph Type].

Set the number of points to be displayed in a scatter graph.

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  The setting range is [2] to [500].
- For GT21 and GS21

  When [Continuous] is selected for [Device Setting], the setting range is [2] to [500].

  When [Random] is selected for [Device Setting], the setting range is [2] to [50].

3) **[Display Mode]**

Set this item when [Batch] is selected for [Graph Type].

Select the refresh method of the display of the graph.

The following shows the items to be selected.

- [Replace]

  Only the latest data is displayed.

- [Locus] (Not available to GT21 and GS21)

  The latest data is displayed on the graph displayed previously.

4) **[Device]**

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Device Setting]	Select the display method of the devices in each of X-axis and Y-axis. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random] Select this item when setting devices one by one.
[X Device] and [Y Device]	Set the devices to be monitored for X-axis and Y-axis. ➟6.1.2 How to set devices

5) **[X] and [Y]**

Set the display range in the scatter graph (lower limit and upper limit) for each axis.

Select whether to use a fixed value or device value.

The following shows the items to be selected.

- [Fixed]:

  Specify a constant.

- [Device]:

  Specify a device value.

  ➟6.1.2 How to set devices

The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

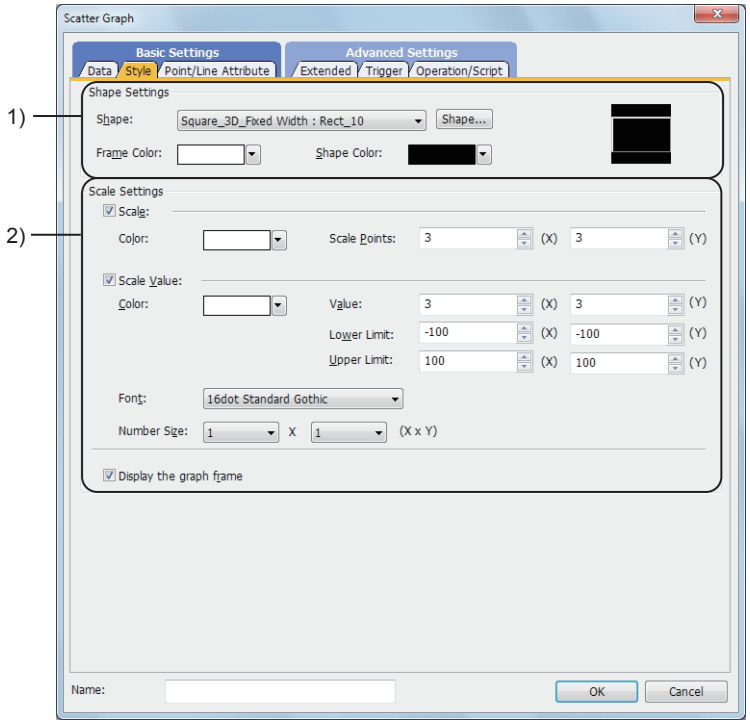
Up to 100 characters can be set.

■2 [Style] tab

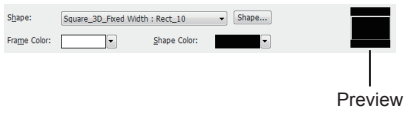
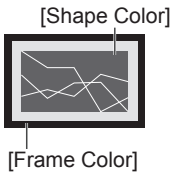
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

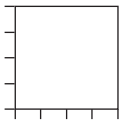


1) [Shape]

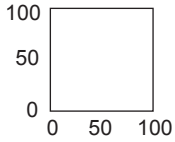
Item	Description
[Shape]	Set the shape of the scatter graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

2) [Scale Settings]

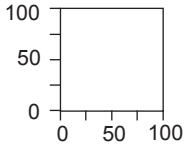
Displays the line or scale value in the scatter graph.



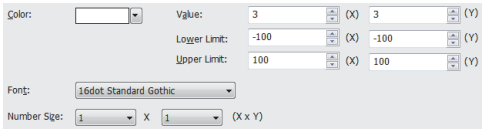
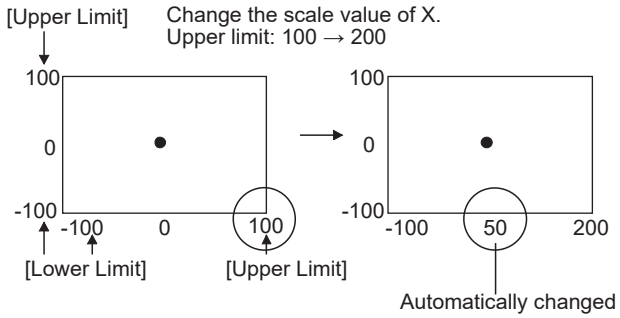
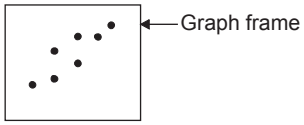
Line
(X: 5)
(Y: 5)



Scale value
(X: 3)
(Y: 3)



Displays both the lines and scale values.

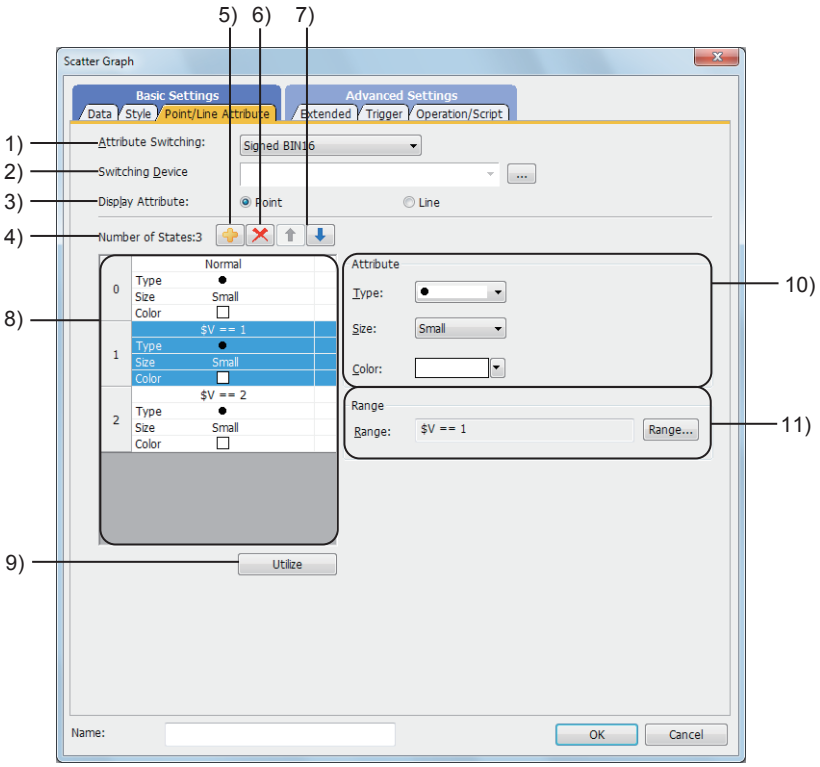
Item	Description
[Scale]	Set this item to display lines on the scale. • **[Color]** Set the color of lines on the scale. • **[Scale Points] ([Horizontal] and [Vertical])** Set the number of lines on the scale. The setting range is [0] and [2] to [101].
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value] ([Horizontal] and [Vertical])** Set the number of numeric characters. The setting range is [0] and [2] to [101]. • **[Lower Limit] ([Horizontal] and [Vertical]) and [Upper Limit] ([Horizontal] and [Vertical])** Set the lower limit and upper limit of the numerical value. Changes in this setting are automatically applied to the display.  Depending on the item selected for [Data Type] in the [Data] tab, the setting range is different. The setting range of 64-bit devices is the same as that of 32-bit devices. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. 1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.
[Display the graph frame]	Select this item to display the frame of the graph. 

■3 [Point/Line Attribute] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the status of points or lines of the graph corresponding to the device value.
For the conditions, refer to the following.

➟6.5.5 ■2 Setting conditions



1) **[Attribute Switching]**

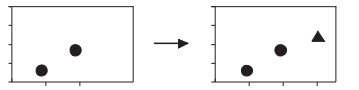
Select the switching type in which the display attribute of the scatter graph (type of points and lines, size, or color) is switched.

The following shows the items to be selected.

- [Fixed]:
  The display attribute is not switched.
  Points or lines are displayed in the display attribute set in the [Style] tab.
- [Bit]:
  Switches two types of the display attribute according to the bit device status.
- [Signed BIN16]:
  Switches multiple display attributes by the value of the word device (16-bit binary value).
- [Signed BIN8]:
  Switches multiple display attributes with eight bit devices.
- [BCD16]:
  Switches multiple display attributes by the value of the word device (16-bit BCD value).

Example 1)

- [Attribute Switching]: [Bit]
- [Switching Device]: [M10]



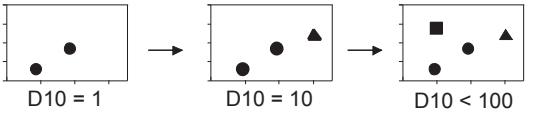
M10: ON
The points are displayed in ●.

M10: OFF
The point are displayed in ▲.

Example 2)

- [Attribute Switching]: [Signed BIN16]

• [Switching Device]: [D10]



The points are displayed in ●. | The point are displayed in ▲. | The points are displayed in ■.

2) **[Switching Device]**
Set the display switching device.

➟6.1.2 How to set devices

3) **[Display Attribute]**
Select the display attribute of the scatter graph.
The following shows the items to be selected.

- [Point]
- [Line]

4) **[Number of States]**
The number of the set conditions

5) **Add button**
Adds a new condition.

6) **Delete button**
Deletes the selected condition.

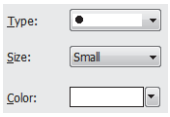
7) **Up button, down button**
Changes the order of priority of the selected condition.

8) **Preview list**
Displays set conditions.

9) **[Utilize] button**
Creates a new condition utilizing the selected condition.

10) **[Attribute]**
Set the attributes of points or lines.

- For points



• **[Style]**
Select the style of the point.
The following shows the items to be selected.

●, ■, ▲, +, ○, □, △, ×

• **[Size]**
Select the size of the point.
The following shows the items to be selected.
·[Small]
·[Medium]
·[Large]

• **[Color]**
Set the color of the point.

- For lines

• **[Style]**
Select the style of the line.
The following shows the items to be selected.
·Solid line
·Dotted line
·Broken line
·One-dot chain line
·Two-dot chain line

• **[Size]**
Select the width of the line.
The following shows the items to be selected.
·[1 Dot]
·[2 Dot]
·[3 Dot]
·[4 Dot]
·[5 Dot]
·[7 Dot]

• **[Color]**
Select the color of the line.

11) **[Range]**

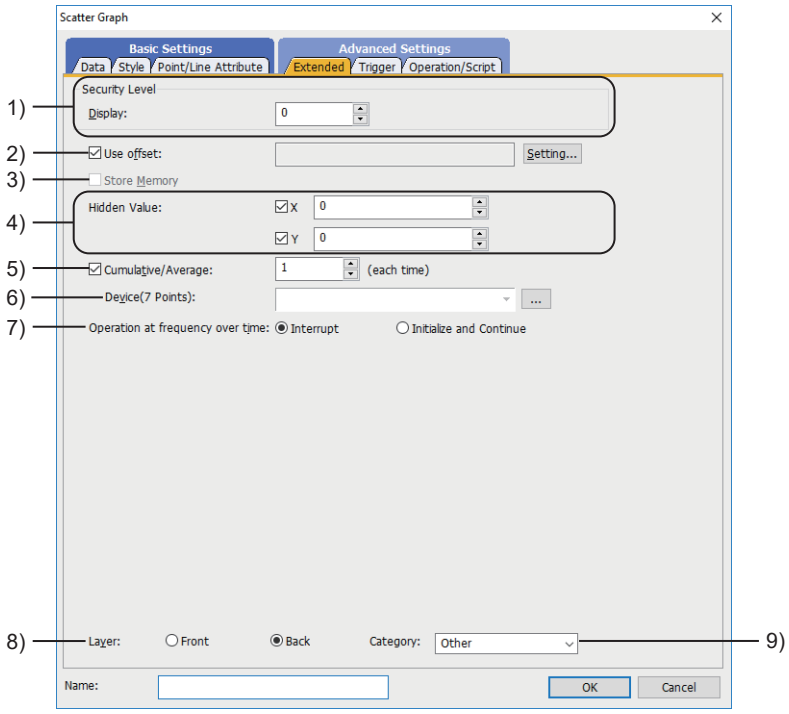
Item	Description
[Range]	Set the display range of the conditions selected in the preview list. When setting the value of the word device as the condition, click the [Range] button to display the [Edit Range] dialog, and then set the conditional expression. ➟6.5.5 ■2 Setting conditions

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.

After selecting this item, set the offset device.

➟6.1.11 Offset

If this item is set, [Store Memory] cannot be set.

3) **[Store Memory]**

Select this item to continue data collection while a screen which displays no scatter graph is displayed.

The data of the points displayed on the graph is stored to the internal memory of the GOT.

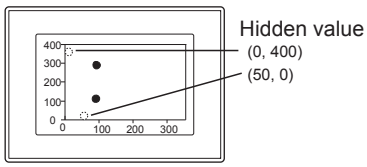
➟8.20.2 ■4 Memory storage

If this item is set, [Use Offset] cannot be set.

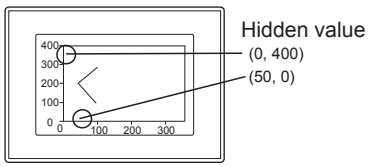
4) **[Hidden Value]**

Select this item to hide a specific value in the scatter graph for each of X-axis and Y-axis.

Example) [Hidden Value] is set to 0 for both of X-axis and Y-axis.



When the display attribute is set to "point"



When the display attribute is set to "line"

5) **[Cumulative/Average]**

Select this item to write the cumulative count and average value, maximum value, and minimum value of the collected data to devices.

➟8.20.2 ■5 Writing the cumulative count and average value

After selecting this item, set the interval of writing the cumulative count, average value, maximum value, and minimum value to devices.

The setting range is [1] time to [36000] times.

The value set in [Hidden Value] is not included in the cumulative count, average value, maximum value, and minimum value.

If the cumulative count, average value, maximum value, or minimum value is being written, the display of the object may be delayed when short intervals are set as the condition for the data storage or display.

6) **[Device (7 devices)]**

Set the device to be used for [Cumulative/Average].

Seven successive devices are automatically set from the specified device.

7) **[Operation at frequency over time]**

Select the operation that is executed when the number of displays of the memory storage or the number of data collections exceeds the limit.

For the limit, refer to the following.

➟8.20.2 ■4 (1) Maximum number of displayed points that can be saved to the memory

8.20.2 ■5 (1) Maximum number of collections that can be counted in the cumulative count or average value

8.20.2 ■5 (3) When the cumulative count and average value are written and the memory storage are used simultaneously

The following shows the items to be selected.

- [Interrupt]:
  Data collection is interrupted and the display of the graph is not refreshed.
- [Initialize and Continue]:
  After the display of the graph is deleted and the memory storage, cumulative count, average value, maximum value, and minimum value are initialized, the data collection resumes.

8) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

9) **[Category]**

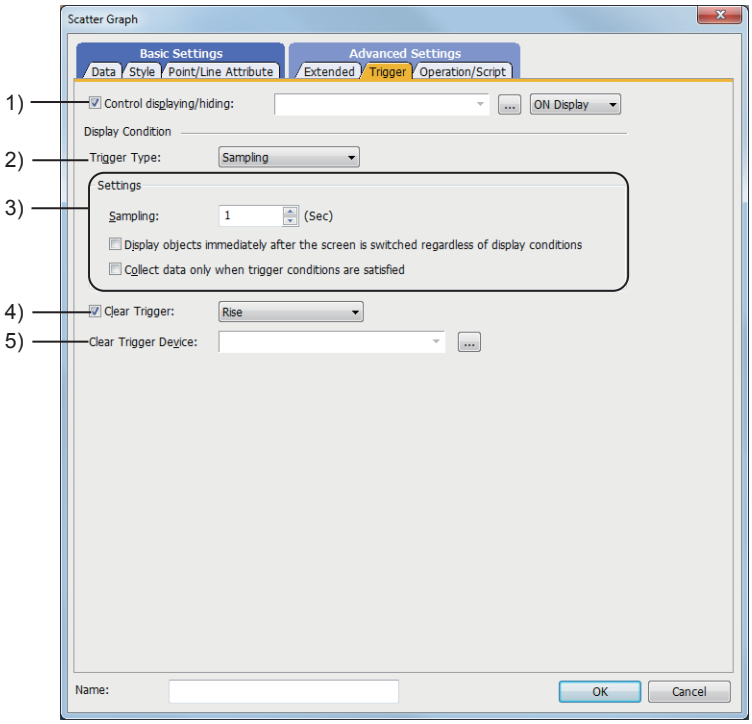
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control Displaying/Hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

- [Ordinary]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

Item	Description
[Collect data only when trigger conditions are satisfied]	Select this item to collect data only when the trigger set for [Trigger Type] is satisfied. When [Rise], [Fall], [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling] is selected, this setting is available. The graph is communicating with the controller even when the trigger is off. To reduce the load of the communication between the GOT and controller, allow the communication when the trigger is on.

4) **[Clear Trigger]**

Select this item to use the trigger that clears the display of the graph.

After setting this item, select the clear timing of the display of the graph.

The following shows the items to be selected.

- [Rise]: The display is cleared at the rise of the bit device (OFF → ON).
- [Fall]: The display is cleared at the fall of the bit device (ON → OFF).

[Clear Trigger] clears the display of the graph, cumulative count, and average value stored in the memory.

5) **[Clear Trigger Device]**

Set a device used for the clear trigger.

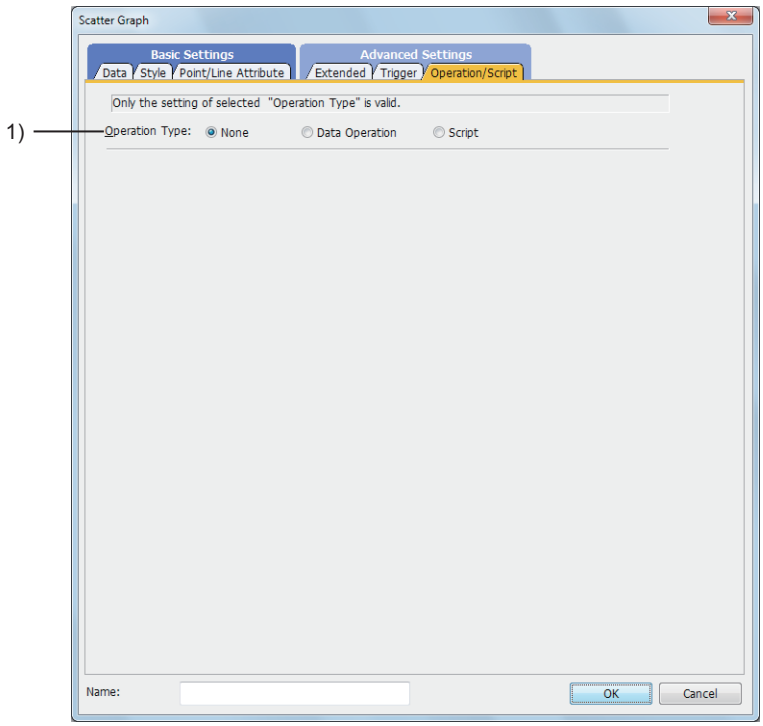
■6 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Set the expression used for the script function.

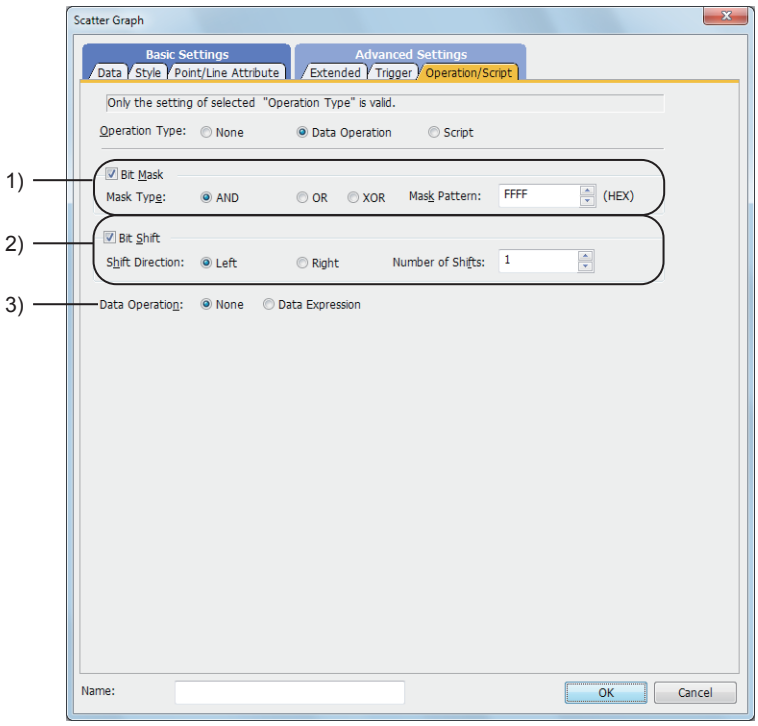
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

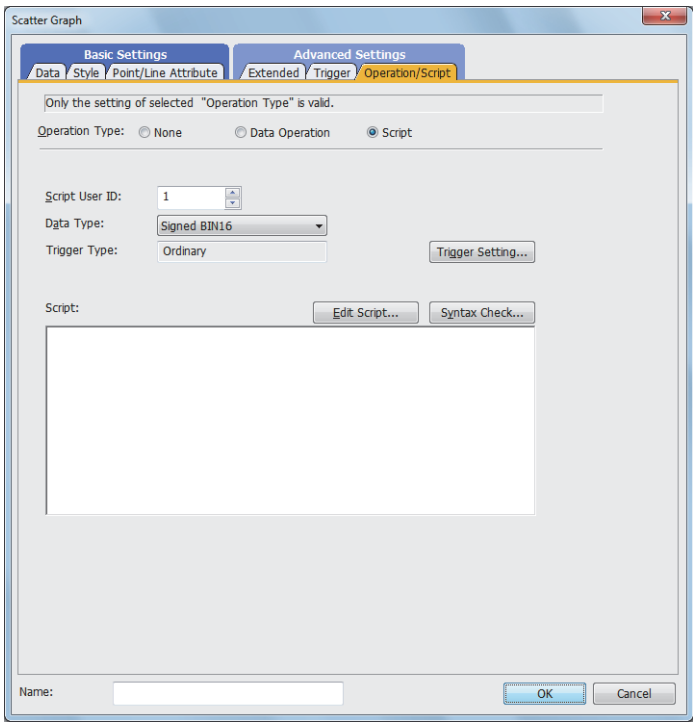
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Data]	[Lower Limit] (X)	scale_min[0]	○	○	When the object is updated	[*3]
	[Lower Limit] (Y)	scale_min[1]	○	○	When the object is updated	[*3]
	[Upper Limit] (X)	scale_max[0]	○	○	When the object is updated	[*3]
	[Upper Limit] (Y)	scale_max[1]	○	○	When the object is updated	[*3]

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the object is updated	[*3]
[Point/Line Attribute]	[Color]	graph_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

*3 When GOT Graphic Ver.1 is selected and [Graph Type] is [Sample] or [Batch], the timing for reflecting the setting change depends on the selection for [Display Mode].
[Locus]: When the screen is updated
[Replace]: When the object is updated
When GOT Graphic Ver.2 is selected, the setting change is reflected when the objected is updated regardless of the graph type.

8.20.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the scatter graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

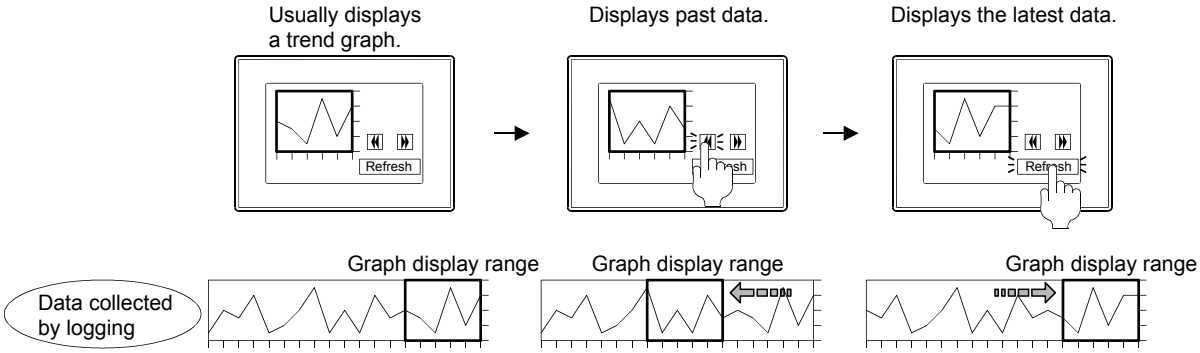
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.21 Placing a Historical Trend Graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays the device data collected by logging in chronological order in a trend graph.



8.21.1 Specifications of the historical trend graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the historical trend graph.

■1 Number of trend graphs that can be set

(1) Maximum number of historical trend graphs on one screen

The maximum number of objects on one screen depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 32 trend graphs and/or historical trend graphs can be placed on one screen.
- For GT21 and GS21
  One historical data list display, trend graph, scatter graph, or historical trend graph can be placed on one screen.

(2) Maximum number of lines in one historical trend graph

The maximum number of lines in one historical trend graph depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 32 lines can be displayed on one graph.
- For GT21 and GS21
  Up to 4 lines can be displayed on one graph.

(3) Maximum number of points

The maximum number of points on one line of a historical trend graph depends on the GOT model.

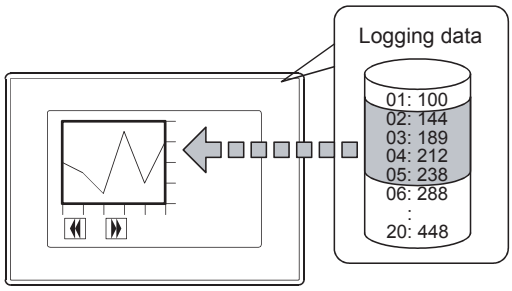
- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 1024 points are displayable.
- For GT21 and GS21
  Up to 500 points are displayable.

■2 Relation between the historical trend graph and logging

The data collected and stored in the buffering area or memory card by logging is displayed in a graph.

➟9.2 Collecting Device Data ([Logging])

The stored data is used, enabling display of both the latest and old data in a graph.



Displays accumulated data in a graph.

A historical trend graph displays only the data of one logging ID.
To display the data of multiple logging IDs, set multiple historical trend graphs.

■3 Difference from the trend graph

The trend graph collects data and displays it.
The trend graph does not require the setting of logging, and the data is not stored.

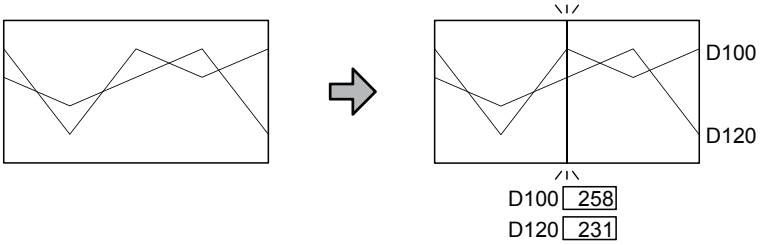
➟8.16 Placing a Trend Graph

■4 Useful function

The following explains the useful functions for using the historical trend graph.

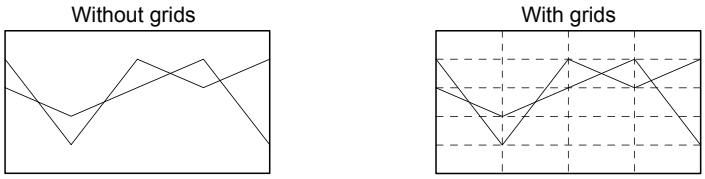
(1) Displaying a cursor

A cursor can be displayed and moved on the graph using the touch switch to which the key code is assigned.
With the setting of the single touch operation, the cursor can be displayed on or moved to the touched position directly.
The device value of the cursor display position can be output to the device set in the [Graph Information] dialog.
While a cursor is displayed, the display of the graph stops.



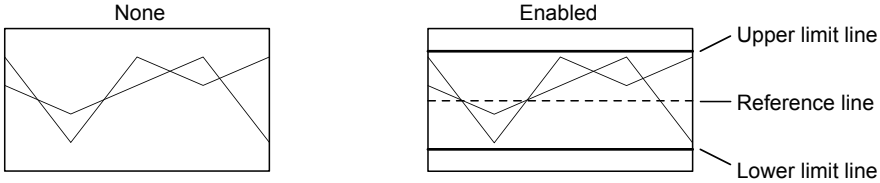
(2) Displaying grids

Grids can be displayed on a graph.



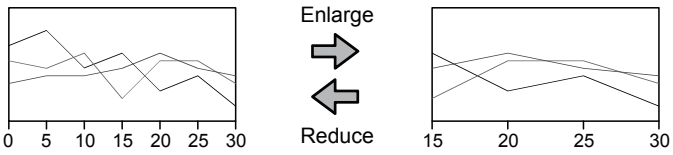
(3) Displaying a reference line, lower limit lime, and upper limit line

A reference line, lower limit lime, and upper limit line can be displayed on a graph.



(4) Enlarging or reducing the time axis

The time axis can be enlarged or reduced by using the touch switch to which the key code is assigned.



(a) **Data displayed upon enlargement or reduction**

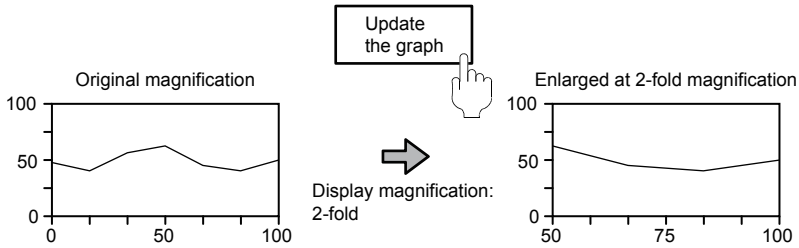
When enlarging or reducing the time axis, you can select whether to always display the latest data or stop the graph update to display the current data.

(b) **Displaying the magnification**

You can store the magnification factor being used to a specific device.
Thus, the current magnification is displayable with the numerical display.

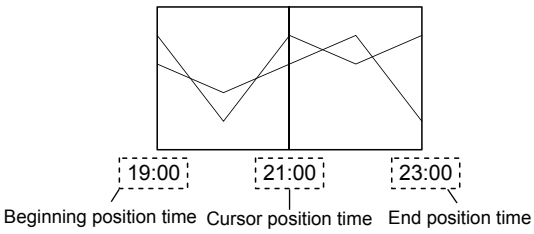
(5) Magnification for displaying the latest data

When the latest data is displayed with the touch switch, screen switching, or graph offset function, you can specify a magnification factor to display the data.
Example) When [Graph display magnification for latest data display] is set to [2-fold]



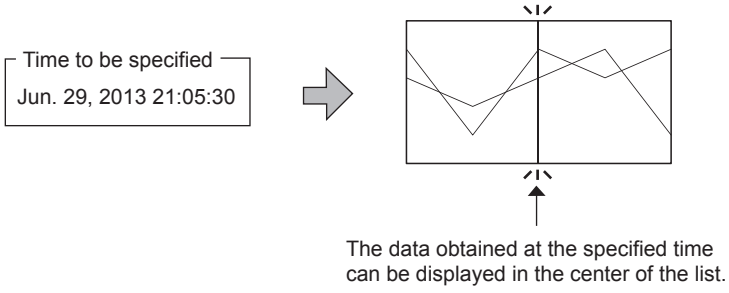
(6) External output of date data

When [Always update Beginning Position Time/End Position Time] in the [Extended] tab is set, the latest beginning position time and end position time can be output constantly to the Time device.
The beginning position time, end position time, and cursor position time can be output to the Time device by using the touch switch to which the key code is assigned.
While the data is output to the device, the display of the graph stops.



(7) Displaying data obtained at specified time

The data obtained at specified time can be displayed by using the touch switch to which the key code is assigned.
While the data obtained at specified time is displayed, the display of the graph stops.



(8) Displaying data of historical trend graphs in historical data list displays

Not available to GT21 and GS21.
The data displayed with a cursor in a historical trend graph can be displayed in a historical data list display.

➟8.10 Placing a Historical Data List Display

(9) Holding the graph display state displayed before screen switching

The GOT holds the display state of the historical trend graph displayed before screen switching and displays the same graph state after switching back to the graph screen.

Before using this setting, set the Logging Count device.

➟9.2 Collecting Device Data ([Logging])

Use the Historical Trend Graph Display Mode signal (GS450.b9) to set the historical trend graph display mode.

- ON: Holds the display state displayed before screen switching.
- OFF: Not hold the display state displayed before screen switching.

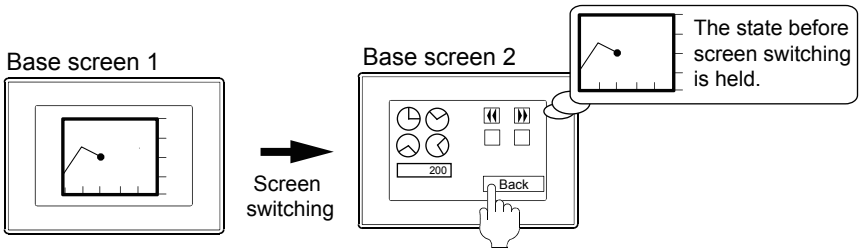
The GOT checks this signal every screen switching.

(a) Action at screen switching

If a screen is switched while GS450.b9 is on, the GOT operates as follows.

- Screen on which the historical trend graph is displayed → another screen

  The GOT holds the display state of the historical trend graph.

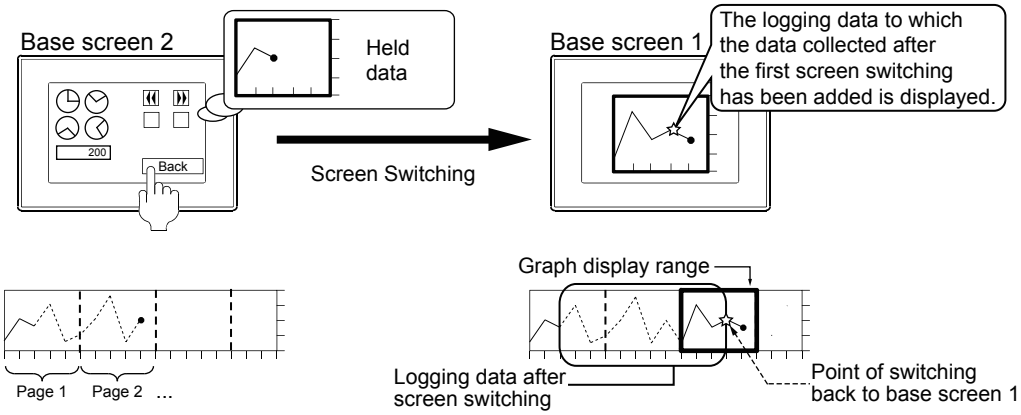


- Other screens → screen on which the historical trend graph is displayed

  The GOT restores and displays the previous historical trend graph based on the held data.

  When the amount of the logging data has increased since the first screen switching, the increased logging data is added to the graph.

  If holding no data, the GOT displays the latest logging data.



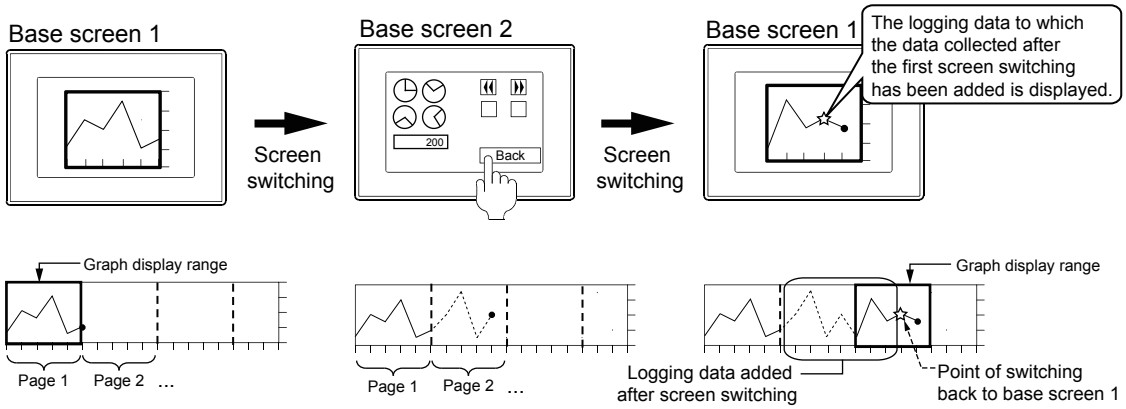
(b) Action example

The following shows an example of the following action: base screen 1 (on which a historical trend graph is placed) is switched to base screen 2, and then base screen 1 is displayed again.

Example)

- When GS450.b9 is on (displaying the latest data)

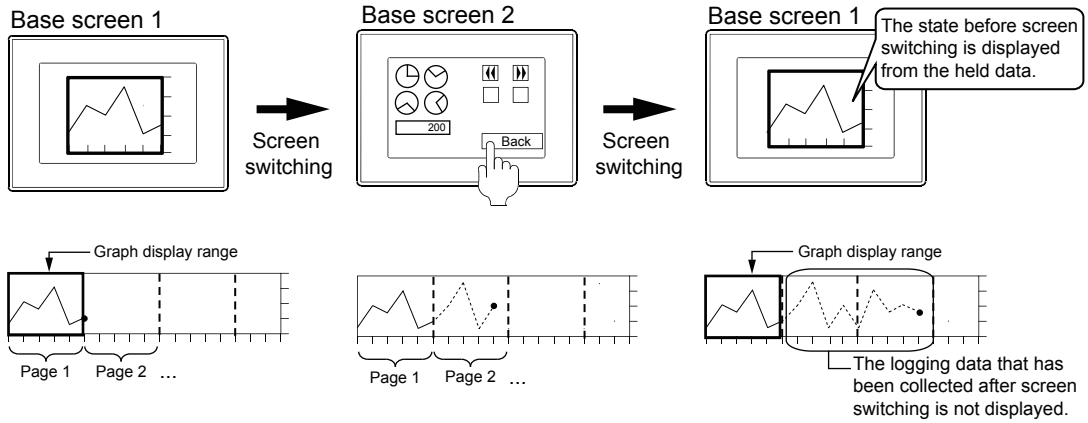
  After the logging data that has been collected after the screen is switched is added to the held data, the logging data is displayed.



• When GS450.b9 is on (displaying the past data)

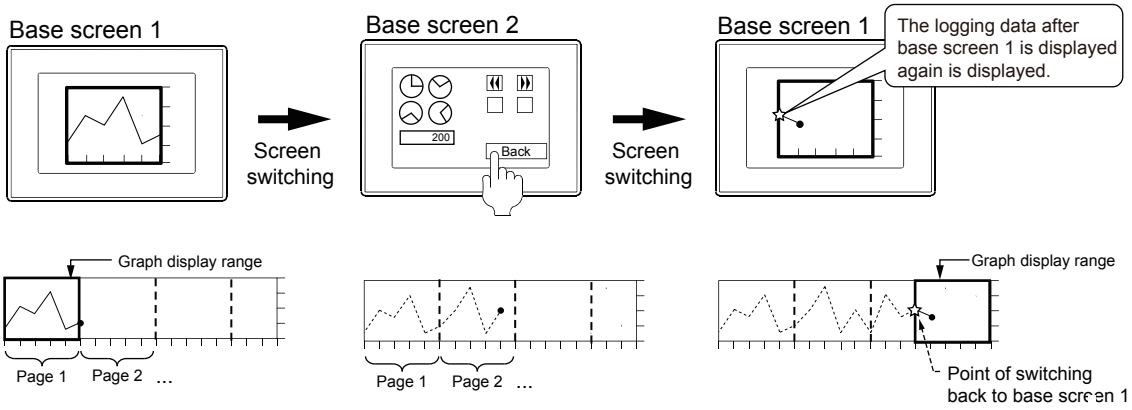
The state before the screen is switched is displayed.

The logging data that has been collected after the screen is switched is not displayed.



• When GS450.b9 is off

The logging data after base screen 1 is displayed again is displayed.



(c) **Restrictions**

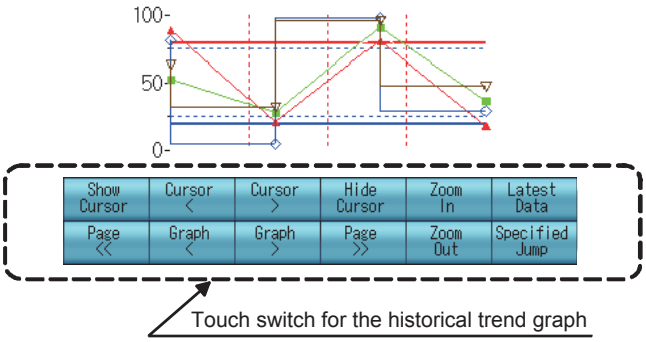
When the logging ID to be monitored by the historical trend graph is set using a device, pay attention when changing the logging ID.

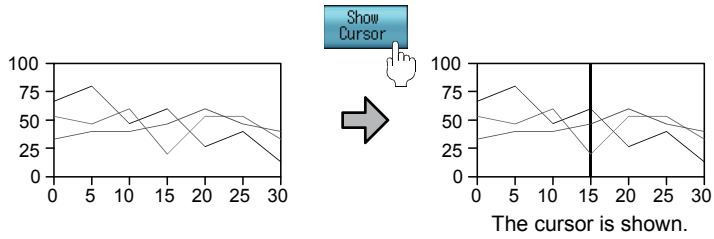
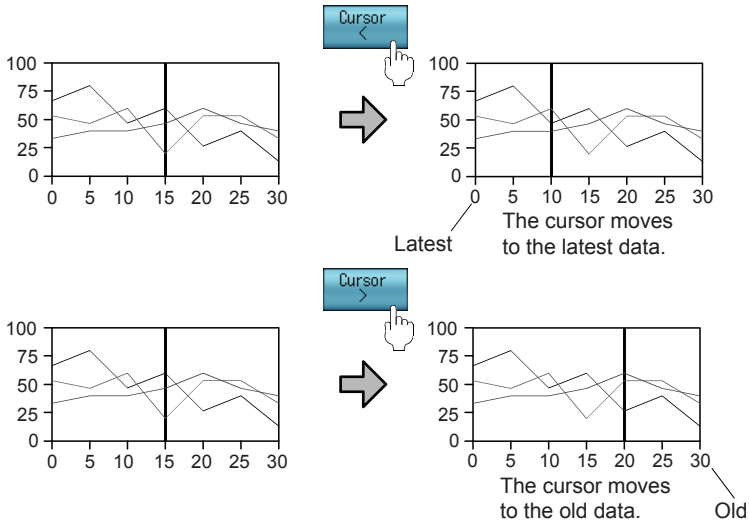
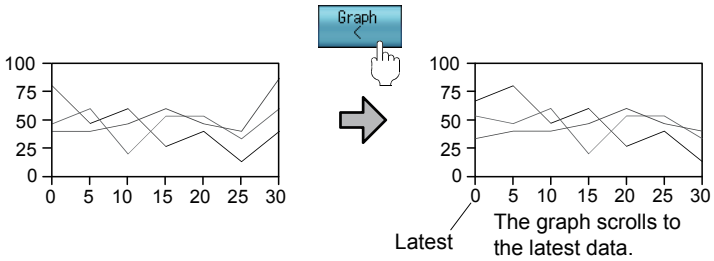
If the logging ID to be monitored is changed after the display state is held, the display state is discarded.

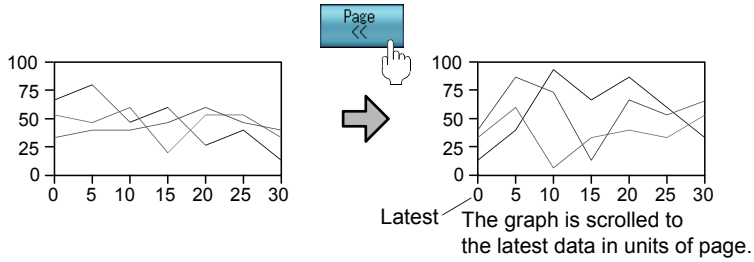
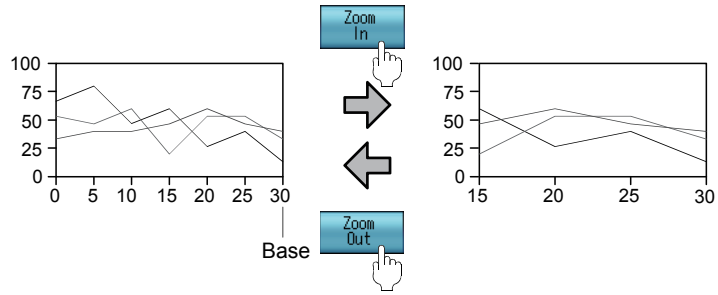
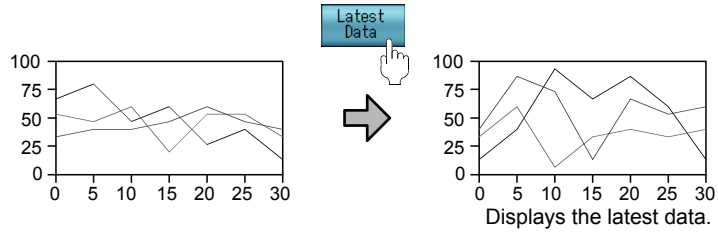
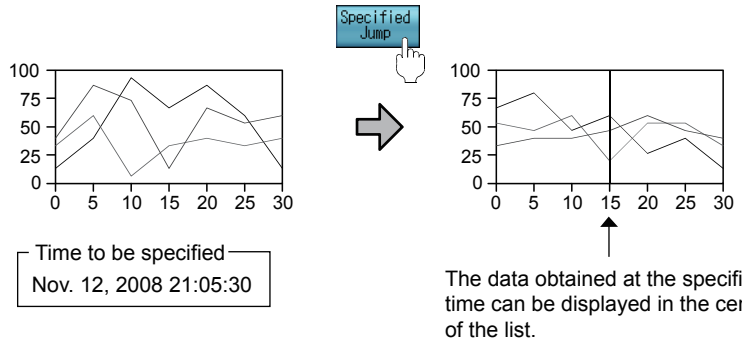
Even when the screen is returned to the screen on which the historical trend graph is placed, the state before the screen switching is not restored and the latest logging data is displayed.

■5 Touch switch for the historical trend graph

Touch switches for the historical trend graph are available by reading them from the library of GT Designer3.
The characters and shapes on the touch switches can be changed by a user.
When key codes are set for touch switches, touch switches for the historical trend graph can be created by a user.



Touch switch	Key code	Description
Show cursor Show Cursor	FFF0h	Displays or deletes the cursor. Displays the cursor in the center of the graph. 
Hide cursor Hide Cursor	FFF1h	
Graph Cursor Next Cursor <	FFF2h	Moves the cursor to the new or past data. Example) When [Display Mode] is set to [Pen Record] and [Direction] is set to [Right] 
Graph Cursor Previous Cursor >	FFF3h	
Graph Next Graph <	FFF4h	Scrolls the graph right or left. Example) When [Display Mode] is set to [Pen Record] and [Direction] is set to [Right] 
Graph Previous Graph >	FFF5h	

Touch switch	Key code	Description
Graph Next Page Scroll 	FFF6h	Moves the graph right or left in units of page. Example) When [Display Mode] is set to [Pen Record] and [Direction] is set to [Right] 
Graph Previous Page Scroll 	FFF7h	
Time Axis Expansion 	FFF8h	Enlarges or reduces the time axis by using the axis of new data as the reference. You can enlarge the time axis until the graph displays two points. The scope of reducing the time axis varies with the setting of [Shrink the graph to be less than its full scale]. • [When [Shrink the graph to be less than its full scale] is selected The time axis can be reduced to a magnification of 1/128. • When [Shrink the graph to be less than its full scale] is deselected The time axis can be reduced to the original magnification. For the setting of [Shrink the graph to be less than its full scale], refer to the following. ➟8.21.4 ■4 [Extended] tab 
Time Axis Reduction 	FFF9h	
Latest data 	FFEFh	Displays the latest data. 
Move display position to the specified time 	FFD4h	Displays the time data stored in the Display Position Time Specification device in the center. (Time specification jump function) Using the time specification jump function may change the graph display magnification as shown below. • When a graph has been enlarged from the original magnification The graph display magnification returns to the original magnification after this function is used. • When a graph has been reduced from the original magnification The graph display magnification remains unchanged after this function is used. 

8.21.2 How to use the historical graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the historical trend graph.

■1 Setting logging

To use a historical trend graph, the logging setting is required.

➟9.2 Collecting Device Data ([Logging])

■2 Placing the historical trend graph

The following shows how to place the historical trend graph.

Step 1 Select [Object] → [Graph] → [Historical Trend Graph] from the menu.

Step 2 Click the position where you place the scatter graph. Placing the scatter graph is complete.

Step 3 Adjust the frame size of the historical trend graph.

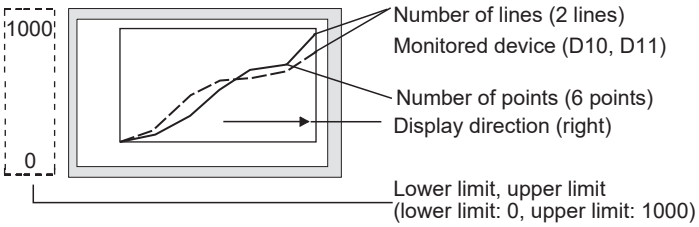
Step 4 Double-click the placed scatter graph to display the setting dialog.

➟8.21.4 [Historical Trend Graph] dialog

Step 5 Display the [Data] tab.

➟8.21.4 ■1 [Data] tab

Step 6 Set the number of lines and points to be displayed in the historical trend graph.



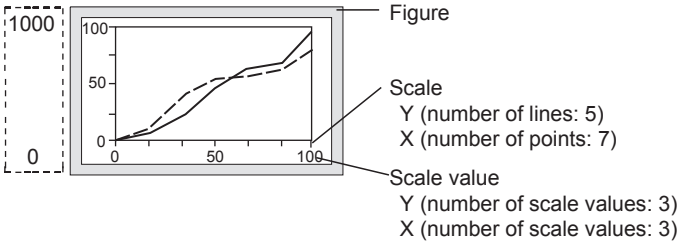
Step 7 Set a device to be monitored.

➟6.1.2 How to set devices

Step 8 Set [Lower Limit] and [Upper Limit].

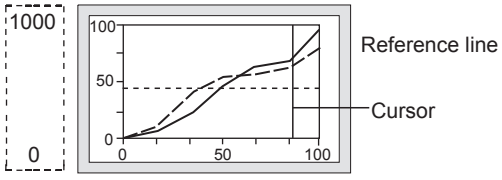
Step 9 Set the scale and figure in the [Style] tab.

➟8.21.4 ■2 [Style] tab



Step 10 Set the graph assistance line and cursor attribute in the [Auxiliary Line/Cursor] tab.

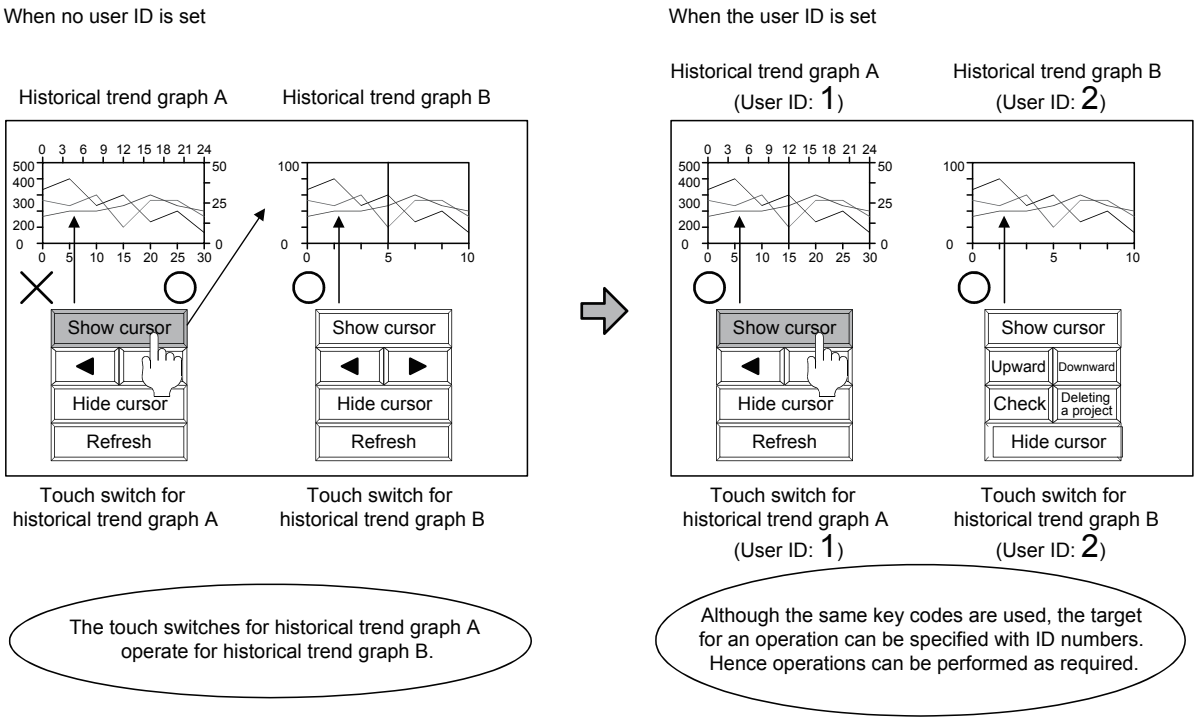
➟8.21.4 ■3 [Auxiliary Line/Cursor] tab



Step 11 Click the [OK] button to complete the historical trend graph settings.

■3 Identifying multiple objects (setting user IDs)

When multiple objects that are operated by the touch switch to which the key codes are assigned are placed on one screen, touching the touch switch may operate the object that is not the target.
Setting a user ID limits the objects operated when the touch switch is touched.



The following shows the setting procedure.

(1) Setting of the historical trend graph

Step 1 Double-click the historical trend graph placed on the screen editor.
The [Historical Trend Graph] dialog appears.
➟8.21.4 [Historical Trend Graph] dialog

Step 2 Enable [User ID] in the [Extended] tab, and specify the number.
➟8.21.4 ■4 [Extended] tab
The number is used to define the target object as the object that operates when the touch switch is touched.
Do not set [User ID] that is already used for other objects.

(2) Settings of touch switches

Step 1 Display the [Switch] dialog.
For the details of the switch, refer to the following.
➟8.2 Placing a Touch Switch

Step 2 Click the [Key Code] button in the [Action] tab.

Step 3 Enable [Individually set user ID for a key input] and specify a number.
Set the same number as the number specified in [User ID] of [Historical Trend Graph].

■4 Storing graph data in devices

The following values displayed in each graph can be stored in devices.

- Value at the cursor
- Maximum value
- Minimum value
- Average value

Even though data operation is set, the value before the data operation is stored.

(1) How to store the data in devices

Set the devices to store the values in [Graph Information] in the [Data] tab.
Set the devices and select the options of data you want to collect.
➟8.21.4 ■1 [Data] tab

(2) Timing with which values are stored in the devices

The timing depends on the model.

For GT27, GT25, GT23, GT SoftGOT2000, and GS25

Values are stored to the devices at the following timings.

- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

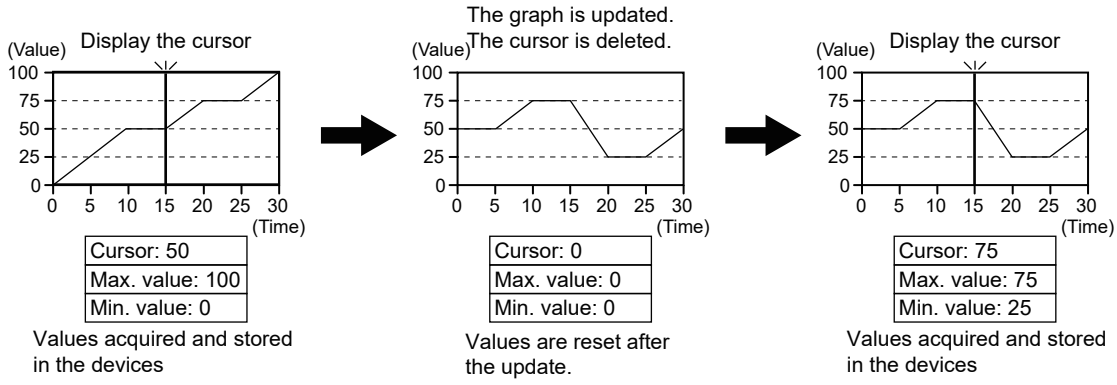
GT21 and GS21

The value at the cursor is stored to the device at the following timings.

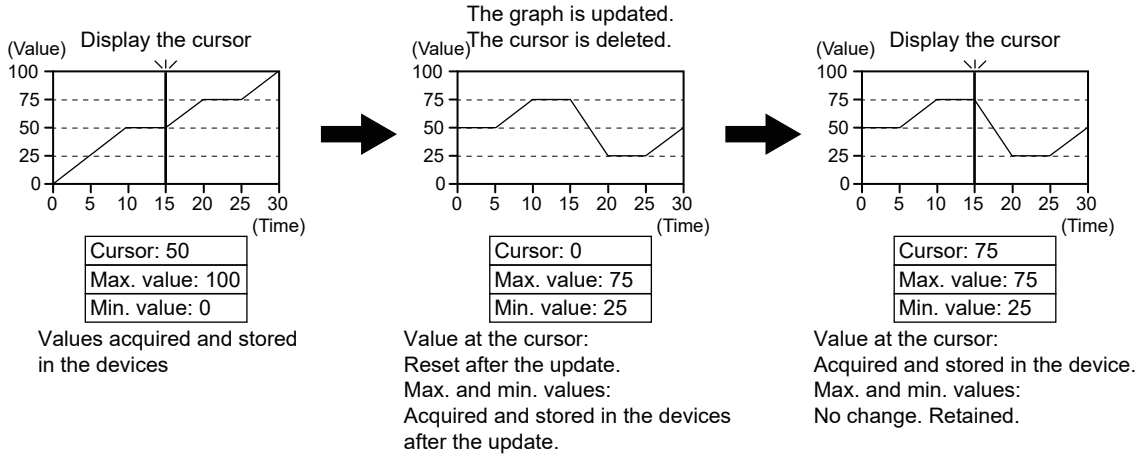
- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

The maximum, minimum, and average values are constantly acquired and stored to the devices.

Example) Storing the value at the cursor, maximum value, and minimum value in GT27



Example) Storing the value at the cursor, maximum value, and minimum value in GT21



■5 Storing time data in devices

The time of the cursor display position, display range beginning position, and display range end position of the graph can be stored to the device by using the Time device.

(1) How to store the data to the device

Data is stored in the upper eight bits and lower eight bits of set devices.

Numerical values are stored in BCD.

Example) When [Device] is set to [D100]

Item	Device	Description
[yymm]	D100	• b15 to b8: The year is stored. • b7 to b0: The month is stored.
[ddhh]	D101	• b15 to b8: The day is stored. • b7 to b0: The time (hour) is stored.

Item	Device	Description
[mmss]	D102	• b15 to b8: The time (minute) is stored. • b7 to b0: The time (second) is stored.
[Day]	D103	• b15 to b8: None • b7 to b0: The day of the week is stored as a numerical value. The following shows the numerical values corresponding to the days. • 0: Sunday • 1: Monday • 2: Tuesday • 3: Wednesday • 4: Thursday • 5: Friday • 6: Saturday

(2) Storage timing and values stored to devices

(a) Timing when the value is stored

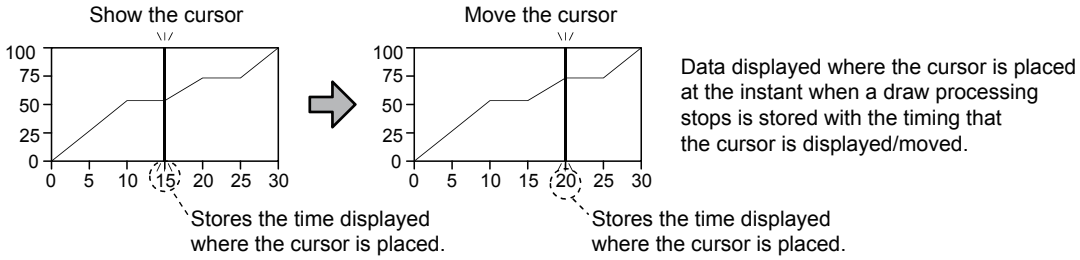
With the following timings, values are stored to devices.

- When a cursor is displayed on a graph
- When a cursor is moved
- When a historical trend graph is operated with a touch switch with a cursor displayed

(b) Values to be stored

When a cursor is displayed on the graph, the drawing processing of the graph stops.
The values at the stop of the draw processing are stored to devices.

Example) Storing a time in the device



(3) Displaying time data in the numerical display

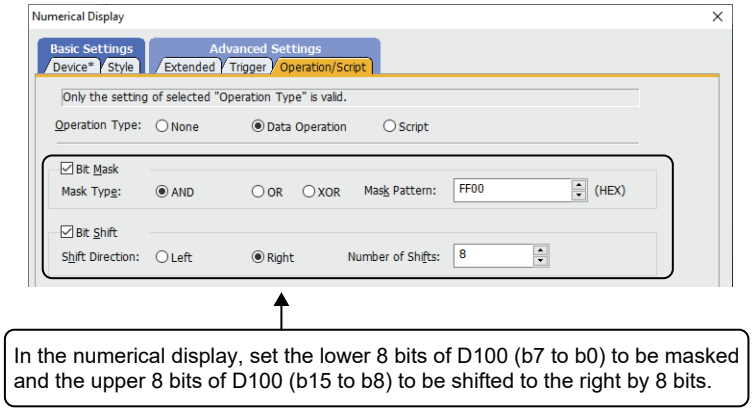
Time data can be displayed in the numerical display.
The following shows the setting procedure.

Step 1 Display the setting dialog for the placed numerical display ([Numerical Display] dialog).
For the details of the numerical display, refer to the following.
➟8.4 Placing a Numerical Display and Numerical Input

Step 2 Select [BCD16], [BCD32], or [BCD64] in [Data Type] in the [Device] tab.

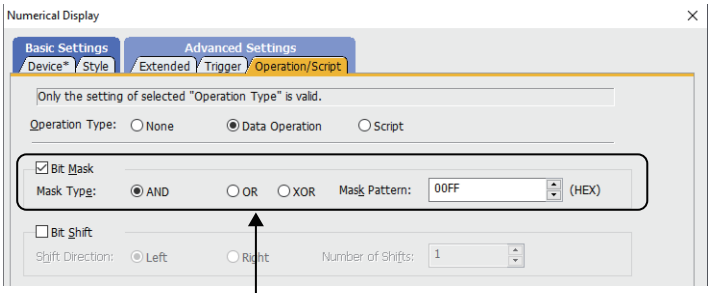
Step 3 Set the mask processing and shift processing in the [Operation/Script] tab.

- When displaying upper 8 bits (year)



In the numerical display, set the lower 8 bits of D100 (b7 to b0) to be masked and the upper 8 bits of D100 (b15 to b8) to be shifted to the right by 8 bits.

- When displaying lower 8 bits (month)



■6 Displaying the data obtained at specified time in the center (time specification jump function)

By using the display position time device and a touch switch, the data obtained at specified time can be displayed in the center of the historical trend graph.
When no data is obtained at the specified time, the data which has the nearest specified date is displayed.
When the multiple values are obtained at the nearest time, the first detected value is displayed.

(1) How to store the data to the device

Set a device to store the data in the upper eight bits and lower eight bits.
Numerical values are stored in BCD16.
Example) When [Device] is set to [D100]

Item	Device	Description
[yymm]	D100	• b15 to b8: The year is stored. • b7 to b0: The month is stored.
[ddhh]	D101	• b15 to b8: The day is stored. • b7 to b0: The time (hour) is stored.
[Minute/Second]	D102	• b15 to b8: The time (minute) is stored. • b7 to b0: The time (second) is stored.

(2) Setting procedure

(a) Settings of touch switches

To use time specification jump function, the following touch switches are required.

- Touch switch for displaying the specified time
- Touch switch for restarting the drawing processing of the graph

If the time specification jump function is used, the drawing processing of the graph stops.
A touch switch for restarting the drawing processing of the graph is required.
The following shows the setting procedure.

Step 1 Display the setting dialog for the placed switch ([Switch] dialog).
For the details of the switch, refer to the following.
➟8.2 Placing a Touch Switch

Step 2 Click the [Key Code] button in the [Action] tab.

Step 3 Set the key cord according to the touch switch to be created.

- When setting a touch switch for displaying the specified time
  Set [Code Setting] to [FFD4].
- When setting a touch switch for restarting the drawing processing of the graph
  Set [Code Setting] to [FFEF].

Point

Using the library data

Touch switches are registered in the library.
➟8.1 Using Objects in the Library

(b) Setting of the historical trend graph

Step 1 Double-click the historical trend graph placed on the screen editor.
The [Historical Trend Graph] dialog appears.
➟8.21.4 [Historical Trend Graph] dialog

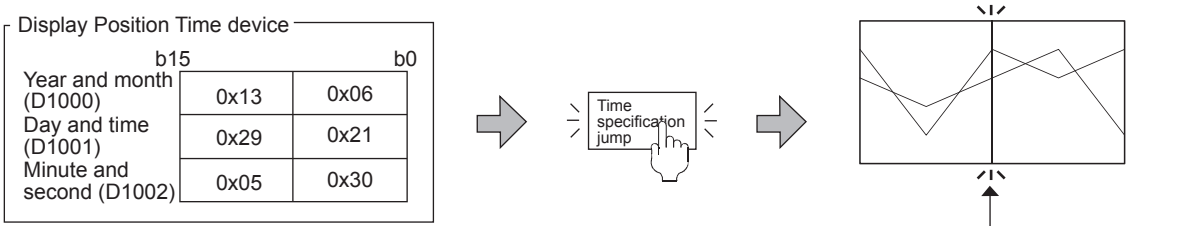
Step 2 Enable [Display Position Time] in the [Extended] tab, and specify a device.

➟8.21.4 ■4 [Extended] tab

(3) Operation example

The following shows the operation examples.

Example) When setting [D1000] in [Display Position Time Device] and displaying the data of Jun.29, 2013 21:05:30



Set the time to be displayed in the Display Position Time device.

Touch the touch switch for which the key code (FFD4h) has been set.

The data obtained at the specified time (Jun. 29, 2013 21:5:30) can be displayed in the center of the list.

(4) Precautions

(a) When time data is being searched for

When time data is being searched for, the historical trend graph cannot be operated.

(b) When no data can be displayed on the historical trend graph

When no data can be displayed on the historical trend graph, the time specification jump function is not executed.

(c) When displaying the data displayed near the start or end point

If the data obtained at specified time is near the start or end point, it may not be displayed in the center of the graph.

(d) Using the time specification jump function for an enlarged or reduced graph

Using the time specification jump function may change the graph display magnification as shown below.

- When a graph has been enlarged from the original magnification
  The graph display magnification returns to the original magnification after this function is used.
- When a graph has been reduced from the original magnification
  The graph display magnification remains unchanged after this function is used.

■7 Operations performed using the object gesture function

Not available to GT21 and GS21.

The display of objects can be operated using gestures.

For operations with gestures, refer to the following.

➟11.13 Operating Objects by the Gesture (Object Gesture Function)

8.21.3 Precautions for a historical trend graph

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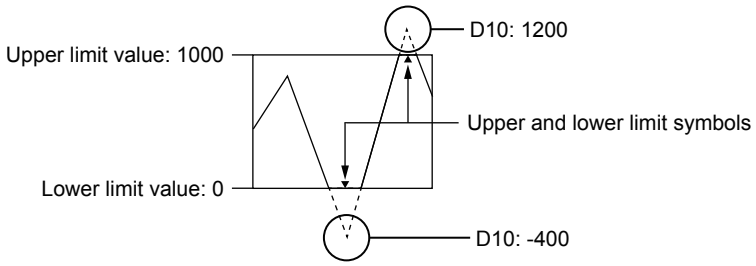
The following shows the precautions for the historical trend graph.

■1 When the monitored device value exceeds the upper or lower limit value

The trend graph does not display a device value that is above the upper limit or below the lower limit.
In such a case, the upper or lower limit symbol appears at the position where the device value is hidden from view.



To hide the upper and lower limit symbols, turn on GS450.b10.

➟12.1.3 GOT special register (GS)

■2 When the device type is set to the string in a logging setting

When [Device Type] is set to [String] in a logging setting, a system alarm occurs and the graph using the setting is not displayed.
(Not available to GT21 and GS21)

■3 When a graph is reduced from the original magnification

(1) Data displayed on the graph

If a graph is reduced from the original magnification, some pieces of data are thinned out and do not appear on the graph. Thus, the data displayed on the graph before and after the reduction may differ.
To check specific data on a graph, display the graph at the original magnification or greater.

(2) Elapsed time before a graph appears

If a graph is reduced from the original magnification, the graph may take a long time to appear.
In such a case, enlarge the graph close to the original magnification.

(3) Storing the maximum value, minimum value, and average value of a graph to specific devices

If a graph is reduced from the original magnification, some pieces of data are thinned out and do not appear on the graph. The maximum value, minimum value, and average value of the reduced graph are stored to specific devices.
Thus, the actual maximum value, minimum value, and average value of the graph at the original magnification may not be stored.
Before storing the values, enlarge the graph to the original magnification.

■4 Precautions for drawing

If you place a historical trend graph by using the [Create a new historical trend graph] button in the [Logging] dialog, the settings of the following items in the [Options] dialog are not applied.

- Place figures/objects sequentially
- Deselect figures/objects once they are placed
- Display the setting dialog once figures/objects are placed

➟9.2.6 [Logging] dialog
11.10.4 Customizing the settings related to editing operations

8.21.4 [Historical Trend Graph] dialog

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The historical trend graph is an object that constantly collects data in word devices and display it in a graph.

Step 1 Select [Object] → [Graph] → [Historical Trend Graph] from the menu.

Step 2 Click the position where you place the historical trend graph. Placing the historical trend graph is complete.

Step 3 Double-click the historical trend graph display which has been placed to display the setting dialog.

➟■1 [Data] tab
■2 [Style] tab
■3 [Auxiliary Line/Cursor] tab
■4 [Extended] tab
■5 [External Output] tab
■6 [Trigger] tab
■7 [Operation/Script] tab

■1 [Data] tab

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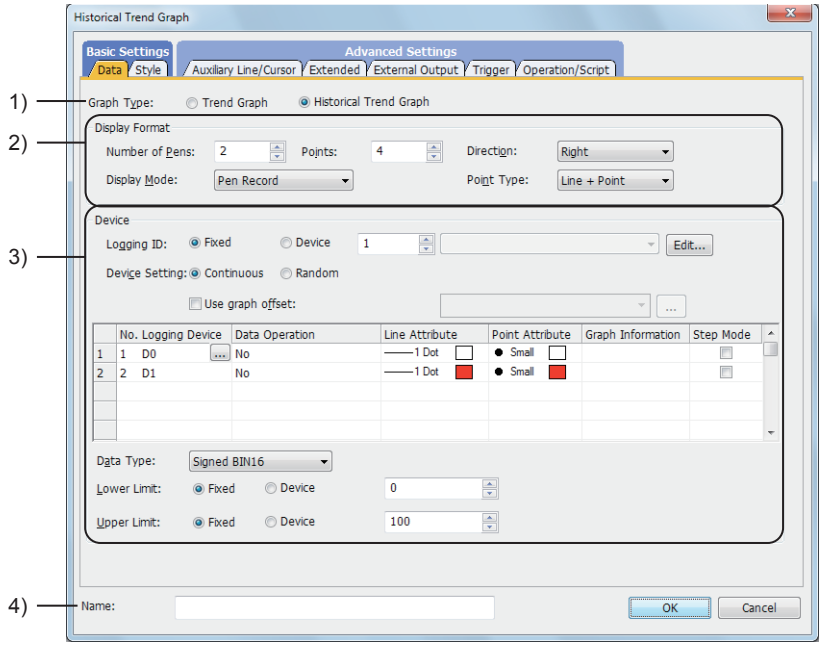
Set the device to be monitored and the historical trend graph status corresponding to the device value.



1) **[Graph Type]**

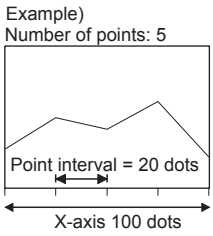
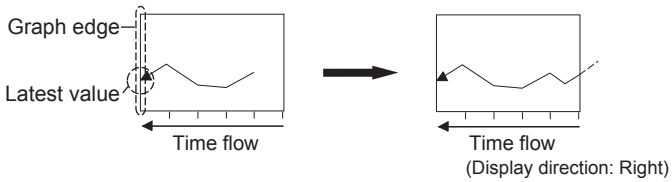
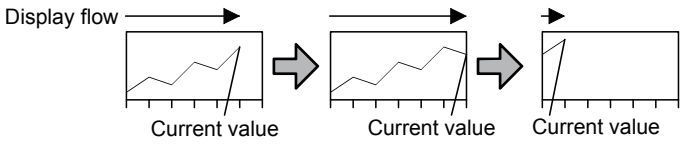
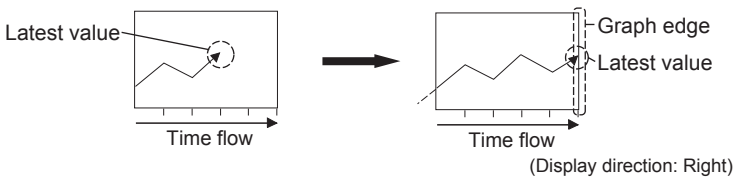
Select the graph to be set.

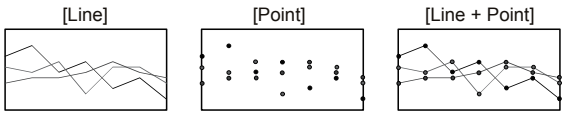
The following shows the items to be selected.

- [Trend Graph]
- [Historical Trend Graph]

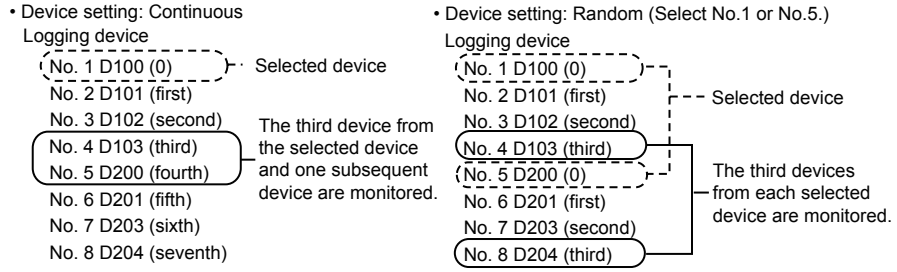
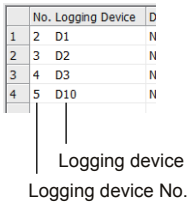
2) **[Display Format]**

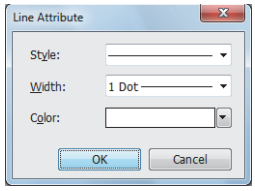
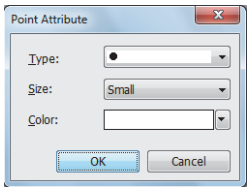
Item	Description
[Number of Pens]	Set the number of lines to be displayed in the historical trend graph. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 The setting range is [1] to [32]. • For GT21 and GS21 The setting range is [1] to [4].

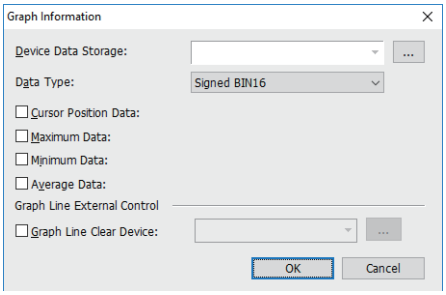
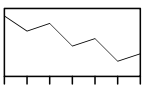
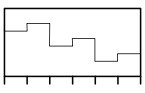
Item	Description
[Points]	Set the number of points to be displayed on a line of the historical trend graph. The setting range depends on the GOT model. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 The setting range is [2] to [1024]. • For GT21 and GS21 The setting range is [2] to [500]. Depending on the number of points and X-axis display range, the interval between points is adjusted automatically. 
[Direction]	Select the display direction of the graph. The following shows the items to be selected. • [Up] • [Right] • [Down] • [Left]
[Display Mode]	The following shows how to draw the historical trend graph. The following shows the items to be selected. • [Pen Record]: The line of the graph is drawn by moving the whole graph to [Direction]. The point indicating the latest value is always drawn at the graph edge.  • [One by One] The current value is displayed in the display direction.When the graph is drawn fully in a display range, the graph being displayed is cleared and a new graph is drawn.  • [Next Point Movement] The line of the graph is drawn to [Direction]. The point indicating the latest value moves to the display direction. Once the point indicating the latest value reaches to the graph edge, the point is drawn at the graph edge constantly. 

Item	Description
[Point Type]	Select the point type. The following shows the items to be selected. • [Line] • [Point] • [Line + Point] 

3) **[Device]**

Item	Description
[Logging ID]	Set the logging ID with which the data to be displayed on the historical trend graph is collected. Select whether to specify the ID using a fixed value or device value. The following shows the items to be selected. • [Fixed]: Specify the ID directly. You can select ID from the logging name as well. • [Device]: Specify the value of the word device as a logging ID. ➟6.1.2 How to set devices
[Device Setting]	Select how to set the device. The following shows the items to be selected. • [Continuous]: When a start device is set, inputs consecutive devices automatically in the table of [Device]. • [Random]: Select this item when setting devices one by one.
[Use Graph Offset]	Select this item to monitor the logging device that is set in the logging ID and specified by the value of the offset device. When a graph has multiple lines, the device to be monitored differs depending on the set value in [Device Setting]. After checking the device value, set the offset device. Example) When [Number of Pens] is set to [2] and offset device is set to [3] 
[No. Logging Device]	In the [Device List] dialog, select a logging device of a selected logging ID number. After the selection in the [Device List] dialog, the logging devices equivalent to the setting of [Number of Pens] are set. Example) When [Number of Pens] is set to [3] 
[Data Operation]	Set this item to execute the data operation. ➟6.5.5 ■4 (3) [Edit Data Expression] dialog The setting of [Data Type] in the [Historical Trend Graph] dialog is applied to the data type of the device set for the expression of this item.

Item	Description
[Line Attribute]	Set the attribute of the line. When [Line] or [Line + Point] is selected for [Point Type], set this item.  • [Line Style] Select the style of the line. The following shows the items to be selected. · Solid line · Dotted line · Broken line · One-dot chain line · Two-dot chain line • [Width] Select the width of the line. The following shows the items to be selected. · [1 Dot] · [2 Dot] · [3 Dot] · [4 Dot] · [5 Dot] · [7 Dot] • [Line Color] Select the color of the line.
[Point Attribute]	Set the attribute of the points. When [Point] or [Line + Point] is selected for [Point Type], set this item.  • [Type] Select the style of the point. The following shows the items to be selected. 0: ●, 1: ■, 2: ▲, 3: +, 4: ○, 5: □ 6: △, 7: ×, 8: ▼, 9: ◀, 10: ▶, 11: ◆ 12: ▽, 13: ◁, 14: ▷, 15: ◇ • [Size] Select the size of the point. The following shows the items to be selected. · [Large]: 9 dots · [Medium]: 7 dots · [Small]: 5 dots · [Very small]: 3 dots · [Point]: 1 dot Only when [0] is selected for [Type], [Very small] or [Point] can be selected. • [Color] Set the color of the point.

Item	Description
[Graph Information]	Set the device in which the information displayed on the graph is stored or device that clears the line of the graph. For the timings with which values are stored in the devices set for [Maximum Data], [Minimum Data], and [Average Data], refer to the following. ➟8.21.2 ■4 Storing graph data in devices  • [Device Data Storage] Set the device in which the graph information is stored. The successive devices following the device set in this item are assigned automatically to [Cursor Position Data] or later items. Set each item optionally. The device is assigned only to the set item. Using the GOT internal device is recommended for this setting. Even though data operation is set, the value before the data operation is stored. • [Data Type] Select the data type of the word device in which graph information is stored. Select the same data type as that of the logging device. When the data type of the logging device is bit, select [Signed BIN16], [Unsigned BIN16], or [BCD16]. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] • [Cursor Position Data] Select this item to store the value of device positioned by the cursor. The device is assigned automatically. • [Maximum Data] Select this item to store the maximum value of the device values displayed on the graph is to be stored. The device is assigned automatically. • [Minimum Data] Select this item to store the minimum value of the device values displayed on the graph. The device is assigned automatically. • [Average Data] Select this item to store the average value of the device values displayed on the graph. The device is assigned automatically. • [Graph Line External Control] · [Graph Line Clear Device] Select this item to clear the line of the graph using a device. After selecting this item, set the device.
[Step Mode]	Select this item to display the line of the trend graph by steps.   Displayed by no steps Displayed by steps

Item	Description
[Data Type]	Select the data type of the word device. The following shows the items to be selected. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] When the device data type is signed 64-bit binary, unsigned 64-bit binary, 64-bit binary-coded decimal, or real number (64 bits), select one of the following. Selecting a data type other than the following may disable proper data operation. • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD64] • [Real(64bit)]
[Lower Limit], [Upper Limit]	Select whether to specify the display range (lower and upper limit values) of the trend graph with the fixed value or with the device value. The following shows the items to be selected. • [Fixed]: Specify a constant. • [Device]: Specify a device value. ➟6.1.2 How to set devices The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

4) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Style] tab

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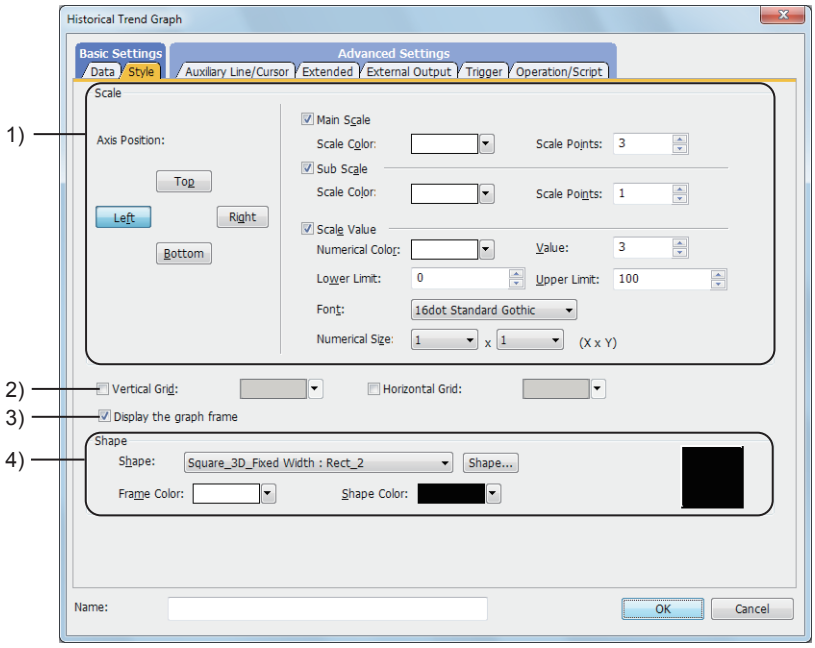
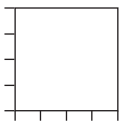
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

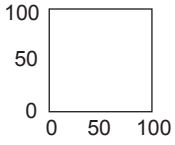


1) [Scale Settings]

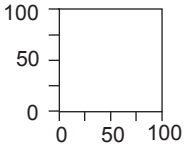
Displays the line or scale value in the historical trend graph.



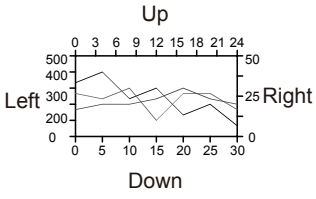
Line
(X: 5)
(Y: 5)

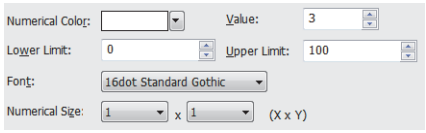
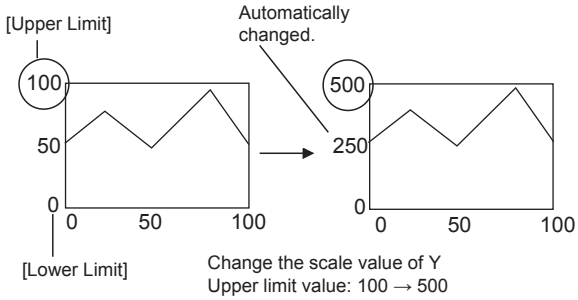


Scale value
(X: 3)
(Y: 3)



Displays both the lines and scale values.

Item	Description
[Axis Position]	Select the position where the line or scale value is displayed. The following shows the items to be selected. • [Left] button • [Right] button • [Top] button • [Bottom] button After selecting the position, set the line or scale value. 
[Main Scale]	Set this item to display lines on the scale. • **[Color]** Set the color of lines on the scale. • **[Scale Points]** Set the number of lines on the scale. The setting range is [2] to [101].

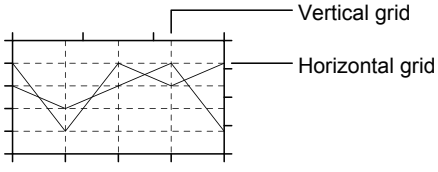
Item	Description
[Sub Scale]	Set this item to place lines between the lines set in [Main Scale]. • **[Color]** Set the color of sub lines on the scale. • **[Scale Points]** Set the number of sub lines on the scale. The setting range is [1] to [9].
[Scale Value]	Set this item to display numeric characters as the scale value.  • **[Numerical Color]** Set the color of numeric characters. • **[Value]** Set the number of numeric characters. The setting range is [2] to [101]. • **[Lower Limit] and [Upper Limit]** Set the lower limit and upper limit of the numerical value. Changes in this setting are automatically applied to the display.  Depending on the item selected for [Data Type] in the [Data] tab, the setting range is different. The setting range of 64-bit devices is the same as that of 32-bit devices. • **[Font]** Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • **[Number Size]** Select the size of numeric characters. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Font], the numeric character size cannot be set.

2) **[Vertical Grid] and [Horizontal Grid]**

Select this item to display the horizontal or vertical grid.

The number of grids is the same as the number set in [Scale Points] of [Main Scale] and [Sub Scale].

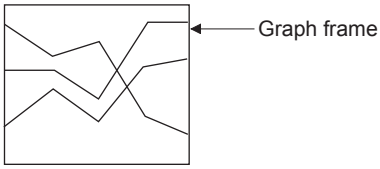
The bottom and left setting in [Axis Position] is prioritized.



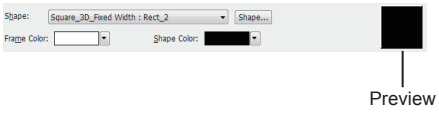
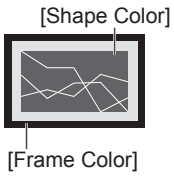
After setting this item, select the color of the grid.

3) **[Display the graph frame]**

Select this item to display the frame of the graph.



4) **[Shape]**

Item	Description
[Shape]	Set the shape of the historical trend graph. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape.  • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

■3 [Auxiliary Line/Cursor] tab

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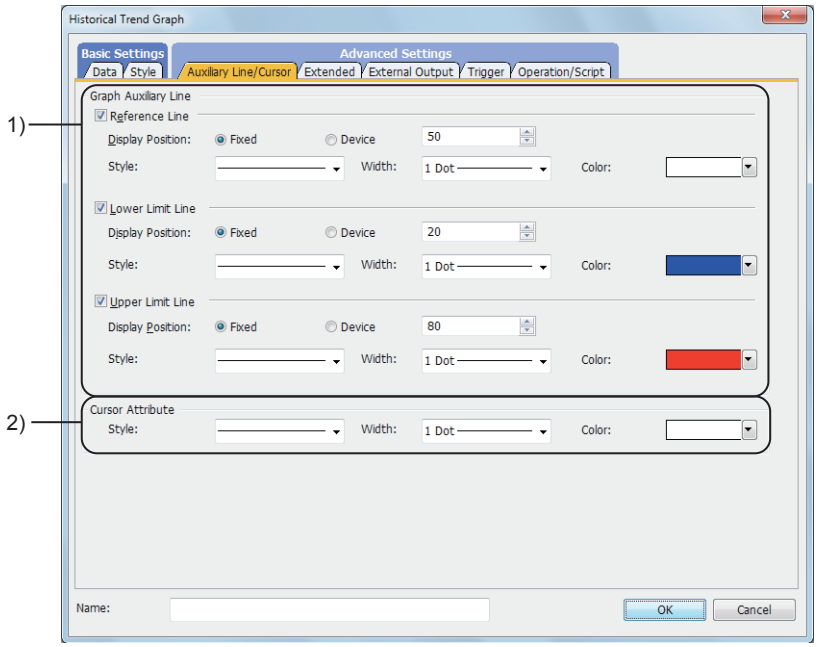
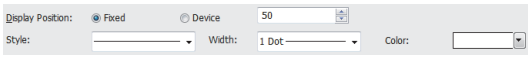
Set the auxiliary line and attribute of the cursor.



1) [Graph Auxiliary Line]

Item	Description
[Reference Line], [Lower Limit Line], and [Upper Limit Line]	Set this item to place a reference line on the graph.  • **[Display Position]** Select whether to specify the line position using a fixed value or device value. The following shows the items to be selected. • [Fixed]: Specify a constant. • [Device]: Specify a device value. ➥6.1.2 How to set devices • **[Line Style]** Select the style of the line. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line • **[Width]** Select the width of the line. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot] • **[Line Color]** Select the color of the line.

2) **[Cursor Attribute]**

Set the attribute of the cursor.

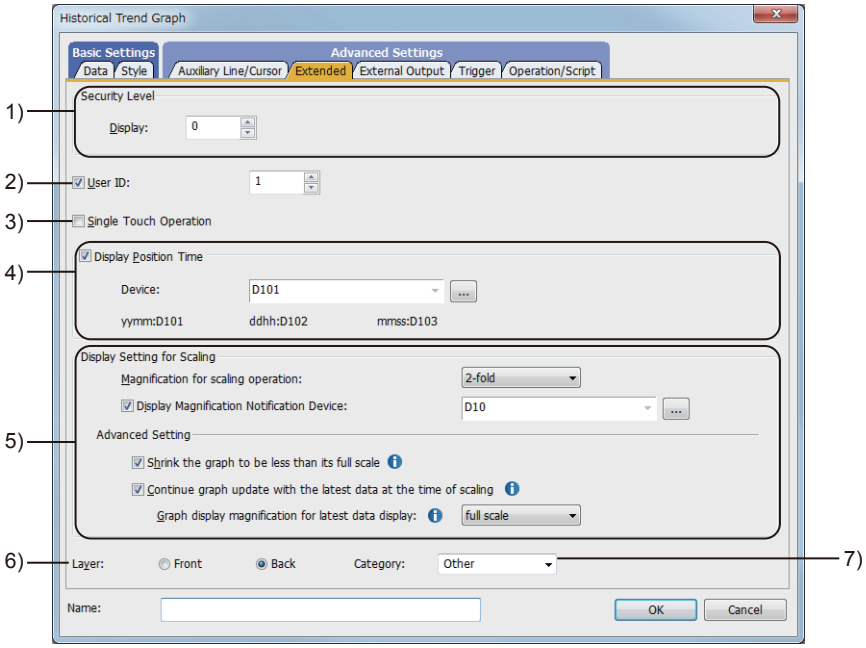
Item	Description
[Line Style]	Select the style of the line. The following shows the items to be selected. • Solid line • Dotted line • Broken line • One-dot chain line • Two-dot chain line
[Width]	Select the width of the line. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Line Color]	Select the color of the line.

■4 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**

Set the security level when using the security function.

The setting range is [1] to [15].

Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[User ID]**

Select this item to set the user ID.

The setting range is [1] to [65535].

➟8.16.2 ■2 Identifying multiple graphs (setting user IDs)

3) **[Single Touch Operation]**

Select this item to display a cursor at the touched place.

4) **[Display Position Time]**

Set this item to display the data obtained at specified time in the center of the graph when the touch switch is touched.

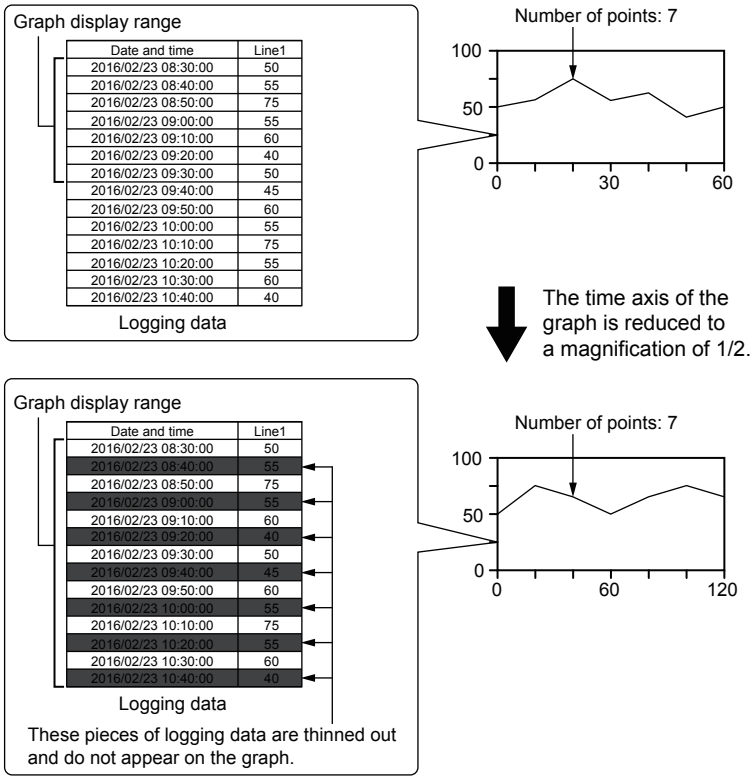
Item	Description
[Device]	Set the device in which the time data is stored. The three successive devices following the device set in this item are automatically assigned to [yymm], [ddhh], and [mmss]. The time data is stored in the upper eight bits and lower eight bits of each set device. The data type of the devices is BCD. ➟8.16.2 ■5 Displaying the data obtained at specified time in the center (time specification jump function)

5) **[Display Setting for Scaling]**

Not available to GT21 and GS21.

Configure the settings to enlarge or reduce the time axis of a graph.

Item	Description
[Magnification for scaling operation]	Select a magnification factor to enlarge or reduce the time axis of a graph by touching a touch switch, pinching in, or pinching out one time. The following shows the items to be selected. • [2-fold] • [4-fold] • [8-fold]

Item	Description
[Display Magnification Notification Device]	Specify a device to store the magnification factor at which the time axis of a graph is being displayed. You can specify a signed 16-bit binary word device or word-specified bit device.
[Shrink the graph to be less than its full scale]	Enables the setting to reduce the time axis of a graph from the original magnification. When the time axis is reduced, the number of points to be displayed remains unchanged, but some pieces of data are thinned out and do not appear on the graph. Example) When the time axis of a graph is reduced to a magnification of 1/2 The amount of data within the graph display range becomes twice as much as that at the original magnification. Because the number of points to be displayed remains unchanged, every other piece of data is thinned out and does not appear on the graph. 
[Continue graph update with the latest data at the time of scaling]	Always updates a graph when the time axis of the graph is enlarged or reduced.
[Graph display magnification for latest data display]	Select a magnification factor for the latest data that is displayed with the touch switch, screen switching, or graph offset function. The magnification factors less than 1 are selectable only when [Shrink the graph to be less than its full scale] is selected. The selectable items vary with the selection for [Magnification for scaling operation]. • When [2-fold] is selected for [Magnification for scaling operation] [8-fold] [4-fold] [2-fold] [full scale] [1/2] [1/4] [1/8] [1/16] [1/32] [1/64] [1/128] • When [4-fold] is selected for [Magnification for scaling operation] [4-fold] [full scale] [1/4] [1/16] [1/64] [1/128] • When [8-fold] is selected for [Magnification for scaling operation] [8-fold] [full scale] [1/8] [1/64] [1/128]

6) **[Layer]**

Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.

- [Front]
- [Back]

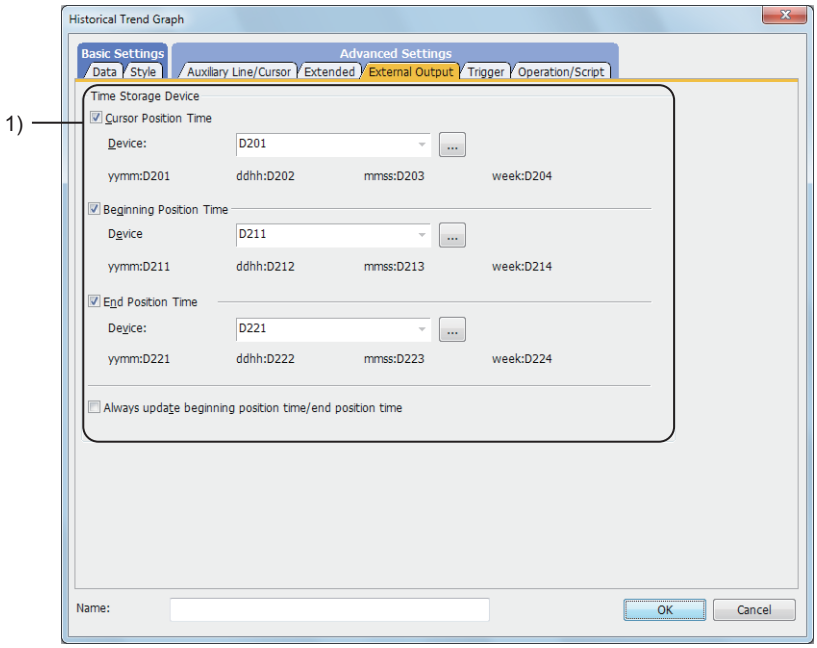
➟6.5.5 ■3 Superimposition

7) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Time Device]**
Stores each time data.
The four successive devices following the device set in this item are automatically assigned to [yymm], [ddhh], [mmss], and [Day].
The time data is stored in the upper eight bits and lower eight bits of each set device.
The data type of the devices is BCD.
Using the GOT internal device is recommended for this setting.
For how to display the time data stored in the device in the numerical display, refer to the following.

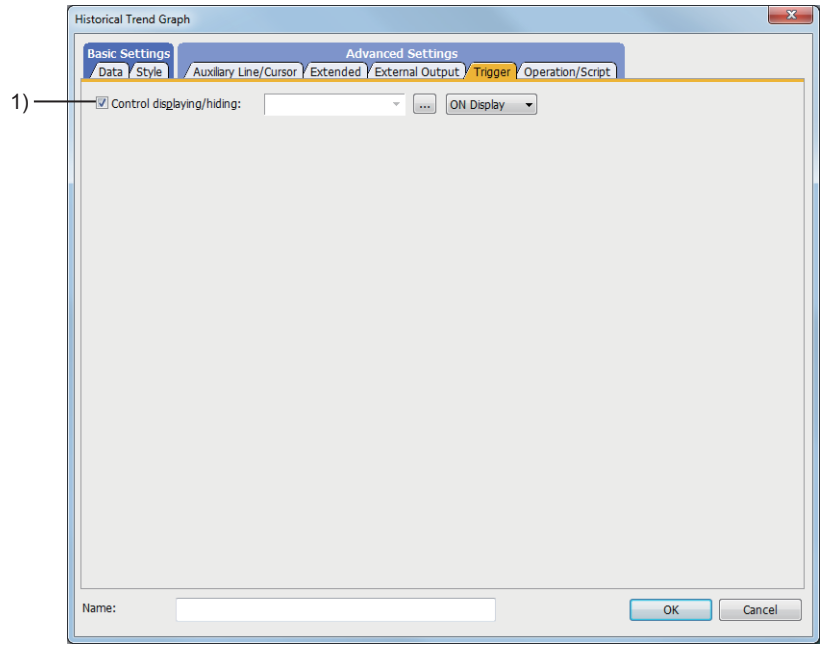
➟8.16.2 ■4 Storing time data in devices

Item	Description
[Cursor Position Time]	Set this item to store the time of the cursor display position. After selecting this item, set the device.
[Beginning Position Time]	Set this item to store the time at the beginning position of the graph. After selecting this item, set the device.
[End Position Time]	Set this item to store the time at the end position of the graph. After selecting this item, set the device.
[Always update Beginning Position Time/End Position Time]	Select this item to constantly store the latest value in the Time device (beginning position time and end position time). New data obtained at specified time is stored every graph refresh.

■6 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control Displaying/Hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

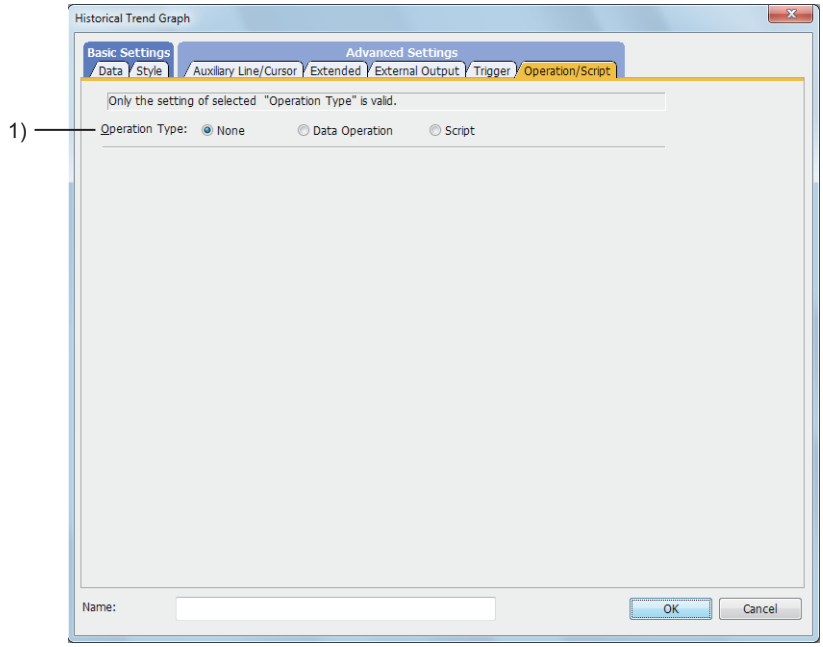
■7 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

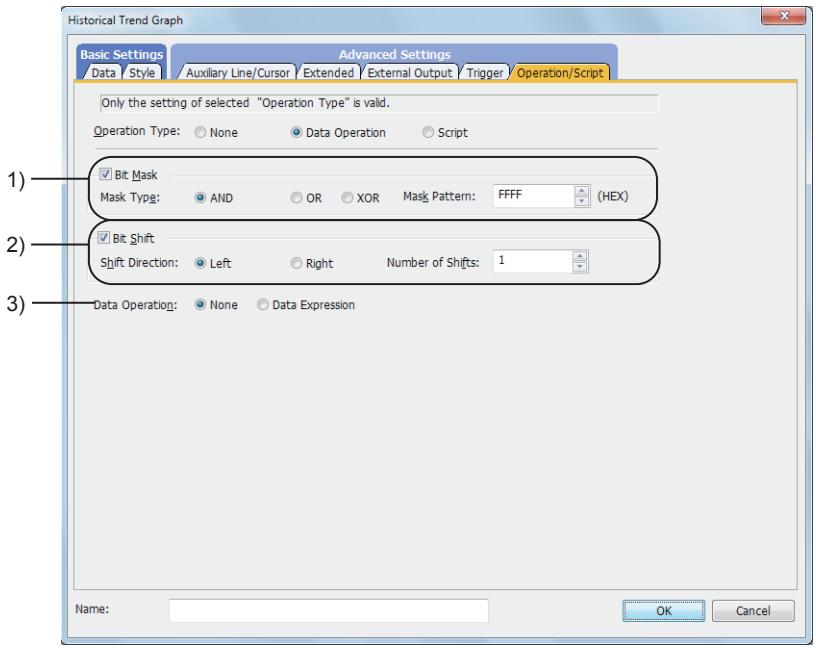
- [None]
  Select this item if the data operation and script are unnecessary.
- [Data Operation]
  Set the expression used for the data operation.
  ➟(1) [Data Operation]
- [Script]
  Not available to GT21 and GS21.
  Set the expression used for the script function.
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Set the format of the expression.

The following shows the items to be selected.

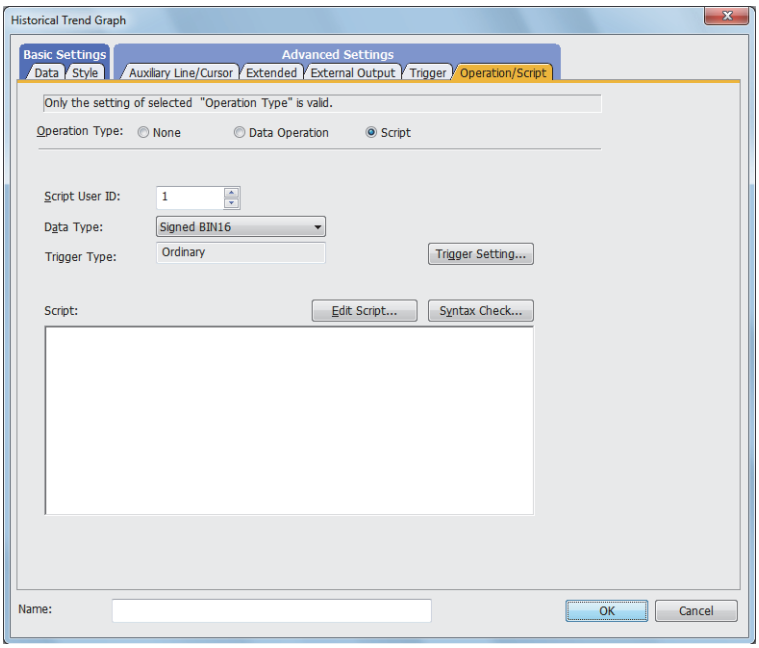
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.
  The setting of [Data Type] in the [Historical Trend Graph] dialog is applied to the data type of the device set for the expression of this item.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Data]	[Lower Limit] (X (lower side))	scale_min[0]	○	○	When the screen is updated	
	[Lower Limit] (Y (left side))	scale_min[1]	○	○	When the screen is updated	
	[Lower Limit] (Y (upper side))	scale_min[2]	○	○	When the screen is updated	
	[Lower Limit] (Y (right side))	scale_min[3]	○	○	When the screen is updated	
	[Upper Limit] (X (lower side))	scale_max[0]	○	○	When the screen is updated	
	[Upper Limit] (Y (left side))	scale_max[1]	○	○	When the screen is updated	
	[Upper Limit] (Y (upper side))	scale_max[2]	○	○	When the screen is updated	
	[Upper Limit] (Y (right side))	scale_max[3]	○	○	When the screen is updated	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
[Style]	[Frame Color]	frame_color	○	×	×	
	[Shape Color]	plate_color	○	○	When the screen is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.21.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the historical trend graph as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

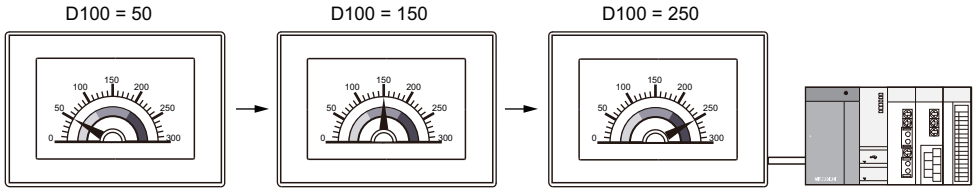
Function	Setting item
Hiding the upper and lower limit symbols	GS450.b10
Retaining the state of the historical trend graph displayed before screen switching and displaying the same graph state after switching back to the graph screen (Historical Trend Graph Display Mode signal: read device) ➟8.21.1 ■4 (9) Holding the graph display state displayed before screen switching	GS450.b9

8.22 Placing a Graphical Meter

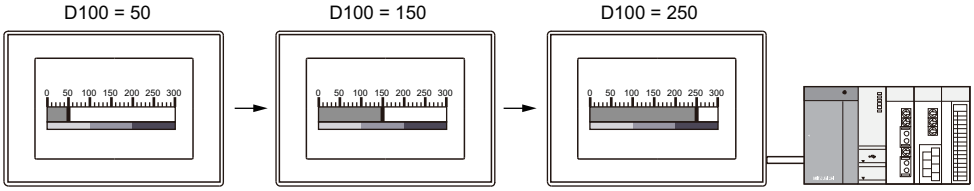
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The graphical meter object monitors the value of a word device, and indicates the device value within a range of the specified upper and lower limits.

• Semicircle meter



• Horizontal bar meter



8.22.1 Specifications of the graphical meter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects on one screen

Up to 32 graphical meter objects can be placed on one screen.

■2 Graphical meter shape

The following shows the selectable shapes of the graphical meter.

- Sector
- Semicircle
- Bar (Vertical)
- Bar (Horizontal)

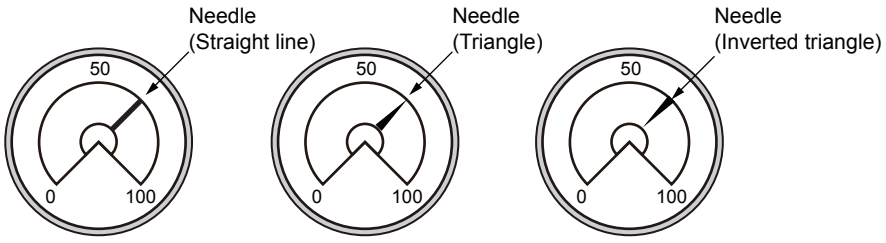
■3 Indication of the monitored device value

The following shows the selectable methods of indicating the device value.

- Needle

  The device value is indicated with a needle.

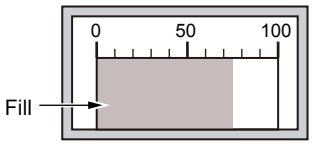
  The following needle shapes are selectable: straight line, triangle, and inverted triangle.



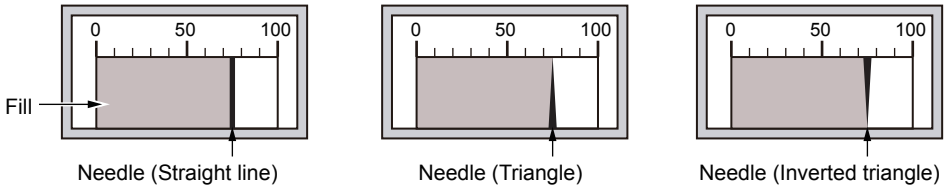
- Fill

  The device value is indicated by applying a fill (from the lower limit to the device value).

  The fill color and design are settable.

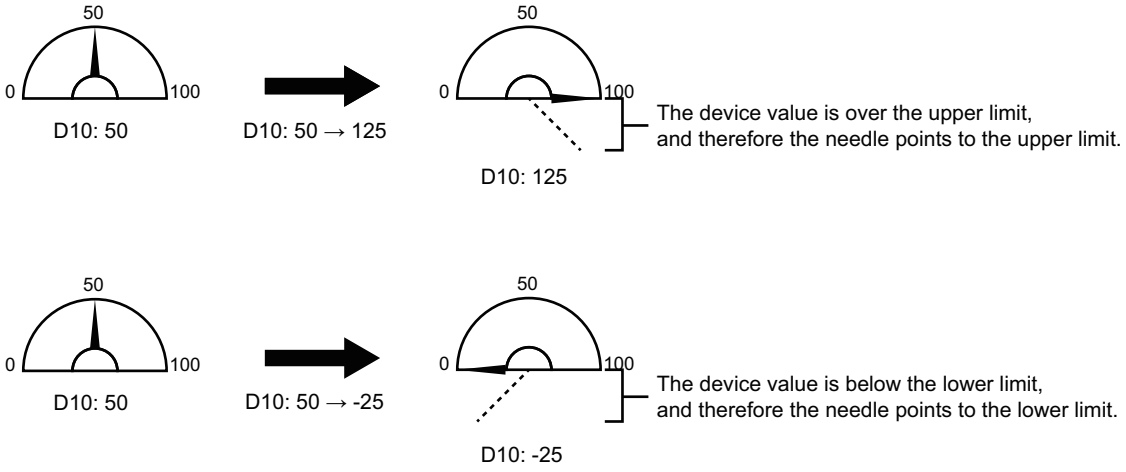


• Needle and fill
The device value is indicated by using a needle and applying a fill.



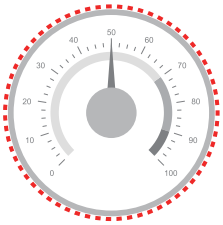
■4 Indication of the device value that is above the upper limit or below the lower limit

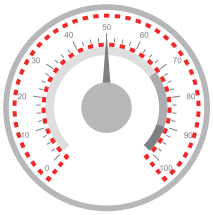
If the monotored device value is above the upper limit or below the lower limit, the limit value is indicated as the device value on the graphical meter.
Example) Graphical meter having an upper limit of 100 and a lower limit of 0

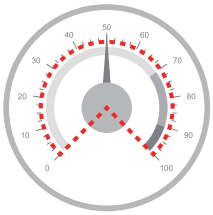


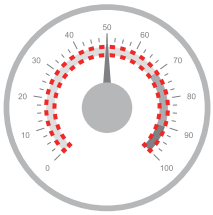
■5 Areas of the graphical meter

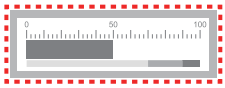
The graphical meter consists of multiple areas as shown below.
Example) Areas of a sector meter or a horizontal bar meter

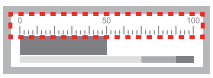

Shape frame area

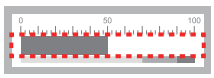

Scale area

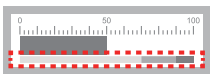

Data area


Warning color area


Shape frame area


Scale area


Data area


Warning color area

- Shape frame area
  An area where the frame of the graphical meter shape is displayed.
- Scale area
  An area where a scale and scale values are displayed.
  The starting and ending edges of the scale area are determined by the angle, data width, and data height of the data area.
- Data area
  An area where a meter, needle, and fill are displayed.
  An upper limit and a lower limit are specified for the meter, and the device value is indicated by the needle and fill.
- Warning color area
  An area where warning colors are displayed.
  The starting and ending edges of the warning color area are determined by the angle, data width, and data height of the data area.

For editing the areas of the graphical meter, refer to the following.

➟8.22.2 ■4 Editing the areas of the graphical meter

8.22.2 How to use the graphical meter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the graphical meter.

■1 Placing the graphical meter

Step 1 Select [Object] → [Graphical Meter] from the menu to select a graphical meter.

Step 2 Click the position to place a graphical meter.

Step 3 Adjust the size of the graphical meter.

Step 4 Double-click the graphical meter to display the setting dialog.

➟8.22.4 [Graphical Meter] dialog

Step 5 In the [Device/Style] tab, set [Device], [Upper Limit], and [Lower Limit].

➟8.22.4 ■1 [Device/Style] tab

For the other setting items, refer to the following.

➟■3 Setting the graphical meter

Step 6 Click the [OK] button to complete the graphical meter settings.

■2 Editing the graphical meter

The graphical meter is editable on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

(1) Resizing the graphical meter

The size of the graphical meter is changeable.

The resize operation differs depending on the selection for [Shape] in the [Scaling Setting] dialog.

- When [Circle] is selected for [Shape]
  The graphical meter is resized while forming a perfect circle.
- When [Square] is selected for [Shape]
  The graphical meter is resized with its length-to-width ratio changed.
- When [None] is selected for [Shape]
  The graphical meter is resized while its length-to-width ratio remains unchanged.

For the details of the [Scaling Setting] dialog, refer to the following.

➟8.22.4 ■4 [Extended Style] tab

■3 Setting the graphical meter

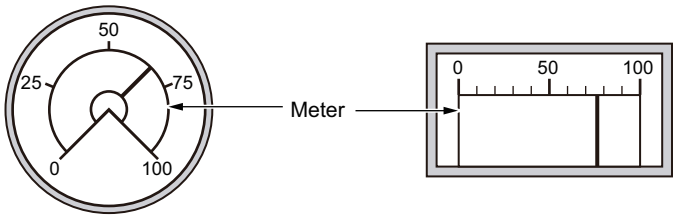
The setting of the graphical meter can be configured on the screen editor.

➟6.5.5 Common setting for objects

(1) Meter setting

Set the meter shape and design in the [Device/Style] tab of the [Graphical Meter] dialog.

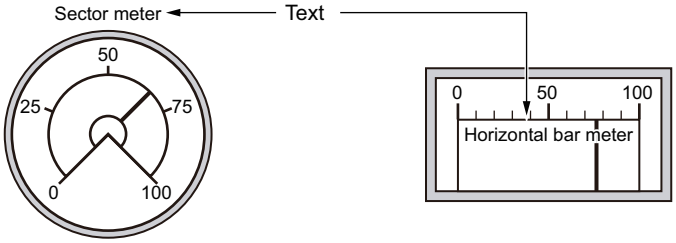
➟8.22.4 ■1 [Device/Style] tab



(2) Text setting

Set the text to be displayed on the graphical meter in the [Text] tab of the [Graphical Meter] dialog.

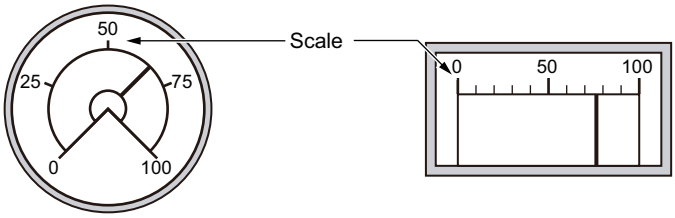
➟8.22.4 ■2 [Text] tab



(3) Scale setting

Set the scale and scale values of the graphical meter in the [Scale] tab of the [Graphical Meter] dialog.

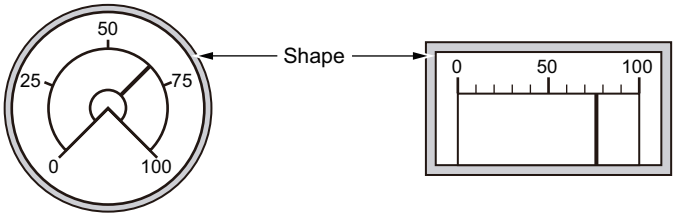
➟8.22.4 ■3 [Scale] tab



(4) Shape setting

Set the shape of the graphical meter in the [Extended Style] tab of the [Graphical Meter] dialog.
Only the shapes in the library are selectable.

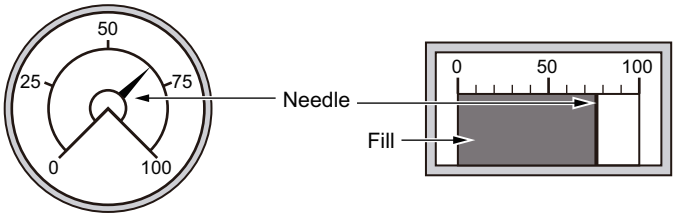
➟8.22.4 ■4 [Extended Style] tab



(5) Needle and fill settings

Set how to indicate a device value on the graphical meter in the [Extended Style] tab of the [Graphical Meter] dialog.

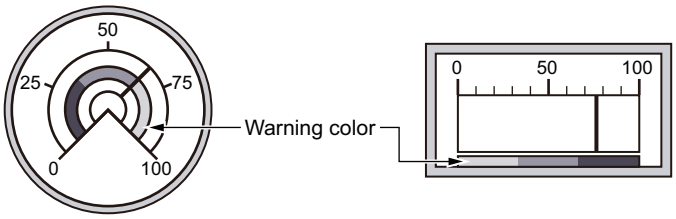
➟8.22.4 ■4 [Extended Style] tab



(6) Warning color setting

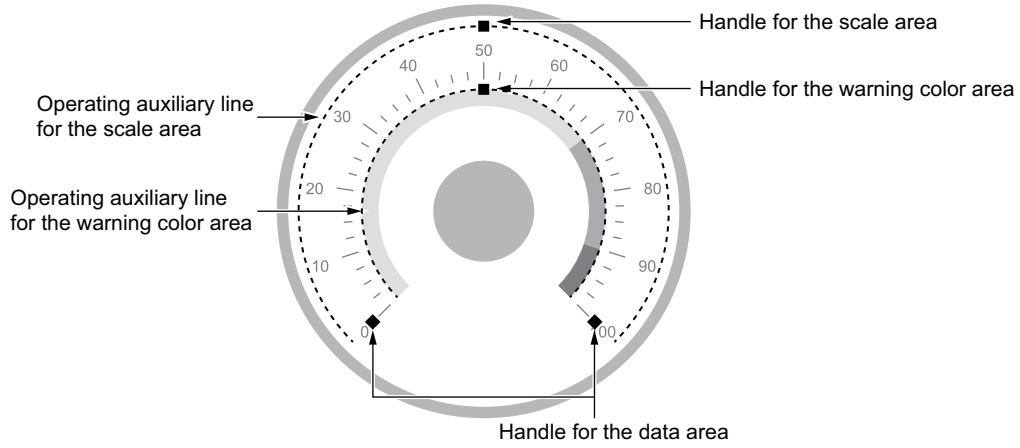
Set warning colors to be displayed on the graphical meter in the [Extended Style] tab of the [Graphical Meter] dialog.

➟8.22.4 ■4 [Extended Style] tab



■4 Editing the areas of the graphical meter

The areas of the graphical meter are editable on the screen editor.
Click the graphical meter to display the handles and operating auxiliary lines for the warning color area, scale area, and data area. The handles for the warning area and scale area are rectangle-shaped, and the handle for the data area is rhombus-shaped.
Drag a handle or operating auxiliary line to edit an area.
Example) Handles and operating auxiliary lines displayed for the areas of a sector meter



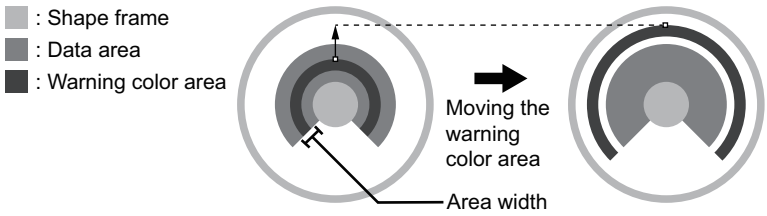
(1) Editable area

The following shows the editable areas.

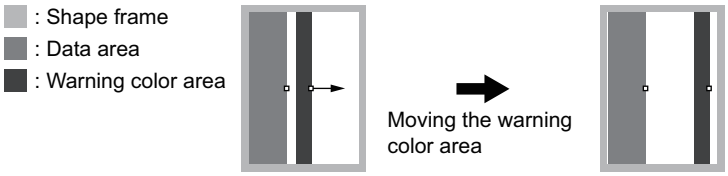
(a) Warning color area and scale area

The warning color area or scale area is movable.
When you move the area in a sector or semicircle meter, the area is resized with its width unchanged.

- Sector meter



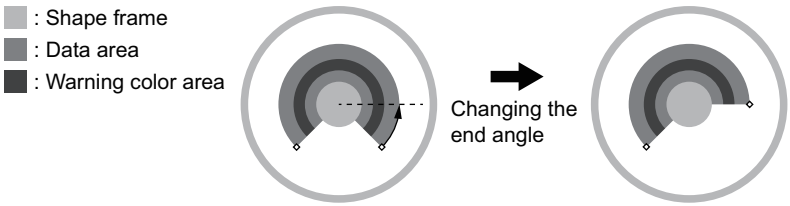
- Vertical bar meter



(b) Data area

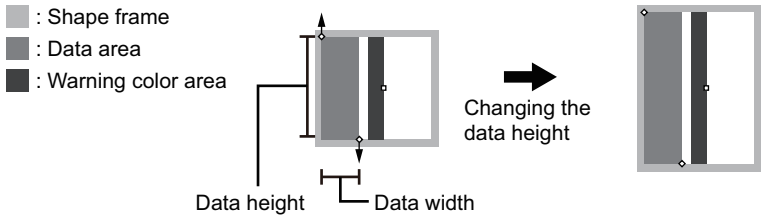
The angle or the data width and height are changeable.
When you change the above items, the warning color area and scale area are resized accordingly.

- Sector meter
  The angle of the data area is changeable.



- Vertical bar meter

The data width and height of the data area are changeable.



(2) Scope of editing the areas

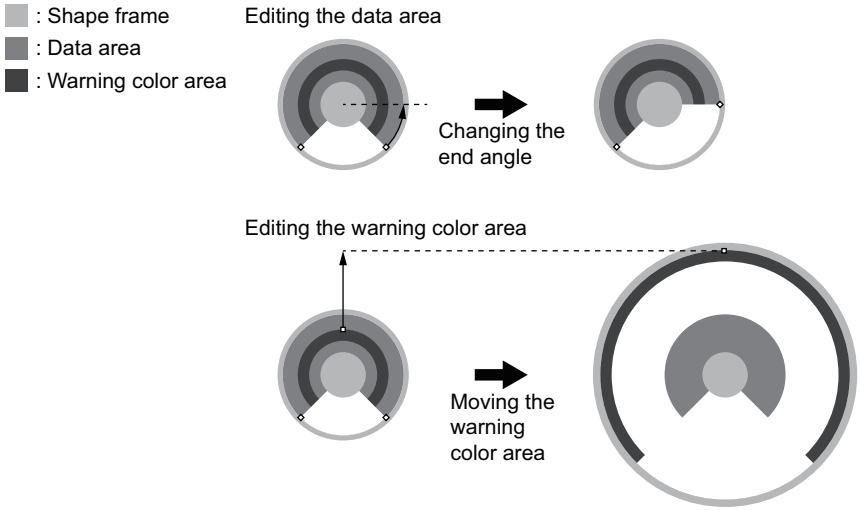
The scope of editing the areas differs depending on the selection for [Shape] in the [Scaling Setting] dialog.
For the details of the [Scaling Setting] dialog, refer to the following.

➟8.22.4 ■4 [Extended Style] tab

(a) When [Circle] is selected for [Shape]

The areas of the graphical meter are editable beyond the shape frame.
If you resize an area beyond the shape frame, the frame is resized to accommodate the area automatically.

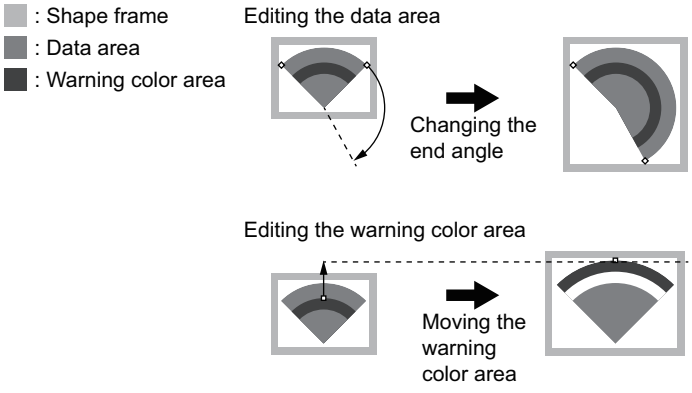
• Sector meter



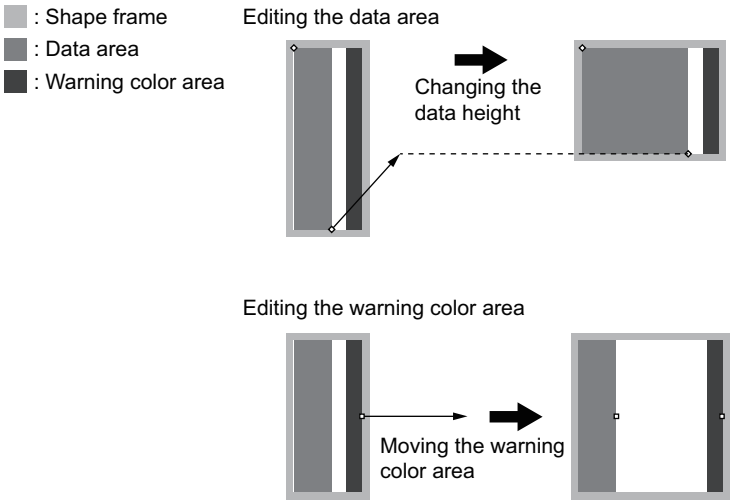
(b) When [Square] is selected for [Shape]

The areas of the graphical meter are editable beyond the shape frame.
If you resize an area beyond the shape frame, the frame is resized to accommodate the area automatically.

• Sector meter



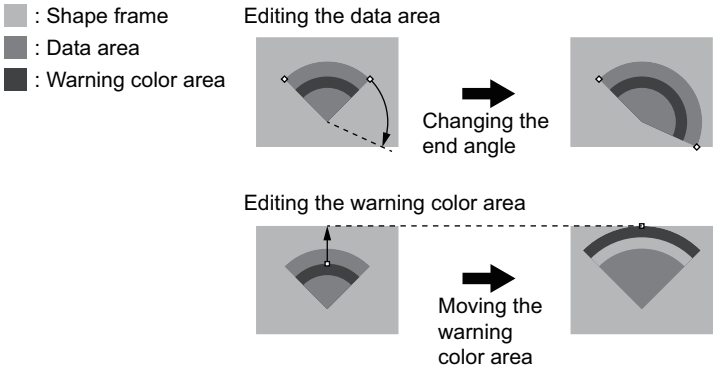
• Vertical bar meter



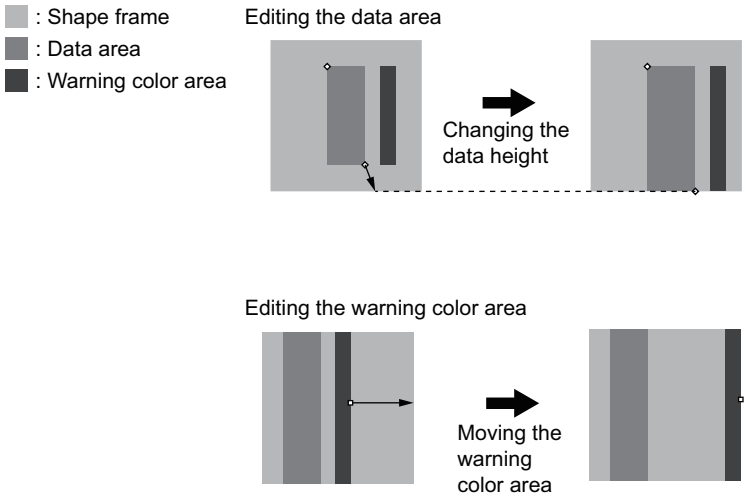
(c) **When [None] is selected for [Shape]**

The areas of the graphical meter are editable only within the shape frame.

• Sector meter



• Vertical bar meter



8.22.3 Precautions for a graphical meter

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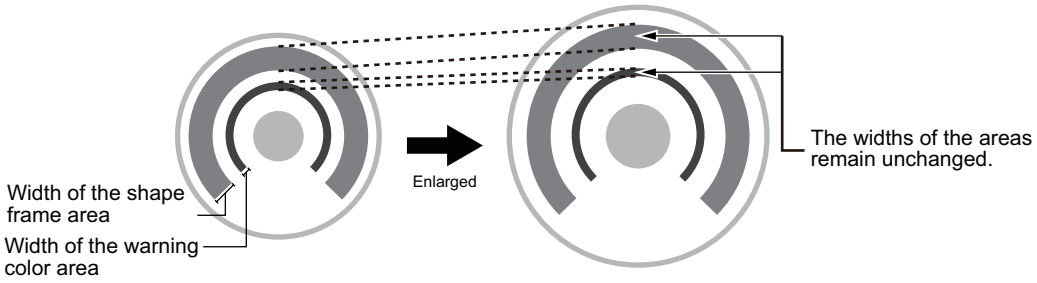
■1 Behavior of the graphical meter when it is resized

(1) Scale area and warning color area

Even if the graphical meter is resized, the widths of the scale area and warning color area remain unchanged.
To change the widths of the areas, set the relevant items in the [Graphical Meter] dialog.

➟8.22.4 [Graphical Meter] dialog

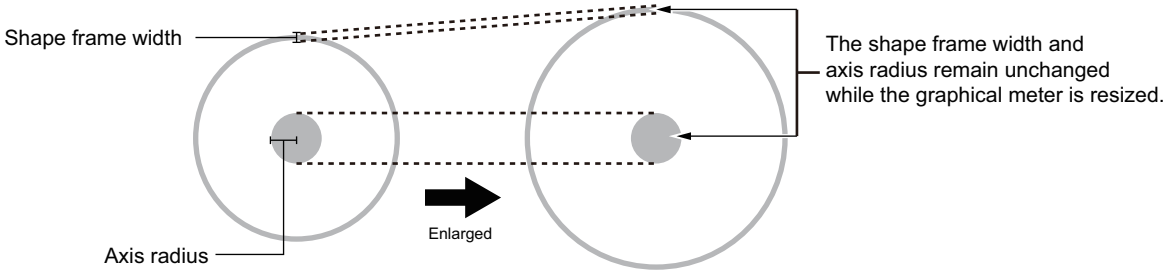
Example) When the graphical meter is enlarged



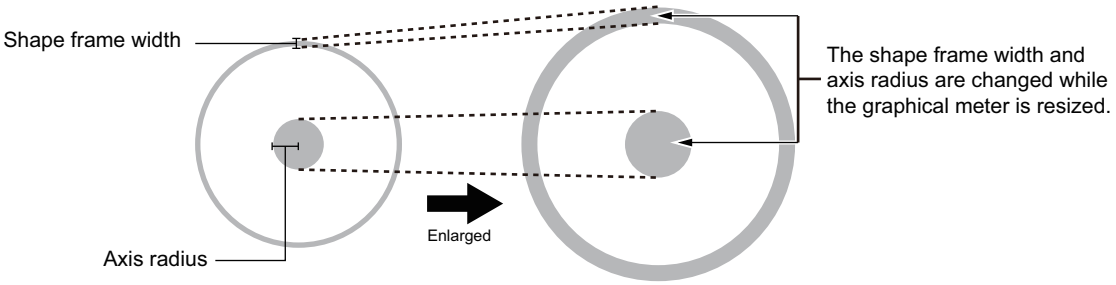
(2) Shape frame width and axis radius

The set value of [Frame Width] or [Axis Radius] in the [Scaling Setting] dialog determines whether the shape frame width or axis radius remains unchanged while the graphical meter is resized.

- When [Frame Width] or [Axis Radius] is set to a value other than [0]
  The shape frame width or axis radius remains unchanged while the graphical meter is resized.
  Example) When the graphical meter is enlarged



- When [Frame Width] or [Axis Radius] is set to [0]
  The shape frame width or axis radius is changed while the graphical meter is resized.
  Example) When the graphical meter is enlarged



For the details of the [Scaling Setting] dialog, refer to the following.

➟8.22.4 ■4 [Extended Style] tab

■2 Shape setting

The shape of the graphical meter may not appear properly if you make different selections in the following settings: [Shape] in the [Graphical Meter] dialog ([Extended Style] tab), and [Shape] in the [Scaling Setting] dialog.
Check the display of the shape, and change the selection for [Shape] in the [Scaling Setting] dialog if necessary.
For the details of the [Scaling Setting] dialog, refer to the following.

➟8.22.4 ■4 [Extended Style] tab

8.22.4 [Graphical Meter] dialog

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Step 1 Select [Object] → [Graphical Meter] from the menu to select a graphical meter.

Step 2 Click the position to place a graphical meter.

Step 3 Double-click the graphical meter to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Text] tab
■3 [Scale] tab
■4 [Extended Style] tab
■5 [Extended] tab
■6 [Trigger] tab
■7 [Operation/Script] tab

■1 [Device/Style] tab

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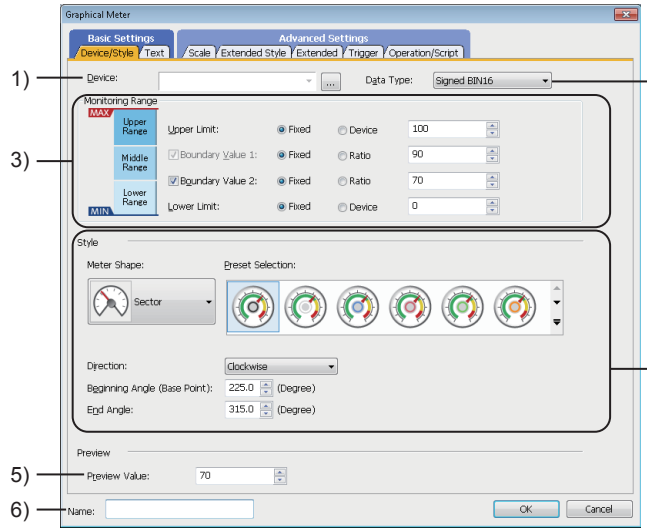
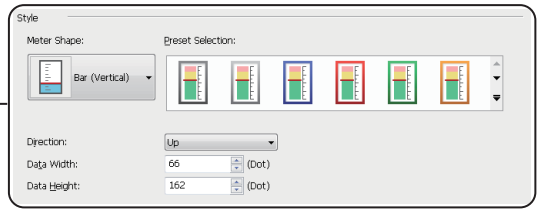




When [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape]

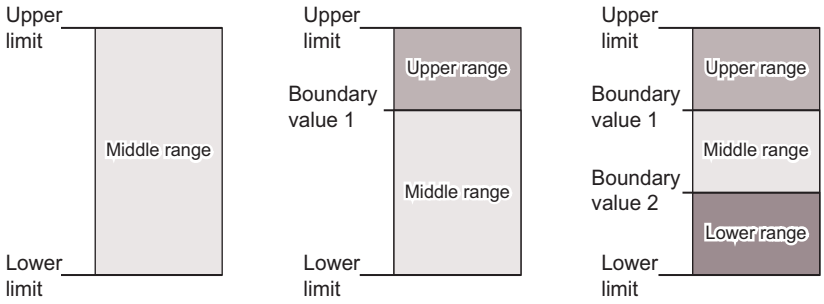
1) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of the word device.
The following shows the items to be selected.

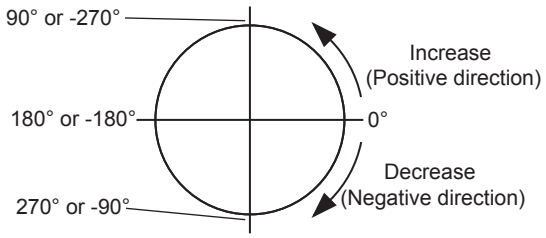
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

3) **[Monitoring Range]**

Item	Description
[Upper Limit], [Lower Limit]	Select whether to set the data area (upper and lower limits) of the graphical meter with fixed values or device values. The following shows the items to be selected. • [Fixed]: Set a constant. The setting range depends on the selection for [Data Type]. • [Device]: Set a device. ➟6.1.2 How to set devices
[Boundary Value 1], [Boundary Value 2]	Set these items to divide the data area of the graphical meter. Select whether to divide the data area with fixed values or by ratio. The data area is divided into the middle, upper, and lower ranges based on the settings of [Boundary Value 1] and [Boundary Value 2].  The following shows the items to be selected. • [Fixed]: These items are settable only when [Fixed] is selected for [Upper Limit] and [Lower Limit]. Set a constant. The setting ranges for [Boundary Value 1] and [Boundary Value 2] are different. For [Boundary Value 1], the setting range is the set value of [Lower Limit] to the set value of [Upper Limit]. For [Boundary Value 2], the setting range is the set value of [Lower Limit] to the set value of [Boundary Value 1]. • [Ratio]: Set a radio for dividing the data area based on [Upper Limit] (100%) and [Lower Limit] (0%). The setting ranges for [Boundary Value 1] and [Boundary Value 2] are different. For [Boundary Value 1], the setting range is [1]% to [99]%. For [Boundary Value 2], the setting range is [1]% to the set value of [Boundary Value 1].

4) **[Style]**

Item	Description
[Meter Shape]	Select a meter shape. The following shows the items to be selected. • [Sector] • [Semicircle] • [Bar (Vertical)] • [Bar (Horizontal)]
[Preset Selection]	Select a graphical meter design. Click the pull-down menu button to display all designs. Pull-down menu button
[Direction]	Select the value increment direction for the graphical meter. The selectable items vary with the selection for [Meter Shape]. • When [Sector] or [Semicircle] is selected for [Meter Shape] [Clockwise] [Counterclockwise] • When [Bar (Vertical)] is selected for [Meter Shape] [Up] [Down] • When [Bar (Horizontal)] is selected for [Meter Shape] [Right] [Left]

Item	Description
[Beginning Angle (Base Point)], [End Angle]	These items are settable when [Sector] or [Semicircle] is selected for [Meter Shape]. Set an angle to define the meter shape. The setting range is [-360.0] degrees to [360.0] degrees. The angle is settable in units of 0.1 degree. Regardless of the selection for [Direction], the 0-degree position is always at the 3 o'clock position, and the angle increases counterclockwise. 
[Data Width], [Data Height]	These items are settable when [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape]. Set the width and height of the meter. When [Bar (Vertical)] is selected for [Meter Shape], the value of [Data Width] is applied to [Needle Length] in the [Extended Style] tab. When [Bar (Horizontal)] is selected for [Meter Shape], the value of [Data Height] is applied to [Needle Length] in the [Extended Style] tab. When [Circle] or [Square] is selected for [Shape] in the [Scaling Setting] dialog, the object is resized according to the specified width and height of the meter.

5) **[Preview Value]**

Set a value or ratio for the graphical meter to be previewed on GT Designer3.

The setting range varies with the selection for [Upper Limit] and [Lower Limit].

- When [Fixed] is selected for [Upper Limit] and [Lower Limit]

  The setting range is the set value of [Lower Limit] to the set value of [Upper Limit].
- When [Device] is selected for [Upper Limit] and [Lower Limit]

  Set a ratio based on [Upper Limit] (100%) and [Lower Limit] (0%).

  The setting range is [0]% to [100]%.

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Text] tab

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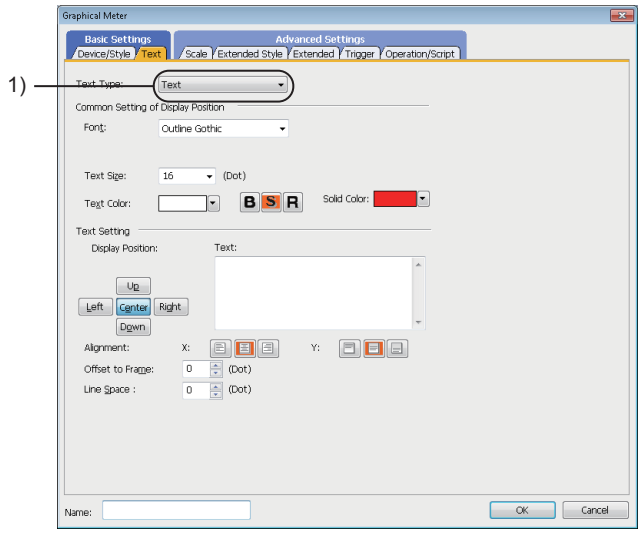
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) [Text Type]

Item	Description
[Text]	Directly input the text to be displayed. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Set the comment in the comment group as the text.

For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

Setting items differ depending on the selected text type.

For the setting items for each text type, refer to the following.

➟(1) [Text]
(2) [Comment]

(1) [Text]

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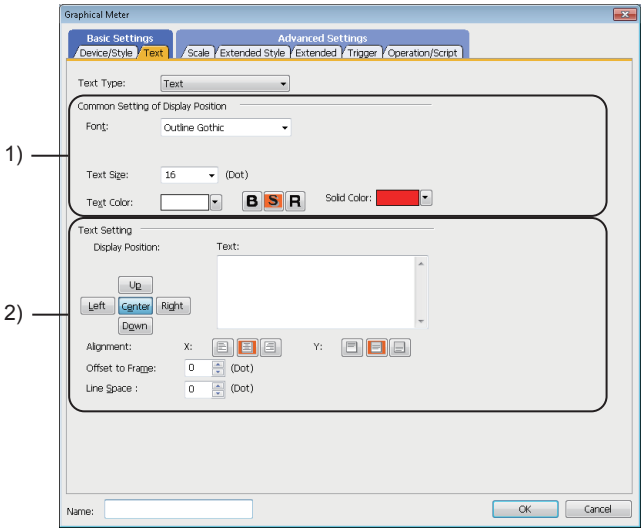
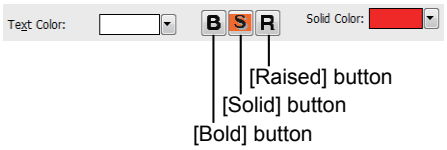
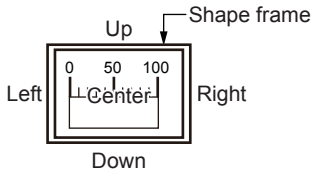
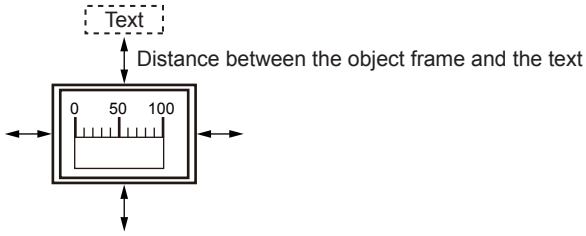


1) [Common Setting of Display Position]

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4.2 Color settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

2) [Text Settings]

Item	Description
[Display Position]	Set the position of the text to be displayed on the object. The text is displayed at each position (Center, Up, Down, Left, Right). • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

(2) [Comment]

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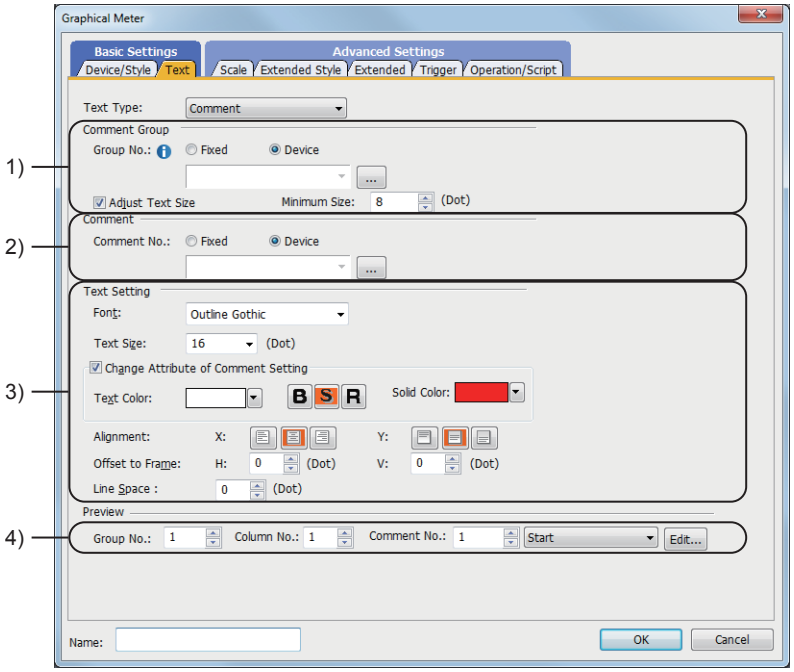


1) **[Comment Group]**

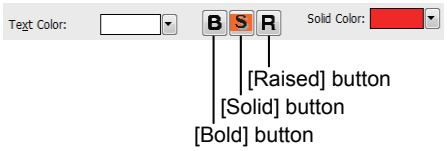
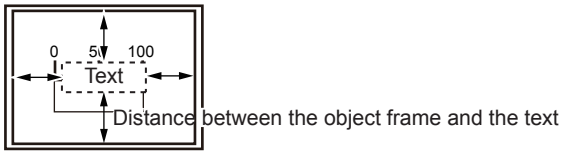
Item	Description
[Fixed]	Select this item to use the specified comment group. After selecting this item, directly enter the comment group No. to be used.
[Device]	Select this item to use the comment group number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices
[Adjust Text Size]	The text size is automatically adjusted so that it fits the object size. When this item is not selected, the line feed is automatically applied to the text.
[Minimum Size]	Set the minimum text size for when [Adjust Text Size] is enabled. The setting range is [8] to [240] dot(s).

2) **[Comment]**

Item	Description
[Comment No.]	Set the comment No. of the comment to be used. • [Fixed]: Select this item to use the specified comment. After selecting this item, set the comment No. to be used. To edit the displayed comment, click the [Edit] button and edit the comment in the [Edit Comment] dialog. If an unregistered comment group No. or comment No. is set, create a new comment. ➟12.15.4 [Edit Comment] dialog • [Device]: Select this item to use the comment number corresponding to the value of the device to be set. After selecting this item, set the device. ➟6.1.2 How to set devices

3) **[Text Settings]**

Item	Description
[Font]	Select the font of the displayed text. The following shows the items to be selected. • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font This item is selectable when [Group No.] is set to [Fixed]. Displays text in the font specified with [Windows Font] in the [Comment Group Property] dialog. • [Windows Font Setting] button Displays the [Comment Group Property] dialog to list the properties of the comment group specified with [Group No.]. Set [Windows Font] and [Character Set] for the target column of the comment group. ➟5.8.4 ■2 (1) [Comment Group Property] dialog
[Text Size]	For the settable text sizes by font, refer to the following. ➟1.2.5 Font specifications

Item	Description
[Change Attribute of Comment Setting]	Select this item to change the comment attribute. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4.2 Color settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.
[Alignment]	Set the vertical or horizontal position of the text.
[Offset to Frame]	Set the offset between the frame of the object and the text in units of dots. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines in units of dots. The setting range is [0] to [128] dot(s).

4) **[Preview]**

Item	Description
[Group No.]	Set the group No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Group No.] of [Comment Group], the value set in [Comment Group] is fixed.
[Column No.]	Set the column No. of the comment to be displayed on the screen of GT Designer3.
[Comment No.]	Set the comment No. of the comment to be displayed on the screen of GT Designer3. When [Fixed] is selected for [Comment No.] of [Comment], the value set in [Comment] is fixed.

■3 [Scale] tab

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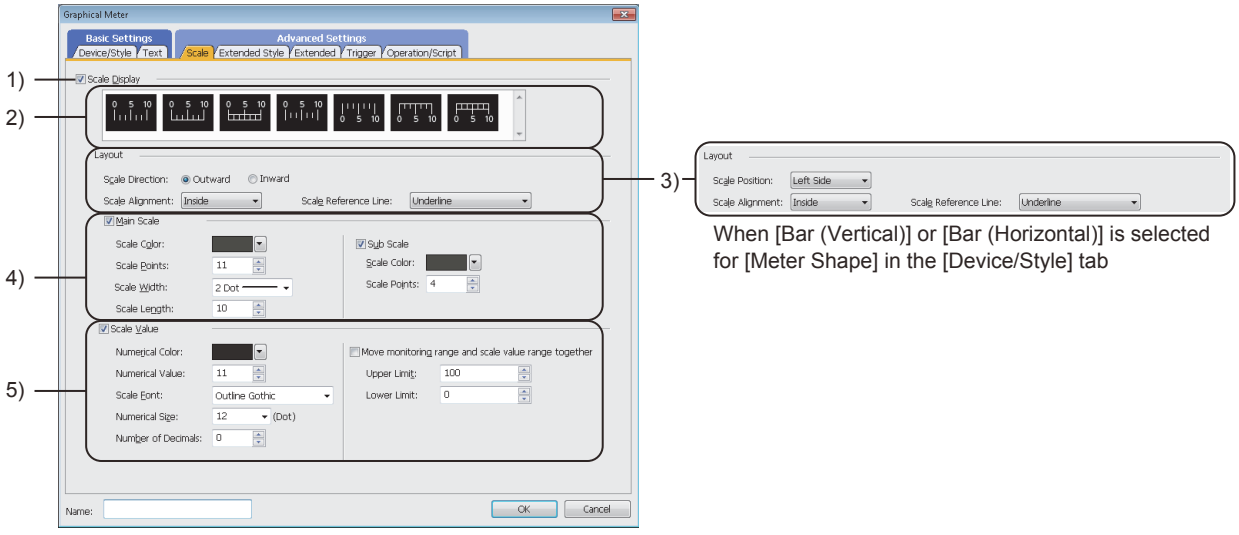
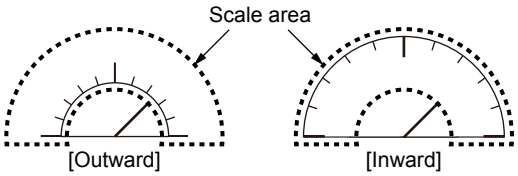
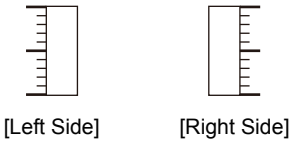
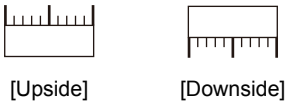
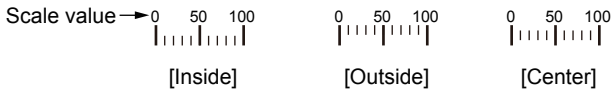
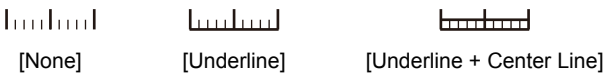


When [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape] in the [Device/Style] tab

1) **[Scale Display]**
Displays a scale on the graphical meter.

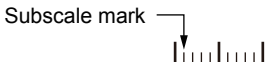
2) **Scale design**
Select a scale design.

3) **[Layout]**

Item	Description
[Scale Direction]	This item is settable when [Sector] or [Semicircle] is selected for [Meter Shape] in the [Device/Style] tab. Select the orientation of scale marks. This setting does not change the position and size of the scale area. The following shows the items to be selected. • [Outward] • [Inward] 
[Scale Position]	This item is settable when [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape] in the [Device/Style] tab. Select the orientation of scale marks. The selectable items vary with the selection for [Meter Shape] in the [Device/Style] tab. • When [Bar (Vertical)] is selected for [Meter Shape] [Left Side] [Right Side] If the selection is changed, the graphical meter is flipped horizontally.  • When [Bar (Horizontal)] is selected for [Meter Shape] [Upside] [Downside] If the selection is changed, the graphical meter is flipped vertically. 
[Scale Alignment]	Select the position to align scale marks. The following shows the items to be selected. • [Inside] • [Outside] • [Center] 
[Scale Reference Line]	Set the reference line for the scale. When [Scale Display] is not selected, no reference line is displayed. The selectable items vary with the selection for [Scale Alignment]. • When [Inside] or [Outside] is selected for [Scale Alignment] [None] [Underline] [Underline + Center Line]  • When [Center] is selected for [Scale Alignment] [None] [Center Line]

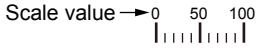
4) **[Main Scale]**

Displays main scale marks.

Item	Description
[Scale Color]	Select the color of main scale marks. ➟6.4.2 Color settings
[Scale Points]	Specify the number of main scale marks. The setting range is [2] to [101].
[Scale Width]	Select the width of main scale marks. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Scale Length]	Set the length of main scale marks. When [Circle] or [Square] is selected for [Shape] in the [Scaling Setting] dialog, the object is resized according to the specified length of the scale marks.
[Sub Scale]	Displays subscale marks.  The width and length of subscale marks default to half of the set values of [Scale Width] and [Scale Length].
[Scale Color]	Select the color of subscale marks. ➟6.4.2 Color settings
[Scale Points]	Specify the number of subscale marks. The setting range is [1] to [9].

5) **[Scale Value]**

Displays scale values.



Item	Description
[Numerical Color]	Select the color of scale values. ➟6.4.2 Color settings
[Numerical Value]	Specify the number of scale values. The setting range is [2] to [101].
[Scale Font][*1]	Select the font for scale values. The following shows the items to be selected. • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows Font
[Numerical Size]	Set the size of scale values in the specified font. For the settable sizes by font, refer to the following. ➟1.2.5 Font specifications
[Number of Decimals]	Set the number of decimal places of a scale value. The setting range is [0] to [6].
[Move monitoring range and scale value range together]	This item is settable when [Fixed] is selected for [Upper Limit] and [Lower Limit] in the [Device/Style] tab. The upper and lower limits of the scale value range are identical to the values of [Upper Limit] and [Lower Limit] set in the [Device/Style] tab. When you change the set values of [Upper Limit] and [Lower Limit] in the [Device/Style] tab, the upper and lower limits of the scale value range are changed accordingly.
[Upper Limit], [Lower Limit]	Set the upper and lower limits of the scale value range. These items are not settable when [Move monitoring range and scale value range together] is selected. The setting range depends on the selection for [Data Type] in the [Device/Style] tab.

*1 The scale font is always antialiased regardless of the setting of [Enable the antialiasing to smooth jagged text edges] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

■4 [Extended Style] tab

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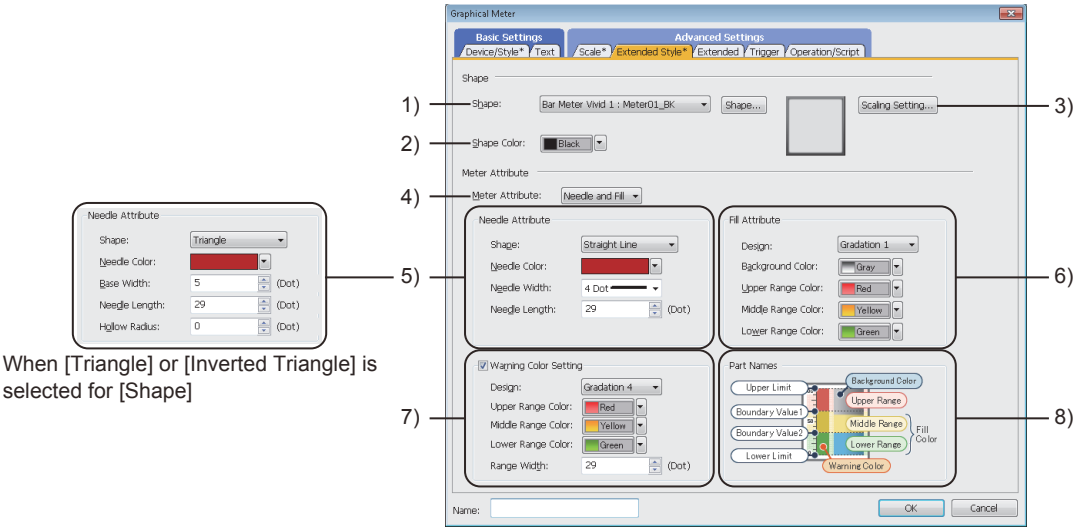


When [Triangle] or [Inverted Triangle] is selected for [Shape]

1) **[Shape]**

Select the shape of the graphical meter.

Only the shapes in the library are selectable.

To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

2) **[Shape Color]**

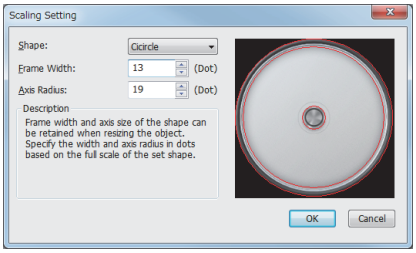
Select the shape color.

The following shows the items to be selected.

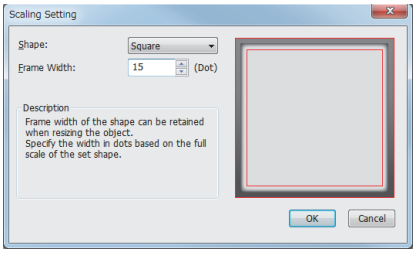
- [Blue]
- [Red]
- [Yellow]
- [Green]
- [Orange]
- [Cyan]
- [Purple]
- [Pink]
- [Gray]
- [Gold]
- [Silver]
- [Black]
- [White]

3) **[Scaling Setting] button**

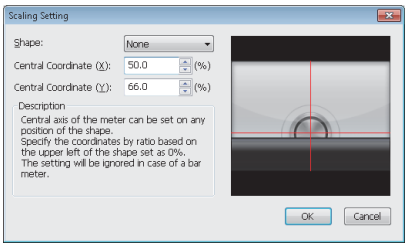
Displays the [Scaling Setting] dialog to set the details of the selected shape.



When [Circle] is selected for [Shape]



When [Square] is selected for [Shape]



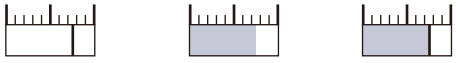
When [None] is selected for [Shape]

- [Shape]
  Select the shape outline.
  The selectable items vary with the selection for [Meter Shape].
  · When [Sector] or [Semicircle] is selected for [Meter Shape]
  [Circle]
  [Square]
  [None]
  · When [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape]
  [Square]
  [None]
- [Frame Width]
  This item is settable when [Circle] or [Square] is selected for [Shape].
  Set the frame width of the selected shape.
  The settable minimum value is [0], and the settable maximum value varies with the shape size.
  When [0] is set, the frame width is changed while the graphical meter is resized.
- [Axis Radius]
  This item is settable when [Circle] is selected for [Shape].
  Set the axis radius.
  The settable minimum value is [0], and the settable maximum value varies with the size of the shape or object.
  When [0] is set, the axis radius is changed while the graphical meter is resized.
- [Central Coordinate (X)], [Central Coordinate (Y)]
  These items are settable when [None] is selected for [Shape].
  Specify the X and Y coordinates of the meter center by ratio.
  The upper left corner of the shape is set as 0%.
  The setting range is [0.0]% to [100.0]%.

4) **[Meter Attribute]**

Select the method of indicating the device value.
The selectable items vary with the selection for [Meter Shape] in the [Device/Style] tab.

- When [Sector] or [Semicircle] is selected for [Meter Shape]
  [Needle]
- When [Bar (Vertical)] or [Bar (Horizontal)] is selected for [Meter Shape]
  [Needle]
  [Fill]
  [Needle and Fill]

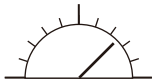
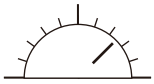


[Needle] [Fill] [Needle and Fill]

5) **[Needle Attribute]**

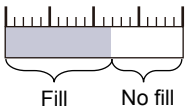
This item is settable when [Needle] or [Needle and Fill] is selected for [Meter Attribute].
Set a needle to indicate the device value.

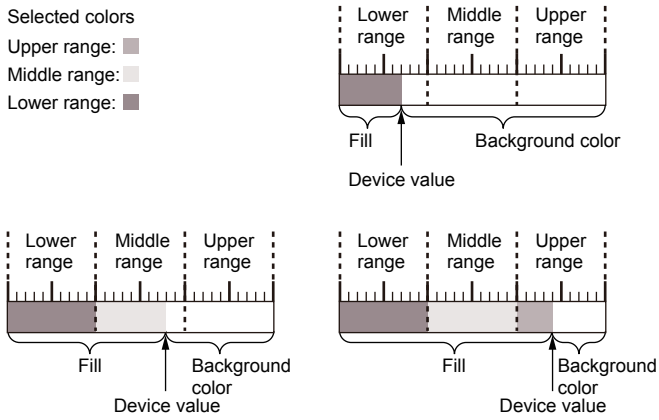
Item	Description
[Shape]	Select a needle shape. The following shows the items to be selected. • [Straight Line] • [Triangle] • [Inverted Triangle]
[Needle Color]	Select a needle color. ➟6.4.2 Color settings

Item	Description
[Needle Width]	This item is settable when [Straight Line] is selected for [Shape]. Select the width of the needle. The following shows the items to be selected. • [1 Dot] • [2 Dot] • [3 Dot] • [4 Dot] • [5 Dot] • [7 Dot]
[Base Width]	This item is settable when [Triangle] or [Inverted Triangle] is selected for [Shape]. Set the base length of the triangle with an odd number. The setting range is [3] (dots) to the set value of [Needle Length] (dots).
[Needle Length]	Set the length of the needle. When [Bar (Vertical)] is selected for [Meter Shape], the value of this item is applied to [Data Width] in the [Device/Style] tab. When [Bar (Horizontal)] is selected for [Meter Shape], the value of this item is applied to [Data Height] in the [Device/Style] tab. When [Circle] or [Square] is selected for [Shape] in the [Scaling Setting] dialog, the object is resized according to the specified length of the needle.
[Hollow Radius]	This item is settable when [Sector] or [Semicircle] is selected for [Meter Shape] in the [Device/Style] tab. Set the distance from the meter center to the drawing start position of the needle. The setting range is [0] (dots) to "[Needle Length] - 2" (dots). The needle is drawn from the center of the data area.  When [Hollow Radius] is set to [0] dots  When [Hollow Radius] is set to [10] dots

6) **[Fill Attribute]**

This item is settable when [Needle] or [Needle and Fill] is selected for [Meter Attribute].
Set a fill to indicate the range of the lower limit to the device value.

Item	Description
[Design]	Select the fill design. The following shows the items to be selected. • [Gradation 1] • [Gradation 2] • [Gradation 3] • [Gradation 4] • [3D (Convex)] • [3D (Concave)] • [Plain Color (Bright)] • [Plain Color (Dark)] • [Plain Color (Light)]
[Background Color]	Select the color of the portion that is not filled in the data area. The following shows the items to be selected. • [Blue] • [Red] • [Yellow] • [Green] • [Orange] • [Cyan] • [Purple] • [Pink] • [Gray] • [Gold](Supported soon) • [Silver] • [Black] • [White]  Fill No fill (Background color)

Item	Description
[Upper Range Color], [Middle Range Color], [Lower Range Color]	Select fill colors for the upper range, middle range, and lower range. Each range appears in its specified color. [Upper Range Color] is settable when [Boundary Value 1] is set in the [Device/Style] tab. [Lower Range Color] is settable when [Boundary Value 1] and [Boundary Value 2] are set in the [Device/Style] tab. For the boundary value settings, refer to the following. ➟■1 [Device/Style] tab The following shows the items to be selected. • [Blue] • [Red] • [Yellow] • [Green] • [Orange] • [Cyan] • [Purple] • [Pink] • [Gray] • [Gold](Supported soon) • [Silver] • [Black] • [White] 

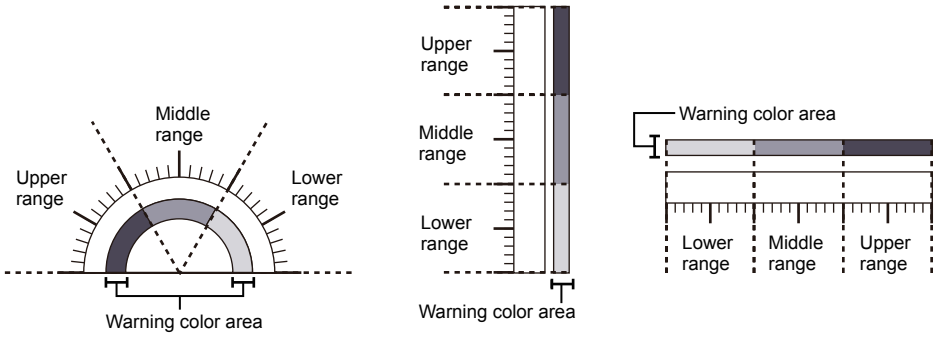
7) **[Warning Color Setting]**

Set the warning color by range.

Selecting this item displays the warning color area.

The warning color area is divided based on the upper, middle, and lower ranges of the data area.

To reposition the warning color area, select and move the area on the screen editor.



For the boundary value settings, refer to the following.

➟■1 [Device/Style] tab

Item	Description
[Design]	Select a warning color area design. The following shows the items to be selected. • [Gradation 1] • [Gradation 2] • [Gradation 3] • [Gradation 4] • [3D (Convex)] • [3D (Concave)] • [Plain Color (Bright)] • [Plain Color (Dark)] • [Plain Color (Light)]
[Upper Range Color], [Middle Range Color], [Lower Range Color]	Select colors for the upper range, middle range, and lower range of the warning color area. [Upper Range Color] is settable when [Boundary Value 1] is set in the [Device/Style] tab. [Lower Range Color] is settable when [Boundary Value 1] and [Boundary Value 2] are set in the [Device/Style] tab. The following shows the items to be selected. • [Blue] • [Red] • [Yellow] • [Green] • [Orange] • [Cyan] • [Purple] • [Pink] • [Gray] • [Gold](Supported soon) • [Silver] • [Black] • [White]
[Range Width]	Set the width of the warning color area. When [Circle] or [Square] is selected for [Shape] in the [Scaling Setting] dialog, the object is resized according to the specified width of the warning color area.

8) **[Part Names]**

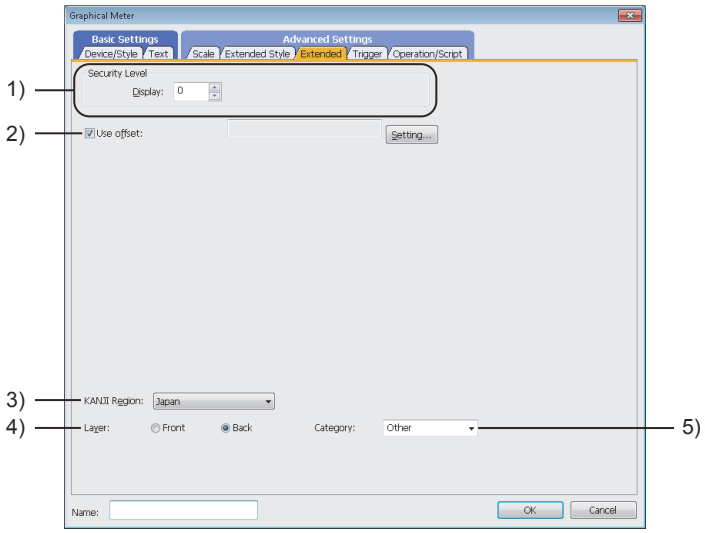
Displays the image of the graphical meter to which the settings configured in this tab are applied.

■5 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15].
Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Select this item to monitor multiple devices by switching between them.
After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[KANJI Region]**
Set the KANJI region.
The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

4) **[Layer]**
Select the layer to arrange the object on.
The following shows the items to be selected.

- [Front]
- [Back]

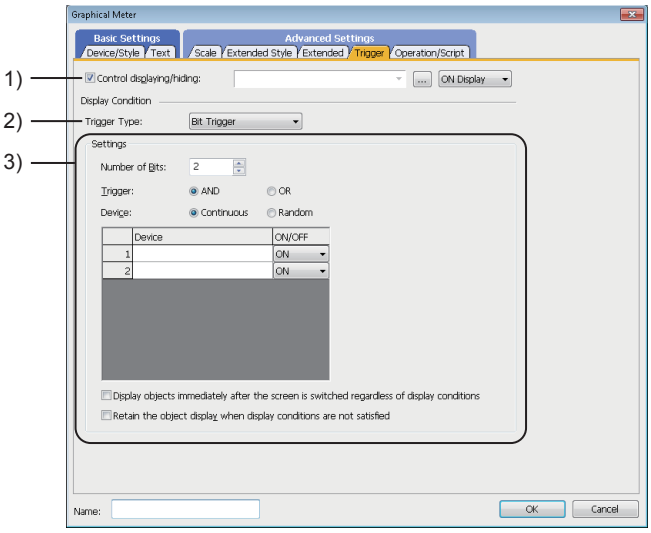
➟6.5.5 ■3 Superimposition

5) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■6 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.
- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**
Select the condition of displaying the object.
The following shows the items to be selected.
- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

3) **[Settings]**
For details of each item, refer to the following.

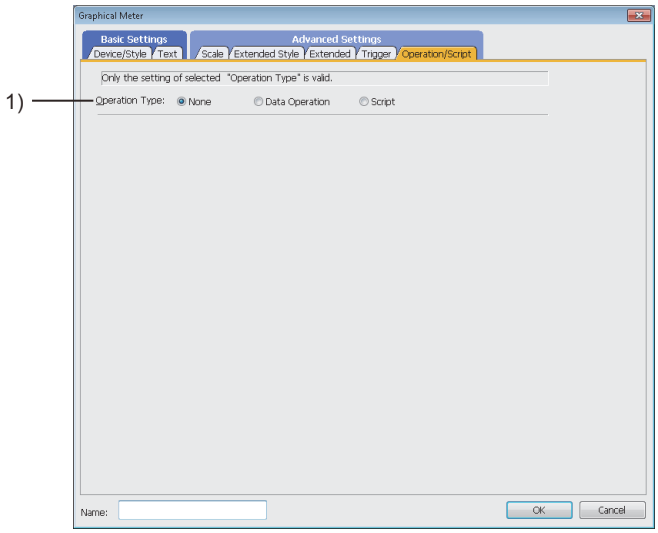
➟6.2.2 Setting Trigger Types

■7 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Set the expression used for the script function.

  ➟(2) [Script]

(1) [Data Operation]

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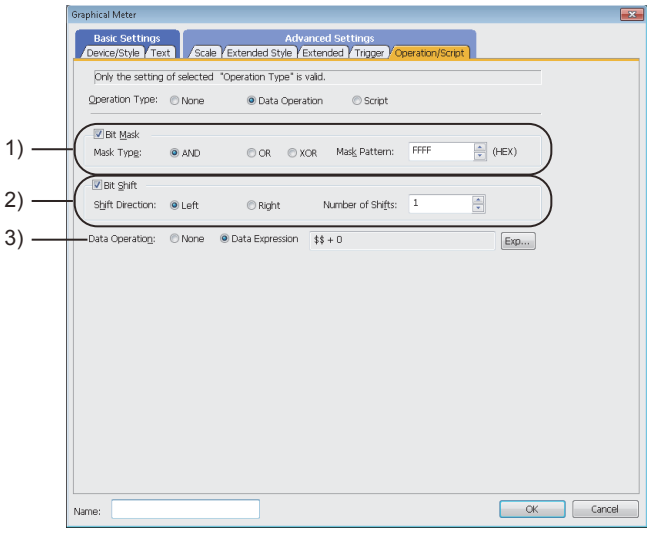
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the selection for [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the selection for [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

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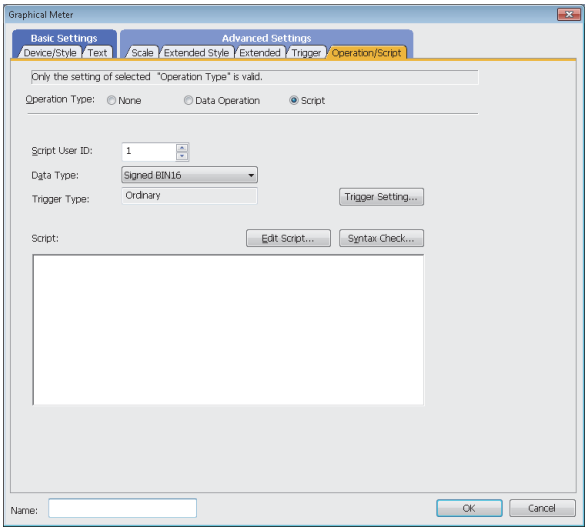
For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) **Correspondence between the object settings and the object properties used in scripts**

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Extended Style]	[Needle Color]	graph_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.22.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the graphical meter as required.

The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.23 Placing a Level Object

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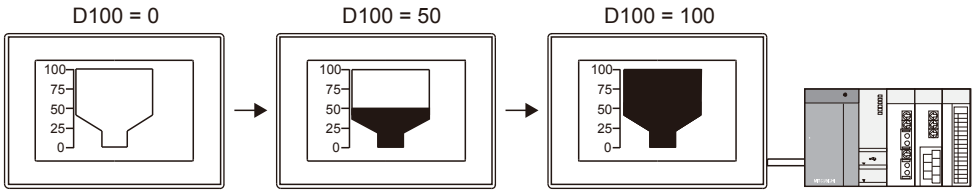
This function monitors the word device value and fills the specified area with the user-selected color, based on the ratio of the device value compared to the set upper and lower limit values.
With this function, the device value can be displayed as a level in any closed figure.



A value or comment is displayable on a level object by placing one of the following objects on the level object.

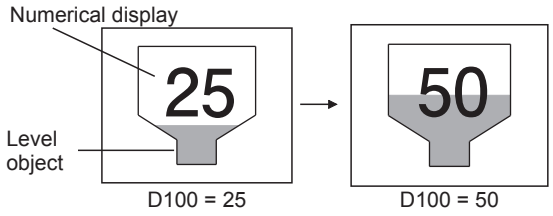
- Numerical display
- Numerical input
- Comment display

If any object mentioned above is placed under the level object on the same layer, this object still appears in front of the level object on the GOT screen.
The display mode of the value or comment varies depending on the relevant settings.

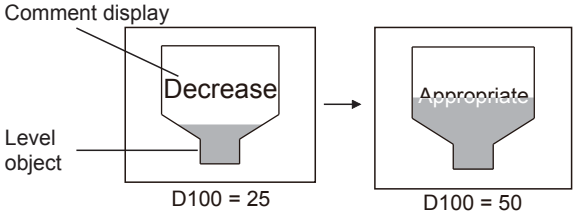
GOT Graphic Ver.2

When any object mentioned above is superimposed on a level object, the transparent mode is applied.
The transparent mode displays the text in the overlapping portion of the objects in the specified color.

- Example of superimposing a numerical display on a level object



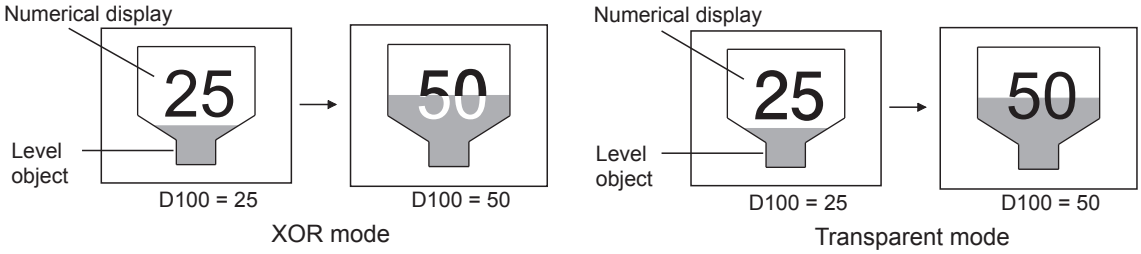
- Example of superimposing a comment display on a level object



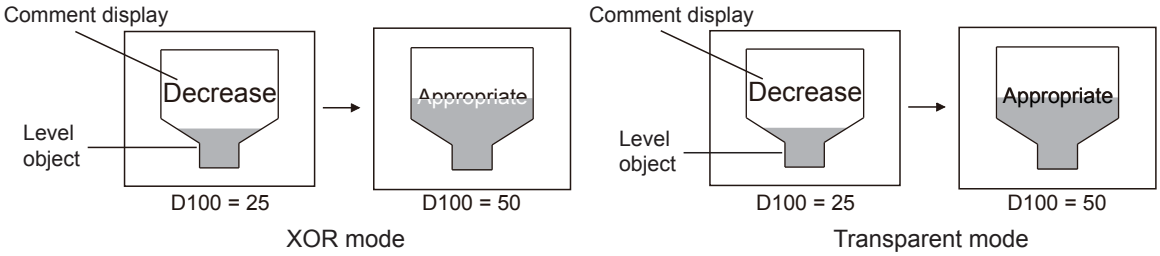
GOT Graphic Ver.1

When any object mentioned above is superimposed on a level object, the XOR mode or the transparent mode is selectable.
The XOR mode inverts the text color in the overlapping portion of the objects.
The transparent mode displays the text in the overlapping portion of the objects in the specified color.

• Example of superimposing a numerical display on a level object



• Example of superimposing a comment display on a level object



8.23.1 Specifications of the level object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the level object.

■1 Maximum number of objects arrangeable on one screen

Up to 1024 objects can be arranged on one screen.
Maximum number of level objects is calculated by subtracting the number of objects other than level objects from 1024.

■2 Objects that can be superimposed on a level object

The following shows the objects that can be superimposed on a level object.

- Numerical display
- Numerical input
- Comment display (bit comment, word comment)

Multiple objects can be superimposed on one level object.
Regardless of the order in which the objects are placed on GT Designer3, the overlapping object (numerical display, numerical input, or comment display) appears in front of the level object on the GOT screen.

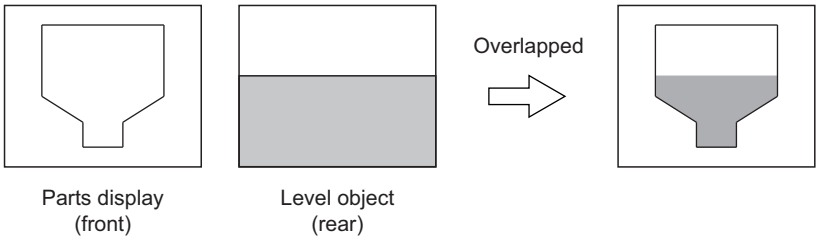
8.23.2 How to use the level object (GOT Graphic Ver.2)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.2

■1 Placing a parts display to add a frame to a level object

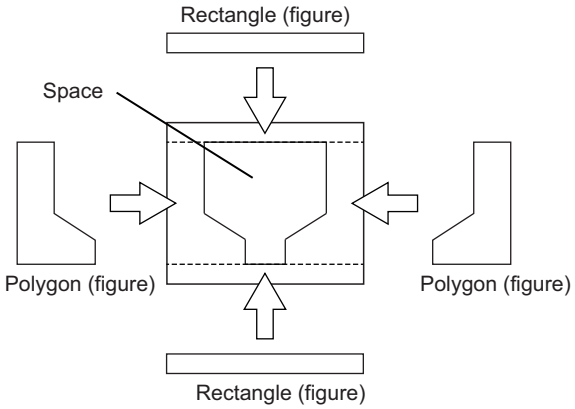
The level object has no frame setting.
To add a frame to a level object, place a parts display on the level object.



Before setting a level object, create a part to be used as the frame of the level object, and specify the part for a parts display.
The following shows the procedure for using a parts display (fixed parts) as an example.

Step 1 Create a part to be used as the frame.

Leave a space in the place where a level object is to be displayed.



For creating a part, refer to the following.

➟5.9.3 ■1 Registering parts

Step 2 Place a parts display (fixed parts).

➟8.8.6 [Fixed Parts Display] dialog

■2 Placing a level object

The following shows how to place a level object.

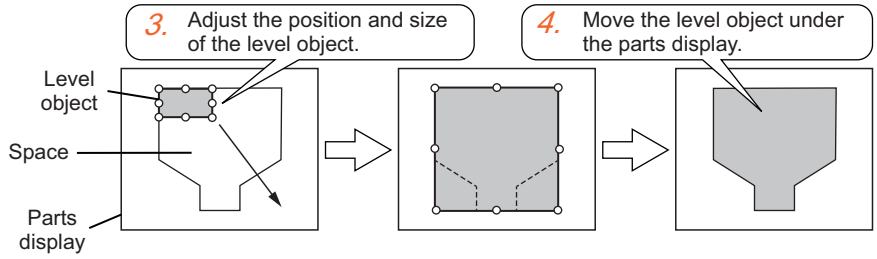
Step 1 Select [Object] → [Meter] → [Level] from the menu.

Step 2 Click the position to place a level object on a screen editor.

Step 3 To use a parts display to add a frame to the level object, adjust the position and size of the level object to fit in the space left in the part that is specified as the frame.

Step 4 Move the adjusted level object under the parts display.

Right-click the level object, and select [Stacking Order] → [Move to the Back] from the displayed menu.



■3 Setting the level object

The following shows how to set the level object.

Step 1 Double-click the level object which has been placed to display the setting dialog.

➟8.23.5 [Level] dialog

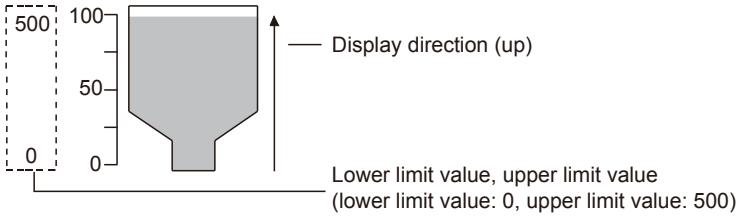
Step 2 Display the [Device/Style] tab.

➟8.23.5 ■1 [Device/Style] tab

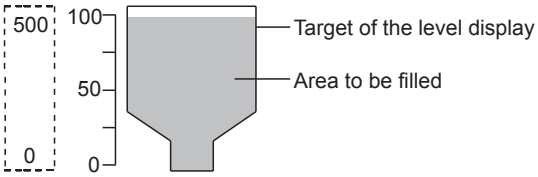
Step 3 Set a device to be monitored for [Device].

➟6.1.2 How to set devices

Step 4 Set [Direction], [Lower Limit], and [Upper Limit].



Step 5 Set the fill color with [Level Color], [Background Color], and [Pattern].



Step 6 To change the fill color according to the device value, add conditions.

After adding conditions, set the following.

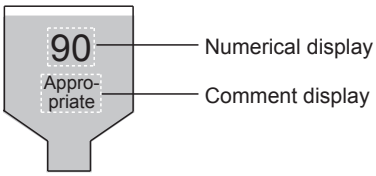
- Ranges corresponding to each condition
- [Level Color], [Background Color], and [Pattern] that are displayed when the conditions are satisfied

Step 7 Click the [OK] button to complete the level object settings.

■4 Displaying a value or text on a level object

To display a value or text on a level object, place one of the following objects within the frame of the level object.

- Numerical display
- numerical input
- Comment display (bit comment, word comment)



Regardless of the order in which the objects are placed on GT Designer3, the overlapping object (numerical display, numerical input, or comment display) appears in front of the level object on the GOT screen.

Step 1 Place one of the above objects within the frame of a level object.

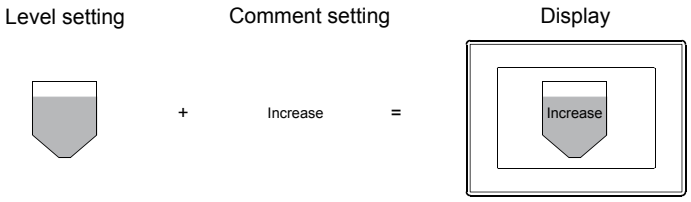
Step 2 Configure the settings of the relevant object, including the device and the display method.

For the settings of each object, refer to the following.

➟8.4.4 [Numerical Display] dialog
8.4.5 [Numerical Input] dialog
8.7.4 [Bit Comment Display] dialog
8.7.5 [Word Comment Display] dialog

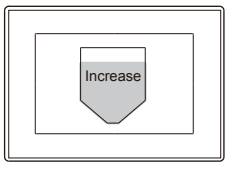
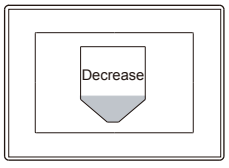
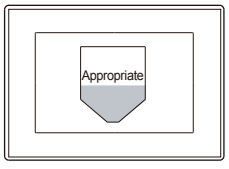
Step 3 Click the [OK] button to complete the object settings.

The following shows an example of settings.
Example) Displaying the level with the comment display
Set the same condition (display range) for the level and comment display, and switch the level color and comment simultaneously.



Level
Device to be monitored : D100
Display direction : Up
Upper limit value : 100
Lower limit value : 0

Comment
Device to be monitored : D100
Registered comments : Comment No. 1...Increase
: Comment No. 2...Decrease
: Comment No. 3...Appropriate

Condition No.	Display range	Level color	Comment	Font image
1	71<=$V	Red	Increase	
2	$V<=30	Yellow	Decrease	
0 (normal)	-	Light blue	Appropriate	

8.23.3 How to use the level object (GOT Graphic Ver.1)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.1

The following shows how to use the level object.

■1 Drawing a figure in which a level is displayed

To display a level in a figure, draw the figure in advance.
When drawing a figure, note the following.

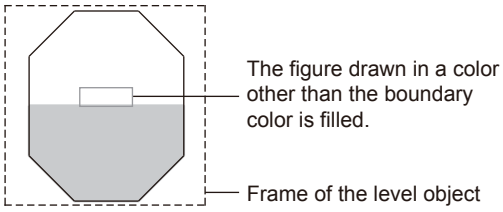
➟7. FIGURES

(1) Drawing a figure in the back layer

GT21 and GS21 are single-layered.
There is no need to consider layers on which figures and level objects are placed.
To display a level in a figure, draw the figure and level object in the back layer.
If the level object is drawn in the front layer, the figure is not the target of the level display.

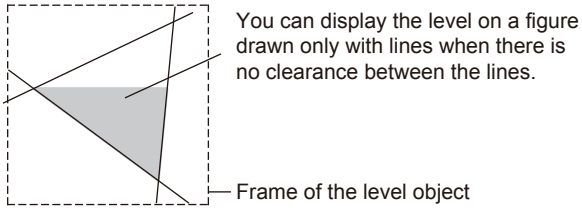
(2) Setting the same color for [Line Color] of a figure and [Boundary Color] of a level

The figure drawn in the same color as [Boundary Color] of the level is the target of the level display.
After placing the level object, set the same color as [Line Color] of the figure for [Boundary Color].



(3) Drawing a figure without any clearance between lines

A level can be displayed only with a completely-closed figure.
A figure drawn with multiple lines can also be used for the level display.
Draw a figure in which a level is displayed without any clearance between lines.



■2 Placing the level object

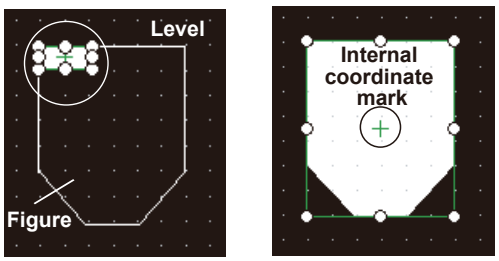
The following shows how to place the level object.

Step 1 Select [Object] → [Meter] → [Level] from the menu.

Step 2 Click the position to place a level object on a screen editor.

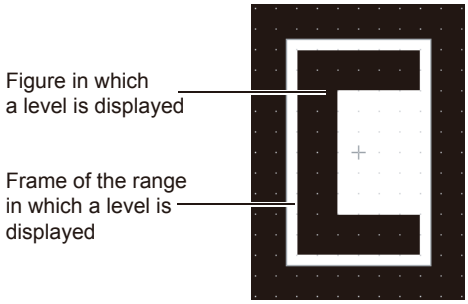
Step 3 Adjust the frame size of the level object.

To display a level in a figure, surround the figure with the frame of the level object and adjust the frame according to the figure size.
When the color of the figure is reversed, the figure is set as the target of the level display.

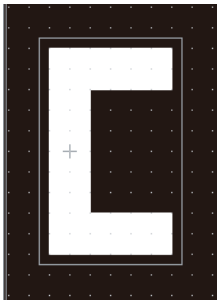


When the color of the figure is not reversed, the internal coordinate mark of the level object is not

superimposed with the figure.
Move the internal coordinate mark manually.
Right-click the frame of the level object and select [Touch Area Edit] → [Manual Edit] from the menu to drag the internal coordinate mark.



The figure is not set as the target of the level display.



The figure is set as the target of the level display.

■3 Setting the level object

The following shows how to set the level object.

Step 1 Double-click the level object which has been placed to display the setting dialog.

➟8.23.5 [Level] dialog

Step 2 Display the [Device/Style] tab.

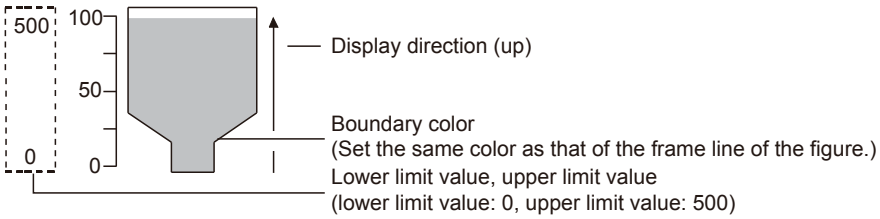
➟8.23.5 ■1 [Device/Style] tab

Step 3 Set a device to be monitored for [Device].

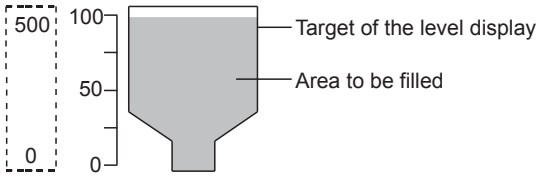
➟6.1.2 How to set devices

Step 4 Set [Direction], [Boundary Color], [Lower Limit], and [Upper Limit].

Set the same color as [Line Color] (frame line color) of the target figure of the level display for [Boundary Color].



Step 5 Set the fill color for [Level Color], [Background Color], and [Pattern].



Step 6 To change the fill color according to the device value, add conditions.

After adding conditions, set the following.

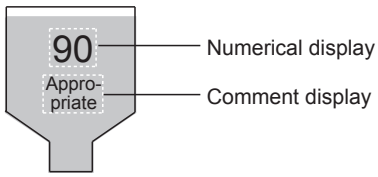
- Ranges corresponding to each condition
- [Level Color], [Background Color], and [Pattern] that are displayed when the conditions are satisfied

Step 7 Click the [OK] button to complete the level object settings.

■4 Displaying a value or text on a level object

To display a value or text on a level object, place one of the following objects within the frame of the level object.

- Numerical display
- Numerical input
- Comment display (bit comment, word comment)



Regardless of the placing order, the objects superimposed with level objects (numerical display, numerical input, and comment display) are displayed over the level objects on the GOT.

Step 1 Place an object within the frame of the level object.

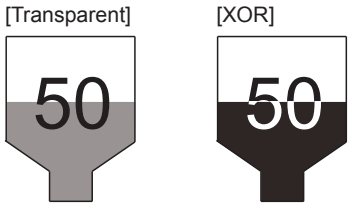
Step 2 Display the setting dialog of the object.

For the setting dialog, refer to the following.

➟8.4.4 [Numerical Display] dialog
8.4.5 [Numerical Input] dialog
8.7.4 [Bit Comment Display] dialog
8.7.5 [Word Comment Display] dialog

Step 3 Select the display color, which is used when the level area to be filled and the object are overlapped, in [Display Mode].

- [Transparent]: The color of a numerical value or characters is not changed.
- [XOR]: The color of a numerical value or characters and the level color are integrated into an XOR synthesis.



Step 4 Click the [OK] button to complete the object settings.

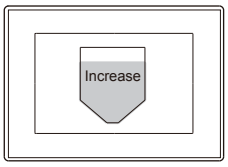
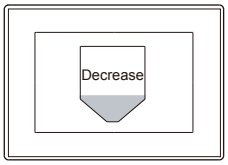
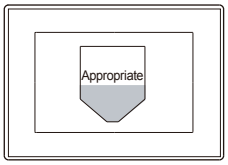
Step 5 When [Blink] or [Reverse] is set for the object, select [Common] → [GOT Type Setting] from the menu, and set [Adjust object display order in GOT to the one in GT Designer3].

With this setting, the blinking display and reversing display of the object to be superimposed with the level are enabled.

The following shows an example of settings.
Example) Displaying the level with the comment display
Set the same condition (display range) for the level and comment display, and switch the level color and comment simultaneously.

Level
Device to be monitored : D100
Display direction : Up
Upper limit value : 100
Lower limit value : 0

Comment
Device to be monitored : D100
Display mode : Transparent
Registered comments : Comment No. 1...Increase
: Comment No. 2...Decrease
: Comment No. 3...Appropriate

Condition No.	Display range	Level color	Comment	Font image
1	71<=$V	Red	Increase	
2	$V<=30	Yellow	Decrease	
0 (normal)	-	Light blue	Appropriate	

8.23.4 Precautions for a level object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the level object.

■1 Precautions for superimposing an object on a level object

(1) Precautions for the display

(a) **When a level object and a figure overlap one another**

GOT Graphic Ver.2

Even if a level object and a figure overlap one another on the same layer, the figure is filled with the level color on the GOT screen.
To use a figure as the frame of a level object, register the figure as a part, specify the part for a parts display, and position the parts display on the level object.

➡**8.23.2 ■1 Placing a parts display to add a frame to a level object**

(b) **When a part of the object is out of the frame of the level object**

GOT Graphic Ver.1

When a part of the object (numerical display, numerical input, or comment display) is out of the frame of the level object, the level or the object is displayed incorrectly.

- When a part of the object placed behind the level object is out of the frame of the level object
  The area of the object within the frame of the level object is not displayed.
  Only the area out of the frame of the level object is displayed.
- When a part of the object placed over the level object is out of the frame of the level object

The level is not displayed only for the area superimposed with the object.
To solve the above problems, execute one of the following operations.

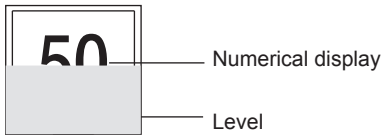
- Move the whole object outside the frame of the level object.
- Move the whole object within the frame of the level object.
- Set [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21.)
  Select [Adjust object display order in GOT to the one in GT Designer3]. (Not available to GT21 and GS21)

(c) **When a level object and an object are placed in different layers**

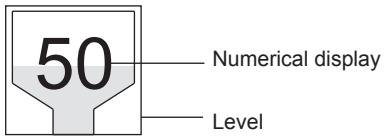
GOT Graphic Ver.1

GT21 and GS21 are single-layered.
There is no need to consider layers on which level objects and other objects are placed.
When a level object and an object (numerical display, numerical input, or comment display) are placed in different layers, the level and the object are not integrated into an XOR synthesis.

- When a level object is placed in the front layer and an object is placed in the back layer
  If the level area to be filled is superimposed with the object, the object is hidden.



- When an object is placed in the front layer and a level object is placed in the back layer
  The object is displayed over the level. However, the object and level are not integrated into an XOR synthesis because they are in different layers.



(2) Precautions for the operation

(a) Update timing of the displayed contents

GOT Graphic Ver.1

The displayed comments of an object (numerical display, numerical input, or comment display) and a level are updated simultaneously.
The update timing set for the object (display condition) is invalid.
To set the update timing of the object different from that of the level, set [Adjust object display order in GOT to the one in GT Designer3].
This setting is available in the [GOT Type Setting] dialog displayed by selecting [Common] → [GOT Type Setting] from the menu.

(b) Blink, reverse

GOT Graphic Ver.1

Normally, an object (numerical display, numerical input, or comment display) which is superimposed with a level object does not blink or reverse.
To blink or reverse the object superimposed on the level object, select [Adjust object display order in GOT to the one in GT Designer3]. (Not available to GT21 and GS21)

(c) Display at inputting a numerical value

GOT Graphic Ver.1

While a cursor is displayed at the numerical input, the area superimposed with the level object is displayed incorrectly.
After the numerical input is completed and the level is updated, the area is displayed correctly.

(d) Text style of the comment display

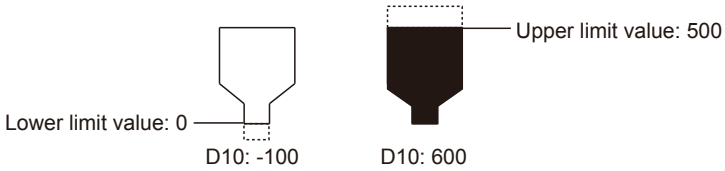
GOT Graphic Ver.1

When the text style (bold, solid, raised) is set for the comment display, the text or the text color may be displayed incorrectly.

■2 Precautions for the lower and upper limit values

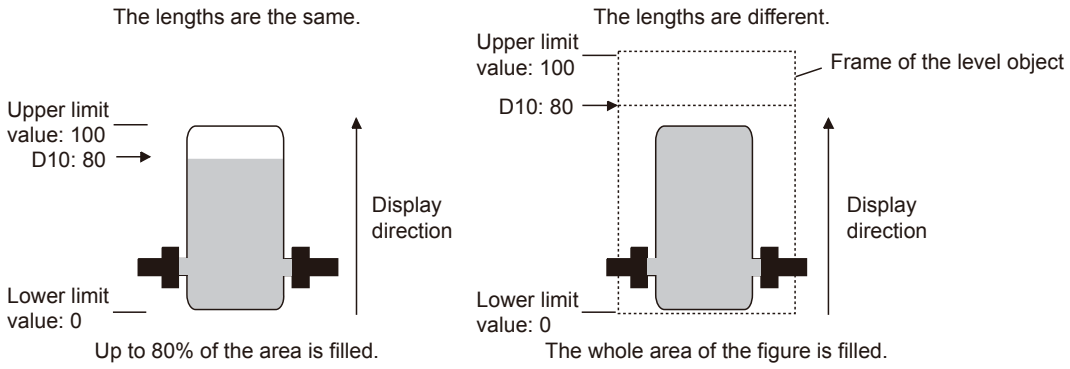
(1) Operations of when the monitored device value exceeds the upper or lower limit value

When the monitored device value exceeds the lower limit value, the display of the lower limit value is applied.
When the monitored device value exceeds the upper limit value, the display of the upper limit value is applied.



(2) Operations of when the lengths of the frame of a level object and a figure are different

When the lengths of the frame of a level object and a figure are different in the direction of the level display, the figure is not filled corresponding to the ratio compared to the upper and lower limit values.
Adjust the frame length of the level object to the length of the figure.



8.23.5 [Level] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The level object is an object that monitors the word device value and fills the specified area with the user-selected color, based on the ratio of the device value compared to the set upper and lower limit values.

Step 1 Select [Object] → [Meter] → [Level] from the menu.

Step 2 Click the position where you place the level object. Placing the level object is complete.

Step 3 Double-click the level object which has been placed to display the setting dialog.

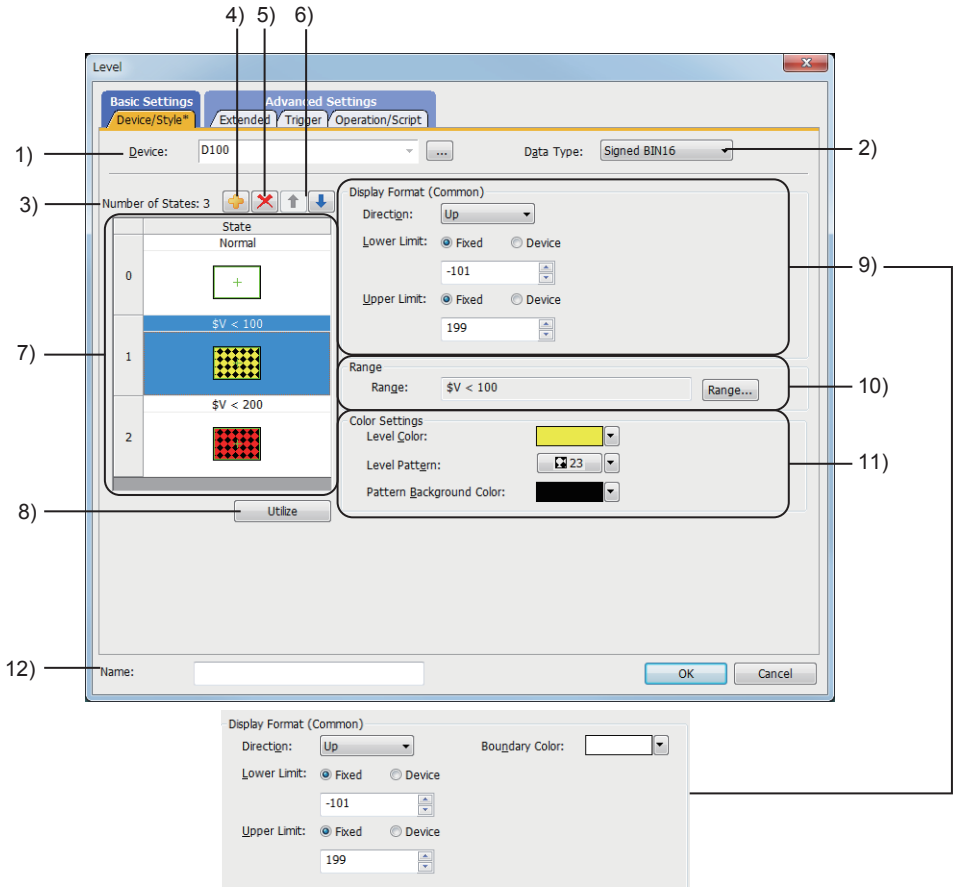
➟■1 [Device/Style] tab
■2 [Extended] tab
■3 [Trigger] tab
■4 [Operation/Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the level status corresponding to the device value.
For the conditions, refer to the following.

➟6.5.5 ■2 Setting conditions



1) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of the word device.
The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]

- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

3) **[Number of States]**
The number of the set conditions

4) **Add button**
Adds a new condition.

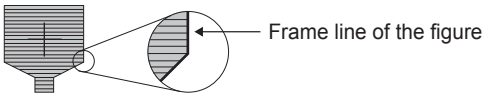
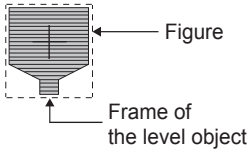
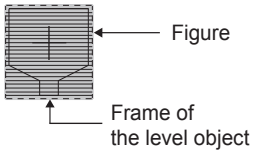
5) **Delete button**
Deletes the selected condition.

6) **Up button, down button**
Changes the order of priority of the selected condition.

7) **Preview list**
Displays set conditions.

8) **[Utilize] button**
Creates a new condition utilizing the selected condition.

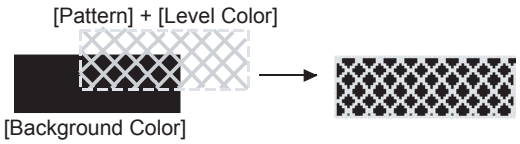
9) **[Display Format (Common)]**
Set the level display that is common to all conditions.

Item	Description
[Direction]	Select the direction in which the level area to be filled extends. The following shows the items to be selected. • [Up] • [Down] • [Left] • [Right]
[Boundary Color]	**GOT Graphic Ver.1** Set the same color as [Line Color] (frame line color) of the target figure of the level display. Set this item to display a level in a figure.  If a color other than [Line Color] of the figure is set, the level is not displayed in the frame of the figure. Example1) When [Boundary Color] of the figure and [Line Color] are the same  The figure is set as the target of the level display. Example2) When [Boundary Color] of the figure and [Line Color] are different  The figure is not set as the target of the level display.
[Lower Limit], [Upper Limit]	Select whether to specify the display range (lower and upper limit values) of the level with the fixed value or with the device value. The following shows the items to be selected. • [Fixed]: Specify a constant. • [Device]: Specify a device value. ➟6.1.2 How to set devices The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

10) **[Range]**

Item	Description
[Range]	Set the display range of the conditions selected in the preview list. When setting the value of the word device as the condition, click the [Range] button to display the [Edit Range] dialog, and then set the conditional expression. ➟6.5.5 ■2 Setting conditions

11) **[Color Setting]**

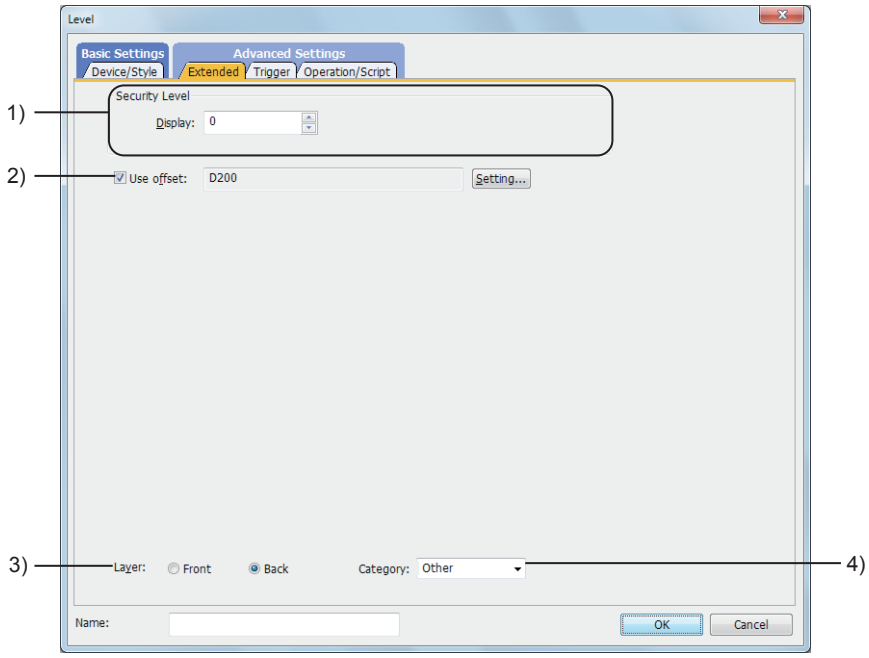
Item	Description
[Level Color]	Set the fill color.
[Pattern], [Background Color]	Set the pattern and the background color to be used for filling. Example) [Level Color] : [Pattern] : [Background Color]: 

12) **[Name]**

Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**

Set the security level when using the security function.
The setting range is [1] to [15].
Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**

Select this item to monitor multiple devices by switching between them.
After selecting this item, set the offset device.

➟6.1.11 Offset

3) **[Layer]**

Not available to GT21 and GS21.
Select the layer to arrange the object on.

The following shows the items to be selected.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

4) **[Category]**

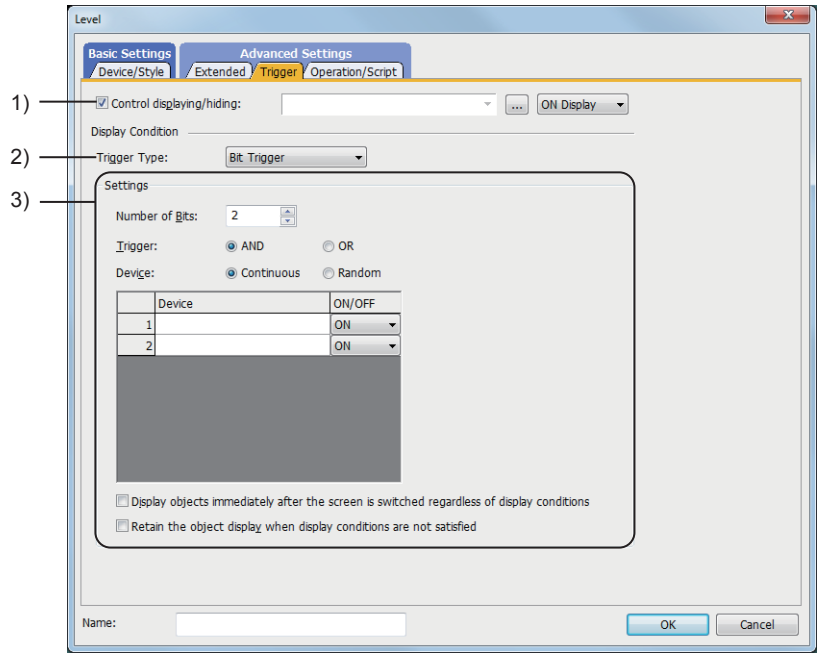
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

When the set device is in either the ON or OFF status, select whether or not to display the object.

The following shows the items to be selected.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.

The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [Sampling]
- [Range]
- [Bit Trigger]
- [ON Sampling]
- [OFF Sampling]

The selectable items vary with the GOT model.

For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

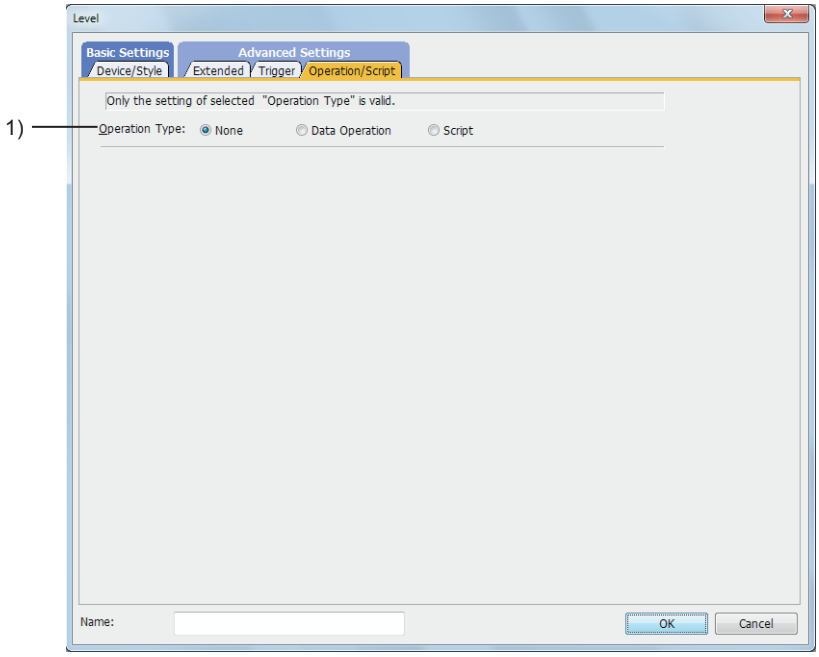
For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

■4 [Operation/Script] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Not available to GT21 and GS21.

  Set the expression used for the script function.

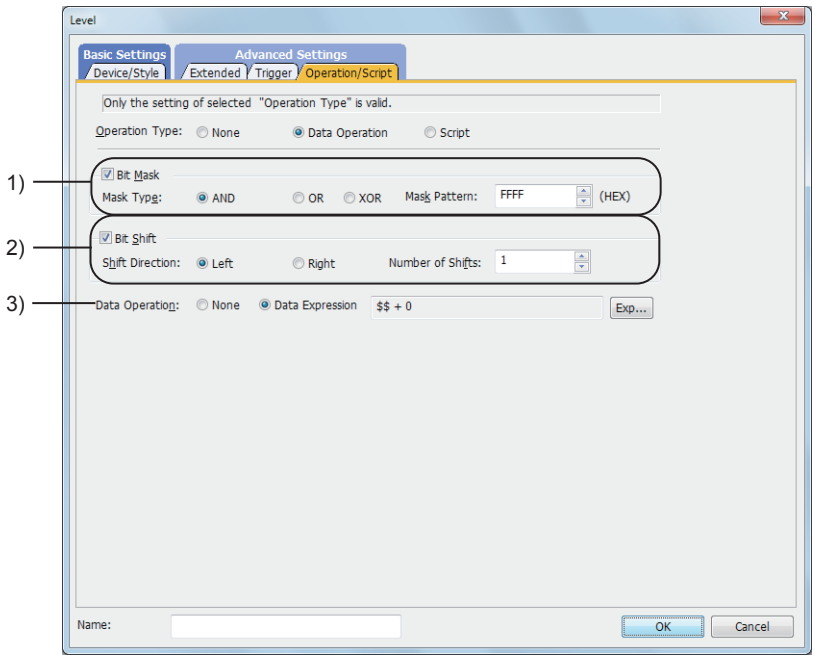
  ➟(2) [Script]

(1) [Data Operation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) **[Bit Mask]**

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the selection for [Data Type] in the [Device/Style] tab.

2) **[Bit Shift]**

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. The following shows the items to be selected. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the selection for [Data Type] in the [Device/Style] tab.

3) **[Data Operation]**

Set the format of the expression.

The following shows the items to be selected.

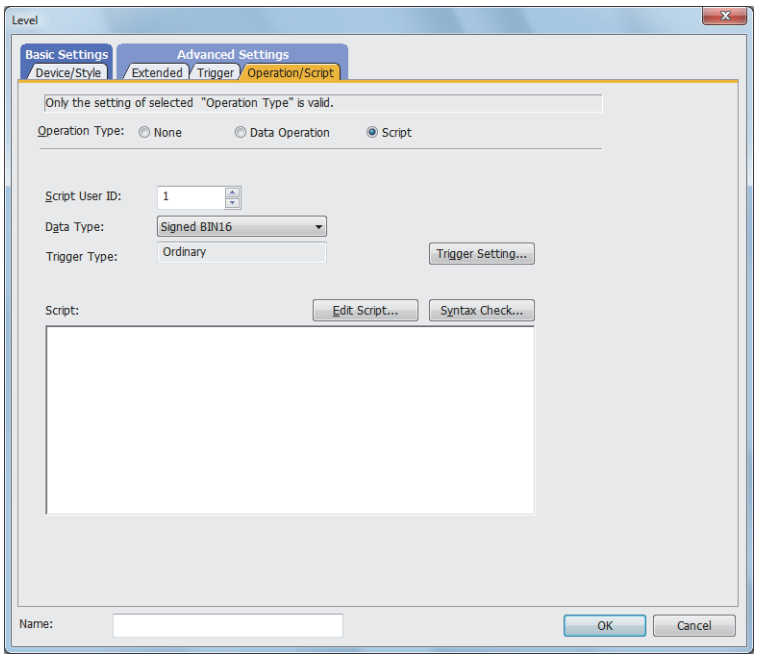
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change*1	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled*2)	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled*2)
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	
[Device/Style]	[Level Color]	graph_color	○	○	When the object is updated	
	[Mask Pattern]	pattern	○	○	When the object is updated	
	[Background Color]	back_color	○	○	When the object is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.23.6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the level object as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

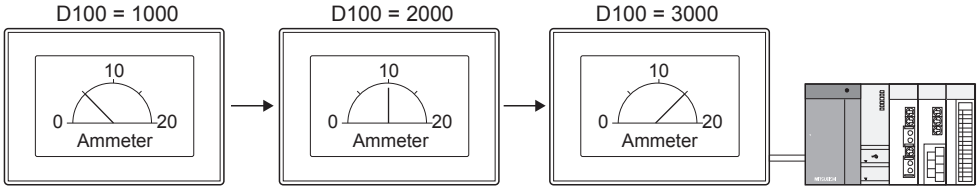
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.24 Placing a Panelmeter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

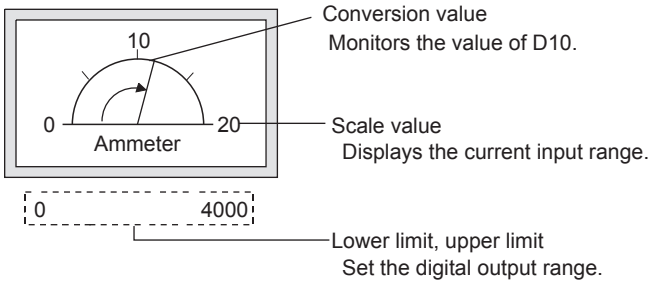
This function monitors the word device value and indicates the relative value to the set upper and lower limit values with a needle.



Application examples

Panelmeter for displaying the A/D conversion value of current of 12 mA

Current input range : 0 to 500 liter
Digital output range : D10
Conversion value : 0 to 100%



8.24.1 Specifications of the panelmeter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the panelmeter.

■1 Maximum number of objects arrangeable on one screen

Up to 1024 objects can be arranged on one screen.

Maximum number of panelmeters is calculated by subtracting the number of objects other than panelmeters from 1024.

8.24.2 How to use the panelmeter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the panelmeter.

Step 1 Select [Object] → [Meter] → [Panelmeter] from the menu.

Step 2 Click the position where you place the panelmeter, and the panelmeter is placed.

Step 3 Adjust the frame size of the panelmeter.

Step 4 Double-click the panelmeter to display the setting dialog.

➟8.24.4 [Panelmeter] dialog

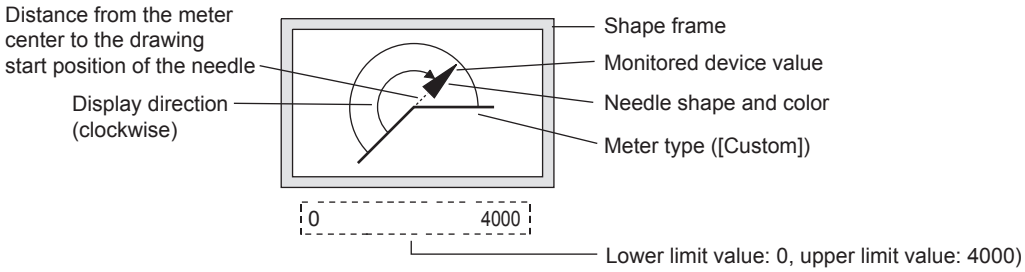
Step 5 Display the [Device/Style] tab.

➟8.24.4 ■1 [Device/Style] tab

Step 6 Set a device to be monitored for [Device].

➟6.1.2 How to set devices

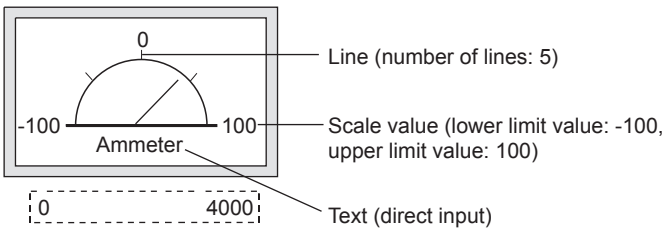
Step 7 Set [Type], [Beginning Angle], [End Angle], [Needle Shape], [Needle Color], [Distance from the Axis], [Shape Settings], [Lower Limit], and [Upper Limit].



Step 8 Set the fill color for [Fill Color], [Background Color], and [Pattern].

Step 9 Set [Scale Settings]and [Text] in the [Scale/Text] tab.

➟8.24.4 ■2 [Scale/Text] tab



Step 10 To change the color of the panelmeter according to the device value, add conditions in the [Range] tab.

➟8.24.4 ■3 [Range Setting] tab

After adding conditions, set the following.

- Ranges corresponding to each condition
- [Fill Color], [Background Color], and [Pattern] that are displayed when the conditions are satisfied

Step 11 Set [Needle Color], [Fill Color], [Background Color], and [Pattern] that are displayed when the added conditions are satisfied.

Step 12 Click the [OK] button to complete the panelmeter settings.

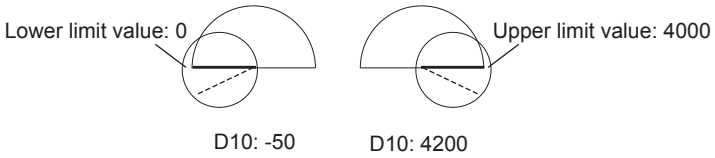
8.24.3 Precautions for a panelmeter

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the precautions for the panelmeter.

■1 When the monitored device value exceeds the upper or lower limit value

When the monitored device value exceeds the lower limit value, the display of the lower limit value is applied.
When the monitored device value exceeds the upper limit value, the display of the upper limit value is applied.



8.24.4 [Panelmeter] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The panelmeter is an object that monitors the word device value and indicates the relative value to the set upper and lower limit values with a needle.

Step 1 Select [Object] → [Meter] → [Panelmeter] from the menu.

Step 2 Click the position where you place the panelmeter, and the panelmeter is placed.

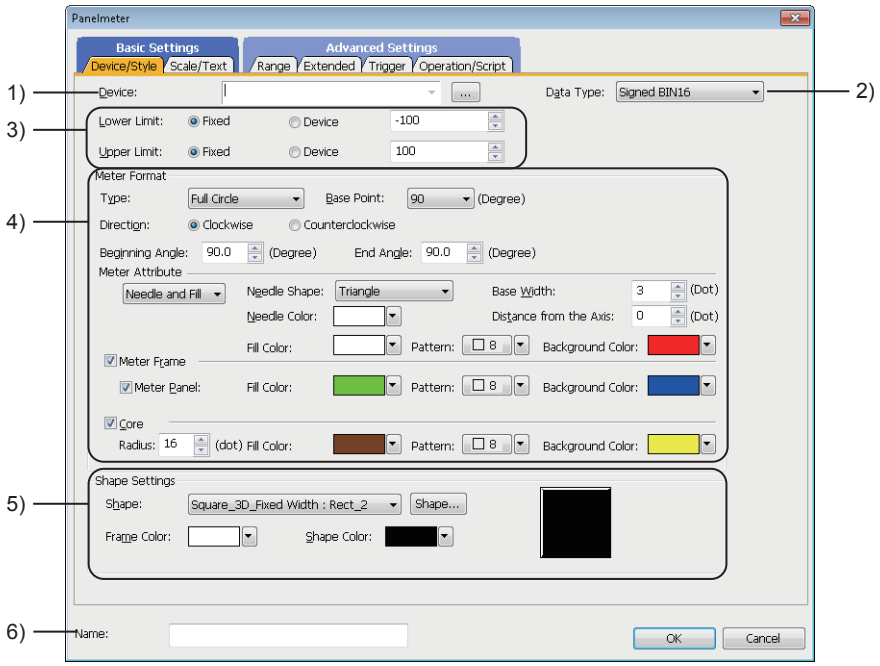
Step 3 Double-click the panelmeter to display the setting dialog.

➥■1 [Device/Style] tab
■2 [Scale/Text] tab
■3 [Range Setting] tab
■4 [Extended] tab
■5 [Trigger] tab
■6 [Operation/Script] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device to be monitored and the panelmeter status corresponding to the device value.



1) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of the word device.
The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

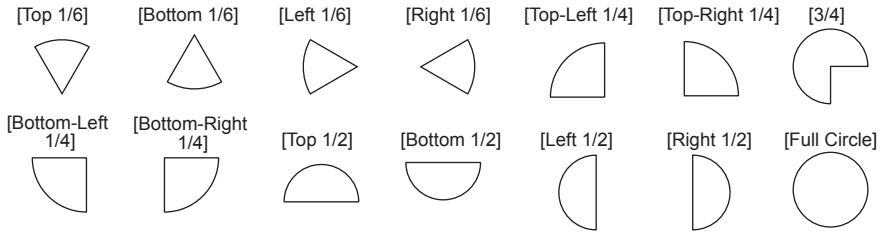
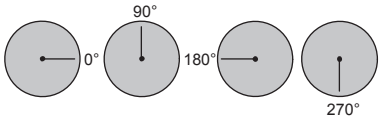
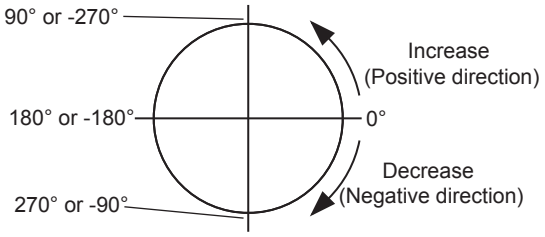
3) **[Lower Limit], [Upper Limit]**
Select whether to specify the display range (lower and upper limit values) of the panelmeter with the fixed value or with the device value.
The following shows the items to be selected.

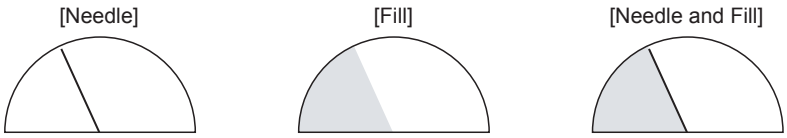
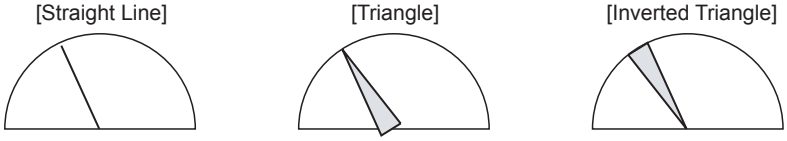
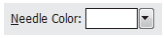
- [Fixed]:
  Specify a constant.
- [Device]:
  Specify a device value.

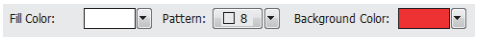
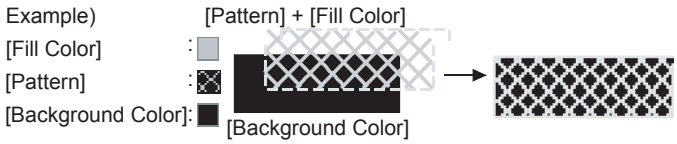
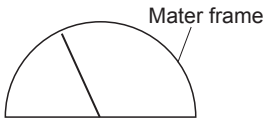
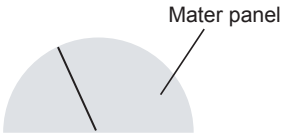
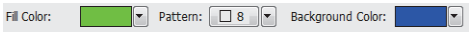
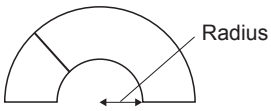
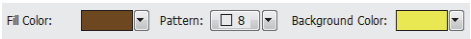
➟6.1.2 How to set devices

The setting range of [Lower Limit] and [Upper Limit] differs depending on the item selected for [Data type].

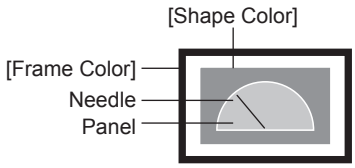
4) **[Meter Format]**

Item	Description
[Type]	Select the shape of the panelmeter. The following shows the items to be selected. • [Top 1/6] • [Bottom 1/6] • [Left 1/6] • [Right 1/6] • [Top-Right 1/4] • [Top-Left 1/4] • [Bottom-Left 1/4] • [Bottom-Right 1/4] • [Top 1/2] • [Bottom 1/2] • [Left 1/2] • [Right 1/2] • [3/4] • [Full Circle] • [Custom]  If you select [Full Circle], set the base point. • **[Base Point]** Select the base point (the point where the upper or lower limit is displayed). The following shows the items to be selected. • [0] • [90] • [180] • [270]  While selecting any other than [Custom] for [Type], inputting an angle to [Beginning Angle] or [End Angle] sets [Type] to [Custom].
[Direction]	Select the direction in which the value of the meter increases. The following shows the items to be selected. • [Clockwise] • [Counterclockwise]
[Beginning Angle] and [End Angle]	Set the shape of the panelmeter by specifying angles. The setting range is [-360.0] degrees to [360.0] degrees. The angle is settable in units of 0.1 degree. When any other than [Custom] is selected for [Type], the set values of [Beginning Angle] and [End Angle] are changed to defaults according to the selected item. Regardless of [Base Point] and [Direction] for [Full Circle], the 0-degree position is always at the 3 o'clock position, and the angle increases counterclockwise. 

Item	Description
[Meter Attribute]	Select a display method for the panelmeter. The following shows the items to be selected. • [Needle] • [Fill] • [Needle and Fill]  When selecting [Needle] or [Needle and Fill], set the needle shape. • **[Needle Shape]** Select a needle shape. The following shows the items to be selected. • [Straight Line] • [Triangle] • [Inverted Triangle]  When selecting [Triangle] or [Inverted Triangle] for [Needle Shape], set the base width of the triangle. • **[Base Width]** Set the base width of the triangle. The setting range is [3] (dots) to "the meter radius" (dots). Specify an odd number value. When selecting [Needle] or [Needle and Fill], set the needle color.  • **[Needle Color]** Select a needle color. When selecting [Needle] or [Needle and Fill], set the distance from the meter center to the drawing start position of the needle. • **[Distance from the Axis]** Set the distance from the meter center to the drawing start position of the needle. The setting range is [0] (dot) to "the meter radius -2" (dots).

Item	Description
[Meter Attribute]	When either of [Fill] or [Needle and Fill] is selected, set the fill color.  • **[Fill Color]** Select the fill color. • **[Pattern], [Background Color]** Select the pattern and the background color to be used for filling. 
[Meter Frame]	Set this item to frame the panelmeter.  The line width of the frame is 1 dot and the display color is white.
[Meter Panel]	Set this item to paint the panel of the panelmeter.  When [Meter Frame] is set, this setting is available.  • **[Fill Color]** Select the color of the panel. • **[Pattern], [Background Color]** Select the pattern and the background color to be used for the panel.
[Core]	Set this item to paint the core of the panelmeter. Set the radius of the target area.  The setting range is [1] to [139] dot(s).  • **[Fill Color]** Select the fill color of the core. • **[Pattern], [Background Color]** Select the pattern and the background color to be used for the core.

5) **[Shape]**

Item	Description
[Shape]	Set the shape of the panelmeter. When [None] is selected, no shape is displayed. To select a shape other than those in the list box, click the [Shape] button. ➟6.5.5 ■1 Setting object shapes When selecting a shape in [Basic Figure], set the color of the frame and of the shape. • **[Frame Color]** Set the color of the frame. • **[Shape Color]** Set the color of the shape.  • **Preview** Displays a preview of the set shape.

6) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.

Up to 100 characters can be set.

■2 [Scale/Text] tab

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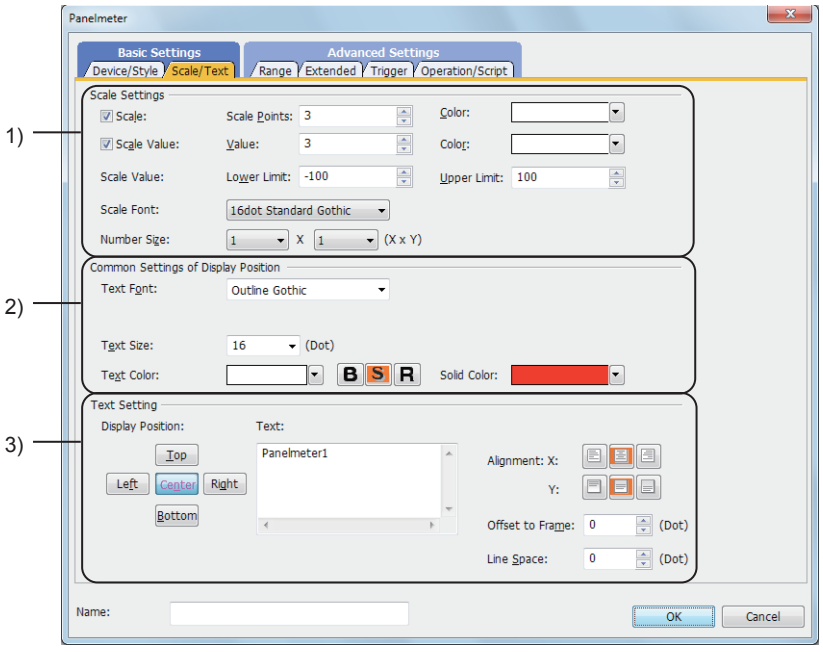
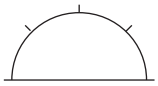
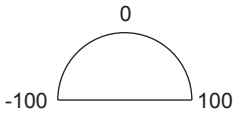


1) **[Scale Settings]**

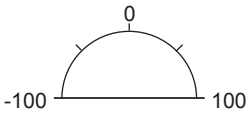
Displays lines and values on the scale on the panelmeter.



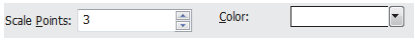
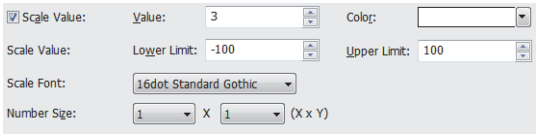
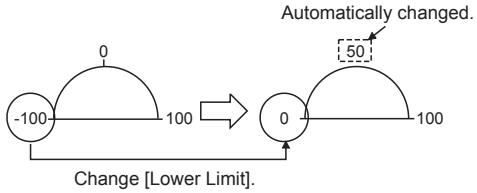
Line
(Number of lines: 5)



Scale value
(Value: 3)

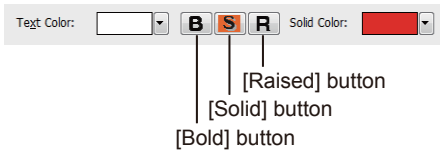


Displays both the lines and scale values.

Item	Description
[Scale]	Set this item to display lines on the scale.  • [Scale Points] Set the number of lines on the scale. The setting range is [2] to [101]. • [Color] Set the color of lines on the scale.
[Scale Value]	Set this item to display numeric characters as the scale value.  • [Value] Set the number of numeric characters. The setting range is [2] to [101]. • [Color] Set the color of numeric characters. • [Scale Value] ([Lower Limit], [Upper Limit]) Set the lower and upper limit values of numeric characters. Changes in this setting are automatically applied to the display. Example)  Automatically changed. Change [Lower Limit]. The setting range differ depending on the item selected for [Data type] in the [Device/Style] tab. The setting range of 64-bit devices is the same as that of 32-bit devices. • [Scale Font] Select the font of numeric characters. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Number Size] Select the size of numeric characters. For the details of the font and size, refer to the following. 1.2.5 Font specifications When [6x8dot] is selected for [Scale Font], this item cannot be set.

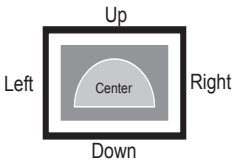
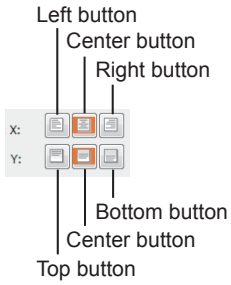
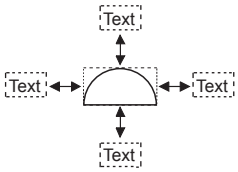
2) **[Common Settings of Display Position]**

Set this option to display text on the panelmeter.

Item	Description
[Text Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [12dot HQ Mincho] • [12dot HQ Gothic] • [16dot HQ Mincho] • [16dot HQ Gothic] • [TrueType Mincho] • [TrueType Gothic] • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N) • Windows font When a Windows font is selected, italicizing and underlining text are available. • [Italic] button Italicizes the text. • [Underline] button Underlines the text.
[Character Set]	When a Windows font is selected, select a character set.
[Text Size]	Select a text size. For the details of the font and size, refer to the following. ➟1.2.5 Font specifications When [6x8dot] is selected for [Text Font], this item cannot be set.
[Text Color]	Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • [Text Color] Set the text color. ➟6.4 Color Settings • [Bold] button Displays the text in bold. • [Solid] button Displays the text with a shadow. • [Raised] button Displays the text embossed. • [Solid Color] When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

3) **[Text Setting]**

Select this item to monitor multiple devices by switching between them.

Item	Description
[Display Position]	Set the position of the text. After clicking [Display Position], input the texts to be displayed in each position. • [Center] button: Displays the text at the center of the object. • [Up] button: Displays the text on the upper side of the object. • [Down] button: Displays the text on the lower side of the object. • [Left] button: Displays the text on the left side of the object. • [Right] button: Displays the text on the right side of the object. 
[Text]	Input the text to be displayed. Up to 1024 characters can be set. To display the text in multiple lines, press the [Enter] key at the end of the text in each line. (When a line feed is inserted, two characters per line feed are added to the number of characters.)
[Alignment]	Set the horizontal and vertical positions of the text.  • [Horizontal] Set the horizontal position of the text. • Left button: Aligns the text to the left. • Center button: Aligns the text to the center. • Right button: Aligns the text to the right. • [Vertical] Set the vertical position of the text. • Top button: Aligns the text to the top. • Center button: Aligns the text to the center. • Bottom button: Aligns the text to the bottom.
[Offset to Frame]	Set the offset between the text and the frame of the object. The setting range is [0] to [100] dot(s). 
[Line Space]	Set the space between lines. The setting range is [0] to [128] dot(s).

■3 [Range Setting] tab

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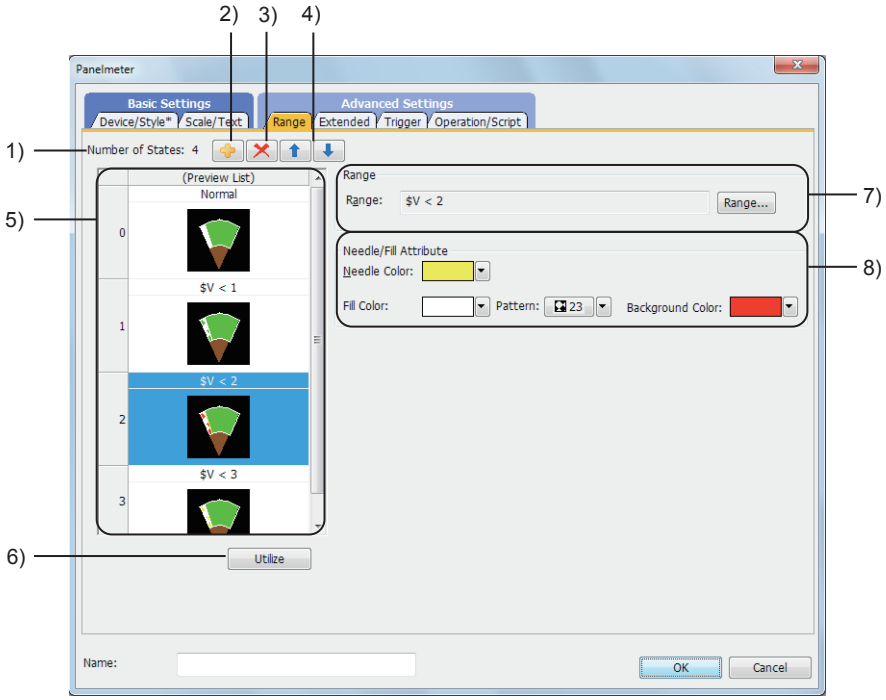
For the conditions, refer to the following.

➟6.5.5 ■2 Setting conditions



1) **[Number of States]**
The number of the set conditions

2) **Add button**
Adds a new condition.

3) **Delete button**
Deletes the selected condition.

4) **Up button, down button**
Changes the order of priority of the selected condition.

5) **Preview list**
Displays set conditions.

6) **[Utilize] button**
Creates a new condition utilizing the selected condition.

7) **[Range]**

Item	Description
[Range]	Set the display range of the conditions selected in the preview list. When setting the value of the word device as the condition, click the [Range] button to display the [Edit Range] dialog, and then set the conditional expression. ➟6.5.5 ■2 Setting conditions

8) **[Needle/Fill Attribute]**

Item	Description
[Needle Color]	Set the color of the needle. When either of [Needle] or [Needle and Fill] is selected for [Meter Attribute] in the [Device/Style] tab, set the color of the needle.
[Fill Color]	Set the fill color. When either of [Fill] or [Needle and Fill] is selected for [Meter Attribute] in the [Device/Style] tab, set the fill color.

Item	Description
[Pattern], [Background Color]	Set the pattern and the background color to be used for filling. Example) [Fill Color] : [Pattern] : [Background Color]: [Pattern] + [Fill Color] [Background Color]

■4 [Extended] tab

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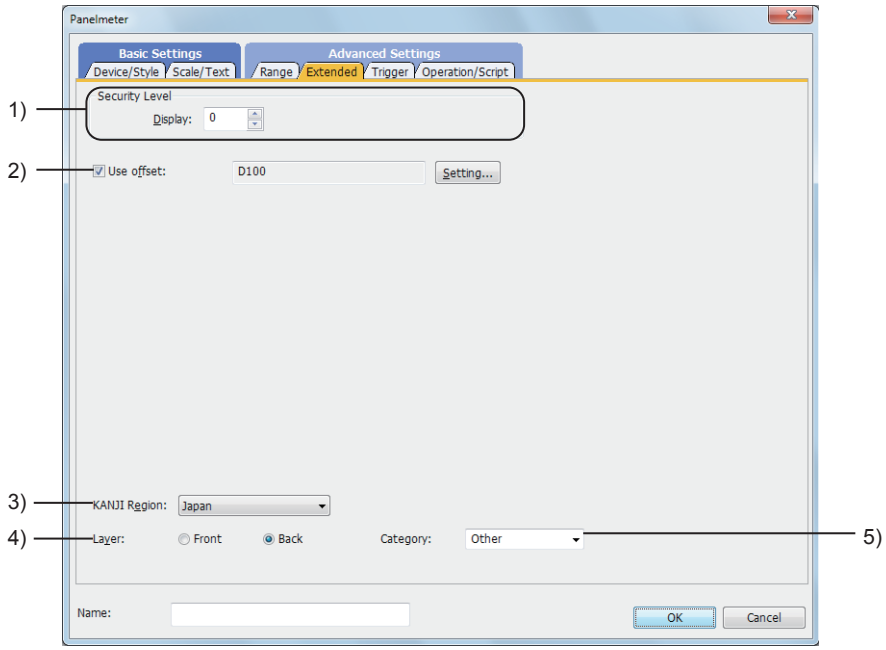

1) **[Security Level]**
Set the security level when using the security function.
The setting range is [1] to [15].
Set the level to [0] when the security function is not used.
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Select this item to monitor multiple devices by switching between them.
After selecting this item, set the offset device.
➟6.1.11 Offset

3) **[KANJI Region]**
Set the KANJI region.
The following shows the items to be selected.
- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

Example) Difference between [Japanese] and [China(GB)-Mincho]

[Japan] [China(GB)-Mincho]

4) **[Layer]**
Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.
- [Front]

• [Back]

➟6.5.5 ■3 Superimposition

5) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■5 [Trigger] tab

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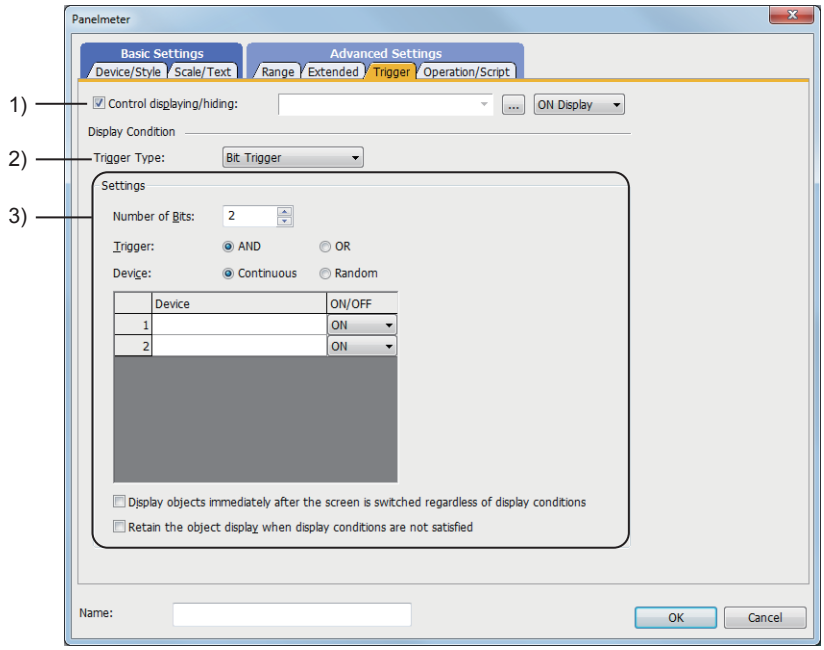
Set conditions for displaying the object.



1) **[Control Displaying/Hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

• [ON Display]
• [OFF Display]

➟6.1.2 How to set devices

2) **[Trigger Type]**

Select the condition of displaying the object.
The following shows the items to be selected.

• [Ordinary]
• [ON]
• [OFF]
• [Rise]
• [Fall]
• [Rise/Fall]
• [Sampling]
• [Range]
• [Bit Trigger]
• [ON Sampling]
• [OFF Sampling]

The selectable items vary with the GOT model.
For details, refer to the following.

➟6.2.1 ■2 Correspondence between functions and trigger types

3) **[Settings]**

For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

■6 [Operation/Script] tab

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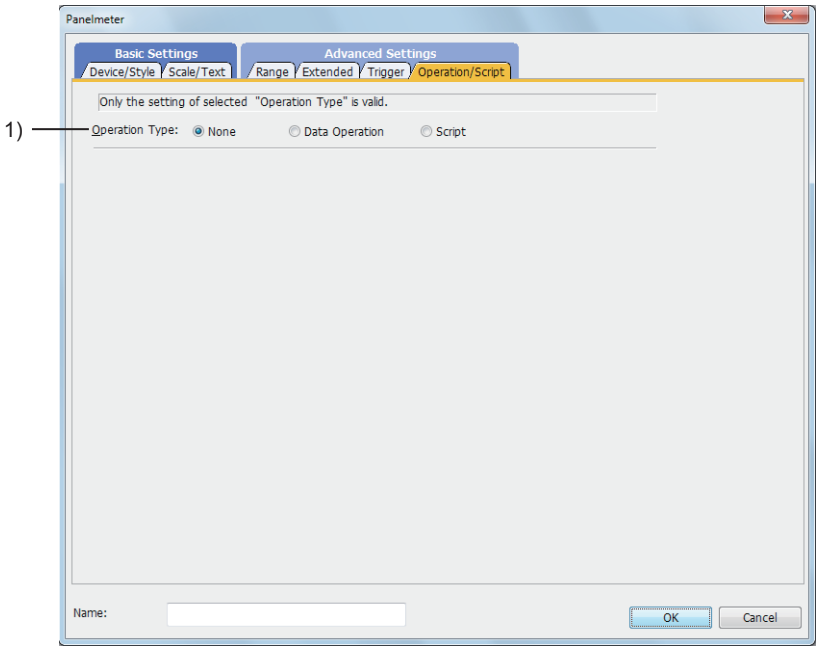
Set a formula for monitoring with the data operation function or the script function.



1) **[Operation Type]**

To use the data operation or script, select the operation type.

The following shows the items to be selected.

- [None]

  Select this item if the data operation and script are unnecessary.
- [Data Operation]

  Set the expression used for the data operation.

  ➟(1) [Data Operation]
- [Script]

  Set the expression used for the script function.

  ➟(2) [Script]

(1) [Data Operation]

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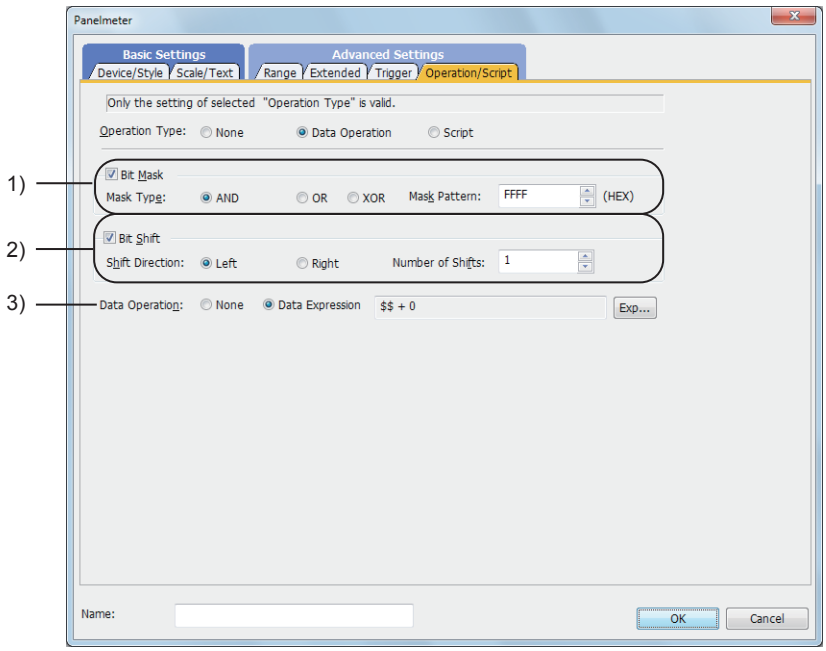
For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations



1) [Bit Mask]

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

2) [Bit Shift]

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Data Operation]

Set the format of the expression.

The following shows the items to be selected.

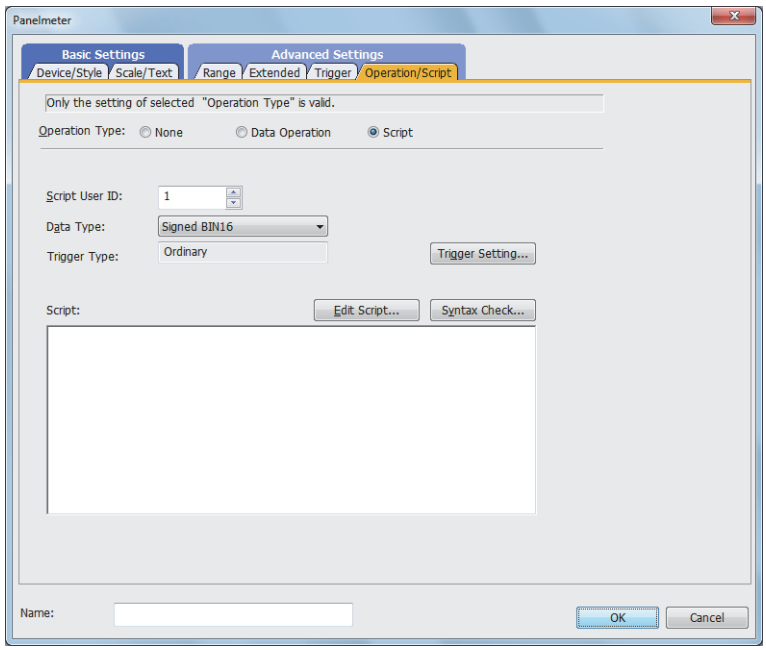
- [None]:
  Select this item not to perform the data operation by using the expression.
- [Data Expression]:
  Select this item to perform the data operation by using the expression.
  Click the [Data Expression] button to set the format of the expression in the [Edit Data Expression] dialog.

(2) [Script]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings of scripts, refer to the following.

➟9.10 Object Script



(a) Correspondence between the object settings and the object properties used in scripts

You can read (reference) the set value from an object setting or write (change) a new value to the setting by using an object property in a script.

The following shows the correspondence between the relevant setting items in the object setting dialog and the object properties used in scripts.

○: Available

×: Not available

-: No setting item available in the setting dialog for the applicable object properties

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
-	-	active	○	○	Upon the setting change	
		x	○	○	When the screen is updated	
		y	○	○	When the screen is updated	
		width	○	×	×	
		height	○	×	×	

Setting dialog		Object property				
Tab name	Setting item	Property name	Read	Write	Timing for reflecting the setting change[*1]	
					GOT Graphic Ver.1 (Object stacking order adjustment enabled[*2])	GOT Graphic Ver.2 GOT Graphic Ver.1 (Object stacking order adjustment disabled[*2])
[Device/Style]	[Needle Color]	graph_color	○	○	When the object is updated	
	[Meter Panel]	back_color	○	○	When the object is updated	
	[Frame Color]	frame_color	○	×	×	
	[Plate Color]	plate_color	○	○	When the object is updated	
	[Mater Panel Pattern]	pattern	○	○	When the object is updated	
	[Mater Panel Background Color]	pattern_bg_color	○	○	When the object is updated	
	[Fill Color]	fill_color	○	○	When the object is updated	
	[Fill Background Color]	fill_bg_color	○	○	When the object is updated	
	[Fill Pattern]	fill_pattern	○	○	When the object is updated	
	[Core]	core_color	○	○	When the object is updated	
	[Core Background Color]	core_bg_color	○	○	When the object is updated	
	[Core Pattern]	core_pattern	○	○	When the object is updated	
	[Lower Limit]	scale_min[0]	○	○	When the screen is updated	
	[Upper Limit]	scale_max[0]	○	○	When the screen is updated	
[Extended]	[Security Level]	security	○	○	When the object is updated	When the screen is updated

*1 For the timing at which the setting change of an object property is reflected, refer to the following.

➟9.10.2 ■2 (5) Timing at which the setting change of an object property is reflected

*2 To enable the object stacking order adjustment, select [Adjust object display order in GOT to the one in GT Designer3] in the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

8.24.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the panelmeter as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

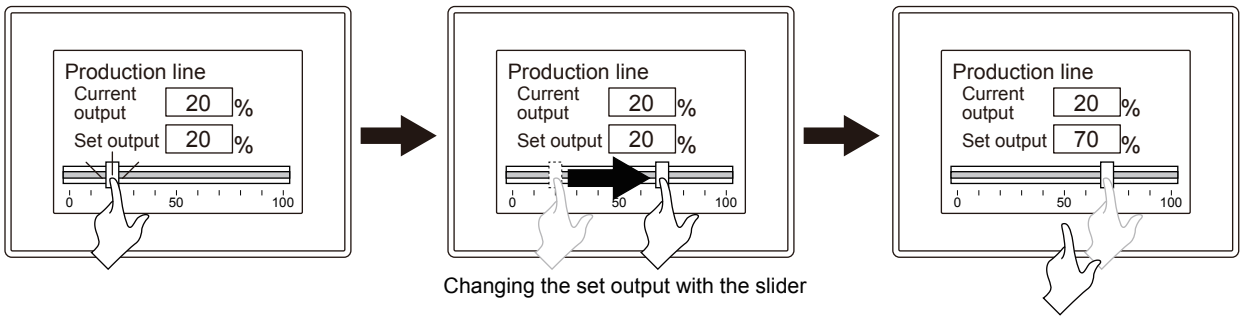
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.25 Placing a Slider

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use the slider to set the continuous value to the device within any setting range.
The value of the destination where you stop the knob is input to the device.



Changing the set output with the slider

8.25.1 Specifications of the slider

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the slider.

■1 Maximum number of objects arrangeable on one screen

Up to 1024 sliders can be set on a screen.

■2 Minimum size of slider

Arrange the slider on the screen not smaller than the following size.

- When [Horizontal] is selected for [Slider Direction]: 18 dots (width) × 16 dots (height)
- When [Vertical] is selected for [Slider Direction]: 16 dots (width) × 18 dots (height)

8.25.2 How to use the slider

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the slider.

■1 Arranging the slider

Arrange the slider on the screen editor.

➟6.5.1 Placing figures and objects

Point

Arrangement positions of the slider and the other input object

Arranging an input object, such as a touch switch, near the slider arrangement area may cause a malfunction when you touch the input object during slider operation.
It is recommended not to arrange any input object in or near the slider arrangement area.

■2 Editing the slider

Edit the slider arranged on the screen editor.

➟6.5.3 Editing figures and objects

■3 Setting the slider

Configure the settings for the slider arranged on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Settings of sliders

➟8.25.3 [Slider] dialog

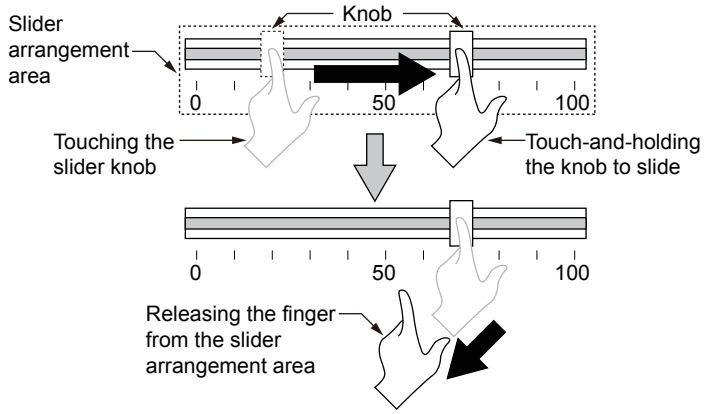
■4 Slider operation

This section describes the operations of the slider.
Touch the area where the slider is arranged. Select the setting value, and release the finger so that the setting value is written into the device.

➟8.25.3 ■3 [Extended] tab

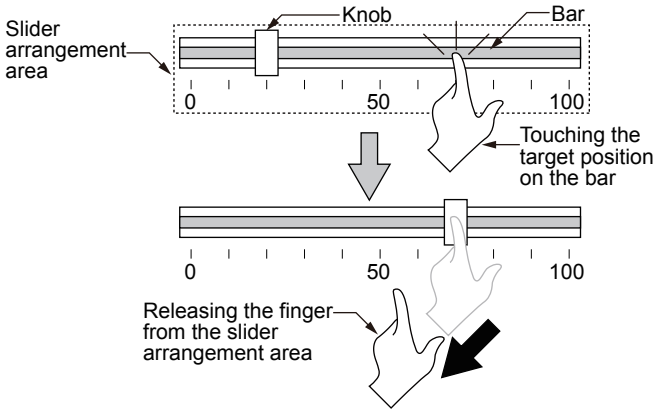
(1) When touch-and-holding the knob to slide

Touch-and-hold the knob to slide until the destination.
When the finger is released from the slider arrangement area, the knob is displayed at the destination, and the setting value is changed simultaneously.



(2) When touching the slider arrangement area

When you touch the value to be set, the knob moves to the touched position.
When the finger is released from the slider arrangement area, the knob is displayed at the destination, and the setting value is changed simultaneously.



8.25.3 [Slider] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Slider] from the menu.

Step 2 Click the position where you arrange the slider to complete the arrangement.

Step 3 Double-click the arranged slider to display the setting dialog.

➥■1 [Device/Style] tab

■2 [Scale] tab

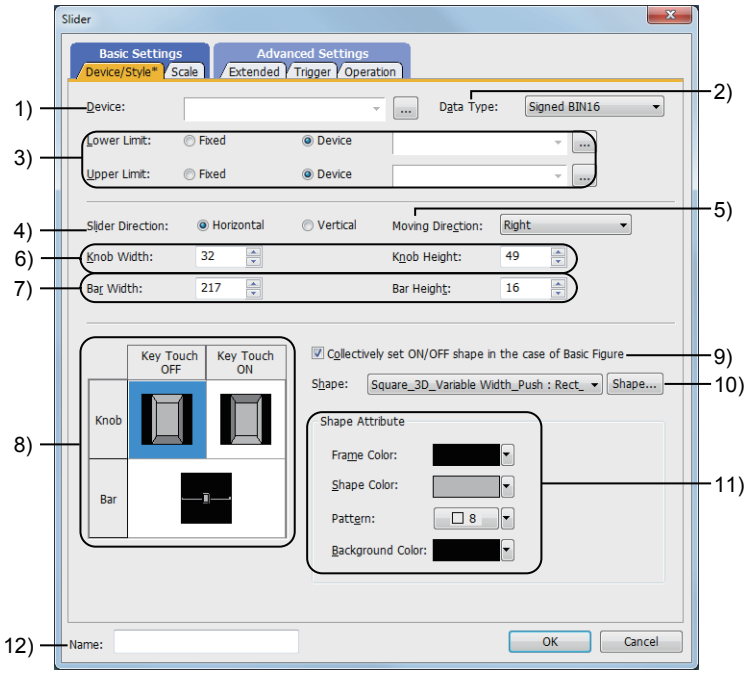
■3 [Extended] tab

■4 [Trigger] tab

■5 [Operation] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Device]**

Set the device to be monitored.

➥6.1.2 How to set devices

2) **[Data Type]**

Select the data type of the device.

The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

3) **[Lower Limit] and [Upper Limit]**

Select whether to specify the display range (lower and upper limit values) of the slider with the fixed value or with the device value.

The following shows the items to be selected.

- [Fixed]:
  Specify a constant.
- [Device]:
  Specify a device value.

➟6.1.2 How to set devices

The setting ranges of [Lower Limit] and [Upper Limit] differ depending on the item selected for [Data Type].

4) **[Slider Direction]**

Select the slider direction from [Horizontal] or [Vertical].

The following shows the items to be selected.

- [Horizontal]: Arranges the slider to be displayed in horizontal direction.
- [Vertical]: Arranges the slider to be displayed in vertical direction.

5) **[Moving Direction]**

Select the moving direction of the knob.

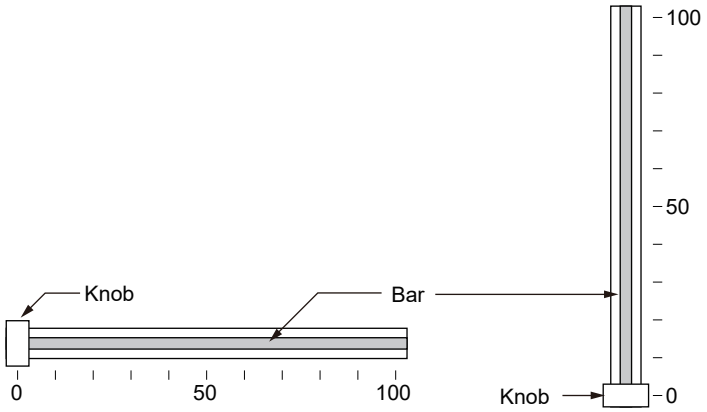
The setting range differs depending on the item selected for [Slider Direction].

When [Horizontal] is selected for [Slider Direction]

- [Right]: Slides the knob from the left (lower limit) to the right (upper limit).
- [Left]: Slides the knob from the right (lower limit) to the left (upper limit).

When [Vertical] is selected for [Slider Direction]

- [Up]: Slides the knob from the bottom (lower limit) to the top (upper limit).
- [Down]: Slides the knob from the top (lower limit) to the down (upper limit).



Display example of when [Horizontal] is selected for [Slider Direction], and [Right] is selected for [Moving Direction]

Display example of when [Vertical] is selected for [Slider Direction], and [Up] is selected for [Moving Direction]

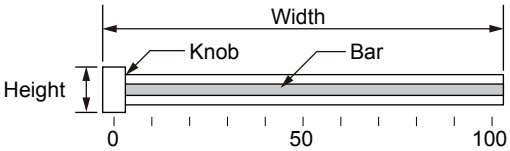
6) **[Knob Width] and [Knob Height]**

Specify the width and height of the knob.

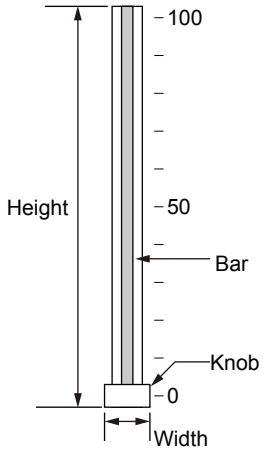
The setting range depends on the type of the screen on which a slider is placed.

Item	[Slider Direction]	Setting range (dot)	
		Base screen	Window screen or library editor
[Knob Width]	[Horizontal]	[16] to [2998]	[16] to [1998]
	[Vertical]	[16] to [3000]	[16] to [2000]
[Knob Height]	[Horizontal]	[16] to [3000]	[16] to [1600]
	[Vertical]	[16] to [2998]	[16] to [1598]

After the width and height of the knob are specified, when the setting of [Slider Direction] is changed, the set values of [Knob Width] and [Knob Height] are switched.



Relationship between the width and the height when [Horizontal] is selected for [Slider Direction]



Relationship between the width and the height when [Vertical] is selected for [Slider Direction]

7) **[Bar Width] and [Bar Height]**

Specify the width and height of the bar.

The setting range depends on the type of the screen on which a slider is placed.

Item	[Slider Direction]	Setting range (dot)	
		Base screen	Window screen or library editor
[Bar Width]	[Horizontal]	[18] to [3000]	[16] to [2000]
	[Vertical]	[4] to [3000]	[4] to [2000]
[Bar Height]	[Horizontal]	[4] to [3000]	[4] to [1600]
	[Vertical]	[18] to [3000]	[18] to [1600]

When [Horizontal] is selected for [Slider Direction], the set value of [Bar Width] varies according to the object size adjusted directly on the screen editor. When [Vertical] is selected for [Slider Direction], the set value of [Bar Height] varies according to the object size adjusted directly on the screen editor.

➟6.5.3 ■3 Changing sizes

After the width and height of the bar are specified, when the setting of [Slider Direction] is changed, the set values of [Bar Width] and [Bar Height] are switched.

8) **Preview list**

The display status of the knob and the bar

9) **[Collectively set ON/OFF shape in the case of Basic Figure]**

This item is available when [Basic Figure] is selected for [Shape].

10) **[Shape]**

Select the shapes of the knob and the bar.

From the list box, only one item can be selected either for the knob or for the bar.

To select a shape other than those in the list box, click the [Shape] button.

➟6.5.5 ■1 Setting object shapes

11) **[Shape Attribute]**

Item	Description
[Frame Color]	Select the frame colors of the knob and the bar.
[Shape Color]	Select the shape colors of the knob and the bar.
[Pattern] and [Background Color]	Select the patterns and background colors of the knob and the bar. The selected pattern in the shape color is displayed on the background color. Example) Shape color: Pattern: Background color: Pattern + Shape color Background color

12) **[Name]**

Set the object name.

The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Scale] tab

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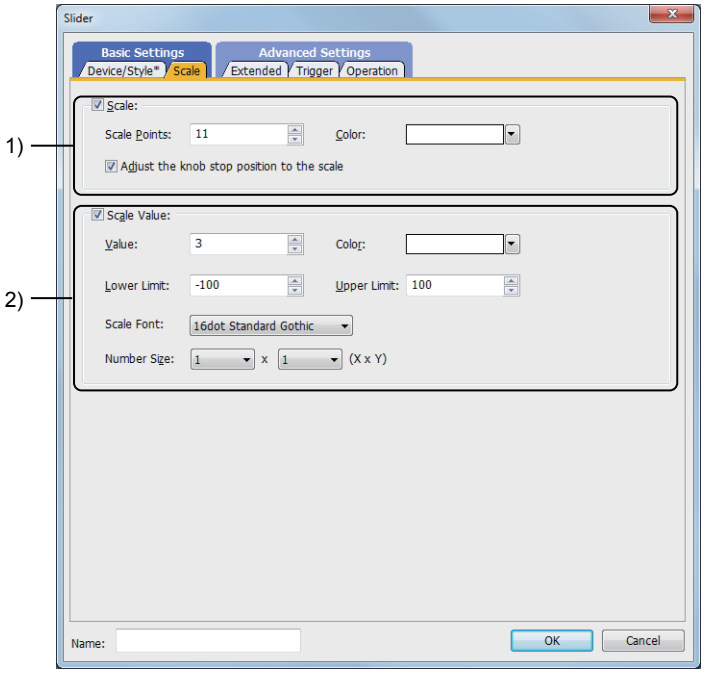


1) **[Scale]**
Arrange the slider scale.

Item	Description
[Scale Points]	Specify the number of scale points. The setting range is [2] to [101].
[Color]	Set the scale color. ➟6.4 Color Settings
[Adjust the knob stop position to the scale]	Adjusts the knob stop position to the scale by matching the centers of the knob and the scale points. When the following setting is configured, the knob does not stop at the scale points correctly. • The data type is not a real number. • (Upper limit of monitor device - Lower limit of monitor device + 1) < Number of scale points

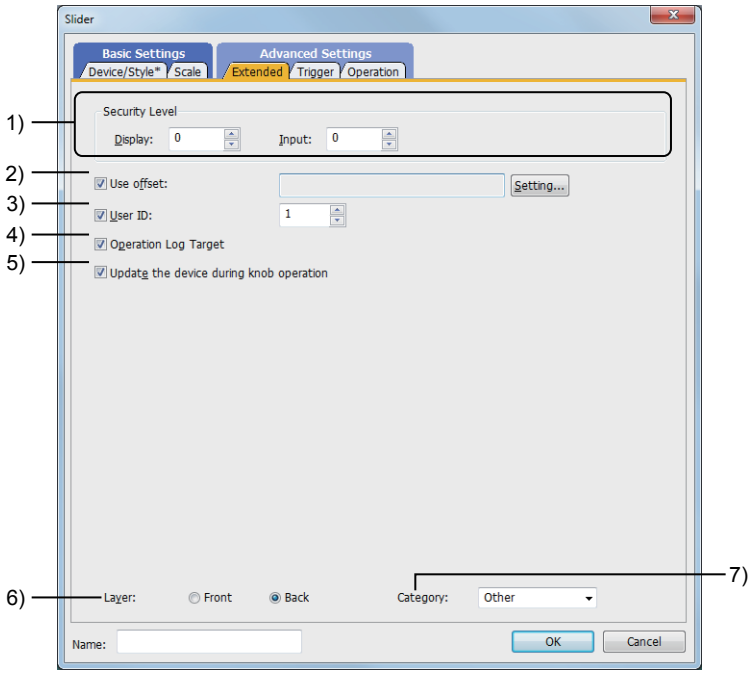
2) **[Scale Value]**
Arrange the scale values.

Item	Description
[Value]	Specify the number of scale values. The setting range is [2] to [101].
[Color]	Set the color of scale values. ➟6.4 Color Settings
[Lower Limit] and [Upper Limit]	Specify the lower limit and upper limit of scale values. The setting range differs depending on the item selected for [Data Type] in the [Device/Style] tab. The setting range of 64-bit devices is the same as that of 32-bit devices.
[Scale Font]	Select the scale font. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21)

Item	Description
[Number Size]	Select the size of the scale value. For the details of the font and the size, refer to the following. ➟1.2.5 Font specifications

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**
When using the security function, set the security level.
The setting range is [1] to [15].
When not using the security function, set the level to [0].
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Use offset]**
Monitors multiple devices by switching them.
After selecting this item, set the offset device.
➟6.1.11 Offset

3) **[User ID]**
Enables the user ID setting.
The setting range is [1] to [65535].
Setting the user ID enables you to identify the object with the operation log.
➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

4) **[Operation Log Target]**
Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Targets the object for the operation log.
➟5.2.11 ■1 Specifications of the operation log

5) **[Update the device during knob operation]**
Updates the device in the fixed cycle (500 ms) during knob operation.

6) **[Layer]**
Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.
- [Front]
- [Back]

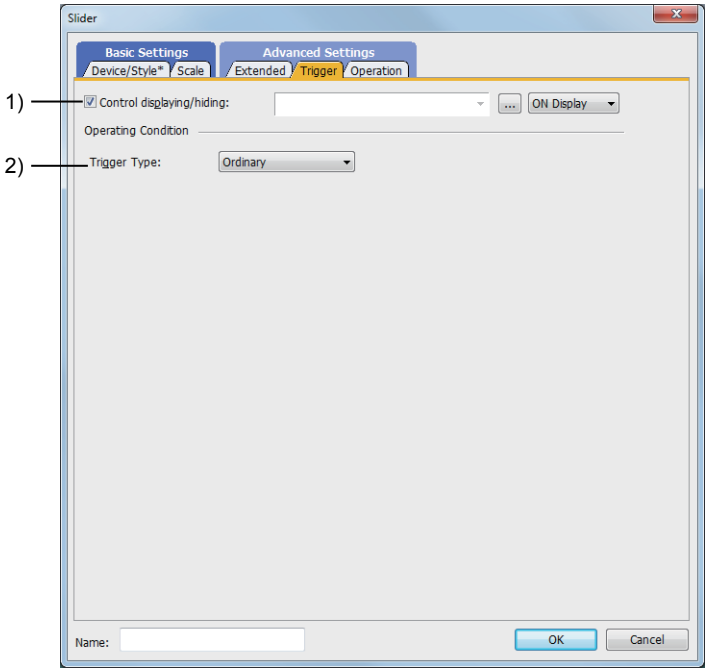
➟6.5.5 ■3 Superimposition

7) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**
Set the device that controls display/hide of the object.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

2) **[Trigger Type]**
Select a trigger condition to display the object.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

For the details of each item, refer to the following.

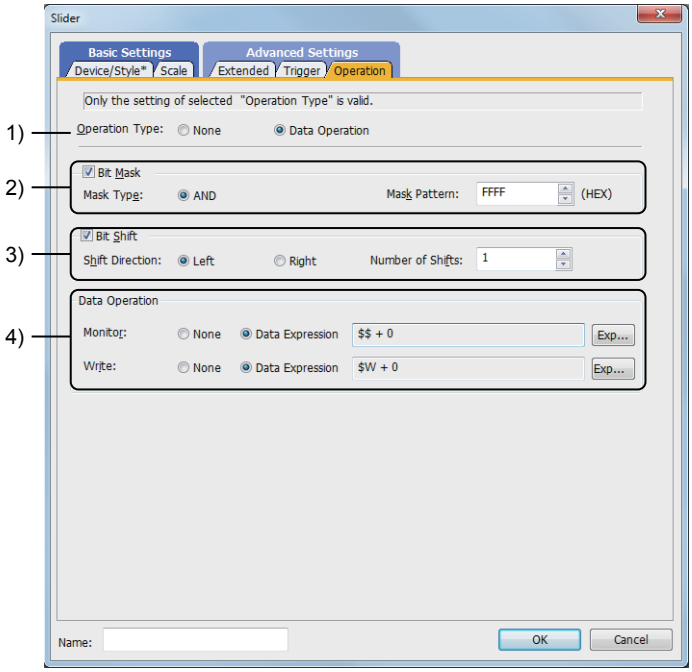
➟6.2.2 Setting Trigger Types

Point

Refresh timing for slider operations and device values
When the display conditions or the operating conditions of the object are unsatisfied, the slider stops operating. The value is also not written to the device.
Therefore, the value written to the device may differ from the value of the knob stop position during slider operation.

■5 [Operation] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) [Operation Type]

Item	Description
[None]	Does not use the data operation function.
[Data Operation]	Sets the expression used for the data operation function.

2) [Bit Mask]

Sets the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. • [AND]: Logical AND
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) [Bit Shift]

Sets the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Shifts to the left • [Right]: Shifts to the right
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

4) [Data Operation]

Set the format of the expression.

Item	Description
[None]	Dose not perform the data operation by using the expression.
[Data Expression]	Performs the data operation by using the expression.
[Exp] button	This button is available only when [Data Expression] is selected for [Data Operation]. Click the [Exp] button to set the format of the expression in the [Edit Data Expression] dialog. ➟6.5.5 ■4 (3) [Edit Data Expression] dialog

8.25.4 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the slider as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

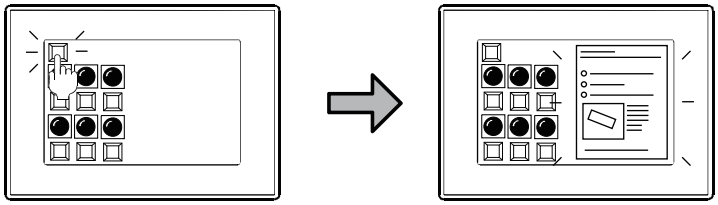
➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	GOT Graphic Ver.2 Always enabled. GOT Graphic Ver.1 [Adjust object display order in GOT to the one in GT Designer3]

8.26 Placing a Document Display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays documents created with a personal computer (such as Microsoft Word and Microsoft Excel) on the GOT.
With this function, the GOT can display specifications and manuals. Thus, you can utilize the documents for the screen of troubleshooting, or display the documents for the operation during monitoring.



Display the document for the operation of objects such as touch switches on the GOT.

8.26.1 Specifications of the document display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the document display.

■1 Usable document type

The following shows the types of documents displayable on a document display object.

(1) PDF file

The PDF file under the following conditions is displayed without conversion to JPEG format.

- Any TTF font is embedded in the file.
- No password is required to open the file.

(2) Document Converter output file

JPEG file that is converted from a document in another file format with Document Converter.
The following shows the documents that can be converted to JPEG format with Document Converter.

- Microsoft Word file
- Microsoft Excel file
- Microsoft PowerPoint file
- PDF file
- Image file (JPEG, BMP)

■2 Usable drive

The following shows the drives usable to store the files to be displayed on the document display object.

- Drive A
- Drive B
- Drive E
- Drive F
- Drive G
- Drive N
- Drive X (current drive)

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

■3 Document ID

ID number that is set for a document to appear on the document display.
The setting range is 1 to 32767.

■4 Displaying a cached document

PDF files are cached to speed up the display of the files on the document display.
A PDF file is cached or a cached PDF file is updated when the file is displayed.
The cached PDF file is stored in the CACHE folder on the drive where the source PDF file is stored.

■5 Maximum number of objects on one screen

One document display can be placed on one screen.

■6 Number of objects that can be displayed at one time

One document display can be displayed for each document type at one time.
If the same document type is set for multiple document displays, these document displays cannot be displayed simultaneously.
Regardless of using the overlap window, superimpose window, or set overlay screen, the multiple document displays are unavailable.

■7 Displaying the [Search] or [Bookmark] window for a PDF file

One system window is used for the [Bookmark] or [Search] window operation.
For system windows, refer to the following.

➟5.2.1 ■2 (5) Using an overlap window as the system window

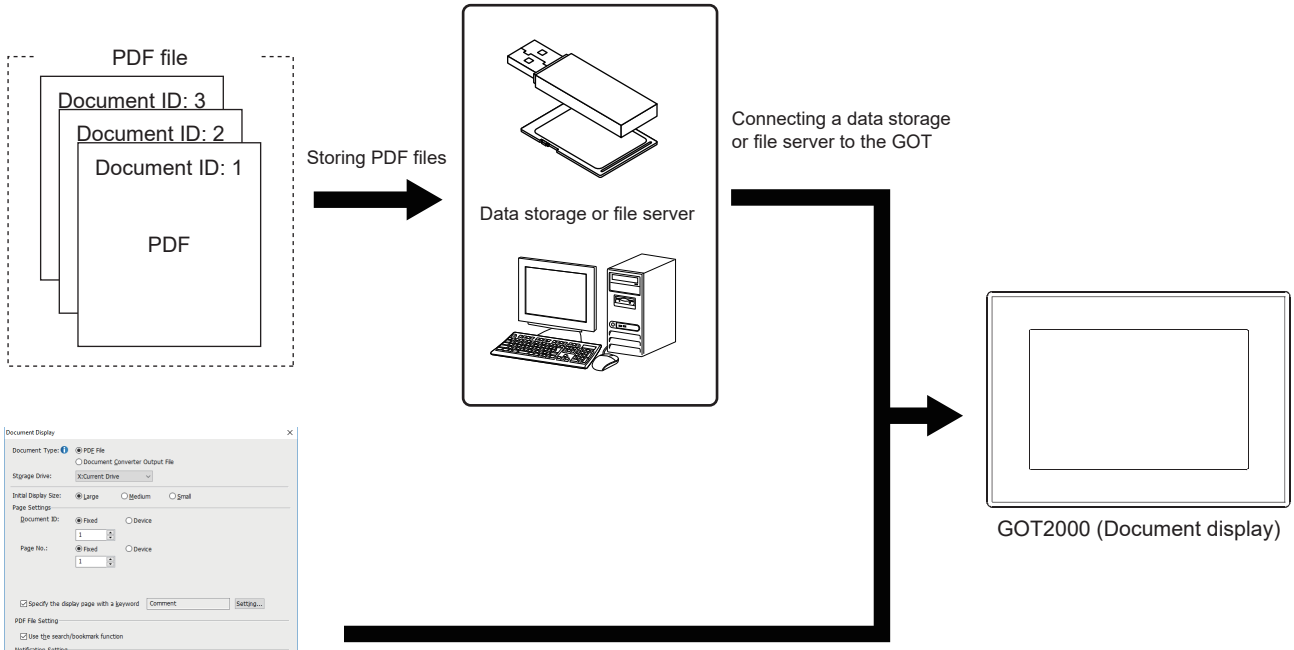
8.26.2 How to use the document display (for PDF files)

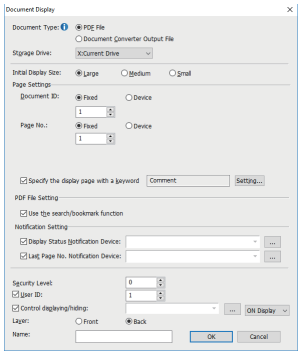
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to display PDF files on the document display.

■1 Procedure for displaying PDF files

The following shows the procedure for displaying PDF files.





GT Designer3 (Object setting)

For the details of the operations below, refer to the following.

- Storing PDF files on a data storage or file server

➟■2 Storing files on a data storage or file server

- Setting a document display object with GT Designer3

➟■3 Placing the document display
8.26.6 [Document Display] dialog

■2 Storing files on a data storage or file server

In the root directory of a drive, create a folder named "PDFDAT", and store PDF files in the folder.
Create folders and files in the PDFDAT folder as shown below.

- Document ID setting

  According to the hierarchical structure of the folders and files, set a document ID number in each folder name or file name.
  A five-digit document ID number is settable.
  The setting range is 00001 to 32767.

- Hierarchical structure of the folders and files

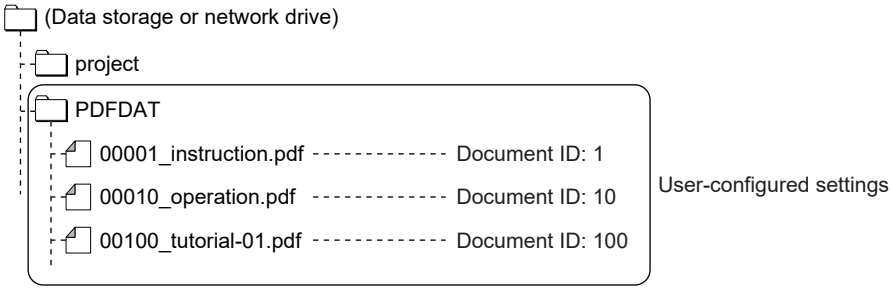
  To store PFD files, use one of the following hierarchical structures.
  If multiple hierarchical structures are used, an unintended PDF file may appear on the document display.

➟(1) Storing PDF files by document ID number
(2) Storing a PDF file to each folder named with a document ID number

(1) Storing PDF files by document ID number

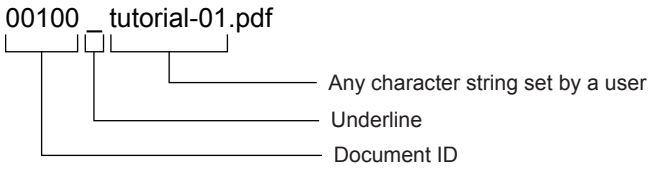
Store the PDF file whose file name includes a document ID number.
To store multiple PDF files, set a different document ID number for each file name.

- Hierarchical structure of the folders and files



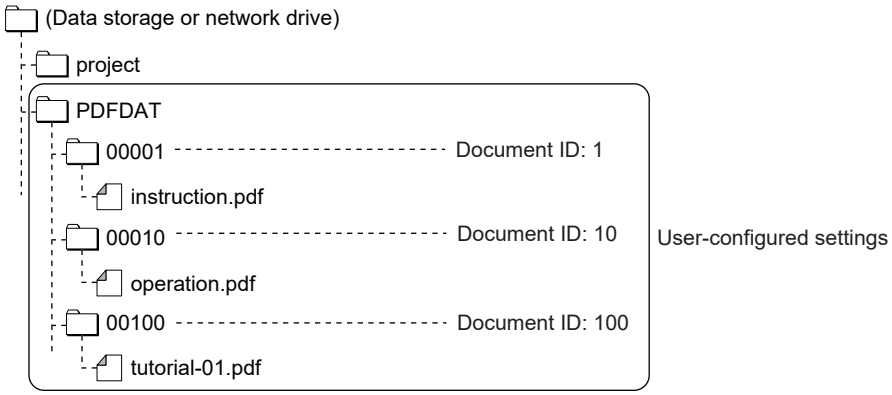
- PDF file name

  Set a PDF file name that includes a document ID number, an underscore, and user-specified characters as shown below.



(2) Storing a PDF file to each folder named with a document ID number

Create folders named with a different document ID number, and store one PDF file to each folder.
Name the PDF file freely.



■3 Placing the document display

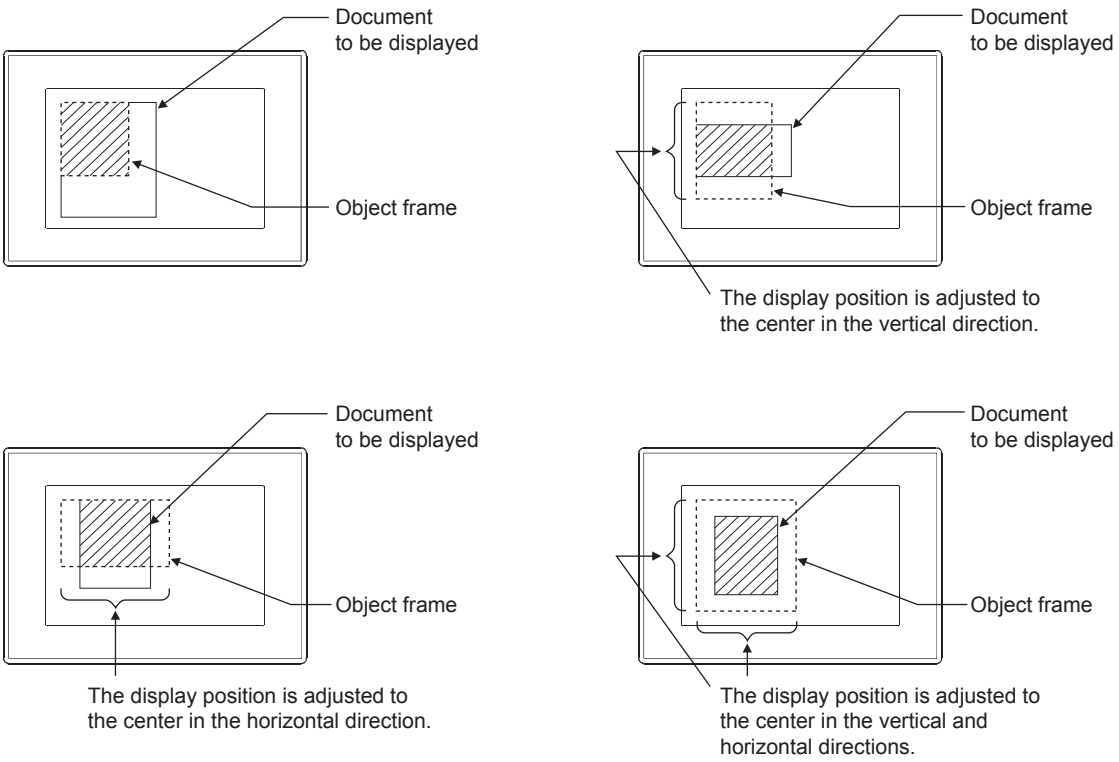
The following shows how to place the document display (object).

Step 1 Select [Object] → [Document Display] from the menu.
Step 2 Click the position where you place the document display. Placing the document display is completed.
Step 3 Double-click the document display which has been placed to display the setting dialog.

➟8.26.6 [Document Display] dialog

Step 4 Depending on the frame size of the placed document display object and the size of a target PDF or JPEG file, the display is changed as shown below.

The shaded area is displayed on the GOT.



Point

More useful setting method

You can configure the object settings with the property sheet.

➟11.9 Checking and Editing Settings of Screens and Objects (Property Sheet)

(1) Image displayed on the document display object in GT Designer3

A sample image is previewed on the document display object in GT Designer3.

When the sample image is replaced with another image with the same file name, the new image is displayed.

The following shows the storage folders and file names of the sample images.

Item	Description
Storage folder	The following folder contains the folders of display languages of GT Designer3. [(Path to the installation location of GT Designer3)\GTD3_2000\App] • Japanese: ja-JP • English: en-US • Simplified Chinese: zh-CN When the display language is switched in GT Designer3, the folder to be referred to is also switched.
File name	Sample images are stored in the folder of each language. • IMG00000L.JPG: Large size (816 dots × 1168 dots) • IMG00000M.JPG: Medium size (656 dots × 928 dots) • IMG00000S.JPG: Small size (400 dots × 584 dots)

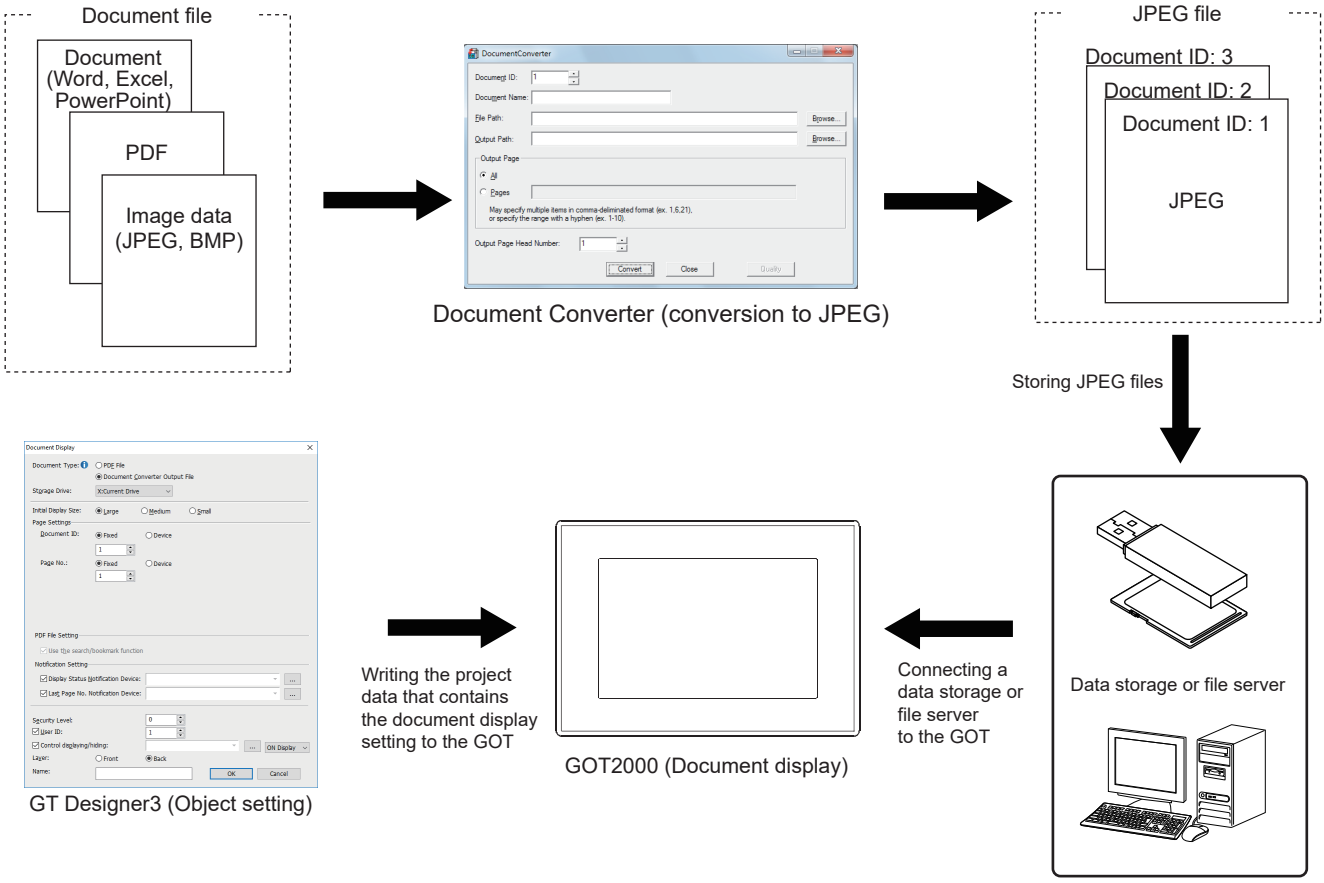
8.26.3 How to use the document display (for Document Converter output files)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to display Document Converter output files on the document display.

■1 Procedure for displaying Document Converter output files

The following shows the procedure for displaying Document Converter output files.



For the details of the operations below, refer to the following.

- Converting files with Document Converter

  ➟■2 Converting documents to JPEG format with Document Converter

- Storing JPEG files on a data storage or file server

  ➟■3 Storing files on a data storage or file server

- Setting a document display object with GT Designer3

  ➟8.26.2 ■3 Placing the document display
  8.26.6 [Document Display] dialog

■2 Converting documents to JPEG format with Document Converter

The following shows how to convert a document to JPEG format with Document Converter.
Before using Document Converter, install the following software in the personal computer.

- Document Converter (Contact your local distributor.)
- Ghostscript GPL9.55 (Free software)
- PostScript printer driver supplied with Windows*1
- Microsoft Office 2003, Microsoft Office XP, Microsoft Office 2000*2

*1 Only the application for creating the document to be used is required.
*2 Required to convert a file created with Microsoft Word, Microsoft Excel, or Microsoft PowerPoint.

(1) Installing Document Converter

For how to install Document Converter, refer to the following.

➟GT Works3 Version1 Installation Procedure Manual

The following shows the operating environment for Document Converter.

Item	Description
Model	Personal computer that Windows runs on.
OS(English version)*1*2*3*4*5	• Microsoft Windows 11 Education (64 bit) • Microsoft Windows 11 Enterprise (64 bit) • Microsoft Windows 11 Pro (64 bit) • Microsoft Windows 11 Home (64 bit) • Microsoft Windows 10 Enterprise (32 bit, 64 bit) • Microsoft Windows 10 Pro (32 bit, 64 bit) • Microsoft Windows 10 Home (32 bit, 64 bit)
CPU	• Windows 11: 64 bit-compatible processor with dual-core or more or System on a Chip (SoC)*8 • Other than Windows 11: Intel Core 2 Duo Processor 2.0 GHz or more recommended*8
Memory	• For Windows 11: 4 GB or more recommended • For 64-bit OS other than Windows 11: 2 GB or more recommended • For 32-bit OS other than Windows 11: 1 GB or more recommended
Display	Resolution SVGA (800 × 600 dots) or higher
Hard disk space	• For installation: 10 MB or more • For execution: 100 MB or more recommended*6
Display color	High Color (16 bits) or higher
Other software	To display Help, the following software must be installed. • Internet Explorer7 or later recommended
	The following software must be installed. • Ghostscript GPL9.55 (Free software) • PostScript printer driver supplied with Windows*7 • Microsoft Office 2003, Microsoft Office XP, Microsoft Office 2000*7
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD drive • For execution: mouse, keyboard • For printing: printer

*1 For installation, the standard user or administrator account is required.
To interact GT Designer3 with other MELSOFT applications which are used under the administrator authority, use GT Designer3 under the administrator authority.
*2 The following functions are not supported.
- Application start in Windows compatibility mode
- Fast user switching
- Changing your desktop themes (fonts)
- Remote desktop
- Setting the size of text and illustrations on the screen to any size other than [Small-100%]

*3 Operation is not supported in an environment with the text cursor indicator turned on.
*4 The touch feature is not supported.
*5 Operation in a virtual environment such as Hyper-V is not supported.
*6 For execution, the hard disk space for storing the temporary data in conversion is required.
The required hard disk space is different depending on the document to be converted.
When the conversion fails, increase the hard disk space and convert the document again.
*7 Required to convert a file created with Microsoft Word, Microsoft Excel, or Microsoft PowerPoint.
*8 ARM6 and ARM32 are not supported.

(2) Installing Ghostscript (Free software)

Download Ghostscript from the following website.
https://www.ghostscript.com/releases/gsdnld.html
Note that the above website may be changed without notification.

(a) Installing procedure

The following shows how to install Ghostscript GPL9.55 as an example.

Step 1 Execute the downloaded file.

Step 2 In the setup wizard, click the [Next] button.

Step 3 In the license agreement window, click the [I Agree] button.

Step 4 Select the installation destination, and click the [Install] button to start the installation.

Step 5 In the window notifying the completion of the installation, select options as necessary and click the [Finish] button.

(b) Adding environment variables

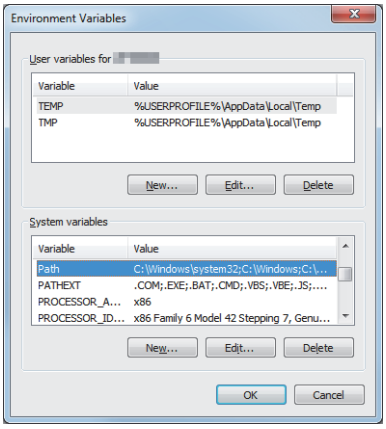
When setting [C:\gs] as the installation destination, add [C:\gs******\bin] and [C:\gs******\lib] to the path of environment variables after the installation is completed.
Input six characters consisting of upper five digits of the installation execution file name and a decimal number to ******. (For gs9550w64.exe, input gs9.55.)
The following shows the procedure for setting environment variables.

Step 1 Select [Start] → [Control Panel] → [System and Security] → [System] from the menu.

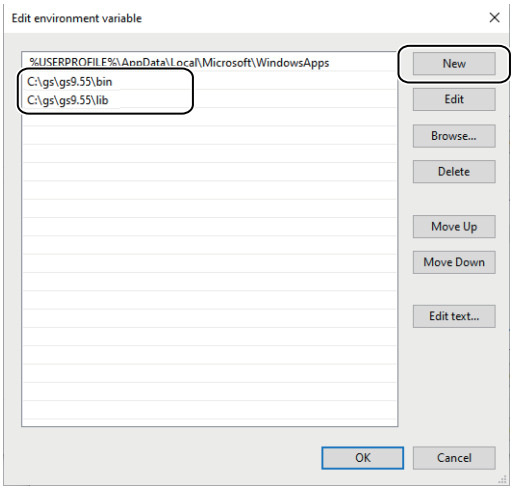
Step 2 Click the [Change settings] button in [Computer name, domain, and work group settings].

Step 3 Select the [Advanced] tab and click the [Environment Variables] button.

Step 4 Select [Path] in [System variables], and then click the [Edit] button.



Step 5 Click the [New] button in the [Edit environment variable] dialog and add the path.
There is no need to add a semicolon (;).



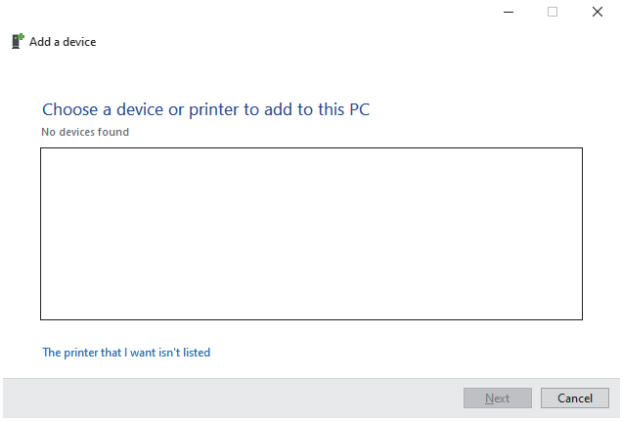
Step 6 Restart the personal computer.

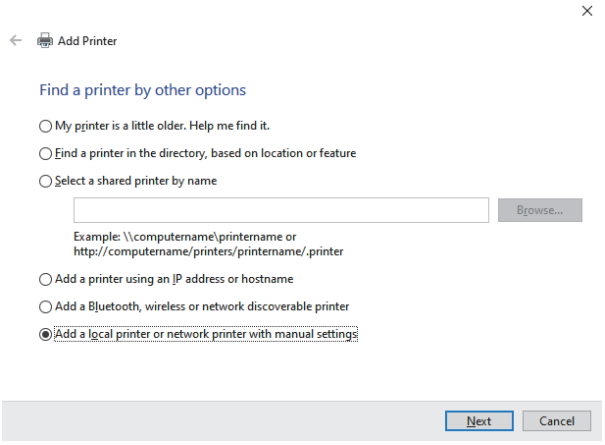
(3) PostScript printer driver

The following shows how to install the PostScript printer driver.
For the detail of the operation of Windows, refer to the manual or help of Windows.

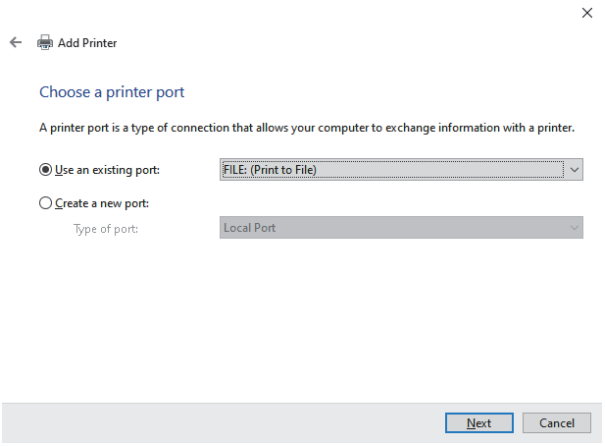
Step 1 Select [Start] → [Control Panel] → [Hardware and Sound] → [Add a printer] from the menu.

Step 2 Click [The printer that I want isn't listed], select [Add a local printer or network printer with manual settings], and click [Next].

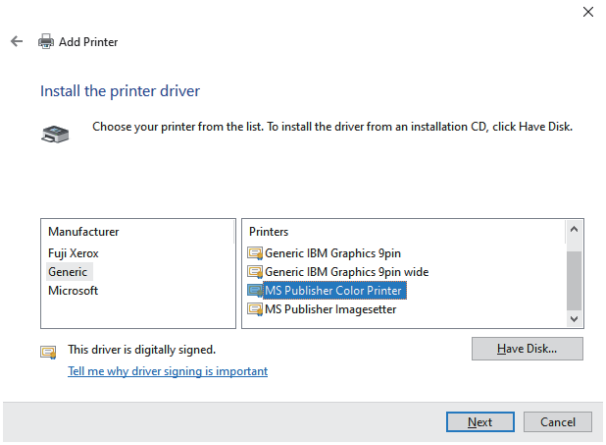




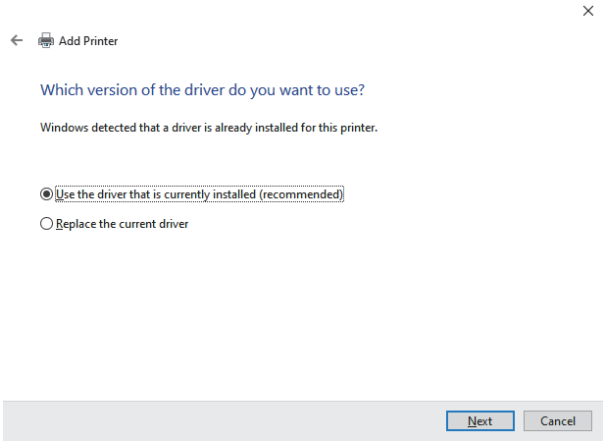
Step 3 Select [FILE: (Print to File)] for [Use an existing port], and click [Next].



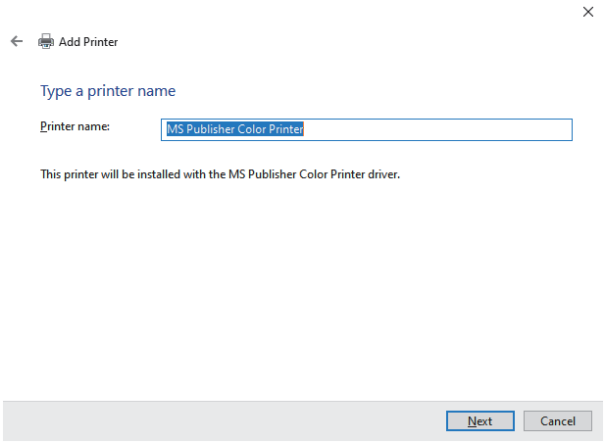
Step 4 Select the PostScript printer driver (manufacturer: Generic, printer: MS Publisher Color Printer) supplied with Windows, and click [Next].



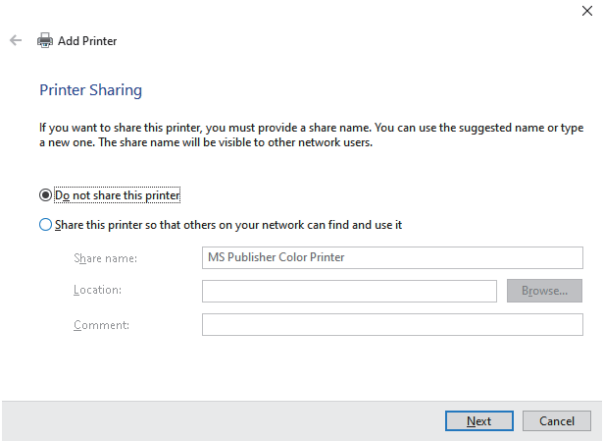
Step 5 Select [Use the driver that is currently installed], and click [Next].



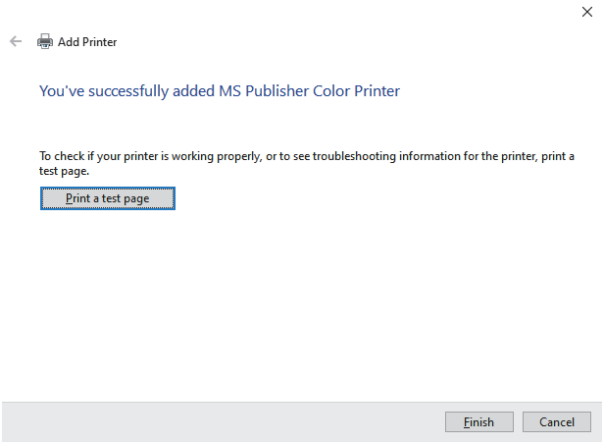
Step 6 Check [Printer name], and click [Next].



Step 7 Select [Do not share this printer], and click [Next].



Step 8 Click the [Finish] button.



(4) Conversion procedure

The following shows the conversion procedure.

Step 1 Start Document Converter.

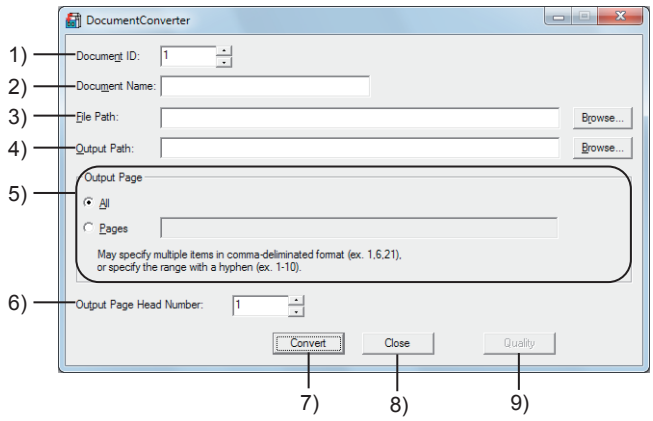
When Ghostscript runs with administrator privileges, use Document Converter with administrator privileges as well.

For how to run the software with administrative privileges, refer to the following.

➟Manual and Help for the Windows version used

Step 2 The [Document Converter] dialog appears.

Set the following items.



1) **[Document ID]**

Set the document ID for the converted document.

The setting range is [1] to [32767].

2) **[Document Name]**

Set the name for the converted document.

The name is displayed in GT Designer3 (such as the data view or property sheet) and in the operation log.
Up to 32 characters can be set.

3) **[File Path]**
Clicking the [Browse] button to specify the path name of the file to be converted.

4) **[Output Path]**
Set the output destination (path) of the converted file.
The following shows the folders and files after the path which can be set.
(Output path)\DOCIMG\(Document ID)\(Output size: L, M, or S)\IMG*****.JPG
As the output size, L means large, M means medium, and S means small.
***** is the page No.
Example) When [Document ID] is set to [1] and [Size] is set to [L]
(Output path)\DOCIMG\001\L\IMG00001.JPG

5) **[Output Page]**
Set the page to be converted.
Set this item when the file to be converted is Word, Excel, PowerPoint, or PDF file.

6) **[Output Page Head Number]**
Set the head number of the pages to be converted.
The setting range is [1] to [65535] page(s).

7) **[Convert] button**
Starts conversion.

8) **[Close] button**
Closes the [Document Converter] dialog.

9) **[Quality] button**
Set the image quality of the document.
The setting is applied to the converted document.

➡(5) Quality adjustment procedure

Step 3 After the setting, click the [Convert] button.

The conversion starts.
After the conversion, the JPEG file is created in three sizes (large, medium, small) for each page.
The following shows the size of a JPEG file converted from an A4-size document.

- Large: 816 dots × 1168 dots
- Medium: 656 dots × 928 dots
- Small: 400 dots × 584 dots

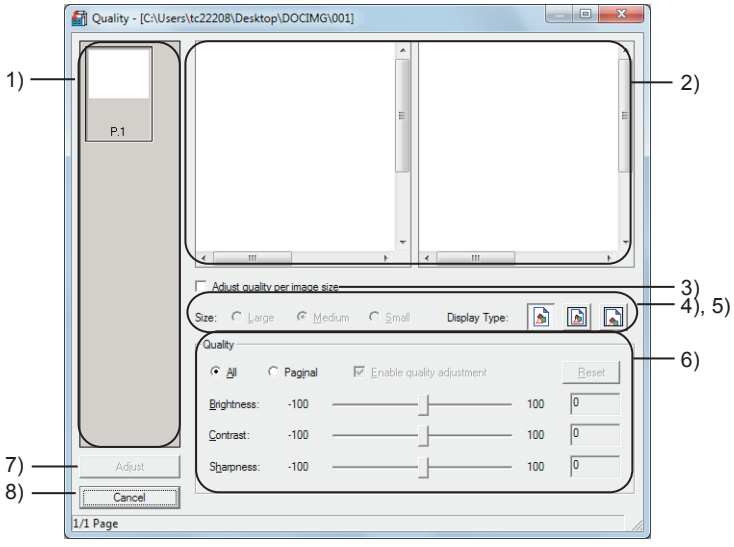
(5) Quality adjustment procedure

The following shows the quality adjustment procedure.

Step 1 Start Document Converter.

Step 2 The [Document Converter] dialog appears.
Click the [Quality] button.

Step 3 The [Quality] dialog appears.
Set the following items.



1) **Page list**
Displays the thumbnails for each page.
Select the page whose image quality is to be adjusted from this list.
When [Paginal] is set for [Quality], select the page.

2) **Preview window**
Displays the preview of the image.
The preview before the quality adjustment is shown in the left window.
The preview after the quality adjustment is shown in the right window.

3) **[Adjust quality per image size]**
Set this item to adjust the image quality per image size.
Select the image size to be adjusted at [Size].

4) **[Size]**
Select the image size to be adjusted.
Select the size every time an image in different size is to be adjusted.
The following shows selectable items.
- [Large]
- [Medium]
- [Small]

Set this item when [Adjust quality per image size] is set.

5) **[Display Type]**
Select a display type at the preview window.
The following shows selectable items.
- Actual size
- Entire page
- Fitted to the width

6) **[Quality]**
Set this item to adjust the image quality.
Select the method of adjustment.
The following shows selectable items.
- [All]:
  Select this item to apply the same adjustment to all pages.
- [Paginal]:
  Select this item to adjust the image quality per page.
  Select the page to be adjusted from the page list and set [Enable quality adjustment] to adjust the selected page.

Item	Description
[Reset] button	Clears the setting of [Quality].
[Brightness]	Set the value of brightness. The setting range is [-100] to [100].
[Contrast]	Set the value of contrast. The setting range is [-100] to [100].
[Sharpness]	Set the value of sharpness. The setting range is [-100] to [100].

7) **[Adjust] button**
Executes the set quality adjustment.
Note that the setting cannot be restored after the execution.

8) **[Cancel] button**
Cancels the set quality adjustment and closes the dialog.

Step 4 After the setting, click the [Adjust] button.
The [Quality] dialog is closed and the setting of the quality adjustment is completed.

■3 Storing files on a data storage or file server

In the root directory of a drive, create a folder named "DOCIMG".
Do not change the hierarchical structure of the folders and files in the DOCIMG folder.
Doing so cause the GOT not to recognize the files.

Point

Image files required when the the graphics accelerator is enabled

When the graphics accelerator is enabled, only large image files are used.
You do not need to store folder M or S, which contains medium or small image files, on the drive.
For the graphics accelerator, refer to the following.

➟8.26.4 ■1 Enlarging or reducing the display of a document

8.26.4 Operating the document display

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The following shows how to operate the document display.

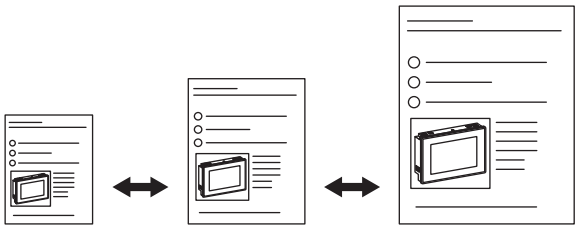
■1 Enlarging or reducing the display of a document

On the GOT, you can enlarge or reduce the display of a document on the document display object.
The frame size of the document display object remains unchanged even though the display of the document is enlarged or reduced.

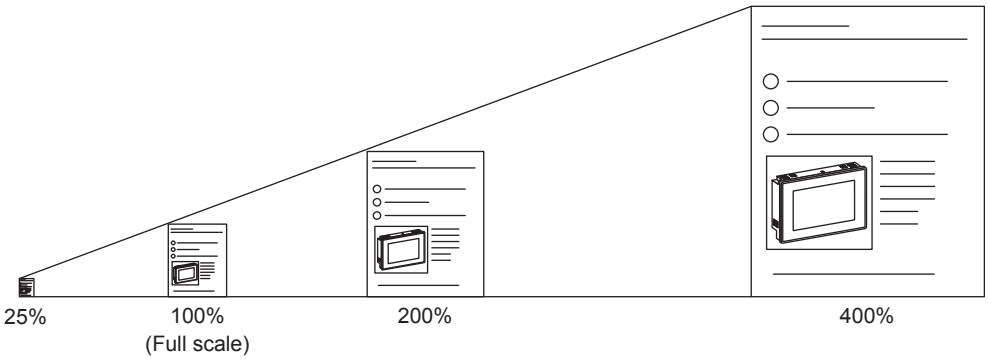
GOT Graphic Ver.2

When the display of a document is enlarged or reduced, the display varies depending on the document type.

- When the document type is set to [Document Converter Output File]
  The document size is switched to large, medium, or small.



- When the document type is set to [PDF File]
  The document size is enlarged or reduced by using the large size (100% magnification) as the reference.



When the document size is enlarged or reduced with the object gesture function, a magnification of 25% to 400% is used.
When the document size is enlarged or reduced with a key code switch, one of the following magnifications is used.

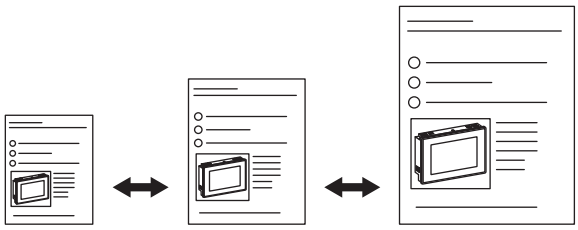
Magnification (%)										
25	37.5	50	62.5	75	87.5	100	125	150	200	400

GOT Graphic Ver.1

When the display of a document is enlarged or reduced, the display varies depending on the document type and the graphics accelerator setting.

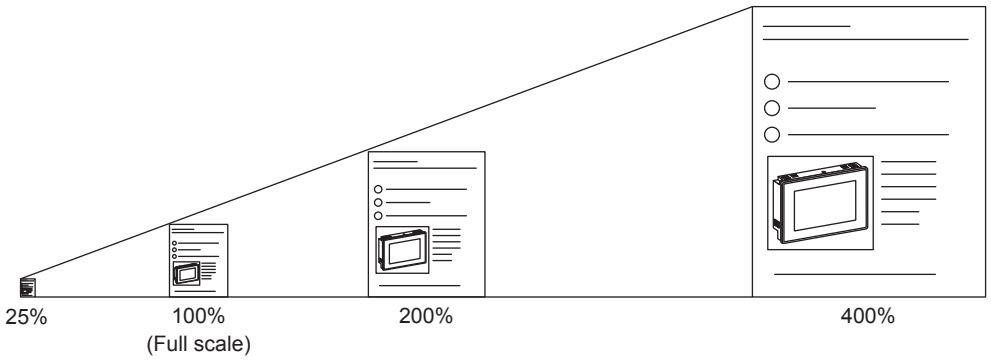
➟5.1.5 [Type Setting] dialog

- When the document type is set to [Document Converter Output File] and the graphics accelerator is disabled
  The document size is switched to large, medium, or small.



• When the document type is set to [PDF File] or when the document type is set to [Document Converter Output File] and the graphics accelerator is enabled

The document size is enlarged or reduced by using the large size (100% magnification) as the reference.



When the document size is enlarged or reduced with the object gesture function, a magnification of 25% to 400% is used.

When the document size is enlarged or reduced with a key code switch, one of the following magnifications is used.

Magnification (%)										
25	37.5	50	62.5	75	87.5	100	125	150	200	400

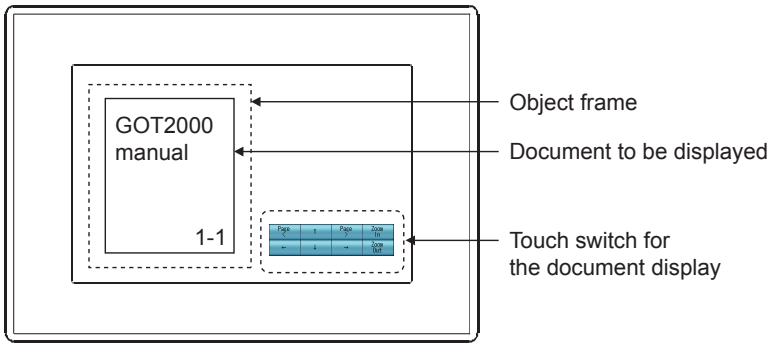
■2 Operating method of the document display

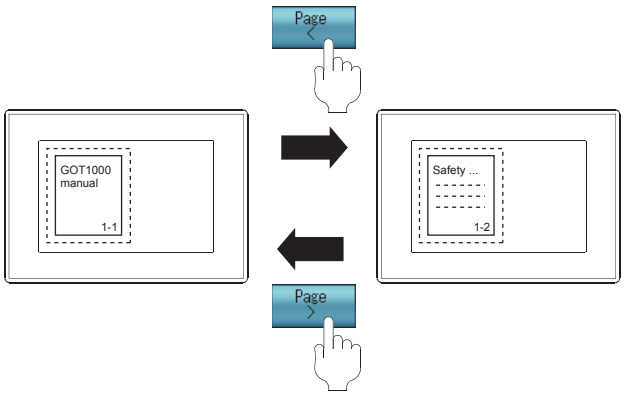
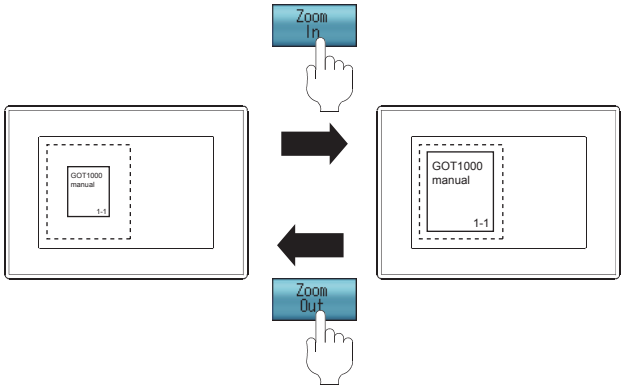
The following shows how to operate the document display.

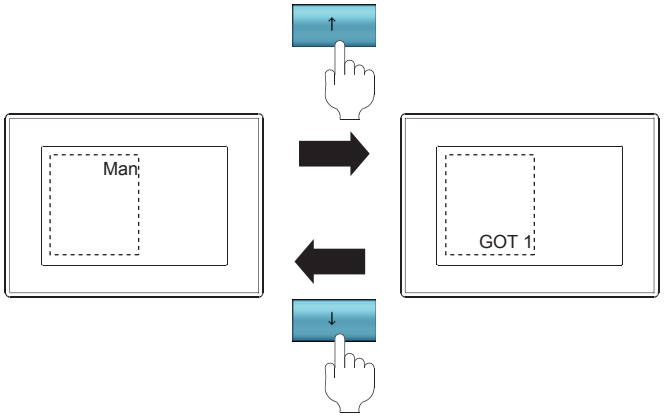
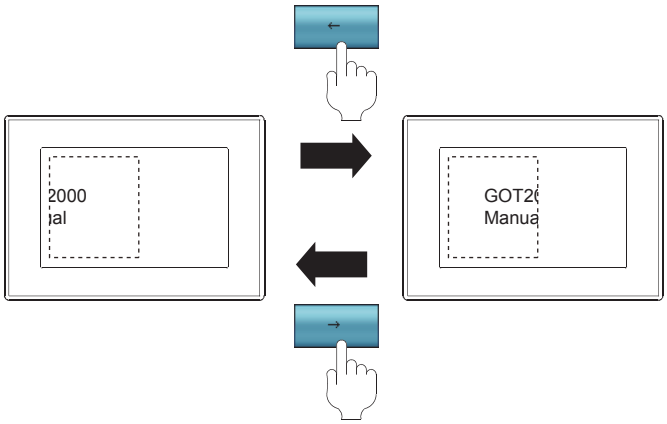
➟(1) Operations by using touch switches
(2) Operations by using the object gesture function
(3) Page switching by using a device
(4) Using bookmarks
(5) Keyword search in the [Search] window
(6) Key window for entering a search string

(1) Operations by using touch switches

Using touch switches where the key codes for the document display are set, operate the document display.
Touch switches for the document display are available by reading from the library of GT Designer3.
The characters and shapes on the touch switches can be changed by a user.
When key codes are set for touch switches, touch switches for the document display can be created by a user.



Touch switch	Key code	Description
Next page 	FFE0h	Moves to the next page or previous page.  When the page No. is specified using a device, the device value is changed according to the key operation.
Previous page 	FFE1h	
Expansion 	FFE2h	Enlarges or reduces the display of a page. When the display of a document is enlarged or reduced, the display is changed depending on the document type and the graphics accelerator setting. For the setting details, refer to the following. ➟■1 Enlarging or reducing the display of a document 
Reduction 	FFE3h	

<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Up Scroll
 </td><td>FFE4h</td><td rowspan="2">Scrolls the page either upward or downward.
 
When the top or bottom of the page is displayed, or the vertical size of the document is smaller than the object frame size (at vertical centering display), the keys do not work.</td></tr>
<tr><td>Down Scroll
 </td><td>FFE5h</td></tr>
<tr><td>Left Scroll
 </td><td>FFE6h</td><td rowspan="2">Scrolls the page either left or right.
 
When the left end or right end of the page is displayed, or the vertical size of the document is smaller than the object frame size (at horizontal centering display), the keys does not work.</td></tr>
<tr><td>Right Scroll
 </td><td>FFE7h</td></tr>
</table>

(2) Operations by using the object gesture function

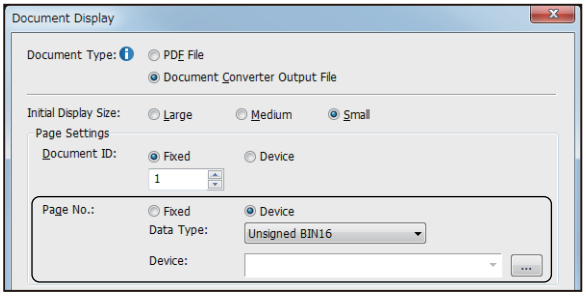
The display of objects can be operated using gestures.
For operations with gestures, refer to the following.

➟11.13 Operating Objects by the Gesture (Object Gesture Function)

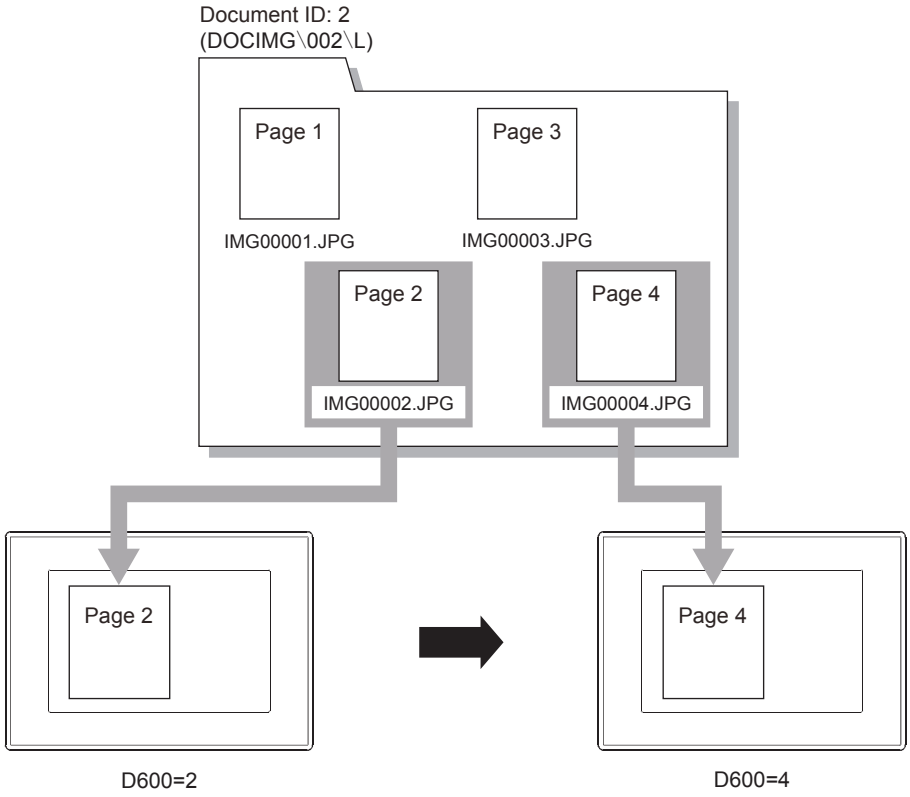
(3) Page switching by using a device

You can control the page displayed on the document display by using a device.
In the [Document Display] dialog, select [Device] for [Page No.] and set [Device].

➟8.26.6 [Document Display] dialog



Changing the set device value switches the page displayed on the document display.
Example) When [Document Type] is [Document Converter Output File], [Initial Display Size] is [Large], [Document ID] is [2], and [Device] is [D600]



(4) Using bookmarks

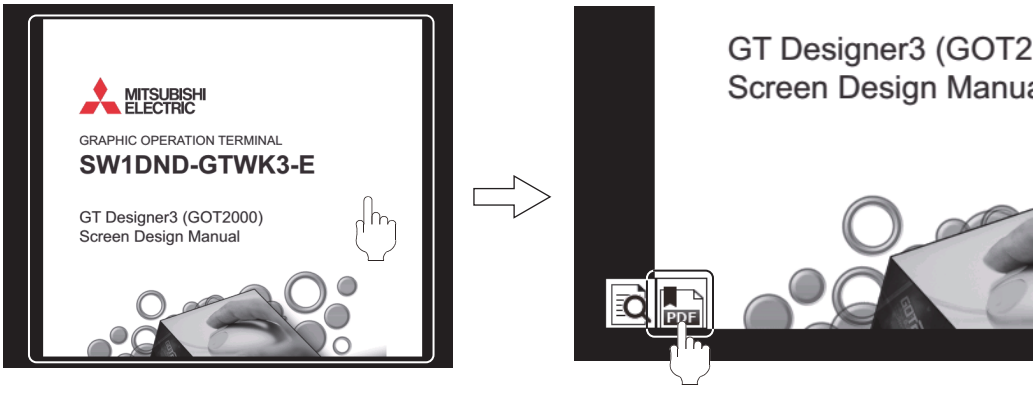
This function is available only when [Document Type] is set to [PDF File].
Touching a bookmark displays the linked page.
Up to 1000 bookmarks in 10 levels are displayable.
For a PDF file without bookmarks, nothing is displayed in the [Bookmark] window.
For the setting to use the [Bookmark] window, refer to the following.

➟8.26.6 [Document Display] dialog

The following shows how to operate the [Bookmark] window on the GOT.

Step 1 Touch a document display object to display the Bookmark button.

If no operation is performed within a certain time period, the Bookmark button is hidden.



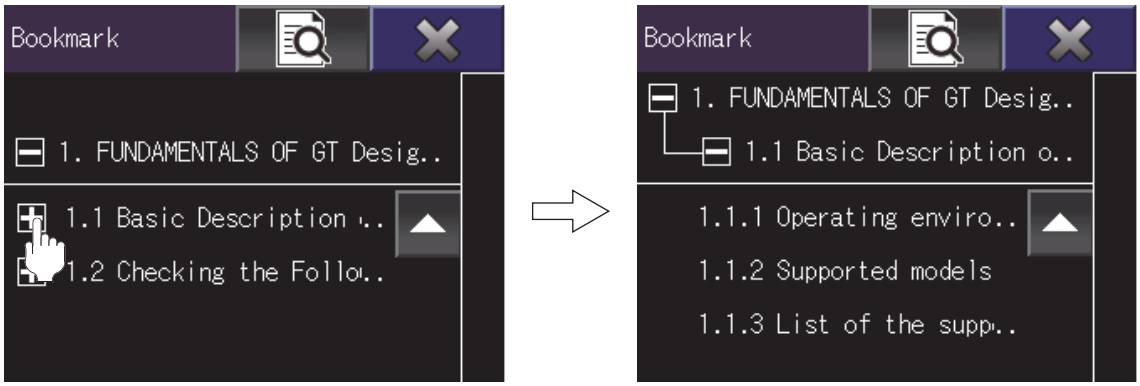
Touch the document display object. Touch the Bookmark button.

Step 2 Touch the Bookmark button to display the [Bookmark] window.

1) **Search button**
Switches to the [Search] window.

2) **[×] button**
Closes the [Bookmark] window.

3) **Bookmarks**
Touch a bookmark to display the linked page.
To expand a bookmark, touch [+] beside the bookmark.
In this case, only the bookmark and its child bookmarks are listed.
To return to the parent level, touch [-] beside the bookmark.



Touch [+] beside section 1.1.

4) **Change Window Width button**
Changes the width of the [Bookmark] window.

(5) Keyword search in the [Search] window

This function is available only when [Document Type] is set to [PDF File].
In the [Search] window, enter a keyword to search for in a PDF file.
The following strings cannot be searched for.

• String split across a page boundary
• One-byte string split over two lines
• Bookmark or annotation

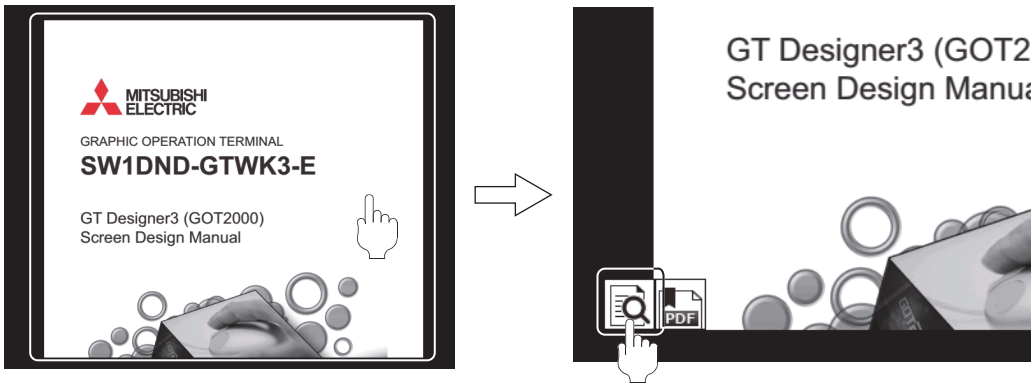
For the setting to use the [Search] window, refer to the following.

➟8.26.6 [Document Display] dialog

The following shows how to operate the [Search] window on the GOT.

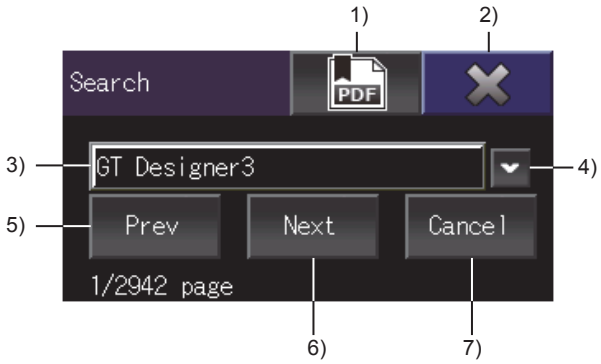
Step 1 Touch a document display object to display the Search button.

If no operation is performed within a certain time period, the Search button is hidden.



Touch the document display object. Touch the Search button.

Step 2 Touch the Search button to display the [Search] window.



1) **Bookmark button**
Switches to the [Bookmark] window.

2) **[×] button**
Closes the [Search] window.

3) **Search string entry field**
Touch the entry field to display the key window for entering a search string.

➟(6) Key window for entering a search string

Enter a string and touch the [ENTER] key in the key window to perform a search.
The search is case-sensitive and only returns exact matches.
Up to 47 Unicode characters can be entered.
The 48th and subsequent characters are deleted when the [Enter] key is touched.

4) **Search History button**
Lists up to 10 strings which are recently searched for.
Select a string from the search history to perform a search.
In this case, the selected string becomes the last-used one and moves to the top of the search history.
When the Disable Search History Update signal (GS523.b1) is on, the search history does not updates.
However, you can still perform searches using the strings in the search history.

5) **[Prev] button**
Searches for the previous instance of a string from the current page.

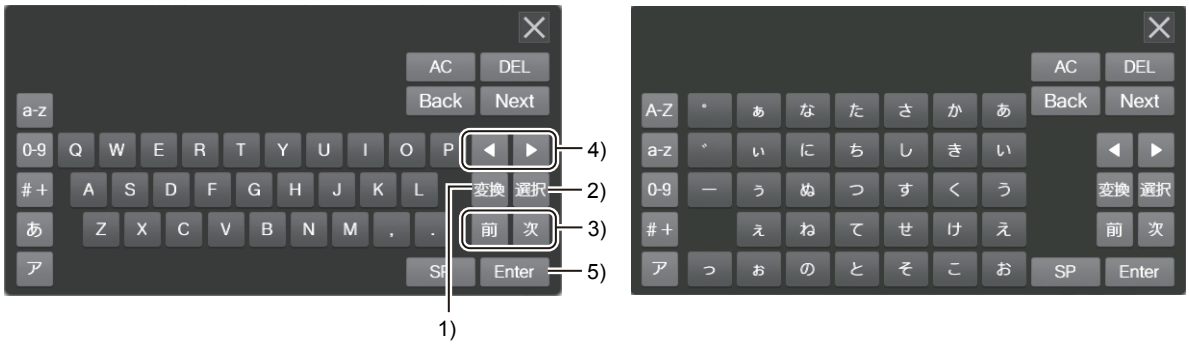
6) **[Next] button**
Searches for the next instance of a string from the current page.

7) **[Cancel] button**
Cancels the search.

(6) Key window for entering a search string

Enter a string to perform a search in the [Search] window.
For the basic operations of a key window, refer to the following.

➟5.2.4 Setting key windows ([Key Window])



Key window in alphabet mode　　Key window in kana mode

1) **Convert key**
This key is usable only when the system language is Japanese and the kana input is used.
Converts a group of hiragana characters to kanji characters.
If you touch this key during the conversion, the converted characters will be restored to their original state.

2) **Select key**
This key is usable only when the system language is Japanese.
Confirms the entry.

Before the entry is confirmed　　After the entry is confirmed

Up to 40 one-byte or 20 two-byte characters can be entered at one time.
To enter a longer string, touch the Select key before the number of the entered characters exceeds the above limit, and then enter the rest of characters.
When you convert multiple groups of hiragana characters, confirm each group of characters with the Select key.

3) **Previous key or Next key**
This key is usable only when the system language is Japanese and the kana input is used.
Converts a group of hiragana characters to kanji characters.
Switches between kanji conversion candidates.

4) **Cursor keys**
The behavior of the keys differs depending on the status of the entry.
- Before the entry is confirmed
  The keys change the range of the characters to be converted.
  After the change, perform a conversion.
- After the entry is confirmed
  The keys move the cursor.

5) **[Enter] key**
Executes a search based on the entered string.

■3 Specifying the first page to appear by keyword searching

This function is available only when [Document Type] is set to [PDF File].
If screens are switched or the display conditions are satisfied, the document display object appears, and then the specified keyword is searched for in the document.
The document display object displays the page on which the first occurrence of the keyword is found.
To enable this function, select [Specify the display page with a keyword] in the [Document Display] dialog.

➟8.26.6 [Document Display] dialog

A search is performed to find only the first hit when the document display object is displayed.
The hit will be highlighted.
No notification will be provided if an error occurs.
To go to another hit or to receive error notifications, enable the search control with devices.

➟(1) Controlling the search with devices

The following strings cannot be searched for.

• String split across a page boundary
• One-byte string split over two lines
• Bookmark or annotation

To specify a search keyword, select one of the following methods.

• Specifying a registered comment as the keyword
  Specify a comment to search for with a comment group number, comment number, and comment column number.
  Specify each number directly or with a device.

➟5.8 Comment Setting ([Comment])

• Storing a string to be the keyword in devices
  Use the string stored in devices as the keyword.

Up to 47 characters are usable in the string.
Set how to specify the keyword in the [Setting] dialog.

➟8.26.6 ■1 [Setting] dialog (Search settings for the document display object)

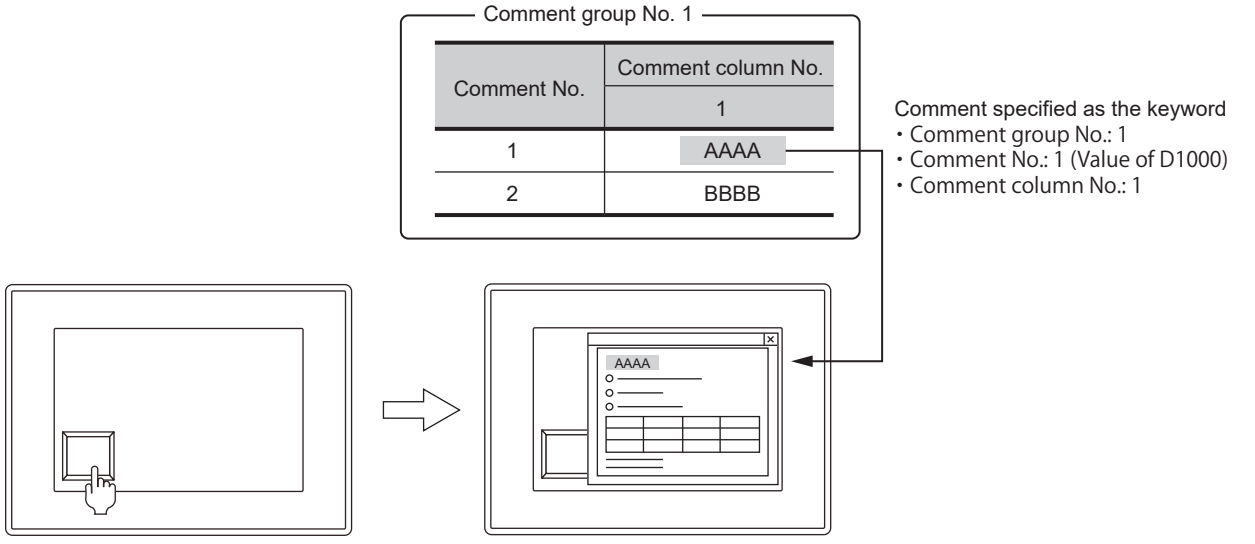
The following shows an example of specifying a comment as the keyword.
Example) Using a switch to display a window screen on which a document display object is placed
Place a document display object on window screen 1, select [Specify the display page with a keyword], and configure the following settings in the [Setting] dialog.

• [Keyword]: [Comment]
• [Comment Group No.]: 1
• [Comment No.]: Value of D1000
• [Comment Column No.]: 1

Place a switch on base screen 1, and configure the settings on the [Action] tab so that the following operations are performed.

• [Word Set]: Storing comment No. 1 in D1000
• [Screen Switching]: Displaying window screen 1 as overlap window 1

Touching the switch displays overlap window 1.
The document display object displays the page on which the first hit is found.



(1) Controlling the search with devices

To control the search and receive search-related notifications, use the search control device and the search status notification device.

- To start or abort a search, use the search control device.
- To receive notification of a search state or an error, use the search status notification device.

To set the devices, select [Control the search] in the [Setting] dialog.
For the function of each bit of the devices, refer to the following.

➡8.26.6 ■1 [Setting] dialog (Search settings for the document display object)

If this search control is enabled, a search will not be performed automatically when a document display object is displayed.
To start a search, turn on the search trigger device (b0 of the search control device).

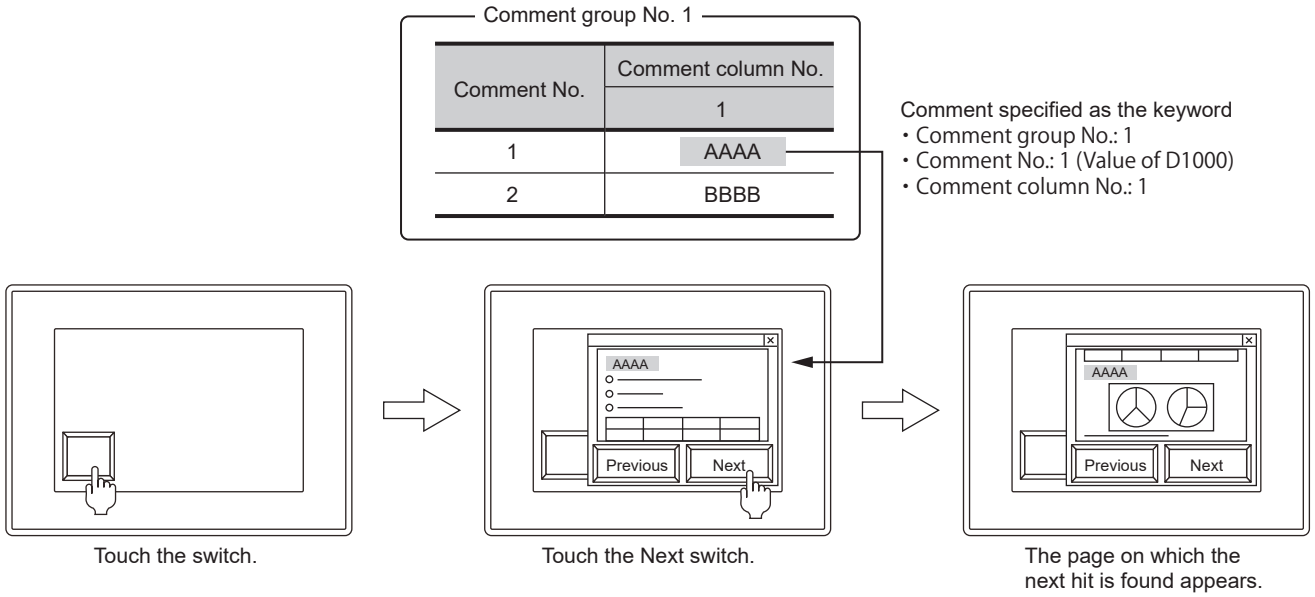
The following shows an example of controlling the search with the devices.
Example) Finding a hit after the document display object displays the page on which the first hit is found
Configure the following settings.

Item	Object or function	Setting

Common setting	Screen script	For window screen 1, set a screen script so that turning on the device notifying that a search is in progress (D3000.b0) turns off the search trigger device (D2000.b0).
		• [Trigger Type]: [Ordinary]
		`if([b:D3000.b0] == 1){`
		`  [b:D2000.b0] = 0;`
		`}`

Base screen 1	Switch	Switch to display the screen on which a document display object is placed. On the [Action] tab, configure the settings so that the following operations are performed. • [Word Set]: Storing comment No. 1 in D1000 • [Bit Set]: Turning on the search trigger device (D2000.b0) • [Screen Switching]: Displaying window screen 1 as overlap window 1
Window screen 1	Document display object	Select [Specify the display page with a keyword], and configure the following settings in the [Setting] dialog. • [Keyword]: [Comment] • [Comment Group No.]: 1 • [Comment No.]: Value of D1000 • [Comment Column No.]: 1 • [Control the search]: Selected • [Search Control Device]: D2000 • [Search Status Notification Device]: D3000
	Switch (Previous)	Switch to go to the previous hit. On the [Action] tab, configure the settings so that the following operations are performed. • [Bit Set]: Turning on the device that reverses the search direction (D2000.b1) • [Bit Set]: Turning on the search trigger device (D2000.b0)
	Switch (Next)	Switch to go to the next hit. On the [Action] tab, configure the settings so that the following operations are performed. • [Bit Set]: Turning off the device that reverses the search direction (D2000.b1) • [Bit Set]: Turning on the search trigger device (D2000.b0)

Touching the switch displays overlap window 1.
The document display object displays the page on which the first hit is found.
Touching the Previous or Next switch goes to the previous or next hit, starting from the first hit.



Even while the [Search] window is being displayed, you can perform a search using the search control device.
In this case, the entered keyword and buttons in the [Search] window are unusable.
If you perform a search using the search control device while a search in the [Search] window is in progress, the search will start upon completion of the search in progress.

8.26.5 Precautions for a document display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the document.

■1 When the page is switched to a nonexistent page

When a nonexistent page is specified at switching the page, no document is displayed.
The Document Display Status Notification signal (GS276.b0) turns on.

■2 When a document is not displayable

In the following cases, a document is not displayable on the document display object.
The Document Error signal (GS276.b0) turns on when a document is not displayable.

- The specified file is nonexistent.
- The type of the specified file differs from the set document type.
- The specified file is corrupt.
- No data storage is installed.
- The data storage is unformatted.
- No file server is connected.
- The file server is turned off.
- The SD card cover of the GOT is open.
- The SD card access switch of the GOT is turned off.
- A nonexistent document ID number or page number is specified.
- The size of a JPEG file exceeds the size of 1240 dots × 840 dots or 840 dots × 1240 dots.
- The size of a JPEG file converted with Document Converter exceeds 960 KB.
- The specified PDF file is not supported.
- The specified PDF file is password-protected.
- A page in the specified PDF file contains a large image file.
  A document that contains a large image file may not be displayed.
  Create a PDF file that does not contain a large image file.
- The page size (paper size) of the specified PDF file is large.
  Create a PDF file with a reduced page size.
- A page in the specified PDF file contains many figures and objects.
  Create a PDF file with reduced number of figures and objects in a page.

■3 When a document cannot be cached to display

A document cannot be cached to display in the following cases.
The Cache Invalidated signal (GS276.b1) turns on when the cache is unavailable.

- The data storage or file server is write-protected.
- The data storage or file server has insufficient free space.
- The data storage or file server is faulty.
- The Invalidate Cache signal (GS523.b0) is on.

■4 Restrictions when the graphics accelerator setting and the display order setting are both configured

GOT Graphic Ver.1

When the following settings are both configured in the [Type Setting] dialog, the GOT has restrictions on its operations.

- [Enable the graphics accelerator to smooth the screen gesture and document display operations] is selected.
- [Adjust object display order in GOT to the one in GT Designer3] is selected.

(1) Refresh stop of the object display

While the document display is being operated, the displays of the other objects are not refreshed.

(2) Functions that do not operate normally

While the document display is being operated, some functions may not operate normally.
Do not use the following functions simultaneously with the document display.

- Free figure drawing function of the object script
- Parts display ([Display Mode]: [Overwrite])
- Scatter graph ([Display Mode]: [Locus])

■5 PDF file which cannot be converted

When the font used in the PDF file is in either of the following statuses, the PDF file cannot be used for the document display.

- The font does not exist in the operating environment (in Windows).
- The font information is not embedded in the PDF file.

In the above cases, an error occurs at the conversion using Document Converter.
Convert the page which cannot be converted using Document Converter in the following procedure.

Step 1 Select [Page] for [Output Page] and execute the conversion.

Step 2 Check the page which cannot be converted with the error message.

Step 3 Capture the image of the page which cannot be converted, and save the captured image as an image file (JPEG or BMP).

Step 4 Convert the saved image file (JPEG or BMP) using Document Converter.

■6 Sharing a PDF file on the network drive with multiple GOTs

In the folder containing the PDF file, a search history file is created with the same filename as the PDF file.
If multiple GOTs share a PDF file on the network drive, the search history file is updated with the data of the last GOT that performed a search.
To disable updating of the search history file, turn on GS523.b1.

8.26.6 [Document Display] dialog

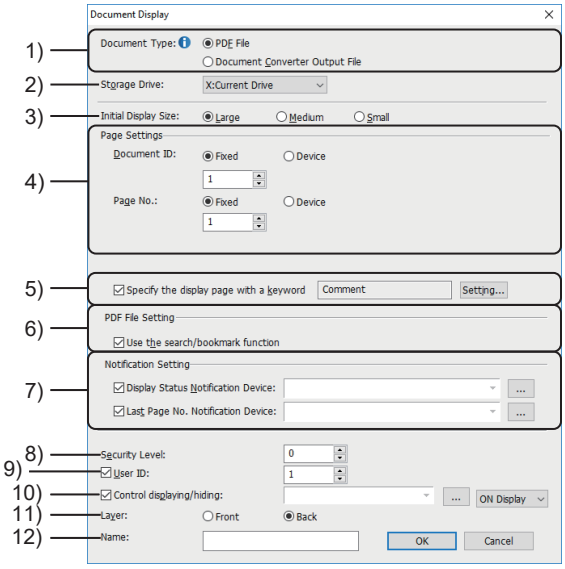
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The document display is an object that displays documents created with a personal computer (such as Microsoft Word, Microsoft Excel) on the GOT.

Step 1 Select [Object] → [Document Display] from the menu.

Step 2 Click the position where you place the document display. Placing the document display is completed.

Step 3 Double-click the document display which has been placed to display the setting dialog.



1) **[Document Type]**

Select the type of a document to be displayed on the document display object.

The following shows selectable items.

- [PDF File]

  Displays a PDF file as it is.

  For the storage location of the PDF files, refer to the following.

  ➟8.26.2 ■2 Storing files on a data storage or file server

- [Document Converter Output File]

  Displays a JPEG file that is converted from a document in another format with Document Converter.

  For the storage location of the JPEG files, refer to the following.

  ➟8.26.3 ■3 Storing files on a data storage or file server

2) **[Storage Drive]**

Select a location to store files to be displayed on the document display object.

The following shows selectable items.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [N:Network Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

3) **[Initial Display Size]**

Select the initial size of the document display to be displayed at screen switching.

The following shows selectable items.

GOT Graphic Ver.2

The selection for [Document Type] determines the GOT operation.

When the document type is set to [PDF File]

- [Large]: Displays a large PDF file at 100% magnification.
- [Medium]: Displays a large PDF file at 75% magnification.
- [Small]: Displays a large PDF file at 50% magnification.

When the document type is set to [Document Converter Output File]

- [Large]: Displays a large JPEG file.
- [Medium]: Displays a medium JPEG file.
- [Small]: Displays a small JPEG file.

GOT Graphic Ver.1

The selection for [Document Type] and the graphics accelerator setting determine the GOT operation.

➟5.1.5 [Type Setting] dialog

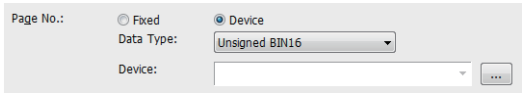
When [Document Type] is set to [PDF File] or [Document Converter Output File] and the graphics accelerator is enabled

- [Large]: Displays a large PDF file or JPEG file at 100% magnification.
- [Medium]: Displays a large PDF file or JPEG file at 75% magnification.
- [Small]: Displays a large PDF file or JPEG file at 50% magnification.

When [Document Type] is set to [Document Converter Output File] and the graphics accelerator is disabled

- [Large]: Displays a large JPEG file.
- [Medium]: Displays a medium JPEG file.
- [Small]: Displays a small JPEG file.

4) **[Page Settings]**

Item	Description
[Document ID]	Select how to set a document ID. If an nonexistent document ID is set, no document is displayed.The following shows the items to be selected. • [Fixed]: Sets the document ID by entering a number directly. Set the document ID of the document to be displayed first at screen switching. The setting range is [1] to [32767]. • [Device]: Sets the document ID by specifying a device value. Set a device that specifies the document ID. ➟6.1.2 How to set devices
[Page No.]	Select how to set the page to be displayed. The following shows the items to be selected. • [Fixed]: Sets the page number by entering a number directly. Set the number of a page to be displayed first upon screen switching. The setting range is [0] to [65535]. • [Device]: Select this item to specify a page No. with the device value.  • **[Data Type]** Select a data type of the word device. The following shows selectable items. ·[Unsigned BIN16] ·[BCD16] • **[Device]** Set a device that specifies the page number. ➟6.1.2 How to set devices

5) **[Specify the display page with a keyword]**

This item is selectable when [Document Type] is set to [PDF File].

Displays the page on which the first occurrence of the specified keyword is found.

➟8.26.4 ■3 Specifying the first page to appear by keyword searching

Click the [Setting] button to display the [Setting] dialog.

➟■1 [Setting] dialog (Search settings for the document display object)

6) **[Use the search/bookmark function]**

This item is selectable when [Document Type] is set to [PDF File].

Select this item to use the search in the [Search] window or the bookmark function.

➟8.26.4 ■2 (4) Using bookmarks
8.26.4 ■2 (5) Keyword search in the [Search] window

In the [Environmental Setting] window ([Screen Switching/Window]), select [Use also as a system window] for the overlap window to be used as a system window.

➟5.2.1 ■5 [Screen Switching/Window]

7) **[Notification Setting]**

Item	Description
[Display Status Notification Device]	Set a device that notifies the display status of a document. The device stores any of the following values according to the display status of the document. • 0: Normal • 1: The specified file is nonexistent or exceeds 3 MB. The data storage or file server is inaccessible. • 2: The specified file is not an image file or is corrupt. • 3: The specified document ID is outside the range of 1 to 32767, or the specified document is nonexistent. • 4: A nonexistent page number is specified. • 101: The specified PDF file is nonexistent. The data storage or file server is inaccessible. • 102: The specified PDF file is not supported or is corrupt. • 103: The document ID of the specified PDF file is outside the range of 1 to 32767, or no PDF file corresponds to the document ID. • 104: The specified page number is nonexistent in the target PDF file. • 105: The specified PDF file is password-protected. • 107: The data size of a page in the specified PDF file exceeds 30 MB.
[Last Page No. Notification Device]	Set a device that notifies the last page number of the document corresponding to a specified document ID.

8) **[Security Level]**

Set the security level when using the security function.
The setting range is [1] to [15].
Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

9) **[User ID]**

Select this item to set the user ID.
The setting range is [1] to [65535].

10) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
When the set device is in either the ON or OFF status, select whether or not to display the object.
The following shows selectable items.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

11) **[Layer]**

Select the layer to arrange the object on.
The following shows selectable items.

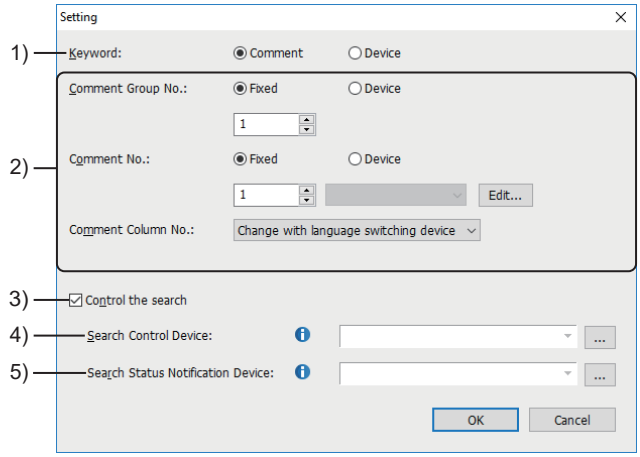
- [Front]
- [Back]

12) **[Name]**

Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

■1 [Setting] dialog (Search settings for the document display object)

Set how to specify a keyword to search for in the document, and set devices to control the search.



1) **[Keyword]**

Select how to specify a search keyword.

The following shows selectable items.

- [Comment]

  Uses a comment registered in a comment group as the keyword.

  ➟5.8 Comment Setting ([Comment])

  If the specified comment has 48 or more characters, the first 47 characters are used as the keyword.
- [Device]

  Uses the string stored in devices as the keyword.

2) **Keyword settings**

The setting items vary according to the selection for [Keyword].

For the details, refer to the following.

➟(1) When specifying a comment as the keyword
(2) When specifying the string stored in devices as the keyword

3) **[Control the search]**

Controls the search and receives search-related notifications with devices.

Set [Search Control Device] and [Search Status Notification Device].

4) **[Search Control Device]**

Set a device to control the search.

The following shows the function of each bit of the set device.

Bit number	Function
b0	Turn on this bit to start searching for the specified keyword. If a document display object is displayed while this bit is on, a search will start. Make sure to turn off this bit if b0 of the search status notification device is turned on.
b1	Switches between the search directions. While this bit is on, turning on b0 of the search control device goes to the previous hit.
b2	Turn on this bit to abort the search in progress. Make sure to turn off this bit.
b3 to b15	Use prohibited

5) **[Search Status Notification Device]**

Set a device that notifies a search state.

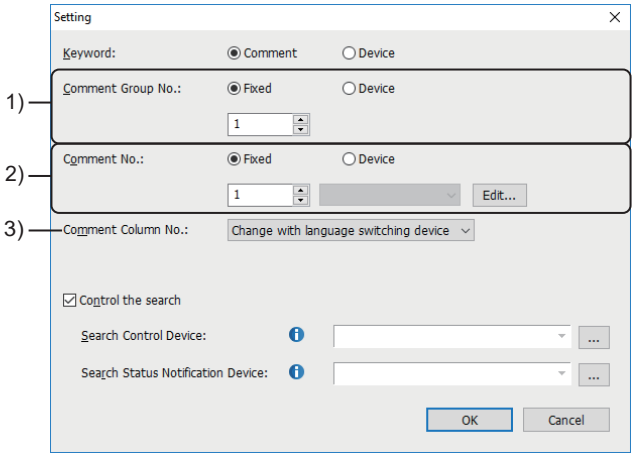
The following shows the function of each bit of the set device.

Bit number	Function
b0	This bit is turned on when b0 of the search control device is turned on to start a search. This bit is turned off when the search in progress is completed and b0 of the search control device is turned off. This bit is turned off when the document display object is hidden because of screens being switched or other events.

Bit number	Function
b1	This bit is turned on when the search returns to the first hit. This bit is turned off when b0 of the search control device is turned on to start a search. This bit is turned off when the document display object is hidden because of screens being switched or other events.
b2	This bit is turned on when the search returns no hits. This bit is turned off when b0 of the search control device is turned on to start a search. This bit is turned off when the document display object is hidden because of screens being switched or other events.
b3 to b13	Use prohibited
b14	This bit is turned on when no keyword is specified, such as in the following cases. • The comment to search for is nonexistent. • The specified devices store no string to search for. This bit is turned off when b0 of the search control device is turned on to start a search. This bit is turned off when the document display object is hidden because of screens being switched or other events.
b15	This bit is turned on if the search fails. This bit is turned off when b0 of the search control device is turned on to start a search. This bit is turned off when the document display object is hidden because of screens being switched or other events.

(1) When specifying a comment as the keyword

Set how to specify a comment group number, comment number, and comment column number.



1) **[Comment Group No.]**

Select how to specify a comment group number.

The following shows selectable items.

- [Fixed]

  Specify a comment group number directly.

  The setting range is [1] to [500].

  If the specified comment group number is nonexistent, a search will not be performed.

- [Device]

  Specify a comment group number with a device.

  Select this item, and specify a device.

  If the specified comment group number is nonexistent, a search will not be performed.

  If a value outside the range of 1 to 500 is specified, it is assumed to be 1.

2) **[Comment No.]**

Select how to specify a comment number.

The following shows selectable items.

- [Fixed]

  Specify a comment number directly.

  The setting range is [1] to [32767].

  If the specified comment number is nonexistent, a search will not be performed.

  Click the [Edit] button to display the [Edit Comment] dialog.

  For the details of the [Edit Comment] dialog, refer to the following.

  ➟12.15.4 [Edit Comment] dialog

- [Device]

Specify a comment number with a device.
Select this item, and specify a device.
If the specified comment number is nonexistent or a value outside the range of 1 to 32767 is specified, a search will not be performed.

3) **[Comment Column No.]**

Select how to specify a comment column number.
The following shows selectable items.

- [Change with language switching device]

  Specifies the value of the language switching device as the comment column number.
  If the specified comment column number is nonexistent or a value outside the range of 1 to 30 is specified, a search will not be performed.
  If [Display] is selected for [Alternative Display (when the language switching device value is out of the range (1-30) or comment column No. does not exist)], a comment in the specified comment column is used as the keyword.
  For the setting details, refer to the following.

  ➟5.2.2 ■4 [Language Switching]
  5.8.4 ■2 Creating a new comment group

- [Fixed]

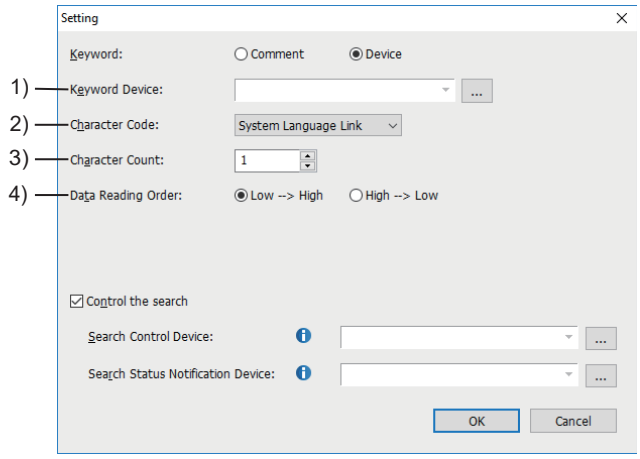
  Specify a comment column number directly.
  The setting range is [1] to [30].
  If the specified comment column number is nonexistent, a search will not be performed.

- [Device]

  Specify a comment column number with a device.
  Select this item, and specify a device.
  If the specified comment column number is nonexistent, a search will not be performed.
  If a value outside the range of 1 to 30 is specified, it is assumed to be 1.

(2) When specifying the string stored in devices as the keyword

Set consecutive devices that store a string to search for.



1) **[Keyword Device]**

Specify the first device of consecutive devices that store a string to search for.
As many devices as the set value of [Character Count] are used.

2) **[Character Code]**

Set the character code of a string.
The following shows selectable items.

- [System Language Link]
- [ASCII]
- [Unicode]
- [S-JIS]
- [GB]
- [KS]
- [Big5]

3) **[Character Count]**

Specify the maximum number of characters in a string.

The setting range is [1] to [47].

4) **[Data Reading Order]**
Select the order in which data is read from the specified devices.
- [Low --> High]
- [High --> Low]

8.26.7 Relevant settings

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Set the relevant settings other than the specific settings for the document display as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Enabling the gesture function	[Use the gesture function]
Smoothing the operations of the document display	GOT Graphic Ver.1 [Enable the graphics accelerator to smooth the screen gesture and document display operations]

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Checking if the document is displayed. (Write device)	GS276.b0
Notifying that a PDF file cannot be cached to display. (Write device)	GS276.b1
Notifying the display quality when a PDF document is displayed (Write device)	GS276.b2
Notifying that the display size of the document has been changed by GS523.b3. (Write device)	GS276.b3
Displaying a PDF file without caching the file. (Read device)	GS523.b0
Using the PDF search function without creating or updating the search history file. (Read device)	GS523.b1
Displaying a PDF document in high quality (Read device)	GS523.b2
Fitting the displayed PDF document to the object width. (Read device)	GS523.b3

8.27 Placing a Video/RGB Display Object

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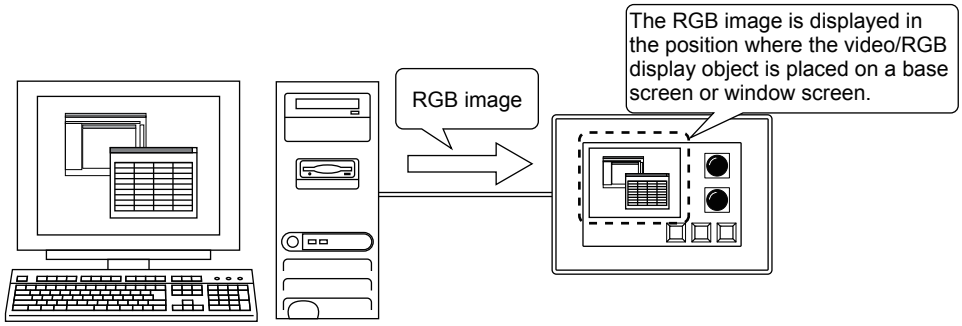
Not available to GT2705-V.
Displaying video images will be supported soon.
The video/RGB display object displays an RGB image on a base screen or window screen.
You can specify the exact display position of an input image just by placing a video/RGB display object on a screen, which is unavailable with the video/RGB display function.
The display magnification, rotation angle, inversion, and others are also settable, displaying an RGB image in various ways.



Point

RGB input unit applicable to the video/RGB display object

Use GT27-R2 for the video/RGB display object.
GT27-R2-Z or GT27-V4R1-Z is not applicable.
When using GT27-R2-Z or GT27-V4R1-Z, use the RGB display function.

➟10.7 Displaying Image from a Personal Computer on the GOT (RGB Display Function)

8.27.1 Specifications of the video/RGB display object

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■1 System application (extended function)

To use the video/RGB display object, a system application (extended function) of [Video/RGB (Object)] is required.
To incorporate the application into package data automatically, select [Use Video/RGB Input] and select [GT27-R2 (RGB Screen only)] for [Unit Type Name] in the [Video/RGB Input] dialog.

■2 Required version of BootOS

To use GT27-R2, install version N or later of BootOS on the GOT.

➟4.3.2 Transferring data

■3 Resolution and refresh rate

The video/RGB display object supports the following resolutions and refresh rates.

Resolution	Refresh rate (Hz)
XGA(1024×768 dots)	60
SVGA(800×600 dots)	60/72/75
VGA(640×480 dots)	60/72/75/85

■4 Applicable channel

The video/RGB display object can display an image input from the following channels.

Input signal	Number of applicable channels	Applicable channel number
RGB input	2	CH1, CH2

■5 Maximum number of objects that can be placed on one screen

Up to four video/RGB display objects can be placed on one screen.
The GOT can simultaneously display up to four video/RGB display objects placed on base screens and window screens. The other video/RGB display objects are not displayed.
Configure the setting so as to display up to four video/RGB display objects placed on base screens and window screens simultaneously.

■6 Applicable screen

The video/RGB display object can be placed on the following screens.

- Base screen
- Overlap window
- Superimpose window
- User-created key window
- Dialog window

■7 Size of the video/RGB display object

The position and size (width and height) of the video/RGB display object are settable in units of 4 dots.
The settable size range is 64 by 64 dots to 1280 by 1024 dots.

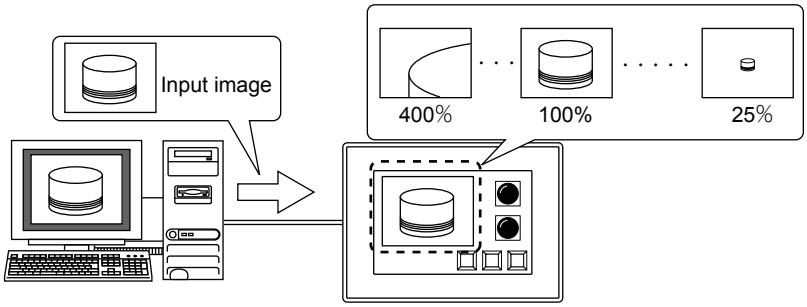
■8 Displaying an input image

Input images are displayable in various ways by using the video/RGB display object.
For the details of the setting method, refer to the following.

➟8.27.4 [Video/RGB Display] dialog

(1) Display magnification

You can change the display magnification of an input image.
[Fixed], [Device], and [Auto-resizing] are selectable to specify the display magnification.
For [Fixed], the following magnification factors are selectable: [400], [200], [100], [87.5], [75], [62.5], [50], [37.5], or [25] (%).

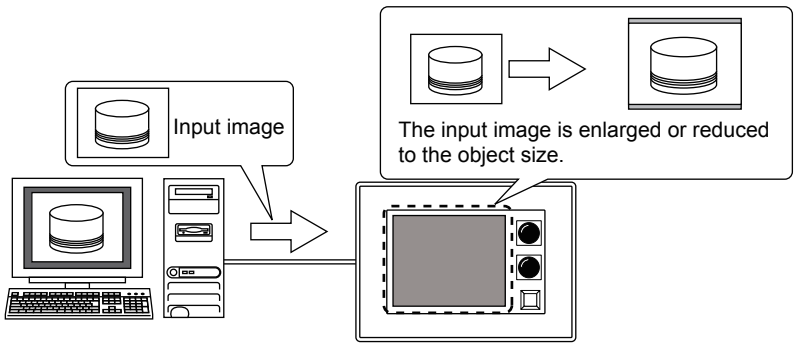


For [Device], the display magnification depends on the device value as shown below.

Device value	Display magnification
0	100%
1	87.5%
2	75%
3	62.5%
4	50%
5	37.5%
6	25%
7	400%
8	200%
9 to 24	100%
25 to 400*1	25% to 400%, or 100%
401 or more	100%

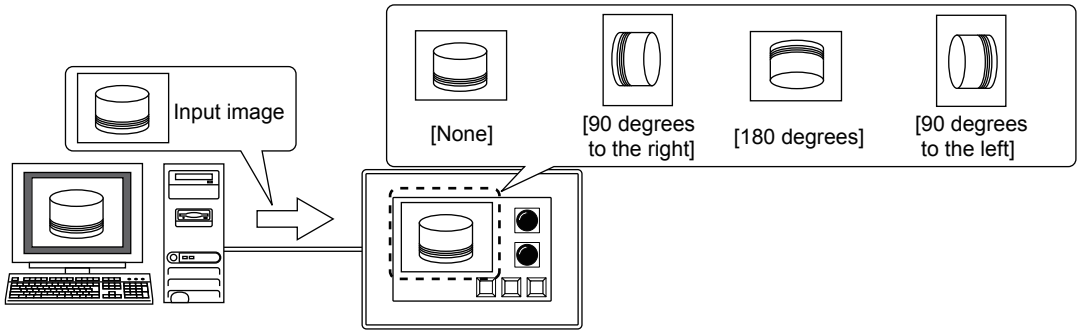
*1 When the object gesture function is enabled, the magnification range of 25% to 400% is applied.
When the object gesture function is disabled, the magnification of 100% is applied.

For [Auto-resizing], an input image is displayed according to the size of a video/RGB display object.
When the aspect (length-to-width) ratios differ between an input image and a video/RGB display object, the image is enlarged or reduced to the object size with the image aspect ratio unchanged.



(2) Rotation angle

You can rotate an input image in units of 90 degrees.
[Fixed] and [Device] are selectable to specify the rotation angle.
For [Fixed], the following rotation angles are selectable: [None], [90 degrees to the right], [180 degrees], and [90 degrees to the left].

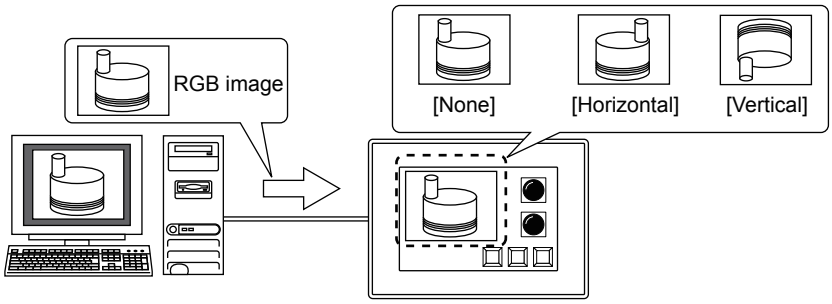


For [Device], the rotation angle depends on the device value as shown below.

Device value	Rotation angle
0	[None]
1	[90 degrees to the right]
2	[180 degrees]
3	[90 degrees to the left]
4 or more	[None]

(3) Inversion

You can invert an input image horizontally or vertically.
[Fixed] or [Device] are selectable to set the inversion method.
For [Fixed], the following inversion methods are selectable: [None], [Horizontal], and [Vertical].



For [Device], the inversion method depends on the device value as shown below.

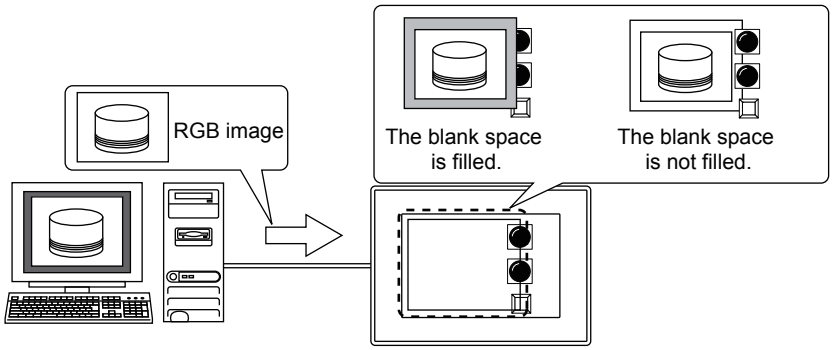
Device value	Inversion method
0	[None]
1	[Horizontal]
2	[Vertical]
3 or more	[None]

(4) Filling blank space

You can select whether to fill blank space with a specified color when an input image is smaller than a video/RGB display object.

For filling blank space, 65536 colors are selectable.

When the blank space is not filled, other figures and objects under the blank space are displayed.



(5) Clip display

You can specify the clip origin to cut out a part of an input image to be displayed.

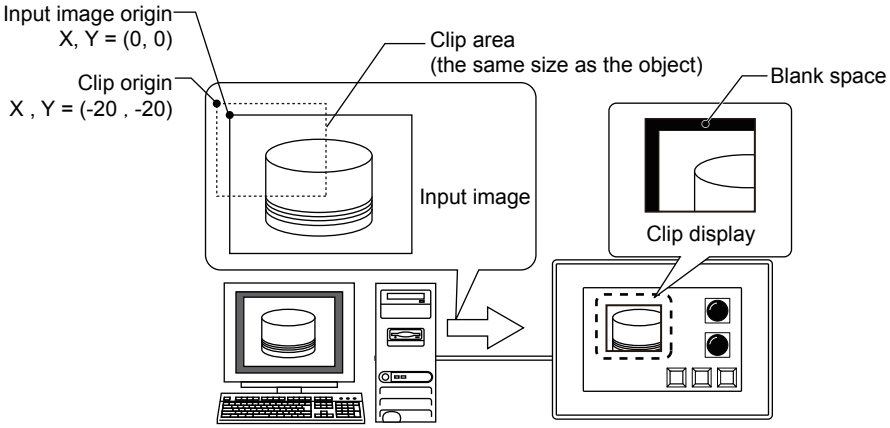
Specify the clip origin in units of 4 dots by using the X and Y coordinates of the input image as the reference.

The following shows the setting ranges for the X and Y coordinates of the clip origin.

- X coordinate: -1280 dots to 1280 dots
- Y coordinate: -1024 dots to 1024 dots

The clip origin is in the upper left corner of the clip area. The GOT displays the clip area as the same size as the video/RGB display object.

Portions of the clip area that extend off the input image are displayed as blank space.



[Fixed] and [Device] are selectable to specify the clip origin.

When selecting [Device], set the first device. Two consecutive devices (signed 16-bit binary), the first device and the subsequent device, are automatically assigned to the X and Y coordinates of the clip origin.

- First device: X coordinate
- Second device: Y coordinate

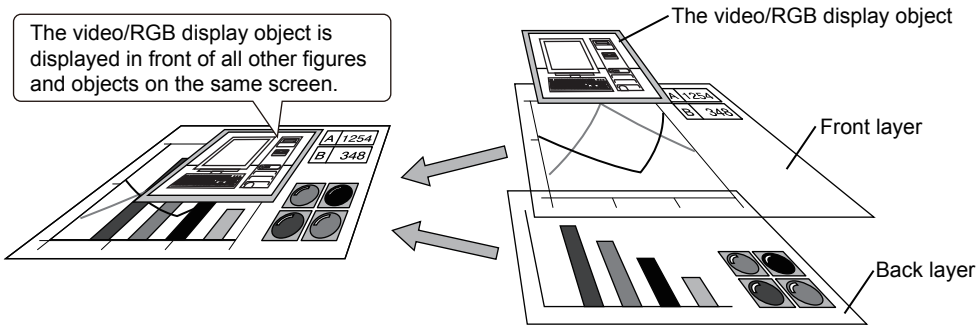
■9 Display mode

The video/RGB display object is displayed in front of or behind all other figures and objects on the same screen, regardless of the layers and object display order of the screen.
When the video/RGB display object is displayed behind all other figures and objects, the transparent method and color are settable with [Display Mode] in the [Video/RGB Input Common] dialog.
For the setting procedure, refer to the following.

➟10.6.5 [Video/RGB Input] dialog

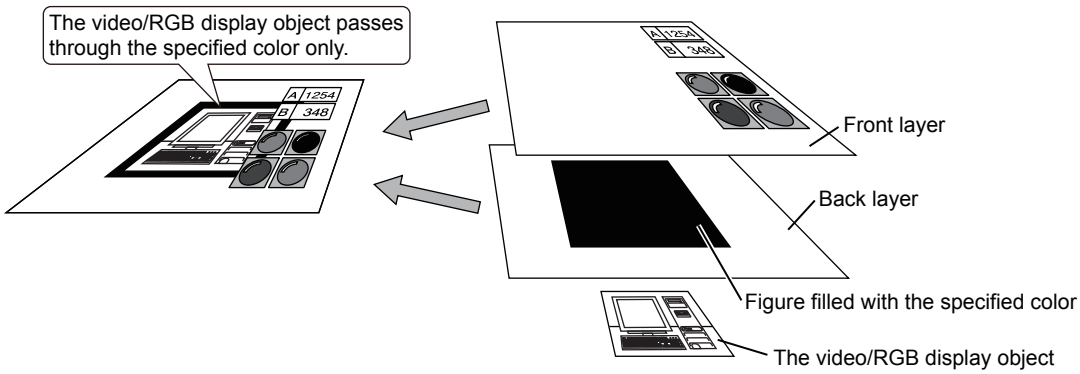
(1) Display in the foreground

The video/RGB display object is displayed in front of all other figures and objects on the same screen.
Overlapping figures and objects are hidden behind the video/RGB display object.



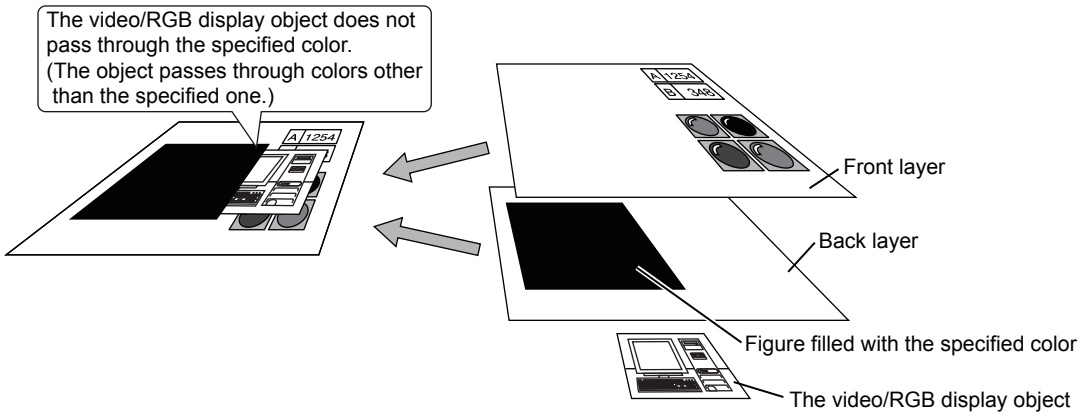
(2) Display on the specified color area (behind all other figures and objects)

The video/RGB display object is displayed behind all other figures and objects on the same screen.
When a figure or object overlaps the video/RGB display object, the video/RGB display object passes through the specified color.



(3) Display on the area of other colors (behind all other figures and objects)

The video/RGB display object is displayed behind all other figures and objects on the same screen.
When a figure or object overlaps the video/RBB display object, the video/RGB display object does not pass through the specified color.
(However, the video/RBG display object passes through colors other than the specified one.)



8.27.2 How to use the video/RGB display object

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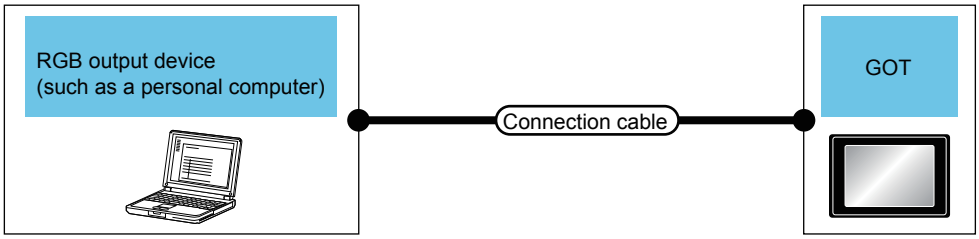
■1 System configuration

The following shows the system configuration to use the video/RGB display object.



Signal type	RGB output device	Connection cable*1	GOT		Number of connectable RGB devices
			Option	GOT model	
Analog RGB	For the connectable RGB output devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT15-C50VG(5m) or Preparing connection cables by each user*2	GT27-R2	GT27	Two RGB output devices for one GOT

*1 The cable length depends on the specifications of the RGB output device used.

*2 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputer, MODBUS/Fieldbus Products, Peripherals) for GT Works3 Version1

■2 Setting procedure

Step 1 Connect the GOT and the RGB output device.

➟■1 System configuration

Step 2 Select [Common] → [Peripheral Setting] → [Video/RGB Input] from the menu to display the [Video/RGB Input] dialog.

➟10.6.5 [Video/RGB Input] dialog

Step 3 In the [Video/RGB Input] dialog, set the items as shown below and click the [OK] button.

- [Destination I/F]: [Extend I/F(1st)]
- [Use Video/RGB Input]: Selected
- [Unit Type Name]:[GT27-R2 (RGB Screen only)]
- [Display Mode]: Display mode for a video/RGB display object

Step 4 Display a screen to place a video/RGB display object.

➟2.5.2 Opening and closing screens

Step 5 Select [Object] → [Video/RGB Display] from the menu, and place the object on the screen editor.

Step 6 Double-click the object to configure the setting.

➟8.27.4 [Video/RGB Display] dialog

Step 7 Write package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to thefollowing.

➟4. COMMUNICATING WITH GOT

■3 Operation on the GOT

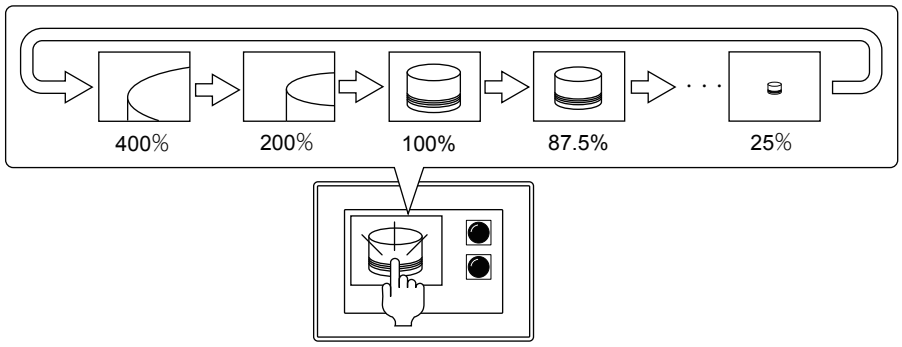
To perform operation by touching the video/RGB display object on the GOT, set [Touch Mode] in the [Video/RGB Setting] tab in the [Video/RGB Display] dialog.

For the details of the setting method, refer to the following.

➟8.27.4 [Video/RGB Display] dialog

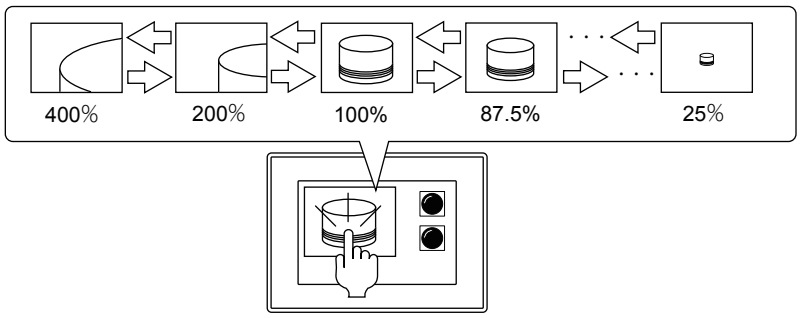
(1) Magnification switching (Loop)

Enlarge or reduce an input image by one magnification factor according to the setting of [Change Direction] with a touch of the video/RGB display object.
The display magnification is wrapped around at its maximum or minimum factor.
Example) When selecting [Smaller ratio] for [Change Direction]



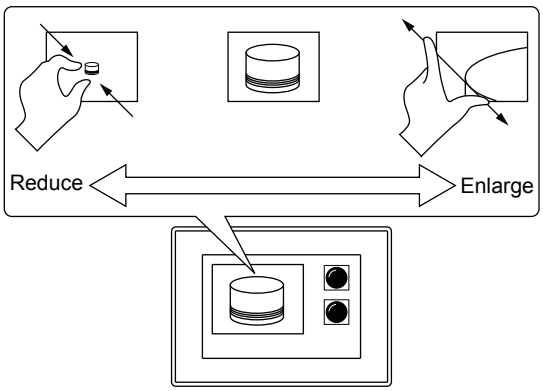
(2) Magnification switching (Reciprocation)

Enlarge or reduce an input image by one magnification factor with a touch of the video/RGB display object.
The display magnification is switched in the opposite direction at its maximum or minimum factor.

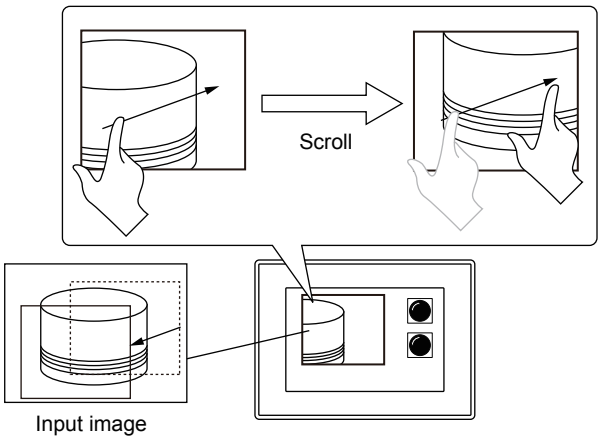


(3) Gesture operation

Reduce or enlarge an input image or reposition the clip origin with the object gesture function.
To reduce or enlarge the input image, pinch in or pinch out the image.
The image is reduced or enlarged by moving fingers toward or away from each other.



To reposition the clip origin, slide the origin.
The clip area is scrolled by the slide operation.



For the details of the object gesture, refer to the following.

➟11.13 Operating Objects by the Gesture (Object Gesture Function)

(4) Remote personal computer operation function (Serial)

Remotely operate the mouse pointer of the personal computer with the remote personal computer operation function (Serial).

For the details of the remote personal computer operation function (Serial), refer to the following.

➟10.4 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Serial))

8.27.3 Precautions for a video/RGB display object

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■1 Precautions for drawing

(1) Functions that cannot be used together

The following functions cannot be used together with the video/RGB display object.

- Video display function
- RGB display function
- Video output function
- Multimedia function

(2) Placing a video/RGB display object on a window screen

Make sure to place a video/RGB display object 4 dots or more away from the edges of a window screen.
The GOT can only display the video/RGB display object with the X and Y coordinates in units of 4 dots.
If the window screen is moved or switched, the video/RGB display object may not be displayed with the X and Y coordinates in units of 4 dots.
In such a case, the X and Y coordinates of the object are automatically corrected toward the input image origin.
If the video/RGB display object is too close to the edges of the window screen, the displayed input image may overlap the window frame depending on the position of the window screen.

(3) Object stacking order when a video/RGB display object is placed

The video/RGB display object is not targeted for the object stacking order adjustment setting.
The GOT always displays the video/RGB display object in front of or behind all other figures and objects on the same screen.

(4) Placing an input object on a video/RGB display object

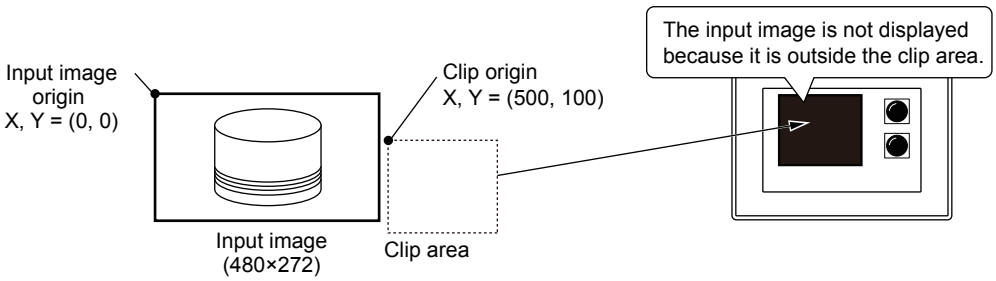
When placing an object requiring touch operation, such as a touch switch or numerical input, on the video/RGB display object, select [Disabled] for [Touch Mode] of the video/RGB display object.
Otherwise, the touch operation of the overlapping object is not performed properly.

(5) Number of video/RGB display objects that can be placed when the remote personal computer operation function (Serial) is used

When using the remote personal computer operation function (Serial), do not place multiple video/RGB display objects on the same screen.
Otherwise, the touch operation of the video/RGB display object may not be performed properly.

(6) Clip origin setting

If an input image is outside the clip area according to the specified clip origin, the image is not displayed within the video/RGB display object.
Set the clip origin while making sure that the image is within the clip area.



■2 Precautions for use

(1) Displaying a window screen on a video/RGB display object

Do not display multiple window screens on a video/RGB display object.
Otherwise, the following may occur.

- Window screens, figures, and objects are not displayed in a correct order.
- The video/RGB display object is not displayed.
- A system alarm occurs.

(2) Restrictions on the video/RGB display object in the window screen

When a window screen contains a video/RGB display object, the input image of the object may not be displayed properly if the window screen lies off the GOT screen.
Make sure that such a window screen does not lie off the GOT screen.

8.27.4 [Video/RGB Display] dialog

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Displaying video images will be supported soon.
The video/RGB display object displays an RGB image on the GOT screen.

Step 1 Select [Object] → [Video/RGB Display] from the menu.

Step 2 Click the position to place a video/RGB display object.

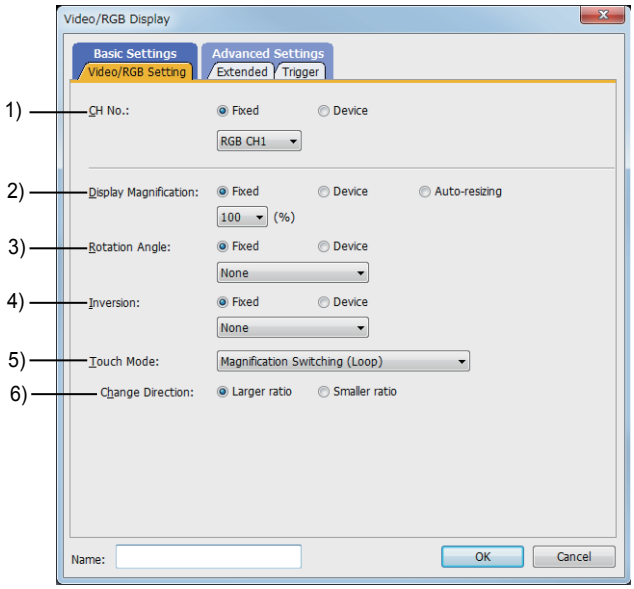
Step 3 Adjust the size of the object.

Step 4 Double-click the object to display the setting dialog.

➟■1 [Video/RGB Setting] tab
■2 [Extended] tab
■3 [Trigger] tab

■1 [Video/RGB Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[CH No.]**
Select the channel number of an RGB output device.
The following shows the items to be selected.

- [Fixed]
  Select the channel number.
  The selectable channel numbers are [RGB CH1] and [RGB CH2].
- [Device]
  Specify the channel number with a device value.
  Select this item, and then set a device.

2) **[Display Magnification]**
Select the display magnification of an input image.
For the details of the display magnification, refer to the following.

➟8.27.1 ■8 (1) Display magnification

The following shows the items to be selected.

- [Fixed]
  Select the display magnification.
  The following shows the items to be selected.
  [25] %
  [37.5] %
  [50] %
  [62.5] %

[75] %
[87.5] %
[100] %
[200] %
[400] %

- [Device]
  Specify the display magnification with a device value.
  Select this item, and then set a device.
- [Auto-resizing]
  Automatically adjusts the display magnification according to the size of a video/RGB display object.

3) **[Rotation Angle]**

Select the rotation angle of an input image.
For the details of the rotation angle, refer to the following.

➟8.27.1 ■8 (2) Rotation angle

The following shows the items to be selected.

- [Fixed]
  Select the rotation angle.
  The following shows the items to be selected.
  [None]
  [90 degrees to the right]
  [180 degrees]
  [90 degrees to the left]
- [Device]
  Specify the rotation angle with a device value.
  Select this item, and then set a device.

4) **[Inversion]**

Select the inversion method of an input image.
For the details of the inversion method, refer to the following.

➟8.27.1 ■8 (3) Inversion

The following shows the items to be selected.

- [Fixed]
  Select the inversion method.
  The following shows the items to be selected.
  [None]
  [Horizontal]
  [Vertical]
- [Device]
  Specify the inversion method with a device value.
  Select this item, and then set a device.

5) **[Touch Mode]**

Select the operation performed when a video/RGB display object is touched.
For the details of the touch mode, refer to the following.

➟8.27.2 ■3 Operation on the GOT

The following shows the items to be selected.

- [Disabled]
  Disables the touch operation.
- [Gesture Operation (Scaling/Scrolling)]
  Enlarges or reduces an input image or repositions the clip origin by using the gesture operation.
- [Magnification Switching (Loop)]
  Enlarges or reduces an input image according to the setting of [Change Direction].
  The display magnification is wrapped around at its maximum or minimum factor.
- [Magnification Switching (Reciprocation)]
  Enlarges or reduces an input image.
  The display magnification is switched in the opposite direction at its maximum or minimum factor.
- [PC Remote Operation (Serial)]
  Remotely operates the mouse pointer of the personal computer by using the remote personal computer operation function (Serial).

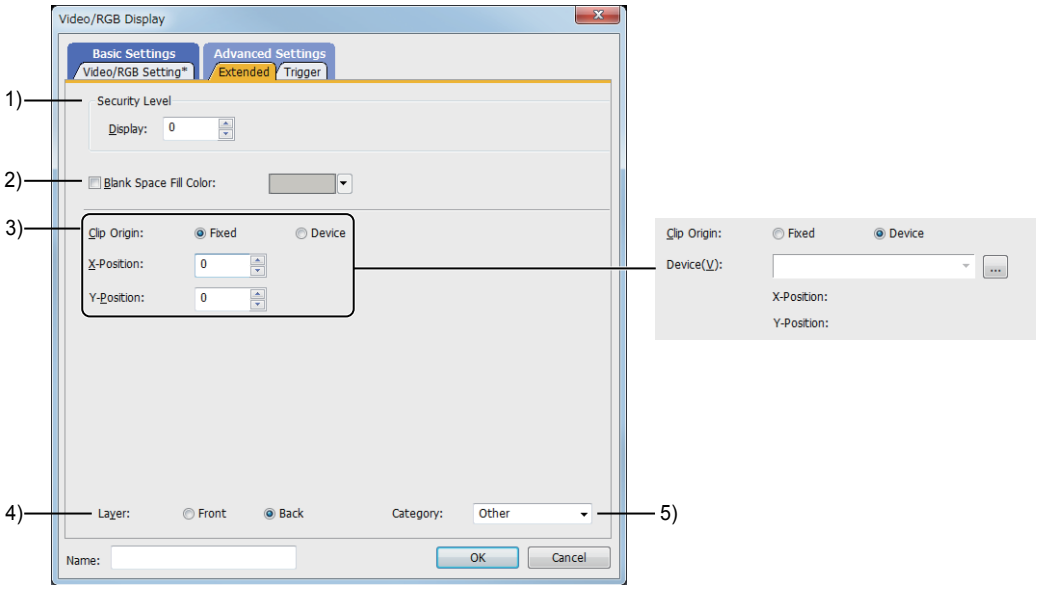
6) **[Change Direction]**

This item appears when [Touch Mode] is set to [Magnification Switching (Loop)].
Select the direction of the display magnification switching.
The following shows the items to be selected.

- [Larger ratio]
- [Smaller ratio]

■2 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**

Set the security level when using the security function.
The setting range is [1] to [15].
Set the level to [0] when the security function is not used.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

2) **[Blank Space Fill Color]**

Fills the blank space of a video/RGB display object.
Select this item, and then set a color to fill the space.
For the details of filling blank space, refer to the following.

➟8.27.1 ■8 (4) Filling blank space

3) **[Clip Origin]**

Set the clip origin for the clip display.
For the details of the clip display, refer to the following.

➟8.27.1 ■8 (5) Clip display

The following shows selectable items.

- [Fixed]
  Specify the clip origin within given ranges.
  Select this item, and then set [X Position] and [Y Position].
  The following shows the setting ranges.
  [X Position]: [-1280] dots to [1280] dots
  [Y Position]: [-1024] dots to [1024] dots
- [Device]
  Specify the clip origin with a device value.
  Select this item, and then set the first device. Two consecutive devices (signed 16-bit binary), the first device and the subsequent device, are automatically assigned to the X and Y coordinates of the clip origin.
  First device: X coordinate
  Second device: Y coordinate

4) **[Layer]**

Switches layers to be placed.

The following shows the items to be selected.

- [Front]
- [Back]

This setting is valid only for filling blank space.
For the details of filling blank space, refer to the following.

➟8.27.1 ■8 (4) Filling blank space

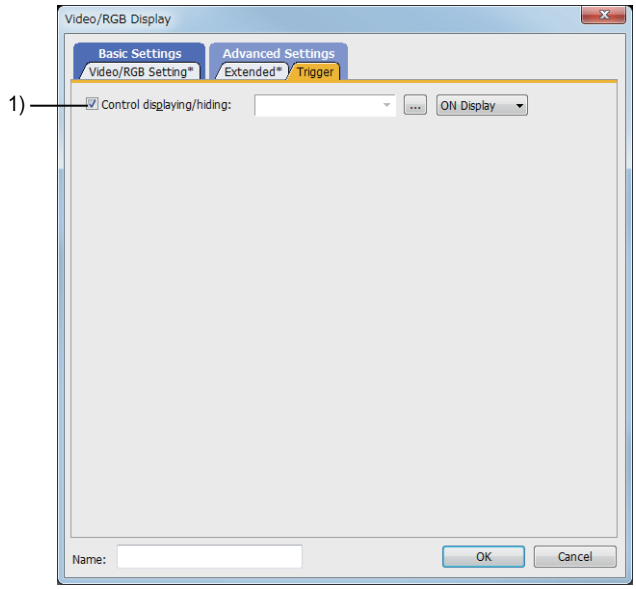
5) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■3 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control Displaying/Hiding]**

Set the control device to display or hide the object.
Select the ON/OFF status of the set device to display the object.
The following shows the items to be selected.

- [ON Display]
- [OFF Display]

8.27.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the video/RGB display object as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

For the details of the devices, refer to the following.

➟12.1.3 GOT special register (GS)

Function	Setting item
Checking if the input status of the RGB signal for CH1 is recognized	GS252.b15
Checking if the input status of the RGB signal for CH2 is recognized (when an RGB input unit, GT27-R2 or GT27-R2-Z, is used)	GS252.b14
Checking the RGB signal input status of CH1	GS1030
Checking the RGB signal input status of CH2	GS1035
Checking the RGB signal horizontal resolution for CH1	GS1031
Checking the RGB signal horizontal resolution for CH2	GS1036
Checking the RGB signal vertical resolution for CH1	GS1032
Checking the RGB signal vertical resolution for CH2	GS1037
Checking the RGB signal refresh rate for CH1	GS1033
Checking the RGB signal refresh rate for CH2	GS1038

8.28 Placing a Script Parts Object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A script parts object is placed to create a script.
When the GOT displays the screen on which a script parts object is placed, if the trigger condition for the created script is satisfied, the script runs.
The following object manipulations are supported.

- Copying to another screen
- Grouping
- Registering to the library
- Adding to a template

A script parts object is visible only on the screen editor of GT Designer3.
The object is invisible on the GOT screen.
For information on how to place a script parts object and configure its settings, refer to the following.

➡9.9.3 ■1 (2) Procedure for setting a script part

For the types of scripts, refer to the following.

➡9.8 Controlling Operations with Scripts ([Script])

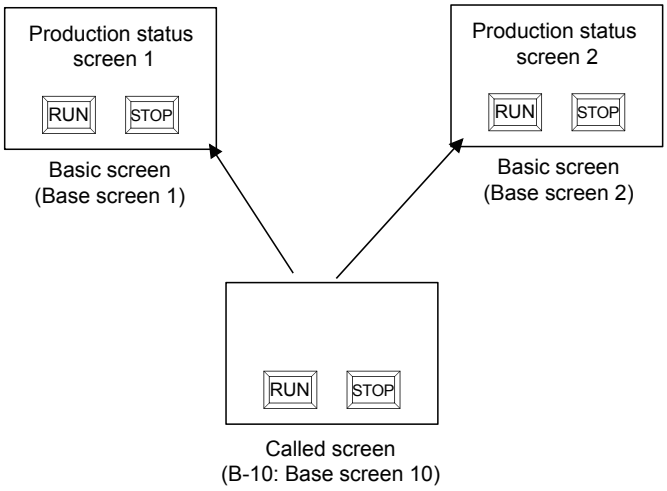
8.29 Placing Another Screen on a Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Calling other base screens and window screens (called screen) on a basic screen, this function displays them as a single screen.
When the same objects are used on multiple screens, memory space can be saved.

- When using no set over screen
  Four touch switches need to be set.
  (two on base screen 1, two on base screen 2)

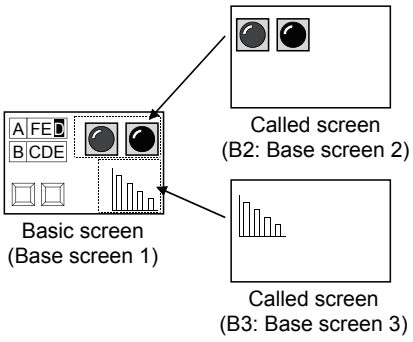
- When using a set over screen
  Only two touch switches need to be set.
  (two on a called screen)
  Because production status screen 1 and 2 display the touch switches on the called screen, no touch switch is required to be placed on production status screen 1 and 2.



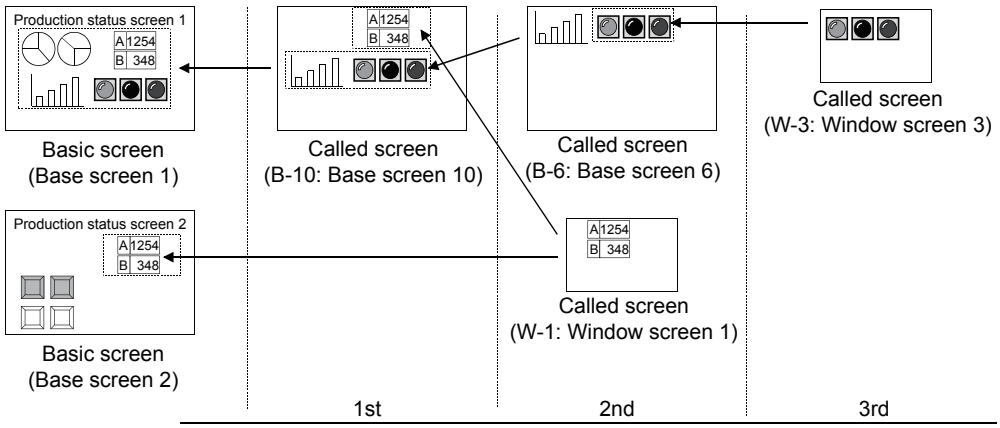
Create a screen for placing touch switches and call it from each basic screen.

Application examples

- Displaying multiple called screens on one basic screen



- Placing hierarchically and displaying



8.29.1 Specifications of the set overlay screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the set overly screen.

■1 Type of a screen that can be used as the basic screen

The following screens can be used as the basic screen.

- Base screen
- Window screen (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- Mobile screen (GT27, GT25, GT SoftGOT2000, and GS25)

For calling a mobile screen, refer to the following.

➟10.19.2 ■2 Usable functions

■2 Types of screens that can be used as called screens

The following screens can be used as called screens.

- Base screen
- Window screen
- Mobile screen (GT27, GT25, GT SoftGOT2000, and GS25)

For calling a mobile screen, refer to the following.

➟10.19.2 ■2 Usable functions

The trigger actions and screen scripts set for the called screens are executed. (Not available to GT21 and GS21)

■3 Number of set overlay screens that can be placed

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 2047 set overlay screen objects can be placed.
- For GT21 and GS21
  Up to 5 set overlay screen objects can be placed.

■4 Hierarchy of called screens

(1) Number of layers in the hierarchy

Set overlay screens can be also placed on screens used as called screens.
The type of the basic screen determines the maximum number of layers of displayable called screens.

Model	Screen type	Maximum number of layers
GT27 GT25 GT SoftGOT2000 GS25	Base screen Window screen	16
	Mobile screen	1
GT23	Base screen Window screen	16
	Mobile screen	-
GT21 GS21	Base screen Window screen	4
	Mobile screen	-

(2) Relation between security levels of called screens and the display of the layers in the hierarchy

The security set for each called screen is valid.

The following shows the specifications when security is set for each called screen.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

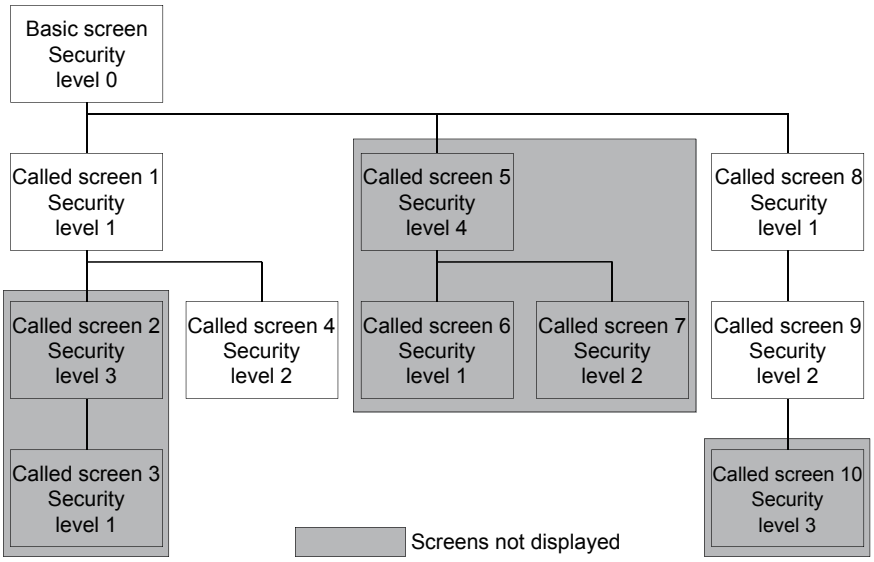
  If the password entered on a basic screen is set for a security level lower than that of a called screen, the called screen is not displayed.

  Screens called in nested structures from the screens that cannot be displayed are not displayed.

  If a called screen is not displayed, the trigger action and screen script set for the called screen are not executed.
- For GT21 and GS21

  Called screens are displayed regardless of the security level entered on the basic screen.

Example) Called screens that can be displayed with a password in security level 2 (for GT27)



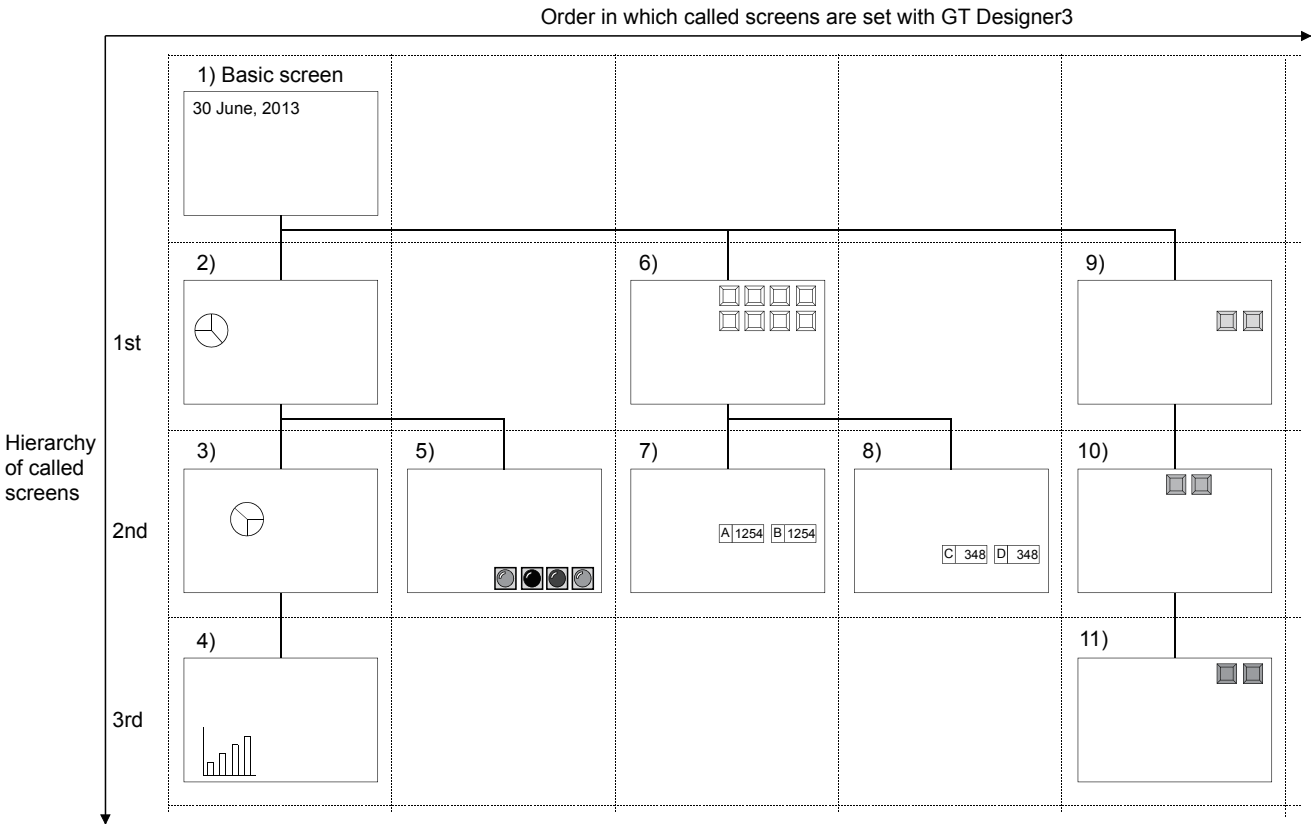
(3) Display order applied when multiple screens are called

When multiple set overlay screens are placed on one screen, the display order of the called screens is determined according to the order of setting with GT Designer3 and the layer in the hierarchy at which the called screens are set. Called screens are displayed on previously displayed screens. Hence screens placed later in the display order are displayed in front.

The following shows the specifications of the display order.

- When multiple called screens are set on a basic screen, the screens are displayed in order of setting with GT Designer3.
- When called screens are placed hierarchically, the screens are displayed in order of layer in the hierarchy from the shallowest depth.
- When multiple called screens are set on a basic screen and a hierarchy is established, the screens placed hierarchically are displayed first.

Example) When multiple called screens are set on one screen and there are ones placed hierarchically among the called screens (1) to 11): Display order)



Point

(1) **Security function, trigger action function, and script function set for each called screen**

The security function, trigger action function, and script function set for each called screen are executed in the display order of the called screens.

(2) **How to check the hierarchy and order in which called screens are set**

The hierarchy can be checked in the screen view tree.

➟2.2.4 Work tree

The order in which called screens are set can be checked in the data view.

For how to use the data view, refer to the following.

➟6.5.2 Selecting figures and objects on the screen editor

8.29.2 How to use the set overlay screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the set overly screen.

■1 Placing the set overlay screen

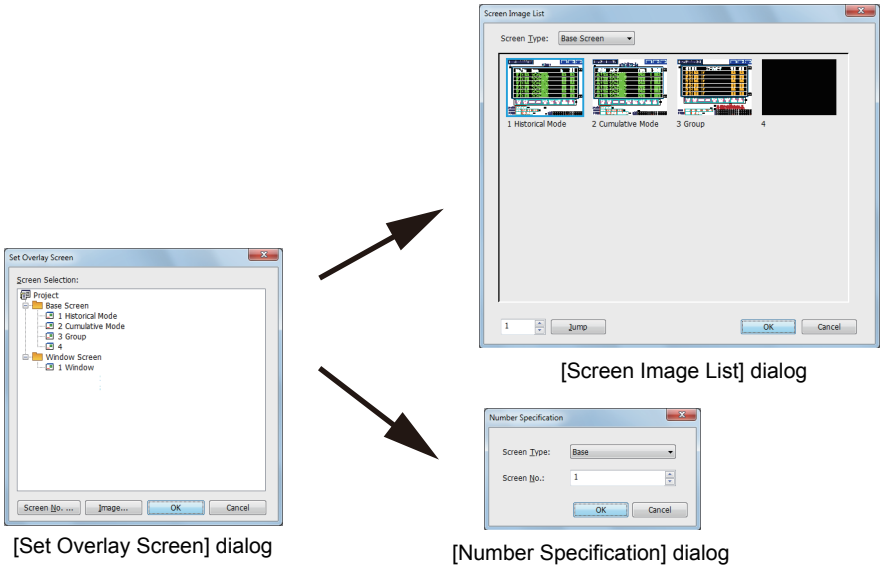
The following shows how to place the set overlay screen.

Step 1 Select [Object] → [Display Overlay Screen] from the menu.

Step 2 The [Display Overlay Screen] dialog appears.

Select a called screen with any one of the following methods and click the [OK] button.

- Select a called screen from the window selection tree.
- Click the [Screen No.] button to display the [Number Specification] dialog, and specify the screen number that has assigned to the called screen.
- Click the [Image] button to display the [Screen Image List] dialog, and select a called screen from the screen images.



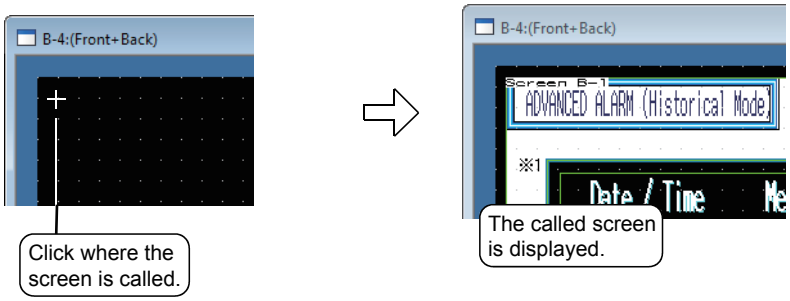
[Screen Image List] dialog

[Set Overlay Screen] dialog

[Number Specification] dialog

Step 3 On the screen editor, place the set over lay screen.

Click the position where you place the called screen.



Point

(1) **Editing called screens**

Double-click the set overlay screen that has been placed on the screen editor to open and edit the called screen.

(2) **Simpler way of setting**

Called screens can be placed by dragging them from the screen view tree.

■2 Checking set overlay screen settings

Set overlay screen settings can be checked in the screen view tree.
For the details of the screen view tree, refer to the following.

➟2.2.4 Work tree

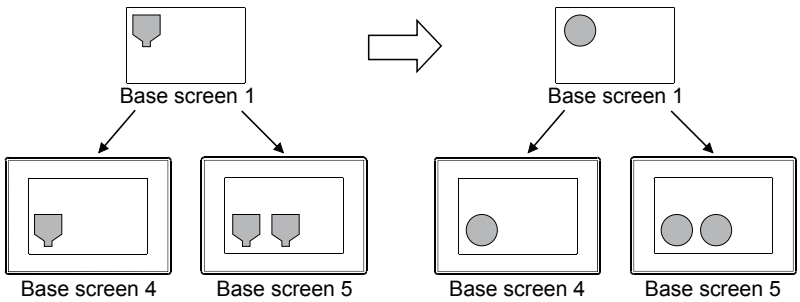
8.29.3 Precautions for a set overlay screen object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for set overlay screens.

■1 Editing called screens

Called screens cannot be edited with the set overlay screens (object).
Open the called screens and edit them.
When called screens are edited, the edits are reflected to all the set overlay screens.



■2 Editing figures overlapping with set overlay screens

When figures are placed on a basic screen on the back of set overlay screens (object), the figures cannot be edited.
When selecting and editing figures on a basic screen, click the [Edit] → [Object of Selection] from the menu to deselect [Display Overlay Screen].

■3 Figures and objects placed in the temporary area

When figures and objects are placed in the temporary area for called screens, the figures are displayed but the objects are not displayed with the GOT.

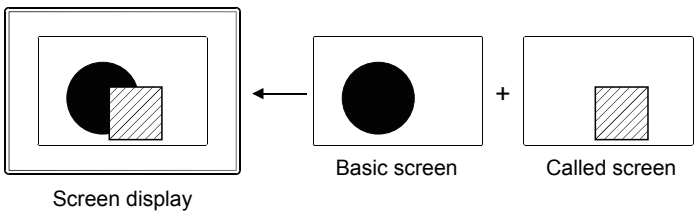
■4 Display of called screens viewed when figures and objects are overlapping

When called screens and figures/objects overlap in the same layer, they are displayed with the GOT as follows.
For the details of superimposition, refer to the following.

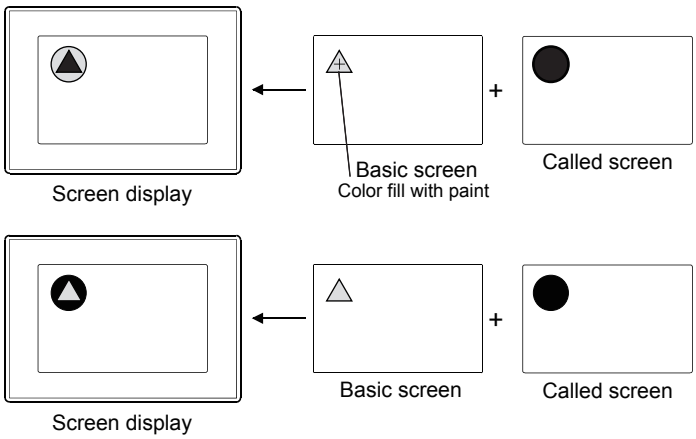
➟6.5.5 ■3 Superimposition

(1) Figure

The shape of the called screen is displayed in front.

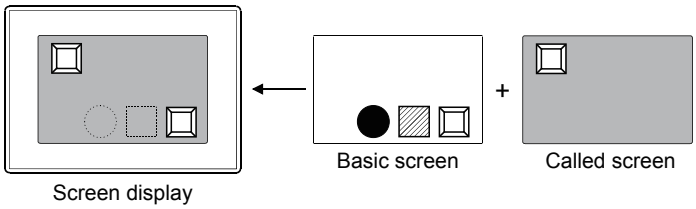


When paints are set for figures on the basic screen and the figures overlap with the shapes of called screens, the colors of the figures may not be displayed correctly.
When the color of a figure is not displayed correctly, set the color fill of the figure with the setting dialog for the figure.

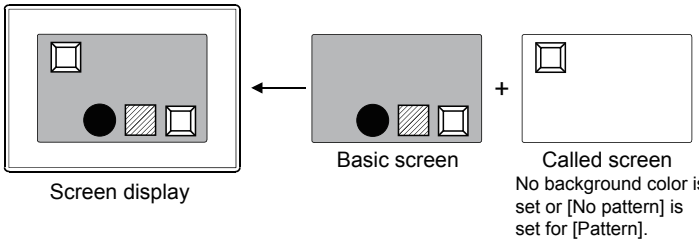


(2) Screen Background

The background color of the called screen is displayed in front.
When the area of the background color overlaps with figures, the figures are not displayed.

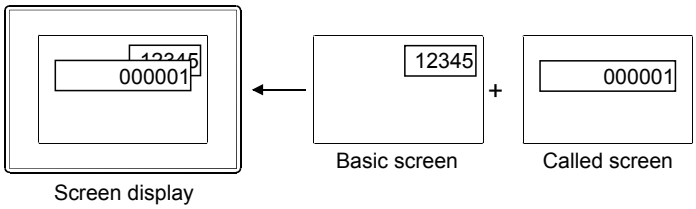


When no background color is set or [No pattern] is set for [Pattern] of the background color, the called screen is displayed in the background color of the basic screen.



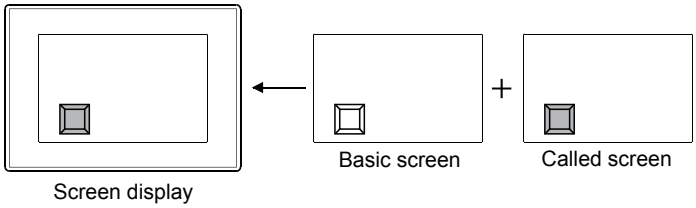
(3) Object

Among the objects on basic screens and called screens, ones on which values change are displayed in front.



(4) Touch switch

Initially, touch switches placed later in the display order are displayed in front.
Subsequently, those with display conditions changed are displayed in front.



■5 Displaying the objects of the types for which only one object can be set on one screen

Do not place on both a basic screen and called screen the objects of the types for which only one object can be set on one screen.
When they are placed, they are displayed but the functionality is limited and they do not work correctly.

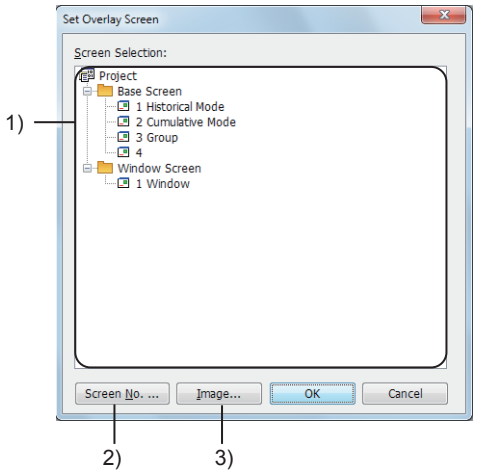
8.29.4 [Set Overlay Screen] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The set overlay screen is an object that calls other base screens and window screens (called screen) on a basic screen and display them as a single screen.

Step 1 Select [Object] → [Display Overlay Screen] from the menu.

The [Display Overlay Screen] dialog appears.



1) **[Screen Selection]**

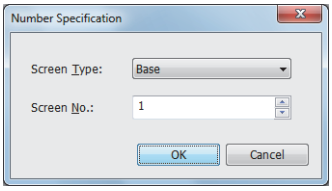
Select the screen used as a called screen from the tree.

Screens being edited cannot be selected.

2) **[Screen No.] button**

When specifying a called screen with a screen number, click this button.

Displays the [Number Specification] dialog.

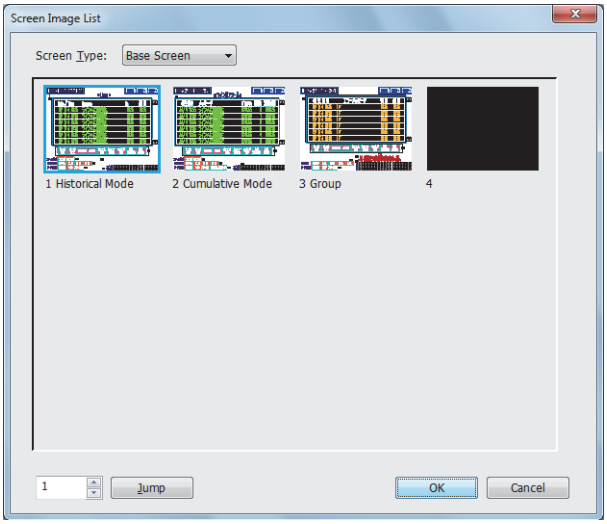


Item	Description
[Screen Type]	Select the type of the screen used as a called screen. The following shows the items to be selected. When the basic screen is a mobile screen, the selection is fixed to [Mobile]. • [Base Screen] • [Window Screen]
[Screen No.]	Set the number that has been assigned to the screen used as a called screen. The setting range is [0] to [32767]. Screen numbers cannot be set if the corresponding screens are non-existent.

3) **[Image] button**

When selecting a called screen from the screen preview list, click this button.

Displays the [Screen Image List] dialog.



Item	Description
[Screen Type]	Select the type of the screen used as a called screen. The following shows the items to be selected. When the basic screen is a mobile screen, the selection is fixed to [Mobile]. • [Base Screen] • [Window Screen] After selecting the type, select the screen used as a called screen.
[Jump] button	Enter a screen number and click this button to select the corresponding screen. The setting range is [0] to [32767]. Screen numbers cannot be set if the corresponding screens are non-existent.

4) **[OK] button**

After selecting the screen used as a called screen, click this button.

Close the [Set Overlay Screen] dialog.

After clicking this button, click where the called screen should be displayed.

8.29.5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the set overlay screen as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT] (Not available to GT21 and GS21)
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

■2 GOT environmental settings (Screen switching/window setting)

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] from the menu to display the [Environmental Setting] dialog.

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

Function	Setting item
Setting the position of a called screen in front of or behind the basic screen Regardless of this setting, if the basic screen is a mobile screen, a called screen is always positioned in front of the basic screen.	[Overlay Screen Positioning]
Setting whether to disable the background color of a called screen Regardless of this setting, if the basic screen is a mobile screen, the background color of a called screen is always enabled.	[Disable background colors of overlay screen when setting an overlay screen]

8.30 Specifying the Display Position of a Window Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the position of a window screen to be displayed on a base screen or mobile screen.

Point

(1) **Operation on the GOT**

An overlap window can be moved on the screen of the GOT.
A superimpose window cannot be moved on the screen of the GOT.

(2) **Controlling the display position of the overlap window with devices**

The display position of the overlap window can be controlled with the device value.

8.30.1 Specifications of the window position

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the window position.

■1 The type of the screen for which the window position can be set

The window position setting is available for a window screen to be displayed on a base screen or mobile screen.

■2 The type of the screen for which the display position can be set

The following shows the type of windows for which the display position can be set.

- Overlap window
- Superimpose window
- Key window (Not applicable to mobile screens)

8.30.2 How to use the window position

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use the window position.

■1 Setting the window position

The following shows the procedure for setting a window position.

Step 1 Select [Object] → [Window position] from the menu and select the window whose position is to be set.

The following shows the items to be selected.
Overlap windows 3 to 5 and key windows are not applicable to mobile screens.

- [Overlap Window1]
- [Overlap Window2]
- [Overlap Window3]
- [Overlap Window4]
- [Overlap Window5]
- [Superimpose 1]
- [Superimpose 2]
- [Key Window]

Step 2 Click the position where you display the window.

A mark indicating the window position is placed.

To display a key window at the position where a window position object is placed, configure one of the following settings.

- In the [Environmental Setting] window, select [Not move] for [Key Window Position Correction] on the [Advanced Setting] tab.

➟5.2.4 ■4 (2) [Advanced Setting] tab

- In the [Screen Property] dialog for a base screen, select [Not move] for [Key Window Position Correction] on the [Key Window Advanced Setting] tab.

➟2.7.1 ■3 [Key Window Advanced Setting] tab

A key window appears near an input object by default.

■2 Displaying the preview on the screen editor

The preview of the window screen placed as the window position can be displayed on the screen editor.
For details, refer to the following.

➟2.9.2 Displaying the preview of a window screen on the screen editor

8.30.3 Precautions for a window position object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for the window position.

■1 When using a set overlay screen

The setting of the window position is valid when the screen is opened as the basic screen.
When the screen for which the window position is set is opened as a called screen, the setting of the window position is invalid.
For the details of the set overlay screen function, refer to the following.

➟8.29 Placing Another Screen on a Screen

■2 When a window screen extends off the screen

At setting of the window position, the size of the window screen is not considered.
When a window screen extends off the screen on which the window screen is placed, depending on the screen type, the window screen is displayed differently.

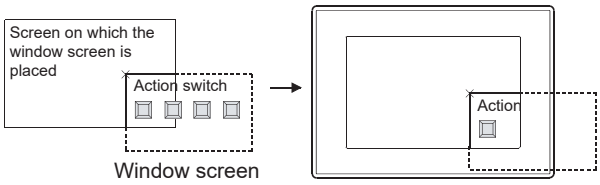
(1) Overlap window

The behavior depends on the setting of [Display windows beyond the screen area] in the [Environmental Setting] window ([Screen Switching/Window]).
For details, refer to the following.

➟5.2.1 ■5 [Screen Switching/Window]

(2) Superimpose window

The window screen does not move, and the part extending off the screen on which the window screen is placed is not displayed.



8.31 Placing an Object to Display the Input Information

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays the information about the input when numerical values or texts are input to an object using key windows.
For the details of the key window, refer to the following.

➟5.2.4 Setting key windows ([Key Window])

8.31.1 Specifications of key window objects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of key window objects.

■1 Key window object types

The following show the information that can be displayed on the key window objects.

- Input value area: Displays the numerical value or text which is being input to the object.
- Input range area: Displays the maximum and minimum values which can be input to the object.
- Input maximum range area: Displays the maximum value which can be input to the object.
- Input minimum range area: Displays the minimum value which can be input to the object.
- Previous value area: Displays a numerical value or text previously input to the object.

■2 Types of the screen where the key window object can be placed

The following shows the types of the screen where the key window object can be placed.

- Base screen
- Window screen

■3 Number of placeable key window objects

You cannot place each key window object more than once on a screen.
You cannot also place two or more objects in the same type on a screen.

8.31.2 How to use key window objects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to use key window objects.

■1 Placing the key window object

The following shows how to place the key window object.

Step 1 Select [Object] → [Key Window Object] from the menu, and then select a key window object to be placed.

The following shows the items to be selected.

- [Input Value Area Setting]
- [Input Range Area Setting]
- [Input Maximum Value Area Setting]
- [Input Minimum Value Area Setting]
- [Previous Value Area Setting]

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Adjust the frame size of the object.

Step 4 Double-click the placed object to display the [Input Value Area Setting] dialog.

➟8.31.4 [Input Value Area Setting] dialog
8.31.5 [Input Range Area Setting] dialog
8.31.6 [Input Maximum Value Area Setting] dialog
8.31.7 [Input Minimum Value Area Setting] dialog
8.31.8 [Previous Value Area Setting] dialog

Step 5 Click the [OK] button to complete the object settings.

8.31.3 Precautions for a key window object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the precautions for key window objects.

■1 Operations for displaying the key window object

The following shows operations that display the key window object except inputting numerical values or texts to the object.

- The security level is changed.
- The language is switched.
- The system language is switched.
- The station number is switched.
- The character code is changed by the Character Code Control (GS456).

8.31.4 [Input Value Area Setting] dialog

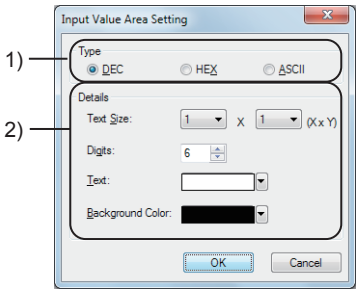
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key window object is an object that displays the information about the input when numerical values or texts are input to an object using key windows.
The numerical value or text which is being input to the object is displayed in the input value area.

Step 1 Select [Object] → [Key Window Object] → [Input Value Area Setting] from the menu.

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Double-click the placed object to display the [Input Value Area Setting] dialog.



1) **[Display Format]**

Select the display format.
This setting only determines the setting range of [Digits].
The key window operates on the GOT according to the format of the input object.
The following shows the items to be selected.

- [DEC]
- [HEX]
- [Text]

To create a key window for inputting decimal values, select [DEC].
To create a key window for inputting hexadecimal values, select [HEX].
To create a key window for inputting octal values, select [DEC] or [HEX].
To create a key window for inputting binary values, select [DEC].
To create a key window for inputting characters, select [Text].

2) **[Detail]**

Item	Description
[Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Size]	Select a text size. For the details of the font and size, refer to the following. 1.2.5 Font specifications
[Digits]	Set the digits to be displayed. If [DEC] is selected for [Type], the setting range is [1] to [33] digit(s). If [HEX] is selected for [Type], the setting range is [1] to [16] digit(s). If [Text] is selected for [Type], the setting range is [1] to [100] digit(s).
[Text Color]	Set the text color.
[Background Color]	Set the color for the object.

8.31.5 [Input Range Area Setting] dialog

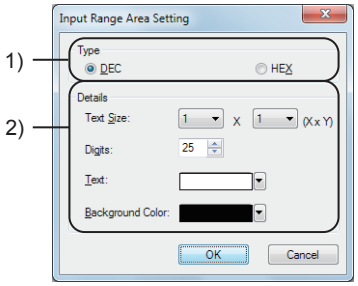
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key window object is an object that displays the information about the input when numerical values or texts are input to an object using key windows.
The maximum and minimum values which can be input are displayed in the input range area.

Step 1 Select [Object] → [Key Window Object] → [Input Range Area Setting] from the menu.

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Double-click the placed object to display the [Input Range Area Setting] dialog.



1) **[Display Format]**

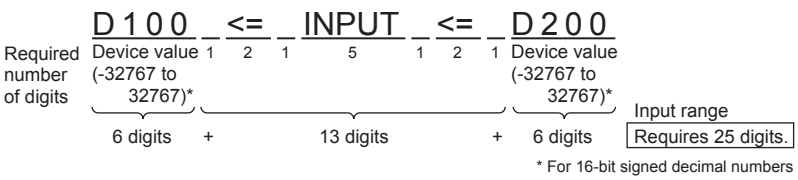
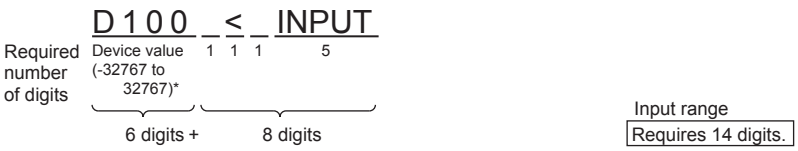
Select the display format.
This setting only determines the setting range of [Digits].
The key window operates on the GOT according to the format of the input object.
The following shows the items to be selected.

- [DEC]
- [HEX]

To create a key window for inputting decimal values, select [DEC].
To create a key window for inputting hexadecimal values, select [HEX].
To create a key window for inputting octal values, select [DEC] or [HEX].
To create a key window for inputting binary values, select [DEX].

2) **[Detail]**

Item	Description
[Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Size]	Select a text size. For the details of the font and size, refer to the following. 1.2.5 Font specifications

Item	Description
[Digits]	Set the digits to be displayed. The setting range is [15] to [79] digits. When the device is set with a range expression and the device value exceeds the set number of digits, ? may be displayed. Set the number of digits in consideration of the device value referring to the following. Example 1) D100 <= INPUT <= D200  * For 16-bit signed decimal numbers Example 2) D100 < INPUT  * For 16-bit signed decimal numbers
[Text Color]	Set the text color.
[Background Color]	Set the color for the object.

8.31.6 [Input Maximum Value Area Setting] dialog

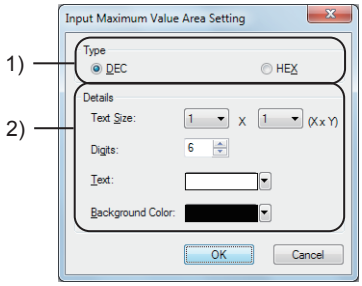
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key window object is an object that displays the information about the input when numerical values or texts are input to an object using key windows.
The maximum value which can be input is displayed in the input maximum range area.

Step 1 Select [Object] → [Key Window Object] → [Input Maximum Value Area Setting] from the menu.

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Double-click the placed object to display the [Input Maximum Value Area Setting] dialog.



1) **[Display Format]**

Select the display format.
This setting only determines the setting range of [Digits].
The key window operates on the GOT according to the format of the input object.
The following shows the items to be selected.

- [DEC]
- [HEX]

To create a key window for inputting decimal values, select [DEC].
To create a key window for inputting hexadecimal values, select [HEX].
To create a key window for inputting octal values, select [DEC] or [HEX].
To create a key window for inputting binary values, select [DEX].

2) **[Detail]**

Item	Description
[Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Size]	Select a text size. For the details of the font and size, refer to the following. 1.2.5 Font specifications
[Digits]	Set the digits to be displayed. The setting range depends on the selection for [Type]. • [DEC] is selected for [Type]: [1] to [33] digit(s) • [HEX] is selected for [Type]: [1] to [16] digit(s) When the number of digits exceeds the set value, ? is displayed.
[Text Color]	Set the text color.
[Background Color]	Set the color for the object.

8.31.7 [Input Minimum Value Area Setting] dialog

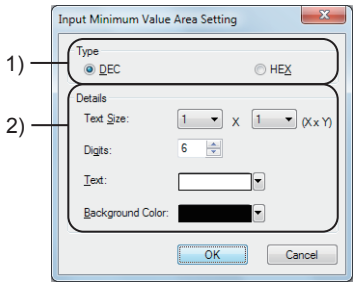
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key window object is an object that displays the information about the input when numerical values or texts are input to an object using key windows.
The minimum value which can be input is displayed in the input minimum range area.

Step 1 Select [Object] → [Key Window Object] → [Input Minimum Value Area Setting] from the menu.

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Double-click the placed object to display the [Input Minimum Value Area Setting] dialog.



1) **[Display Format]**

Select the display format.
This setting only determines the setting range of [Digits].
The key window operates on the GOT according to the format of the input object.
The following shows the items to be selected.

- [DEC]
- [HEX]

To create a key window for inputting decimal values, select [DEC].
To create a key window for inputting hexadecimal values, select [HEX].
To create a key window for inputting octal values, select [DEC] or [HEX].
To create a key window for inputting binary values, select [DEX].

2) **[Detail]**

Item	Description
[Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Size]	Select a text size. For the details of the font and size, refer to the following. 1.2.5 Font specifications
[Digits]	Set the digits to be displayed. The setting range depends on the selection for [Type]. • [DEC] is selected for [Type]: [1] to [33] digit(s) • [HEX] is selected for [Type]: [1] to [16] digit(s) When the number of digits exceeds the set value, ? is displayed.
[Text Color]	Set the text color.
[Background Color]	Set the color for the object.

8.31.8 [Previous Value Area Setting] dialog

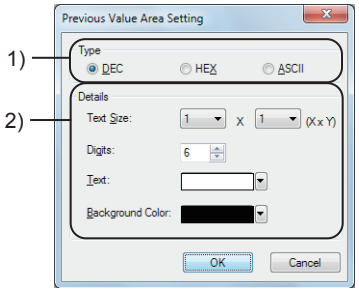
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The key window object is an object that displays the information about the input when numerical values or texts are input to an object using key windows.
The numerical value or text that is previously input is displayed in the previous value area.

Step 1 Select [Object] → [Key Window Object] → [Previous Value Area Setting] from the menu.

Step 2 Click the position where you place the object. Placing the object is completed.

Step 3 Double-click the placed object to display the [Previous Value Area Setting] dialog.



1) **[Display Format]**

Select the display format.
This setting only determines the setting range of [Digits].
The key window operates on the GOT according to the format of the input object.
The following shows the items to be selected.

- [DEC]
- [HEX]
- [Text]

To create a key window for inputting decimal values, select [DEC].
To create a key window for inputting hexadecimal values, select [HEX].
To create a key window for inputting octal values, select [DEC] or [HEX].
To create a key window for inputting binary values, select [DEX].
To create a key window for inputting characters, select [Text].

2) **[Detail]**

Item	Description
[Font]	Select the font of the text. The following shows the items to be selected. • [6x8dot] • [12dot Standard] • [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25) • [16dot Standard] (GT23, GT21, and GS21) • [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) • [Outline] (GT2107-W and GS21-W-N)
[Size]	Select a text size. For the details of the font and size, refer to the following. 1.2.5 Font specifications
[Digits]	Set the digits to be displayed. The setting range depends on the selection for [Type]. • [DEC] is selected for [Type]: [1] to [33] digit(s) • [HEX] is selected for [Type]: [1] to [16] digit(s) • [Text] is selected for [Type]: [1] to [100] digit(s) When the number of digits exceeds the set value, the operation of the GOT differs depending on the model. • GT27, GT25, GT23, GT SoftGOT2000, GS25 ? is displayed. • GT21, GS21 The numbers of the set number of digits from the least digit are displayed.
[Text Color]	Set the text color.

Item	Description
[Background Color]	Set the color for the object.

8.31.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the key window object as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other	[Check for overlapping objects in the GOT]
Adjusting the stacking order of the objects on the GOT to that on GT Designer3	**GOT Graphic Ver.2** Always enabled. **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3]

8.32 Placing a Print Object on a Report Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

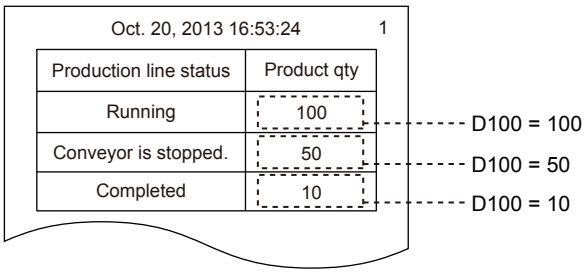
➡8.32.1 Specifications of the print object
8.32.2 How to use the print object
8.32.3 Precautions for a print object
8.32.4 [Numerical Print] dialog
8.32.5 [Text Print] dialog
8.32.6 [Bit Comment Print] dialog
8.32.7 [Word Comment Print] dialog

The print object is placed on a report screen to print its device value or the comment corresponding to the device.
For the details of the report function, refer to the following.

➡10.11 Outputting the Collected Data as a Report (Report Function)

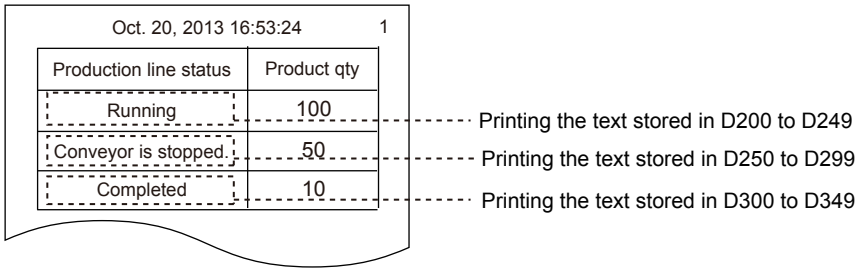
■1 Numerical print

The numerical print object prints the value stored in a specified device.



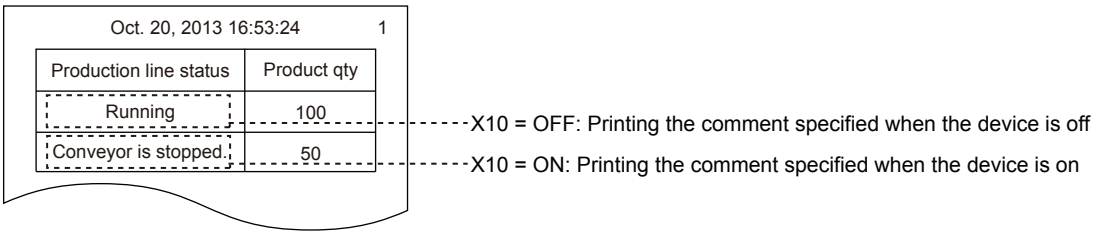
■2 Text print

The text print object prints the text stored in specified consecutive devices.



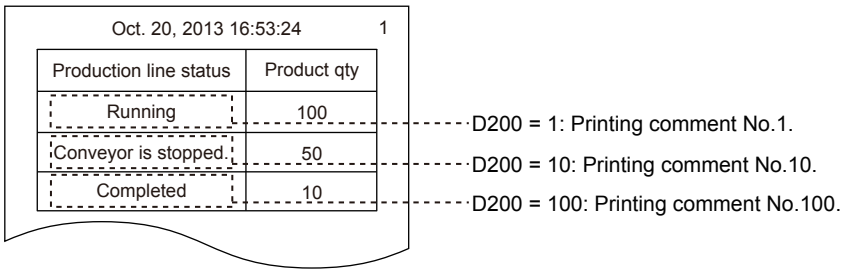
■3 Bit comment print

The bit comment print object prints the comment corresponding to a specified bit device.



■4 Word comment print

The word comment print object prints the comment corresponding to a specified word device.



8.32.1 Specifications of the print object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Applicable screen

The numerical print, text print, and comment print can be placed on a report screen only.
Up to 260 devices can be monitored on one report screen.
The object devices, collection trigger device, output trigger device, and other devices set for a report screen are included.

■2 Specifications of the numerical print

(1) Maximum number of printable characters

The maximum number of pintable characters depends on the setting of [Format].

- [Signed Decimal] or [Unsigned Decimal]: 21 characters
- [Hexadecimal]: 16 characters
- [Binary]: 32 characters
- [Real]: 33 characters

■3 Specifications of the text print

(1) Maximum number of printable characters

Up to 50 two-byte or 100 one-byte characters are printable.

(2) Supported character code

The following character codes are supported.

- ASCII code
- Unicode
- Shift JIS code
- GB code
- KS code
- Big5 code

(3) Number of monitored devices and number of digits to be printed

The number of monitored devices depends on the device data type, character code, and the number of digits to be printed.

Device data type	Character code	The number of monitored devices
16-bit	ASCII code Shift JIS code GB code KS code Big5 code	One word device is used for two digits to be printed. If an odd number of digits is printed, the odd number incremented by 1 is the number of monitored devices.*1 Example) Number of digits to be printed: 3, start device: D1000 Two word devices (D1000 and D1001) starting from D1000 are used.
	Unicode	One word device is used for one digit to be printed. Example) Number of digits to be printed: 3, start device: D1000 Three word devices (D1000 to D1002) starting from D1000 are used.

Device data type	Character code	The number of monitored devices
8-bit	ASCII code Shift JIS code GB code KS code Big5 code	Eight bit devices are used for one digit to be printed. Example) Number of digits to be printed: 3, start device: GB1000 Twenty-four consecutive devices (GB1000 to GB1023) starting from GB1000 are used.
	Unicode	Sixteen bit devices are used for one digit to be printed. Example) Number of digits to be printed: 3, start device: GB1000 Forty-eight consecutive devices (GB1000 to GB1047) starting from GB1000 are used.

*1 The lower- or higher-order bytes of the last device are not monitored.
Whether the lower- or higher-order bytes are not monitored depends on the display order of the string data.
- High to low: Lower-order bytes of the last device
- Low to high: Higher-order bytes of the last device

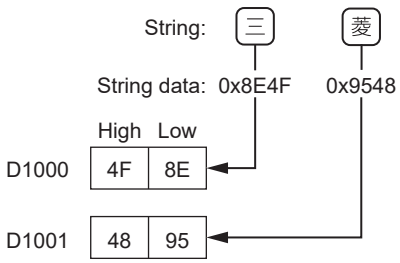
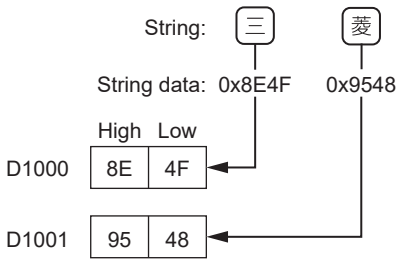
(4) Order of displaying and storing character strings

You can specify the order of displaying the character strings stored in devices and the order of storing character strings in devices.
The following shows the specifications of each character code.

- ASCII code, shift JIS code, GB code, KS code, Big5 code

Specifications differ depending on the data type.
When the data type is 16-bit
Low to high or high to low can be specified.
b8 to b15 of a word device are handled as the higher-order bytes, and b0 to b7 as the lower-order bytes.
When the data type is 8-bit
Only low to high can be specified.
When the start device is GB1000, GB1008 to GB1015 are handled as the higher-order bytes, and GB1000 to GB1007 as the lower-order bytes.

Example) Storing 16 bit string data in D1000 to D1001

Display order and storage order	Specifications
Low to high	Example) Character code: Shift JIS code  Higher: b8 to b15, lower: b0 to b7
High to low	Example) Character code: Shift JIS code  Higher: b8 to b15, lower: b0 to b7

- Unicode

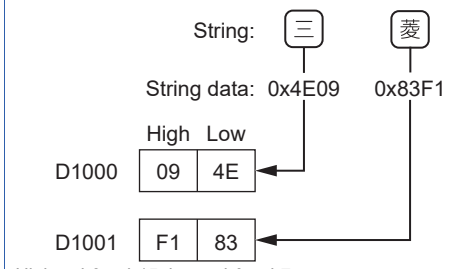
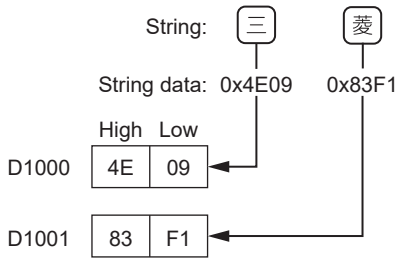
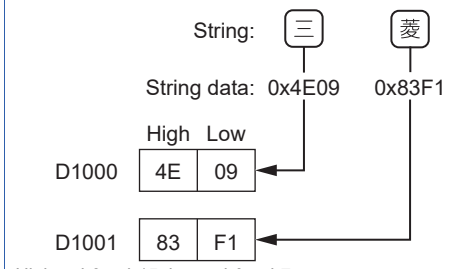
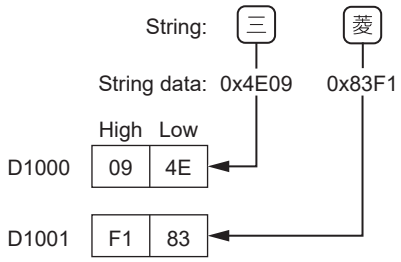
Specifications differ depending on the data type and GOT model.

When the data type is 16-bit
Low to high or high to low can be specified.
b8 to b15 of a word device are handled as the higher-order bytes, and b0 to b7 as the lower-order bytes.

When the data type is 8-bit

Low to high or high to low can be specified.
When the start device is GB1000, GB1032 to GB1063 are handled as the higher-order bytes, and GB1000 to GB1031 as the lower-order bytes.

Example) Storing 16 bit string data in D1000 to D1001

Display order and storage order	Specifications	
	GT27, GT25, GT23, GT SoftGOT2000, GS25	GT21, GS21
Low to high	 Higher: b8 to b15, lower: b0 to b7	 Higher: b8 to b15, lower: b0 to b7
High to low	 Higher: b8 to b15, lower: b0 to b7	 Higher: b8 to b15, lower: b0 to b7

■4 Specifications of the comment print

(1) Comment with multiple rows

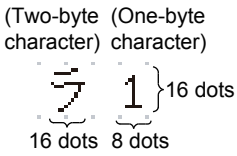
Only the first row of a comment that involves multiple rows can be printed.

(2) Character property

The character property (character effect, character color, and others) cannot be changed.

(3) Character size

Two-byte characters are placed by 16 dots × 16 dots. One-byte characters are placed by 16 dots × 8 dots.



(4) Maximum number of printable characters

The number of printable characters varies with the setting of [Printer Type] in the [Printer] dialog.

➟10.11.8 [Printer] dialog

[PictBridge], [ESC/P-R] or [PCL5]: 62 two-byte or 124 one-byte characters
[Serial]: 127 two-byte or 255 one-byte characters

8.32.2 How to use the print object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing a print object

Comments displayed by a comment print must be registered in advance.

➟5.8 Comment Setting ([Comment])

The following shows how to use the numerical print and comment print.

Step 1 Open the report screen to select [Object] → [Print] from the menu then select either of the following items.

- [Numerical Print]
- [Text Print]
- [Bit Comment Print]
- [Word Comment Print]

Step 2 Click the position to place the selected object.

Step 3 Double-click the object to display the setting dialog.

The setting dialog appears.

➟8.32.4 [Numerical Print] dialog
8.32.5 [Text Print] dialog
8.32.6 [Bit Comment Print] dialog
8.32.7 [Word Comment Print] dialog

Step 4 Click the [OK] button to complete the object settings.

8.32.3 Precautions for a print object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the precautions for a print object, refer to those for the report function.

➟10.11.4 Precautions

8.32.4 [Numerical Print] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Print] → [Numerical Print] from the menu.

Step 2 Click the position where you place the numerical print. Placing the numerical print is complete.

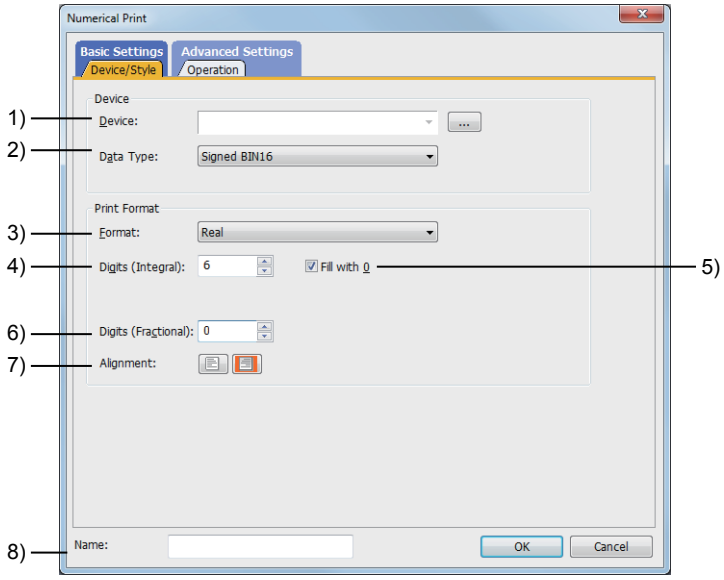
Step 3 Double-click the numerical print which has been placed to display the setting dialog.

➟■1 [Device/Style] tab

■2 [Operation] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of the device to be set.
The following shows the items to be selected.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [Real(32bit)]
- [Real(64bit)]

3) **[Format]**
Select the data type at printing.
The following shows the items to be selected.

- [Signed Decimal]
- [Unsigned Decimal]
- [Hexadecimal]
- [Binary]
- [Real]

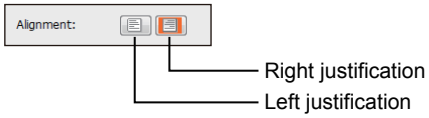
When the device data type is [Signed BIN64], [Unsigned BIN64], or [Real(64bit)], [Binary] cannot be selected.

4) **[Digits (Integral)]**
Set the integer digits to be printed.
The setting range depends on the setting in [Format].
- [Signed Decimal] or [Unsigned Decimal]: [1] to [21]
- [Hexadecimal]: [1] to [16]
- [Binary] or [Real]: [1] to [32]

5) **[Fill with 0]**
This item can be set when the right justification is set for numerical values in [Alignment].
Prefixes a numerical value with 0 and adds it.

6) **[Digits (Fractional)]**
This item can be set when [Real] is set in [Format].
Set the fractional digits to be printed.
The setting range is [0] to [30] digit(s).

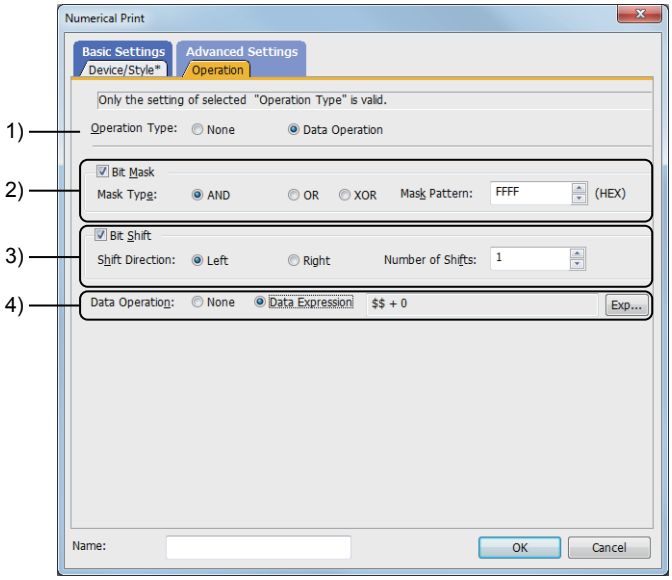
7) **[Alignment]**
Select the direction of the justification for the numerical values to be printed.



8) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Operation] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Operation Type]**
Select whether to use the data operation function.
The following shows the items to be selected.
- [None]:
  Select this item if the data operation is unnecessary.
- [Data Operation]:
  Select this item if the data operation is necessary.
  For the settings of the data operation function, refer to the following.

➟6.5.5 ■4 Setting data operations

2) **[Bit Mask]**

This item can be set when [Data Operation] is set in [Operation Type].

Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

3) **[Bit Shift]**

This item can be set when [Data Operation] is set in [Operation Type].

Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range depends on the setting of [Data Type] in the [Device/Style] tab.

4) **[Data Operation]**

This item can be set when [Data Operation] is set in [Operation Type].

Set the format of the expression.

- [None]

  Select this item not to perform the data operation by using the expression.
- [Data Expression]

  Select this item to perform the data operation by using the expression.

  Click the [Exp] button to display the [Edit Data Expression] dialog.

  Set the expression.

  ➟6.5.5 ■4 Setting data operations

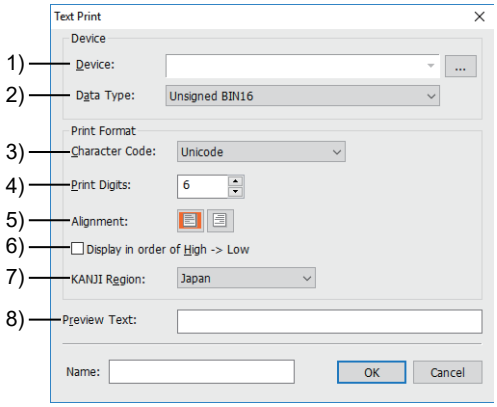
8.32.5 [Text Print] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Print] → [Text Print] from the menu.

Step 2 Click the position to place a text print.

Step 3 Double-click the placed object to display the setting dialog.



1) **[Device]**

Set the first device to be monitored.

➟6.1.2 How to set devices

The number of monitored devices depends on the setting.

For details, refer to the following.

➟8.32.1 (3) Number of monitored devices and number of digits to be printed

2) **[Data Type]**

Select the data type of the device to be set.

The following shows the items to be selected.

- [Unsigned BIN16]
- [Unsigned BIN8]

3) **[Character Code]**

Set the character code applied to text.

The following shows the items to be selected.

- [System Language Link]
- [ASCII]
- [Unicode]
- [S-JIS]
- [GB]
- [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Big5]

When [System Language Link] is selected, different character code is applied depending on the system language.

- When the system language is English: [ASCII]
- When the system language is not English: [S-JIS]

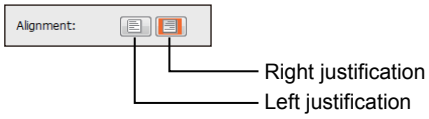
4) **[Print Digits]**

Set the number of digits of text printed.

The setting range is [0] to [100].

5) **[Alignment]**

Select the alignment direction of text.



6) **[Display in order of High -> Low]**

Select this item to display string data stored in devices in order of lower byte to upper byte.

The specifications differ depending on the character code or GOT model.

➟8.32.1 ■3 (4) Order of displaying and storing character strings

7) **[KANJI Region]**

This item is settable when [Character Code] is set to [Unicode].

Set the KANJI region.

The following shows the items to be selected.

- [Japan]
- [China(GB)-Mincho]
- [China(Big5)-Gothic]

8) **[Preview Text]**

Set the text to be previewed on the screen editor.

Up to 100 characters can be set.

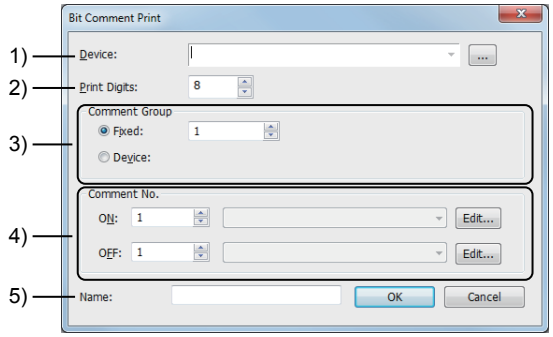
8.32.6 [Bit Comment Print] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Print] → [Bit Comment Print] from the menu.

Step 2 Click the position where you place the bit comment print. Placing the bit comment print is completed.

Step 3 Double-click the bit comment print which has been placed to display the setting dialog.



1) **[Device]**

Set the device to be monitored.

➟6.1.2 How to set devices

2) **[Print Digits]**

Set the digits of a comment to be printed.

The setting range varies with the setting of [Printer Type] in the [Printer] dialog.

➟10.11.8 [Printer] dialog

- [PictBridge], [ESC/P-R], or [PCL5]: [1] digit to [124] digits
- [Serial]: [1] digit to [255] digits

3) **[Comment Group]**

Set the group number of the comment group to be used.

- [Fixed]:

  Select this item to use the specified comment group.

  After selecting this item, directly enter the comment group No. to be used.
- [Device]:

  Select this item to use the comment group number corresponding to the value of the device to be set.

  After selecting this item, set the device.

➟6.1.2 How to set devices

4) **[Comment No.]**

Set the comment No. to be printed while the bit device to be monitored is on or off.

The setting range is [0] to [32767].

If [0] is set, the comment is not printed.

To print the comment No. only while the bit device to be monitored is on, set [0] while it is off.

Click the [Edit] button to display the [Edit Comment] dialog.

The displayed comments can be edited.

➟12.15.4 [Edit Comment] dialog

5) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
Up to 100 characters can be set.

8.32.7 [Word Comment Print] dialog

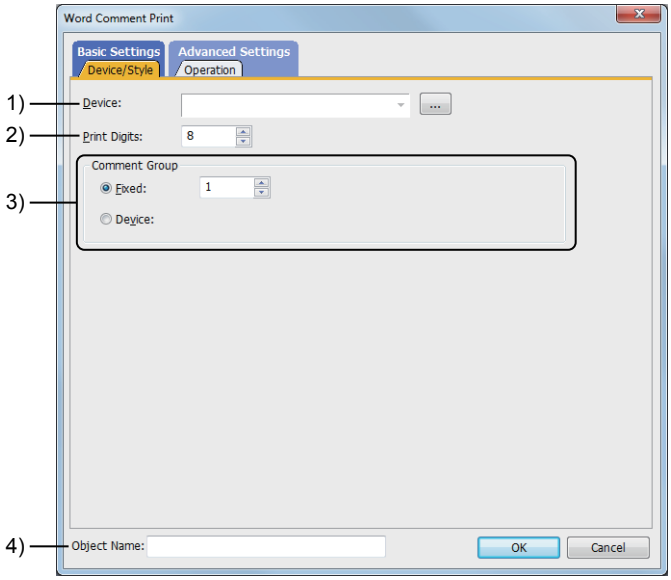
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Print] → [Word Comment Print] from the menu.
Step 2 Click the position where you place the word comment print. Placing the word comment print is completed.
Step 3 Double-click the word comment print which has been placed to display the setting dialog.

➟■1 [Device/Style] tab
■2 [Operation] tab

■1 [Device/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Device]**
Set the device to be monitored.

➟6.1.2 How to set devices

The comment of the comment No. corresponding to the device value is printed.

2) **[Print Digits]**
Set the digits of a comment to be printed.
The setting range varies with the setting of [Printer Type] in the [Printer] dialog.
- [PictBridge], [ESC/P-R], or [PCL5]: [1] digit to [124] digits
- [Serial]: [1] digit to [255] digits

3) **[Comment Group]**
Set the group number of the comment group to be used.
- [Fixed]:
  Select this item to use the specified comment group.
  After selecting this item, directly enter the comment group No. to be used.
- [Device]:
  Select this item to use the comment group number corresponding to the value of the device to be set.
  After selecting this item, set the device.

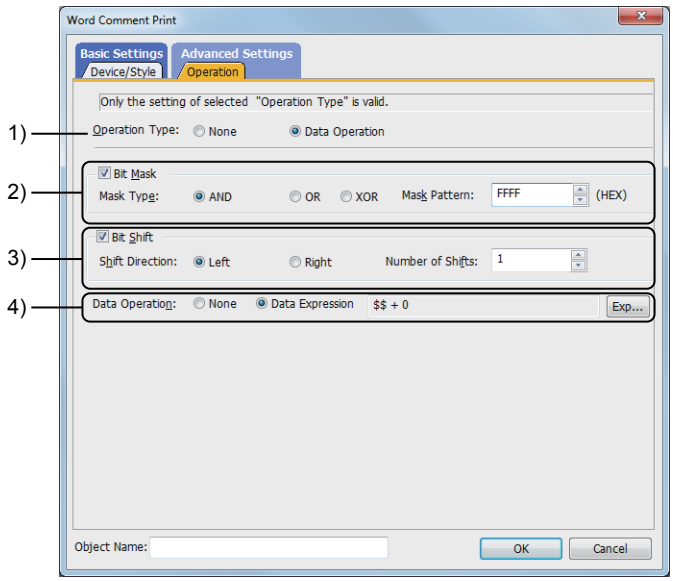
➟6.1.2 How to set devices

4) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.

The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Operation] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Operation Type]**
Select whether to use the data operation function.
The following shows the items to be selected.

- [None]:
  Select this item if the data operation is unnecessary.
- [Data Operation]:
  Select this item if the data operation is necessary.
  For the settings of the data operation function, refer to the following.
  ➟6.5.5 ■4 Setting data operations

2) **[Bit Mask]**
This item can be set when [Data Operation] is set in [Operation Type].
Set the operation of mask processing.

Item	Description
[Mask Type]	Select a type of mask processing. The following shows the items to be selected. • [AND]: Logical AND • [OR]: Logical OR • [XOR]: Exclusive OR
[Mask Pattern]	Set a pattern value to mask in hexadecimal. The setting range is [0000] to [FFFF].

3) **[Bit Shift]**
This item can be set when [Data Operation] is set in [Operation Type].
Set the operation of shift processing.

Item	Description
[Shift Direction]	Select a shifting direction. • [Left]: Left-shift • [Right]: Right-shift
[Number of Shifts]	Set the number of bits to be shifted. The setting range is [1] to [15] bit(s).

4) **[Data Operation]**
This item can be set when [Data Operation] is set in [Operation Type].
Set the format of the expression.

- [None]

Select this item not to perform the data operation by using the expression.

• [Data Expression]

Select this item to perform the data operation by using the expression.

Click the [Data Expression] button to display the [Edit Data Expression] dialog.

Set the expression.

➟6.5.5 ■4 Setting data operations

8.32.8 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the settings related to the report function, refer to the following.

➟10.11 Outputting the Collected Data as a Report (Report Function)

8.33 Placing a Hyperlink on a Mobile Screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟8.33.1 Specifications of the hyperlink object
8.33.2 How to use the hyperlink object
8.33.3 Precautions for a hyperlink object
8.33.4 [Hyperlink] dialog

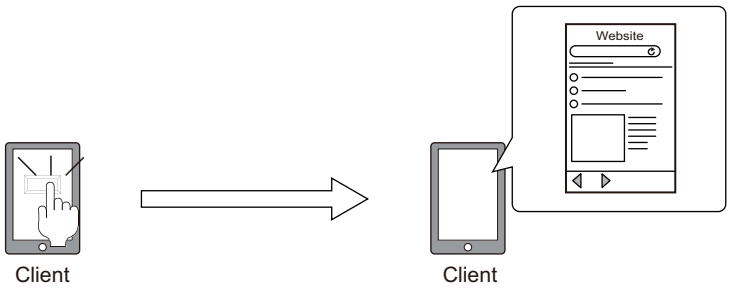
The hyperlink object is placed on a mobile screen to access a website or a file in the GOT public folder, or to make a phone call from a GOT Mobile function client.
For the details of the GOT Mobile function, refer to the following.

➟10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

■1 Application examples

(1) Opening a website

You can access a website by specifying its URL.

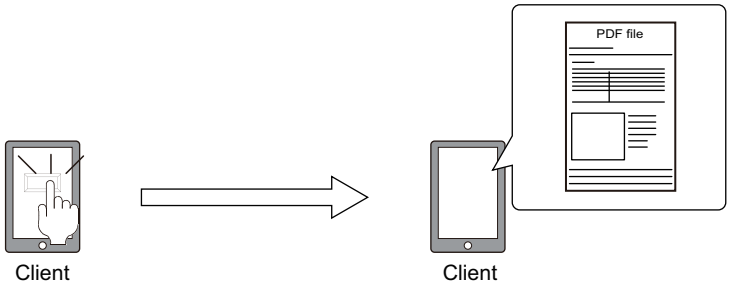


(2) Opening a file in the public folder

You can access or download a file in the GOT public folder through a browser.
For the details of the public folder, refer to the following.

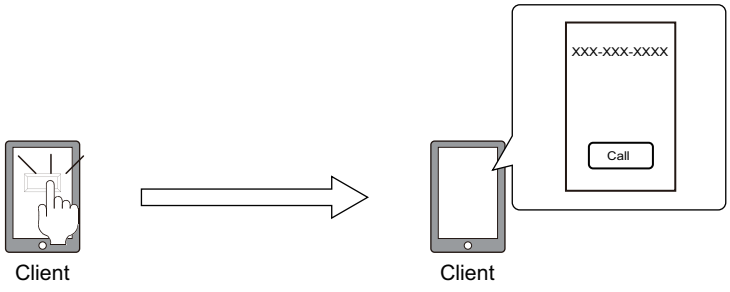
➟10.19.2 ■7 Public folder

Example) When accessing a PDF file



(3) Making a phone call

You can call a specified phone number.



8.33.1 Specifications of the hyperlink object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Maximum number of objects on one screen

The maximum number of hyperlink objects and other objects combined is 1024 on one screen.

■2 Applicable screen

The hyperlink object can be placed only in the mobile screen.

8.33.2 How to use the hyperlink object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Placing a hyperlink object

Place a hyperlink object on the screen editor.

➟6.5.1 Placing figures and objects

■2 Editing a hyperlink object

Edit a hyperlink object placed on the screen editor.

➟6.5.2 Selecting figures and objects on the screen editor
6.5.3 Editing figures and objects

■3 Configuring the hyperlink object setting

Configure the setting for a hyperlink object placed on the screen editor.

- Common setting of objects

➟6.5.5 Common setting for objects

- Hyperlink object setting

➟8.33.4 [Hyperlink] dialog

8.33.3 Precautions for a hyperlink object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Behavior of the hyperlink function dependent on the GOT Mobile function client

(1) When opening a file in the public folder

To open a file in the public folder, the client to be used must have the application that supports the file format.
If the client does not have the applicable application, the file is downloaded to the client.

(2) When making a phone call

To call a specified phone number, the client to be used must have a phone call function.

■2 When hyperlink objects overlap one another

If you touch the overlapping portion between hyperlink objects, the hyperlink object at the front operates only.

■3 When sliding your finger on a hyperlink object

If you slide your finger within the touch area of a hyperlink object, the object operates when you release your finger.

8.33.4 [Hyperlink] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Hyperlink] from the menu.

Step 2 Click the position to place a hyperlink object.

Step 3 Double-click the placed object to display the setting dialog.

➟■1 [Action/Style] tab

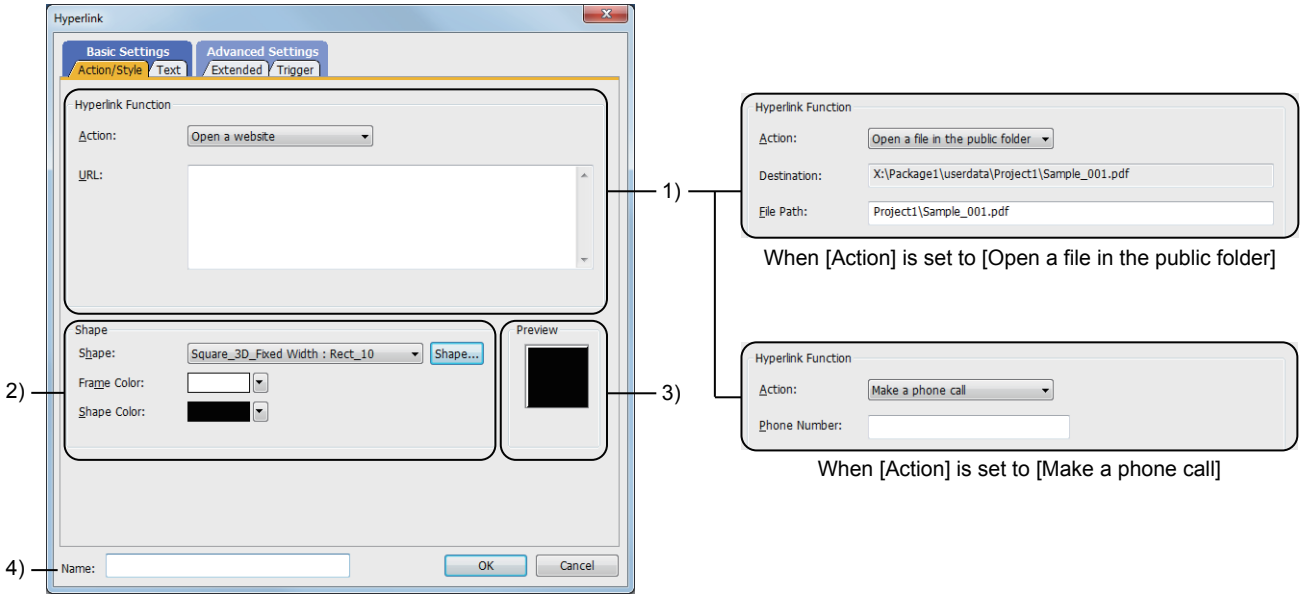
■2 [Text] tab

■3 [Extended] tab

■4 [Trigger] tab

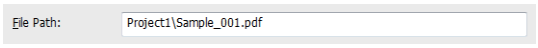
■1 [Action/Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) [Hyperlink Function]

The setting items differ depending on the selection for [Action].

Item	Description
[Action]	The following shows selectable items. • [Open a website] • [Open a file in the public folder] • [Make a phone call]
[URL]	Set the URL of a website to be accessed. Specify the URL with one-byte alphanumerics and symbols within 2083 characters.
[Destination]	Displays the full path to the file to be opened in the GOT public folder. If a message saying [The public folder is not set] appears, select [Allow external access to GOT public folder] in the [GOT Mobile Setting] window ([Basic Setting]). ➟10.19.6 ■1 [Basic Setting]
[File Path]	Set the relative path to the file to be opened in the GOT public folder (including sub folders). Example) When opening Sample_001.pdf in the Project1 folder under the GOT public folder  For restrictions on the folder name and file name, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Phone Number]	Set a phone number to be called. Specify the phone number with one-byte numerics and no hyphen within 15 digits.

2) **[Shape]**

Item	Description
[Shape]	Set a shape for the hyperlink object. To select a shape other than those in the list box, click the [Shape] button.
[Frame Color]	Set the frame color of the shape.
[Shape Color]	Set the color of the shape.

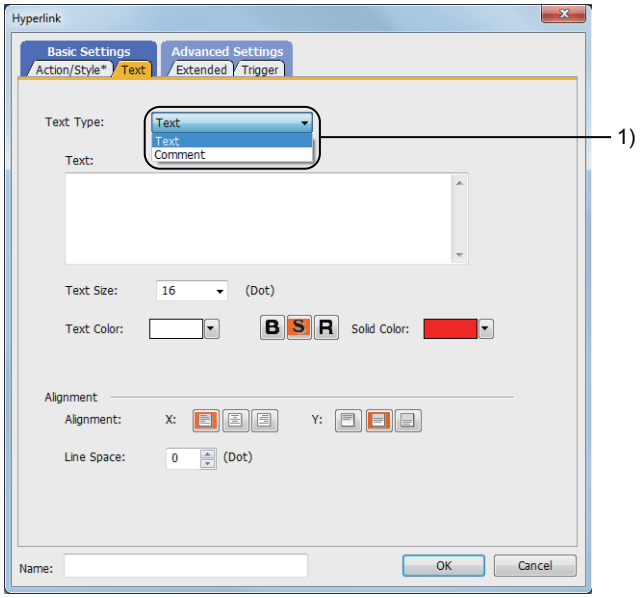
3) **[Preview]**
Object preview

4) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

■2 [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can select the text type to display the entered characters or a comment in a comment group on the object.



1) **[Text Type]**

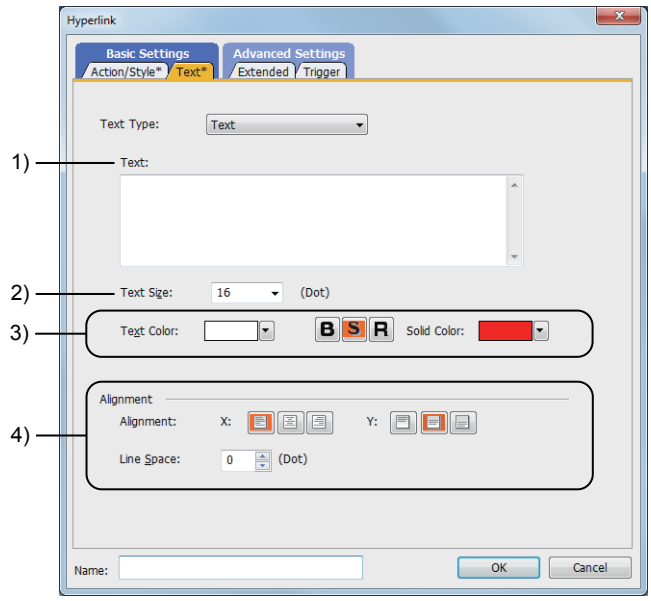
Item	Description
[Text]	Displays the entered characters on the object. If characters have already been entered in the [Text] field, switching the text type from [Text] to [Comment] enables you to register the entered characters in a comment group. For the registration method for the comment group, refer to the following. ➟5.8.4 ■12 (2) Registering the characters in the [Text] field to a comment group
[Comment]	Displays a comment of a specified comment group on the object.

For the setting of the comment group, refer to the following.

➟5.8 Comment Setting ([Comment])

The setting items differ according to the text type.
The following shows the setting items for each text type.

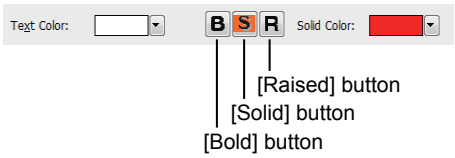
(1) [Text]



1) **[Text]**
Enter characters to be displayed on the object.
Up to 1024 characters can be set.
To display the characters in multiple lines, press the [Enter] key at the end of a line.
(A line feed is counted as two characters.)

2) **[Text Size]**
Set the size of the text to be displayed on the object.
The setting range for the vertical and horizontal orientations is [8] dots to [240] dots (in 1-dot units).

3) **[Text Color]**
Set the color and style of the text to be displayed on the object.
One style ([Bold], [Solid], or [Raised]) is settable only.

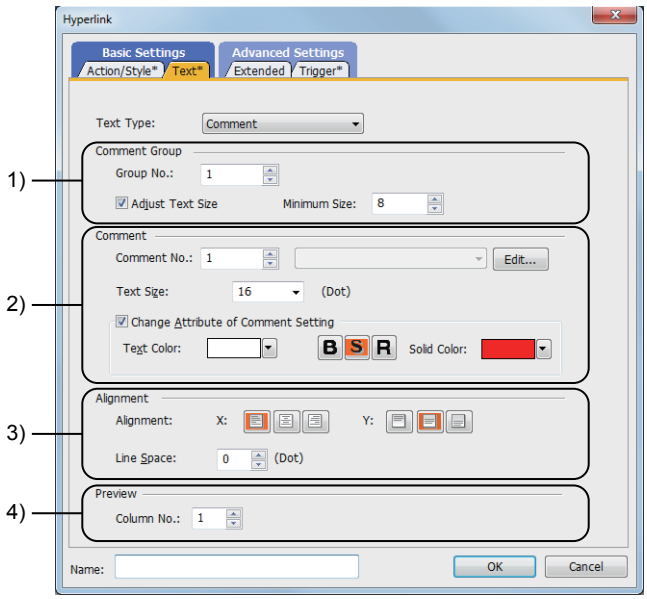


Item	Description
[Text Color]	Set the text color. ➟6.4 Color Settings
[Bold] button	Displays the text in bold.
[Solid] button	Displays the text with a shadow.
[Raised] button	Displays the text embossed.
[Solid Color]	When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

4) **[Alignment]**

Item	Description
[Alignment]	Set the vertical and horizontal positions of the text.
[Line Space]	Set the space between lines in units of dots. The setting range is [0] dots to [128] dots.

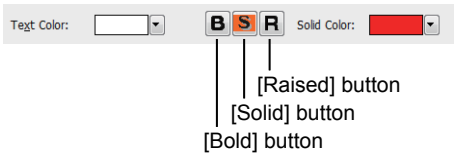
(2) [Comment]



1) [Comment Group]

Item	Description
[Group No.]	Set the comment group number to be used. The setting range is [1] to [500].
[Adjust Text Size]	Automatically adjusts the text size according to the object size. When this item is not selected, a line feed is automatically inserted if the text is more than one line.
[Minimum Size]	Set the minimum text size applied when the text size is automatically adjusted. The setting range is [8] dots to [240] dots.

2) [Comment]

Item	Description
[Comment No.]	Set the comment number to be displayed. The setting range is [0] to [32767]. To edit the comment to be displayed, click the [Edit] button to display the [Edit Comment] dialog. If you specify an unregistered comment group number or comment number, a comment is newly created. ➟12.15.4 [Edit Comment] dialog
[Text Size]	Set the size of the text to be displayed on the object. The setting range for the vertical and horizontal orientations is [8] dots to [240] dots (in 1-dot units).
[Change Attribute of Comment Setting]	Change the comment attributes. Set the color and style of the text to be displayed on the object. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Text Color]** Set the text color. ➟6.4 Color Settings • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed. • **[Solid Color]** When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

3) **[Alignment]**

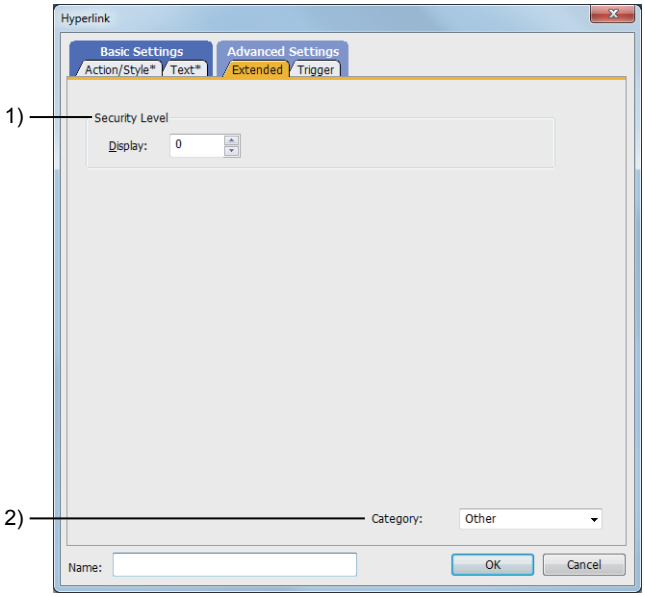
Item	Description
[Alignment]	Set the vertical and horizontal positions of the text.
[Line Space]	Set the space between lines in units of dots. The setting range is [0] dots to [128] dots.

4) **[Preview]**

Item	Description
[Column No.]	Set the column number of the comment to be displayed on the object on GT Designer3.

■3 [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Security Level]**

Set a security level when using the security.

The setting range is [0] to [15].

If you do not use the security, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

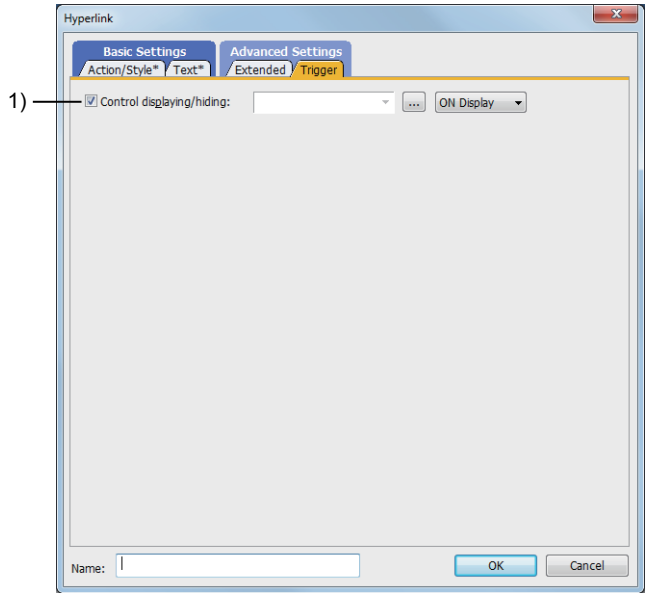
2) **[Category]**

Select the category to assign the object.

➟11.7 Managing figures and objects by category

■4 [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.
Select the ON/OFF status of the set device to display the object.
The following shows selectable items.

- [ON Display]
- [OFF Display]

➟6.1.2 How to set devices

9. FUNCTIONS RUNNING IN THE BACKGROUND

9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm]) . . . 9 - 2
9.2 Collecting Device Data ([Logging]) . . . . . 9 - 157
9.3 Executing the Batch Write or Batch Read on Multiple Devices ([Recipe]) . . . . . 9 - 201
9.4 Transferring Data between Devices ([Device Data Transfer]) . . . . 9 - 270
9.5 Operating a Device as a Trigger ([Trigger Action]) . . . . . 9 - 289
9.6 Operating the Set Time as a Trigger ([Time Action]) . . . . . 9 - 303
9.7 Capturing the GOT Screen and Outputting the Screen Image ([Hard Copy]) . . . . . 9 - 313
9.8 Controlling Operations with Scripts ([Script]) . . . . . 9 - 335
9.9 Project Script, Screen Script, and Script Part . . . . . 9 - 338
9.10 Object Script . . . . . 9 - 439

9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.1.1 Overview of the alarm function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

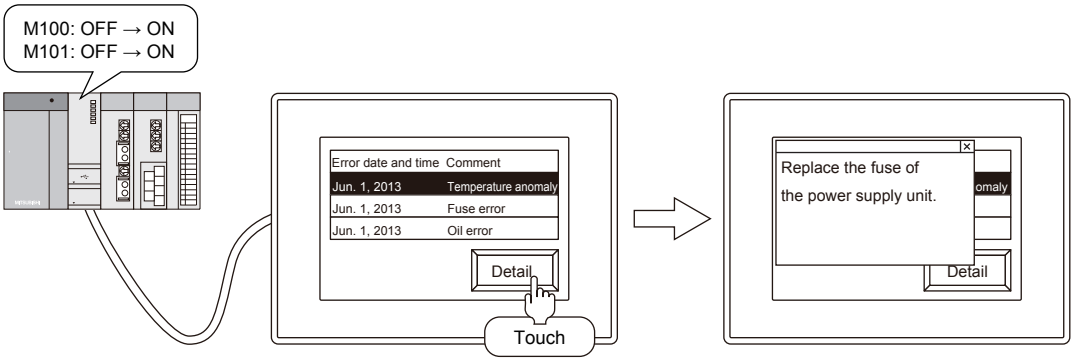
■1 Alarm type

The GOT collects the following alarms.

(1) User alarm

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

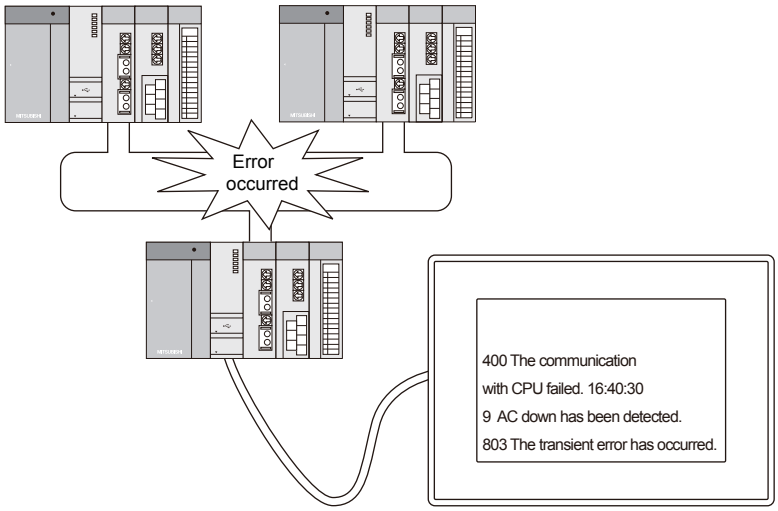
This function displays a comment created by user as an alarm message when an alarm occurs.
Use this function when displaying an alarm created by a user.



(2) System alarm

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function displays the error code and the error message when an error occurs in the GOT, controller, or network.
Use this function when displaying an error occurred in the GOT, controller, or network.

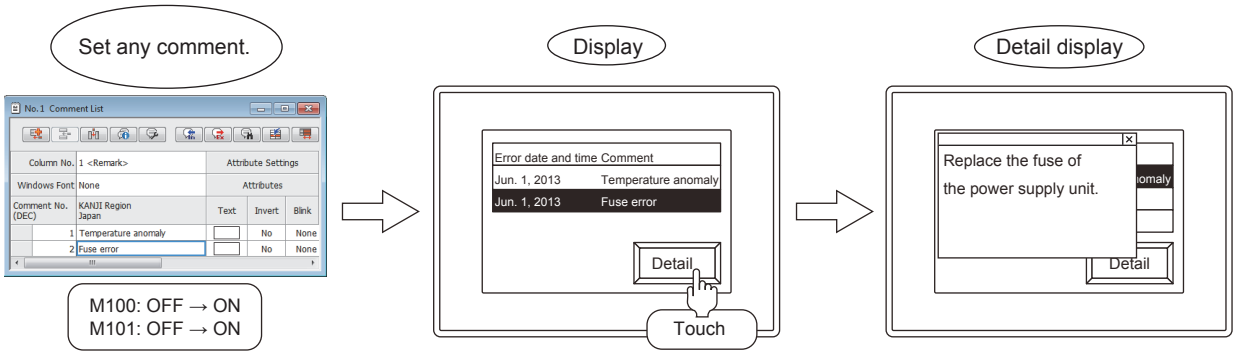


■2 Available functions in the alarm

The GOT collects and displays alarms as follows.

(1) Displaying the comment set previously at the alarm occurrence

You can register any comment for the user alarm.

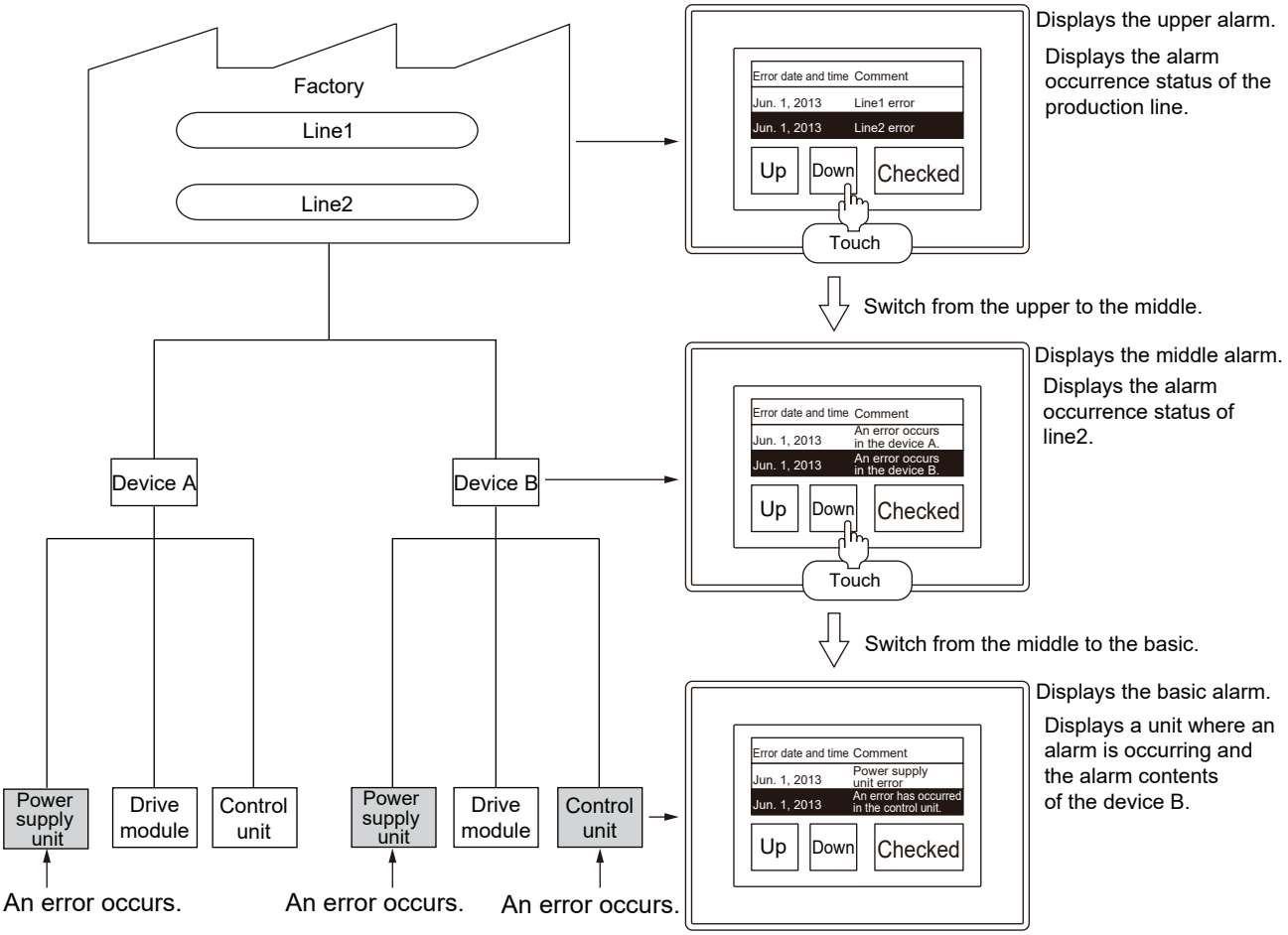


(a) Displaying comments by level in the hierarchy

The user alarm function displays the comment for one alarm in the upper alarm comment, middle alarm comment, or basic alarm comment.

➟9.1.5 ■4 (1) [Alarm Setting] tab

This enables you to check the alarm from the overview to the detail.



(b) Displaying the comment by switching the language

By setting multiple languages in a comment group, you can switch the display language with the language switching device.

Comment group setting

Setting comment group No.1 to the title row

No. 1 Title Comment List

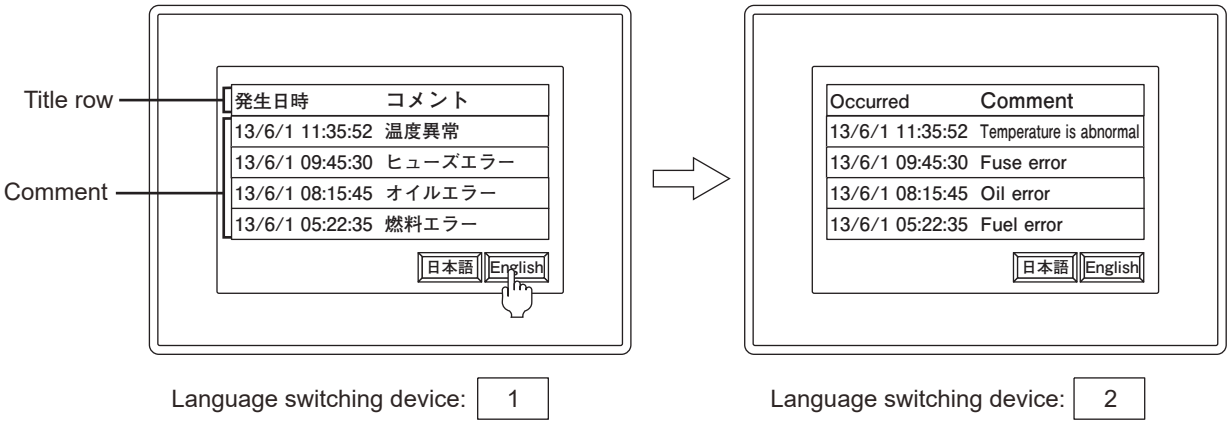
Column No.	1 日本語	2 English
Windows Font	None	None
Comment No. (DEC)	KANJI Region Japan	KANJI Region Japan
1	発生日時	Occurred
2	コメント	Comment

Setting comment group No.2 to comments

No. 2 Comment Comment List

Column No.	1 日本語	2 English
Windows Font	None	None
Comment No. (DEC)	KANJI Region Japan	KANJI Region Japan
1	温度異常	Temperature is abnormal
2	ヒューズエラー	Fuse error
3	オイルエラー	Oil error
4	燃料エラー	Fuel error

Switching between comment column numbers with the language switching device



Language switching device: 1

Language switching device: 2

For setting comments, refer to the following.

➟5.8 Comment Setting ([Comment])

For the language switching settings, refer to the following.

➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

(2) Checking the working status of the equipment by displaying the alarm information

The alarm function displays the following items.

- Occurred time
- Comment
- Restored time
- Checked time
- Cumulative Time*1
- Frequency
- Alarm status
- Down Time*2
- Level*3
- Group*3

*1 The total of alarm occurrence times.

*2 The time from the alarm occurrence to the restoration.

*3 By setting the level or group for each alarm, the display contents can be narrowed.

By the information above, you can understand the working status of the equipment and you can identify the cause of the deterioration of productivity.

(3) Operating the display contents

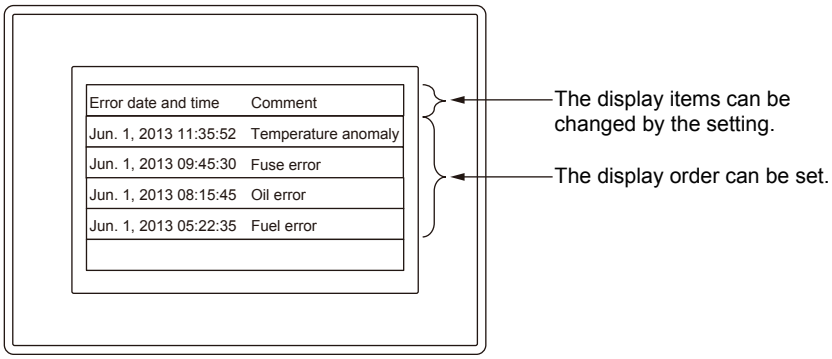
(a) Changing the display order by the setting

Set the display order for the displayed alarms.

You can sort the display order by the ascending order or the descending order of either of following conditions.

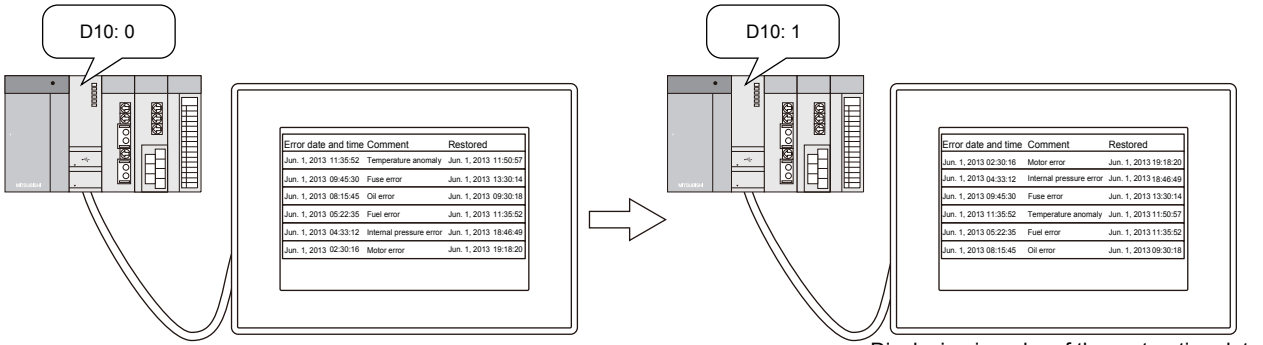
- Error date and time
- Comment
- Alarm status
- Restored
- Checked
- Frequency
- Cumulative Time
- Down Time
- Level
- Group

Example) When displaying alarms in the descending order of the date of alarm occurrence



The display order can be changed by the device value.

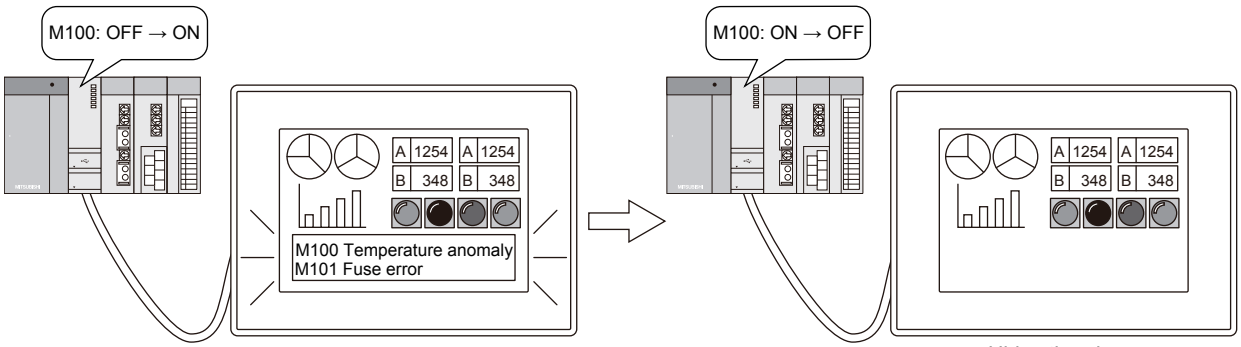
➟9.1.1 ■2 (3) (b) Operating the alarm display by device



(b) Operating the alarm display by device

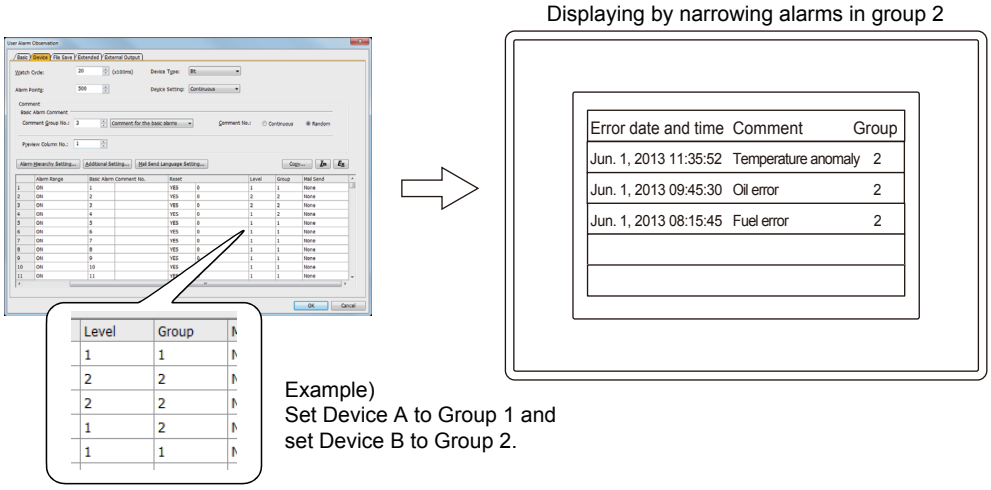
- Displaying or hiding the alarm

  You can display or hide the alarm by the device.



• Narrowing the display contents

You can narrow the display contents by the device.



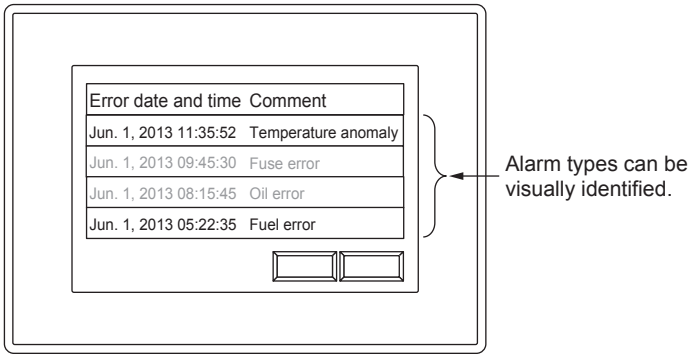
By setting the level or group for each alarm, the display contents can be narrowed.

Two or more items can be set for narrowing the display contents.

(c) **Setting a display color for the alarm contents**

By displaying different character colors for each alarm, you can distinguish the alarm type visually.

The character color can be set only for the alarm popup display.

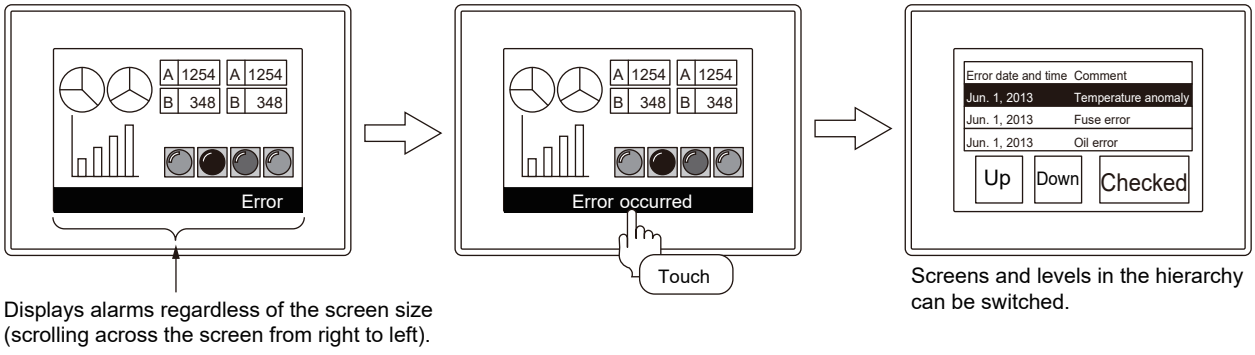


(d) **Displaying the alarm only at the alarm occurrence**

By using the alarm popup display, you can display the alarm only at the alarm occurrence without arranging the alarm display object.

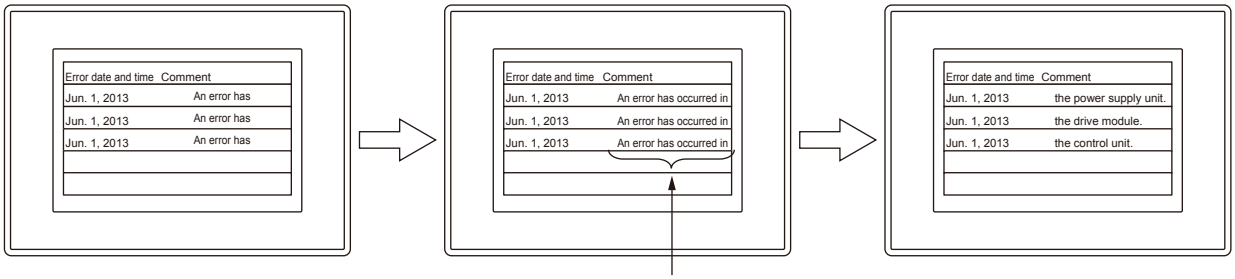
When an object is placed on the alarm display position, the alarm is displayed.

Touching the alarm popup display on the screen switches a screen or level in the hierarchy, or displays the detail display.



(e) **Scrolling comment display**

The comments at the alarm occurrence are displayed by scrolling across the screen from right to left.
This function displays whole comments even when the display area is narrow.



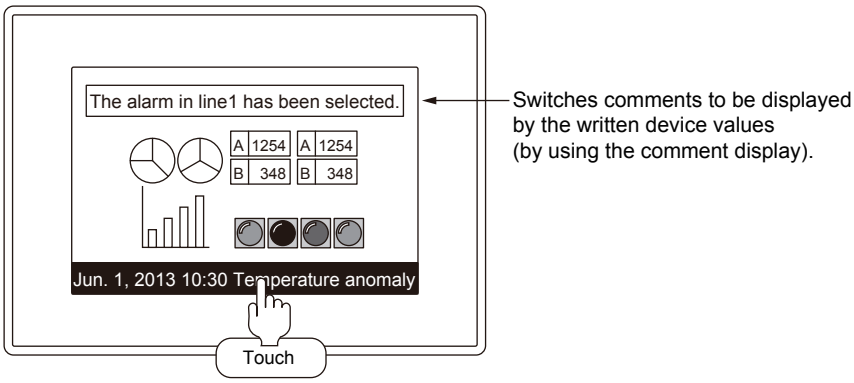
Comments are displayed by scrolling across the screen from right to left.

(f) **Writing the alarm information to devices**

You can write the touched alarm information to a device.
The following shows the writable information.

- Alarm ID
- Comment group No.
- Comment No.
- Alarm status
- Occurrence date
- Occurrence time
- Date of restoration
- Time of restoration
- Date of confirmation
- Time of confirmation
- Level
- Group
- Frequency
- Cumulative Time
- Down Time

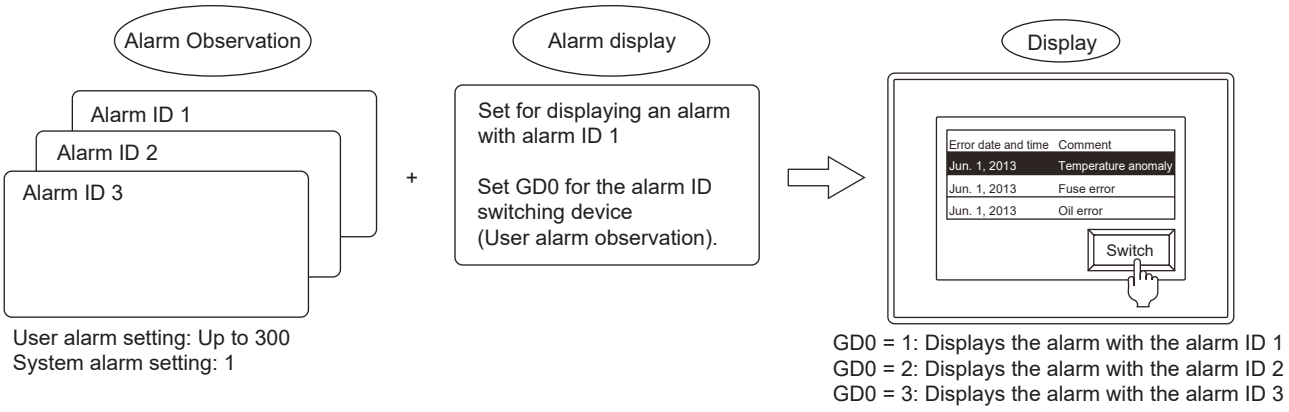
The detail message of the selected alarm can be displayed in the comment display.
In addition, the contents that cannot be displayed due to a narrow screen can be written to the device.



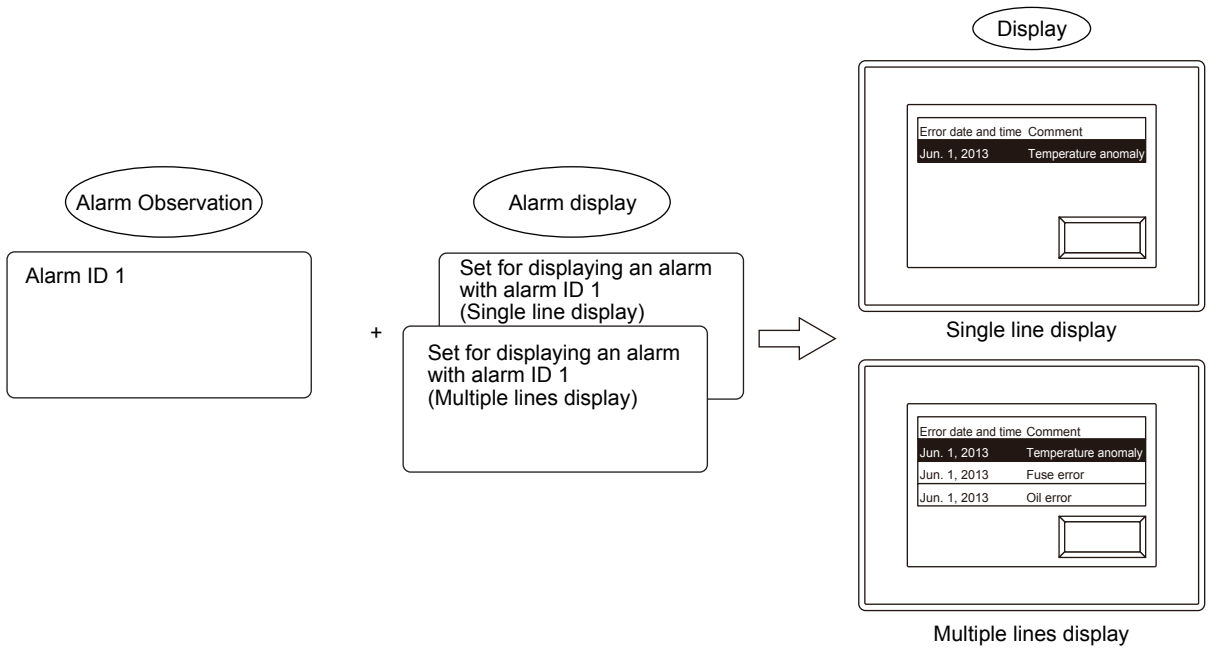
(g) **Setting any alarm monitor device**

The alarm monitor device can be set by the user.
Set the monitor device (alarm monitor) and the alarm display in different screens.

- Configuring multiple monitor device settings (alarm monitor) and displaying on one screen by switching the screen



• Arranging various displays by one monitor device setting (alarm monitor)

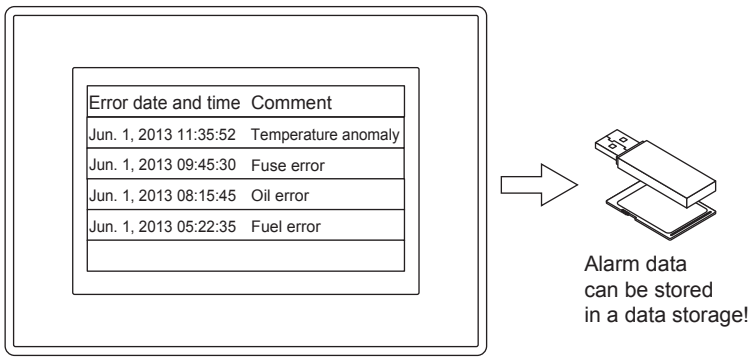


(h) **Storing the alarm data (power failure backup)**

By storing the alarm data as alarm log files, the alarm histories can be stored even when the GOT is powered off.

• Storing the alarm data in data storage

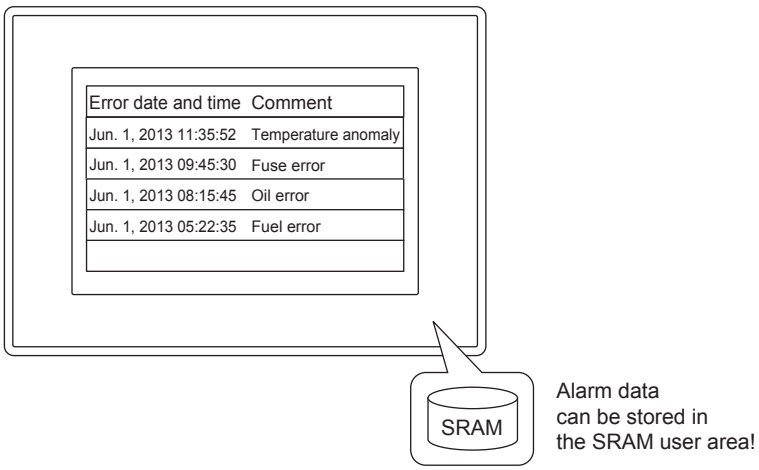
You can store the user alarm history and the system alarm history in data storage.
Set whether to store or not each monitor device of the user alarm and the system alarm, and set the folder name and file name for each user alarm history and the system alarm history.
Set the timing for the storage from any of the rise, fall, cycle, ON sampling, or OFF sampling with the device.
When an alarm log file exists in the data storage, the alarm data in the data storage are read automatically when the GOT is powered on from off.



• Storing the alarm data in SRAM user area

You can store the user alarm history and the system alarm history in SRAM user area.

The latest alarm data are stored.
Set whether to store or not each monitor device of the user alarm and the system alarm.
When an alarm log file exists in the SRAM user area, the alarm data in the SRAM user area are read automatically when the GOT is powered on from off.



(i) **Utilizing the stored data**

The stored alarm log files can be displayed and edited in a personal computer, and displayed in a graph in the GOT.

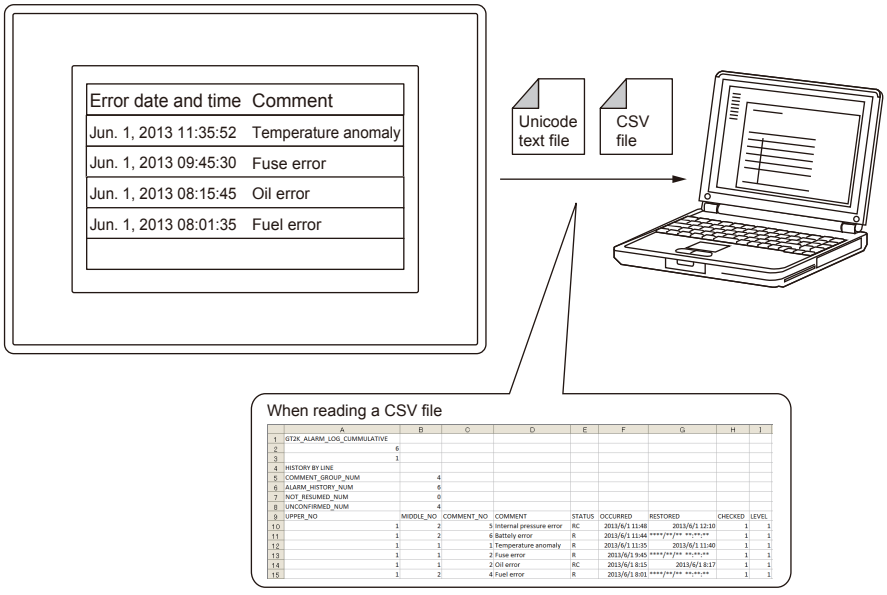
- Outputting the alarm log files to a Unicode text file or a CSV file

The alarm data can be output to a Unicode text file and a CSV file.
The output alarm data can be displayed and edited on a personal computer.
To display and edit the alarm data on a personal computer, store the Unicode text file or the CSV file into the personal computer.
To read the resource data with GT Designer3, refer to the following.

➟4.3.2 ■3 Reading the data from the GOT

To read the CSV file stored in the data storage to the personal computer, refer to the following.

➟4.5 Transferring the Data with Data Storage



- Converting the alarm log file stored in the data storage

The alarm log file can be converted into a CSV file or a Unicode text file.
For the conversion with the utility of the GOT, refer to the following.

➟GOT2000 Series User's Manual (Utility)

For the conversion with the conversion trigger device, refer to the following.

➟9.1.2 ■6 [User Alarm Observation List] dialog

For the conversion with GT Designer3, refer to the following.

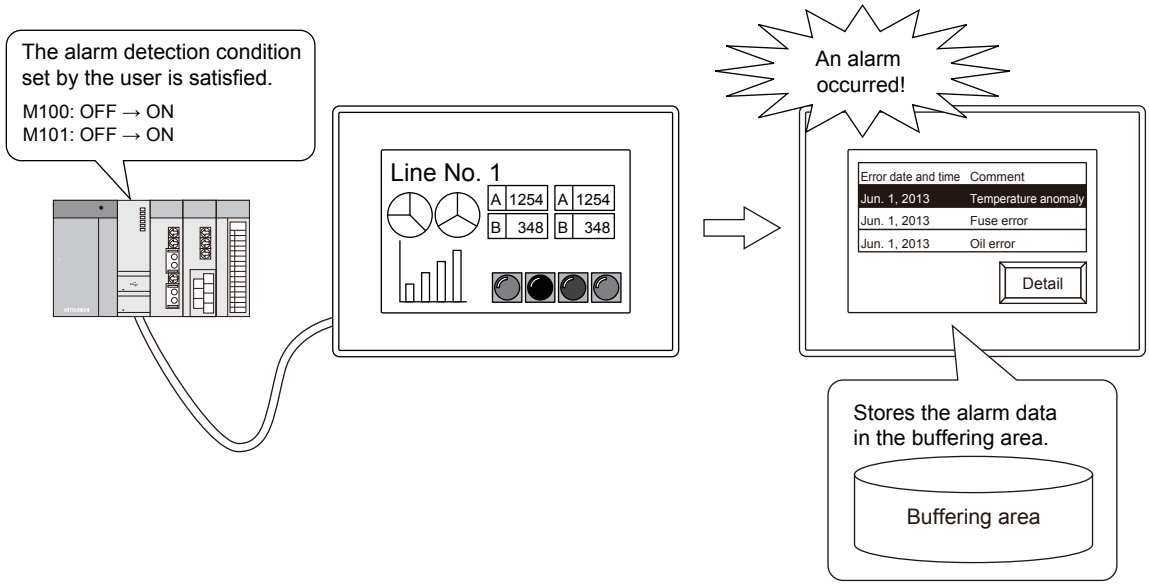
➟9.1.2 ■8 [Alarm File Conversion] dialog

9.1.2 Collecting alarms by monitoring devices

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of the user alarm observation
■2 How to use the user alarm observation
■3 Precautions for drawing
■4 Precautions for use
■5 [Alarm Common Setting] dialog
■6 [User Alarm Observation List] dialog
■7 [User Alarm Observation] dialog
■8 [Alarm File Conversion] dialog
■9 Relevant settings

In a user alarm monitor, the time when set conditions of devices set as the alarm detection are satisfied or comments as the user alarm data history to a built-in memory of the GOT.



■1 Specifications of the user alarm observation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Alarm detection condition and range

(a) **Detection condition**

- Rising (OFF to ON) or falling (ON to OFF) of the bit device
- Word device value

(b) **Collection cycle (monitoring cycle)**

The user alarms can be collected and updated to a buffering area of the GOT in a cycle set by the user regardless of a displayed screen.

The following shows the setting range of the cycle.

- 0.1 second to 3600 seconds
- 0.5 second to 3600 seconds (GT23, GT21, and GS21)

(c) **Setting range**

- User alarm observation setting

  A user alarm observation setting specifies a pattern of collecting alarms.

  Each user alarm observation setting has an alarm ID, which is used to specify its corresponding setting as the target of the alarm display (user) or others.

  Up to 300 user alarm observation settings can be set.

  The setting range of the alarm ID is 1 to 32767.
- Alarm points

The alarm points refer to the number of monitored devices.
The setting range depends on the GOT model.
For GT27, GT25, GT23, GT SoftGOT2000, and GS25
Up to 32767 devices can be set in one user alarm observation setting.
Up to 45000 devices can be set in one project.
For GT21 and GS21
Up to 2000 devices can be set in one project.

(2) Setting example

Alarm detection conditions, collection cycles (observation cycle),
and number of alarms for each alarm ID
Number of alarm ID numbers: 3 (No.1, No.150, and No.300)
Alarm points: 58 (No.1: 50, No.150: 4, No.300: 4)

Alarm ID: 1 (An alarm for the maintenance)

D10 > 40 [Supply oil]
D20 > 500 [Supply fuel]
. .
. .
. .

Setting

Alarm detection condition:	Values of word devices
Watch cycle	: 3600 seconds
Alarm points	: 50

Alarm ID: 150 (An alarm for an emergency)

M10: OFF → ON [LineA abnormal stop]
M20: OFF → ON [LineB abnormal stop]
M30: OFF → ON [LineC abnormal stop]
M40: OFF → ON [LineD abnormal stop]

Setting

Alarm detection condition:	Bit devices
Watch cycle	: 2 seconds
Alarm points	: 4

Alarm ID: 300

M80: OFF → ON [Check a battery]
M81: OFF → ON [Check the hydraulic pressure]
M82: OFF → ON [Check the internal pressure]
M83: OFF → ON [Check a fuse]

Setting

Alarm detection condition:	Bit devices
Watch cycle	: 60 seconds
Alarm points	: 4

■2 How to use the user alarm observation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

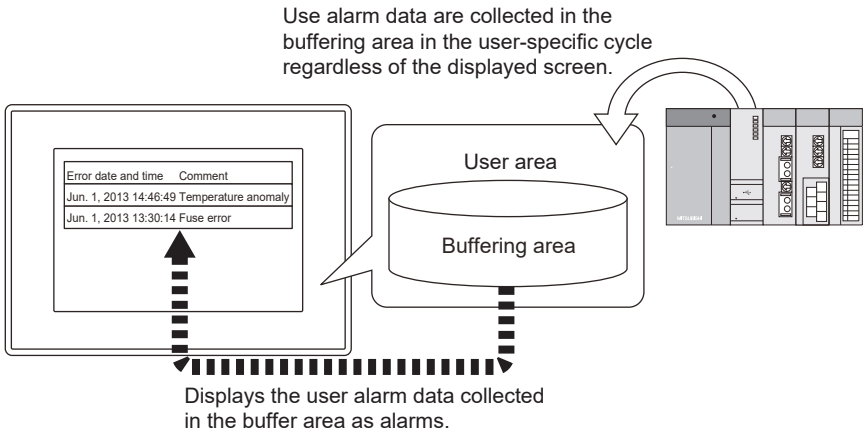
(1) Alarm collecting procedure and alarm history collecting method

(a) Alarm collecting procedure

The user alarm observation collects user alarm data to the buffering area of the user area in the user-specified cycle regardless of the displayed screen.
For the data collection cycle, refer to the following.

➟9.1.2 ■1 Specifications of the user alarm observation

The buffering area stores the collected user alarms as histories temporarily, and displays them on the GOT as alarms.



• For how to delete the data in the buffering area, refer to the following.

➟9.1.2 ■2 (2) Storing and deleting the collected user alarm data

• The data to be stored in the buffering area of the user area differ depending on the history collecting method.

(b) **Alarm history collecting method**

The following shows the alarm history collecting method.

• History mode

Adds the alarm contents to the user area of the GOT for each alarm occurrence.

• Cumulative mode

Collects the latest alarm status and the alarm counts or time together for each alarm.

• Only the current alarm

Displays only the alarm in occurrence, and deletes the display after the alarm restoration.

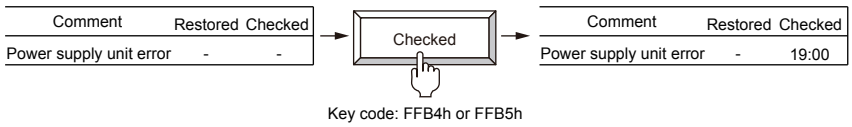
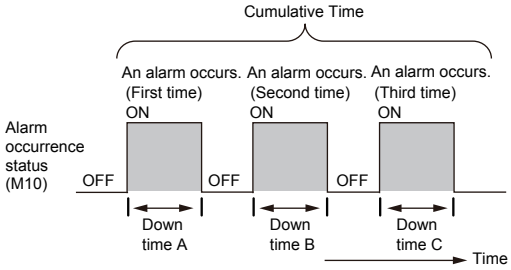
For the setting of the alarm history collecting method, refer to the following.

➟9.1.2 ■7 [User Alarm Observation] dialog

Depending on the collecting method, the types of information collected differs.

Example) Alarm Display (User)

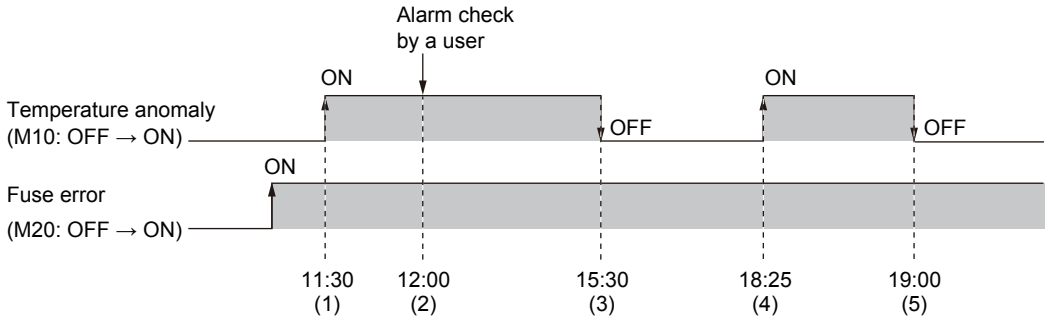
Error date and time	Comment	Alarm status	Restored	Checked	Frequency	Cumulative Time	Down Time	Level	Group
Jun. 1, 2013 20:00	Power supply unit error	-	-	-	1	-	-	1	2
Jun. 1, 2013 18:30	Hydraulic pressure failure	Checked	-	18:50	2	-	-	1	1
Jun. 1, 2013 16:10	Drive module error	Checked	16:30	16:20	2	00:40	00:20	2	1
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Displayed information	Description		
	History mode	Cumulative mode	Alarms in the "Occurred" status only
(1) Date of occurrence	Displays the date and time when an alarm occurs.		
(2) Comment	Displays the comment assigned to the alarm at the alarm occurrence.		
(3) Alarm status	Displays the alarm status that is currently displayed. • Occurred: The alarm has occurred. (The occurrence of the alarm has not been checked.) • Checked: The occurrence of the alarm has been checked. • Restored: The monitor target already recovered from the alarm.		
(4) Restored	Displays the date and time when the monitor target recovered from the alarm.		
(5) Checked	Displays the date and time when an alarm occurrence has been checked. Check the occurrence of an alarm with the touch switch or device that is set for the alarm check. ➟9.1.2 ■7 (2) [Device] tab 9.1.5 ■2 (11) Touch switches for the alarm display Example) Operation with a touch switch  Key code: FFB4h or FFB5h		
(6) Frequency	-	Displayed only for the accumulation mode. Displays the number of error occurrence.	-
(7) Cumulative Time	-	Displayed only for the accumulation mode. Displays the total time of alarm occurrence including the past alarm occurrence time. 	-
(8) Down time	-	Displayed only for the accumulation mode. Displays the time from the alarm occurrence to the alarm restoration.	-

Displayed information	Description		
	History mode	Cumulative mode	Alarms in the "Occurred" status only
(9) Level	Displays the levels set for alarms. The alarms can be classified into the level according to the alarm importance. You can display the alarm with higher level preferentially or display the alarms with specific level only. ➟9.1.2 ■2 (6) Useful operations and functions		
(10) Group	Displays the groups set for alarms. The alarms can be classified into groups according to the alarm contents. You can display the alarms in order of the group or display the alarms with specific group only. ➟9.1.2 ■2 (6) Useful operations and functions		

(c) **Alarm display example**

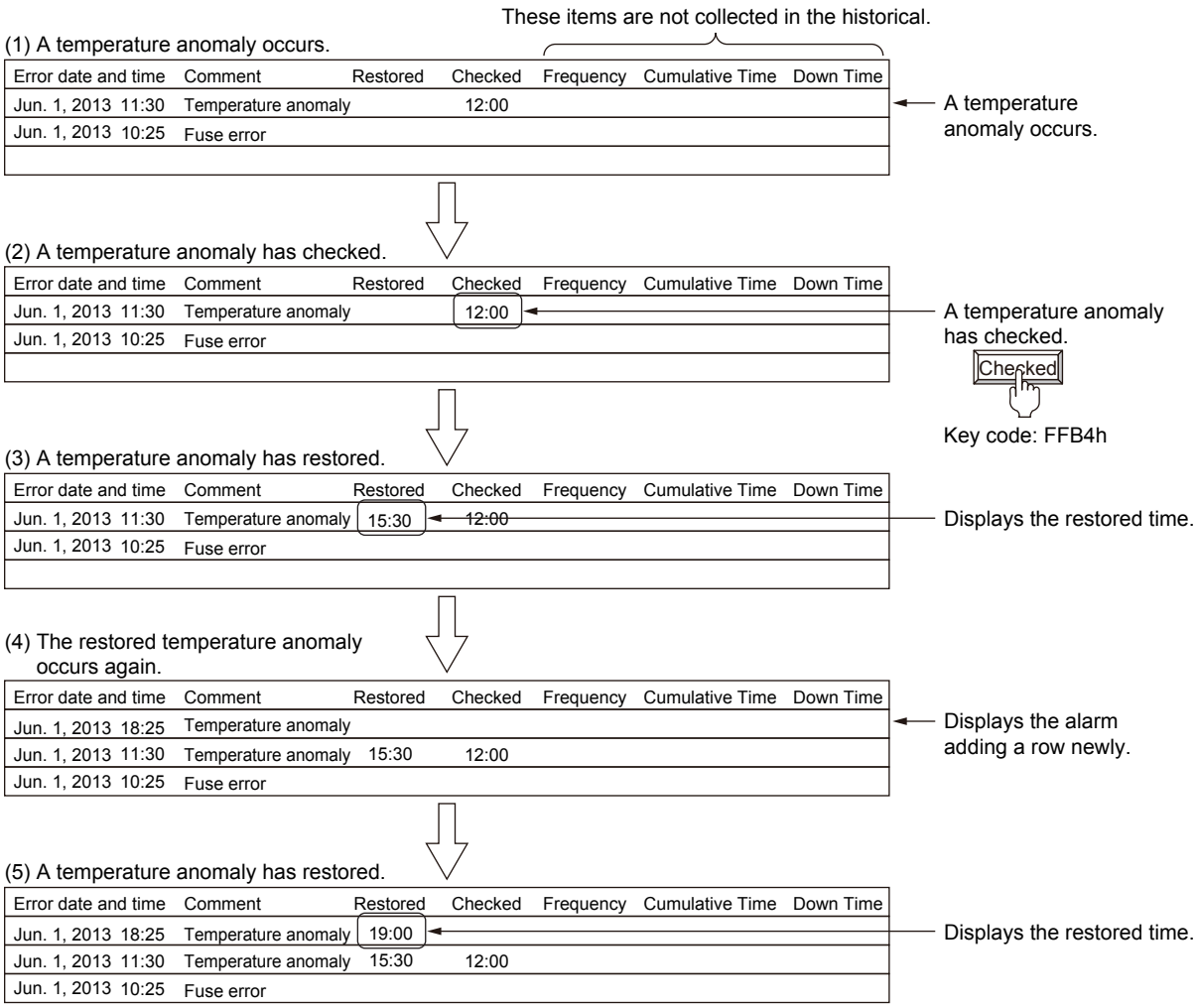
The following shows the examples for displaying alarms with the alarm display (user) for each alarm collecting method.



• Historical

Collects the alarm occurrence status as histories.

The history is added every time an alarm occurs.



• Cumulative

Collects the latest alarm status, the alarm counts, and the time together for each alarm.

(1) A temperature anomaly occurs.

Error date and time	Comment	Restored	Checked	Frequency	Cumulative Time	Down Time
Jun. 1, 2013 11:30	Temperature anomaly			1	00:00	
Jun. 1, 2013 10:25	Fuse error			1	00:00	

← A temperature anomaly occurs.

(2) A temperature anomaly has checked.

Error date and time	Comment	Restored	Checked	Frequency	Cumulative Time	Down Time
Jun. 1, 2013 11:30	Temperature anomaly		12:00	1	00:00	
Jun. 1, 2013 10:25	Fuse error			1	00:00	

A temperature anomaly has checked.

Key code: FFB4h

(3) A temperature anomaly has restored.

Error date and time	Comment	Restored	Checked	Frequency	Cumulative Time	Down Time
Jun. 1, 2013 11:30	Temperature anomaly	15:30	12:00	1	04:00	04:00
Jun. 1, 2013 10:25	Fuse error		12:00	1	00:00	

← Displays the restored time, the down time, and the cumulative time.

(4) The restored temperature anomaly occurs again.

Error date and time	Comment	Restored	Checked	Frequency	Cumulative Time	Down Time
Jun. 1, 2013 18:25	Temperature anomaly			2	04:00	
Jun. 1, 2013 10:25	Fuse error		12:00	1	00:00	

← Displays the alarm occurred time of the alarm that occurred again in the same line, and frequency is added by one.

(5) A temperature anomaly has restored.

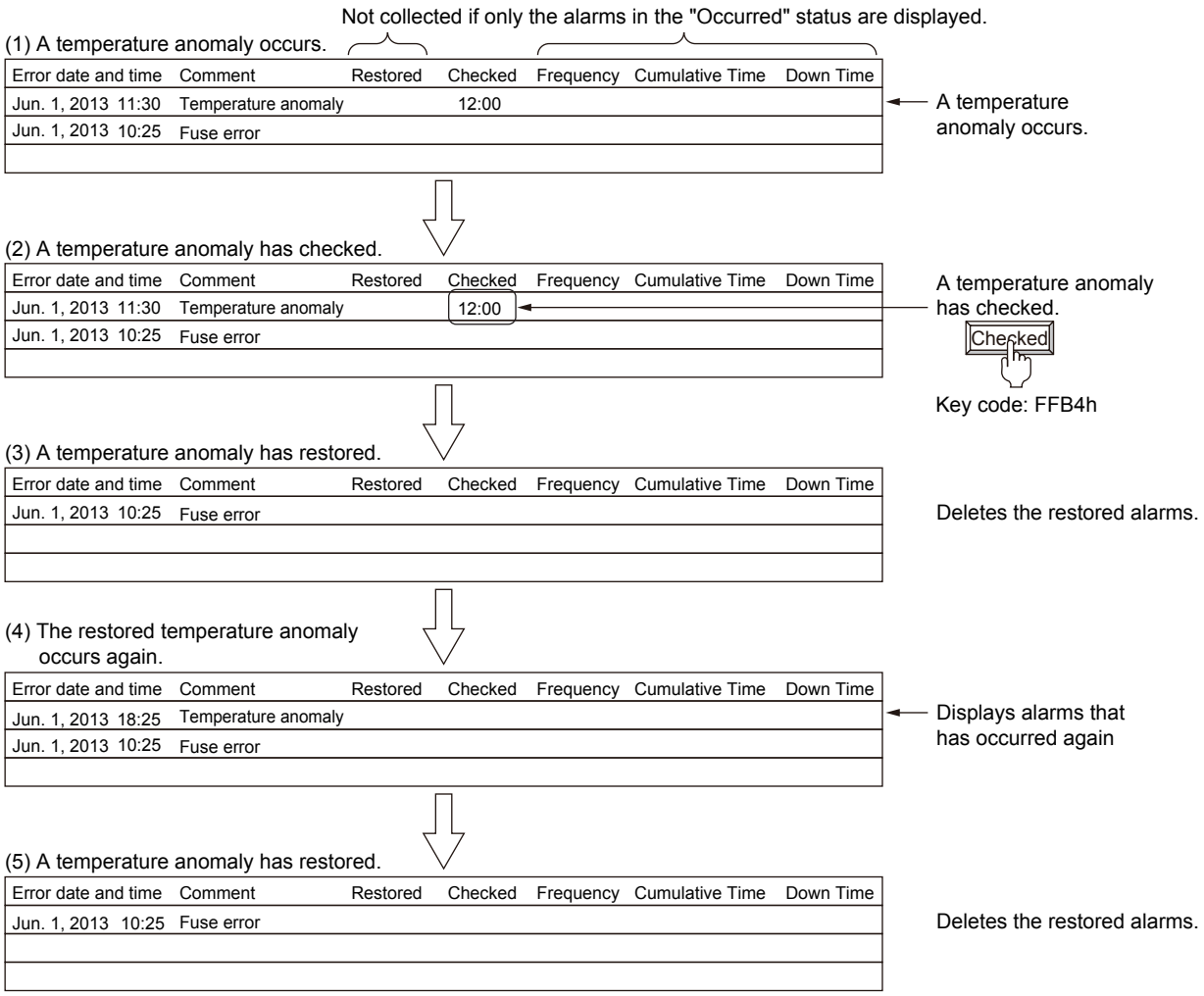
Error date and time	Comment	Restored	Checked	Frequency	Cumulative Time	Down Time
Jun. 1, 2013 18:25	Temperature anomaly	19:00		2	04:35	00:35
Jun. 1, 2013 10:25	Fuse error		12:00	1	00:00	

← Displays the restore time, downtime, and cumulative time (total time during which the alarm has occurred).

• Alarms in the "Occurred" status only

Collects the alarms that are currently occurring only.

The histories of the alarms that have been recovered are not stored.



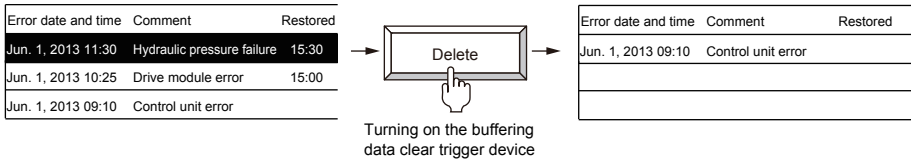
(2) Storing and deleting the collected user alarm data

The user alarm data are stored in the buffering area in the user area of the GOT.
The stored user alarms are deleted at the following timing.

(a) When turning on the buffering data clear trigger device

Turn on [Buffering Data Clear Trigger Device] set in the [Basic] tab of the [User Alarm Observation] dialog to delete all alarm data in the "Restored" status.

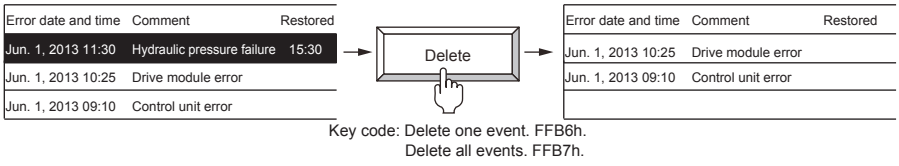
➟9.1.2 ■7 [User Alarm Observation] dialog



(b) When inputting a key code for deletion using a touch switch

Use a touch switch to delete one or all alarm data items in the "Restored" status.

➟9.1.2 ■2 (6) Useful operations and functions



(c) When powering off or resetting the GOT

Power off or reset the GOT to delete alarm data.
However, when the alarm data is stored in a data storage, the data is retained even after the GOT is powered off.

(d) **When changing the [Controller] setting in the utility**

Change the [Controller] setting in [GOT basic set] in the utility to delete all alarm data in the "Restored" status.

(e) **When writing/deleting data to/from the GOT**

Perform any of the following operations in the [Communicate with GOT] dialog to delete all alarm data in the "Restored" status.

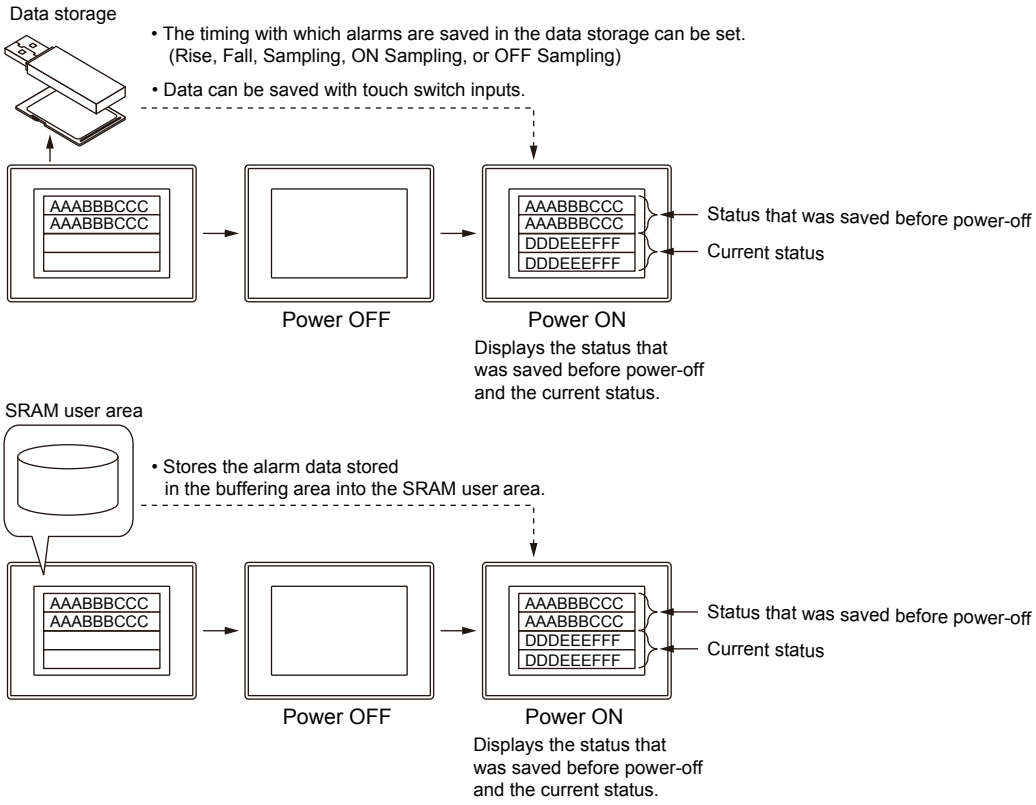
- Writing package data
- Deleting an item from the drive information
- Formatting a drive

(3) Power failure backup for the user alarm

(a) **Overview of the power failure backup**

Once the user alarm data are stored in the data storage or the SRAM user area as the alarm log file, the user alarm data are held even when the GOT is powered off.

When the alarm log file is stored in the data storage or the SRAM user area when the GOT is powered on, the alarm log file is read automatically and the user alarm history before the power-off is restored.



- Precautions for starting the GOT

  When reading and restoring the user alarm from the data storage, install the data storage on the GOT before powering-on the GOT.

  After the powering-on the GOT, the data in the data storage cannot be restored.

  In addition, when the data storage is installed after the power-on, the user alarm data in the data storage are overwritten when other user alarm data are stored in the data storage.

(b) **Performing the power-failure backup**

To hold the data in the data storage, configure the setting in the [File Save] tab of the [User Alarm Observation] dialog, and use either of the following methods.

- Storage by the store trigger device

  ➟9.1.2 ■7 [User Alarm Observation] dialog

- Storage by the touch switch

  ➟9.1.5 ■2 (11) Touch switches for the alarm display

- Storage by the Buffering And File Access Control: Forcefully Save Buffered Data signal (GS520.b0)

  ➟12.1 GOT Internal Device

To hold the data in the SRAM user area, configure the setting in the [Basic] tab of the [User Alarm Observation] dialog.

Up to 10 user alarm observation settings can be configured with the SRAM power-failure backup function enabled.

• Saving data to the SRAM user area

➟9.1.2 ■7 [User Alarm Observation] dialog

(c) **Information to be stored**

The information in the alarm log file to be stored in the data storage and the SRAM user area differ depending on the alarm collecting method.

➟9.1.2 ■1 Specifications of the user alarm observation

(d) **File name and storage timing**

You can set any file name for each alarm ID.
You can set triggers (rise or fall) to perform the file save.

➟9.1.2 ■7 [User Alarm Observation] dialog

(e) **Available memory capacity**

The memory capacity used to retain the user alarms at power failure can be checked in the [Basic] tab of the [User Alarm Observation] dialog.

➟9.1.2 ■7 (1) [Basic] tab

(f) **Backing up the alarm log file stored in the data storage**

Select [Automatically backup at the time of saving] in the [File Save] tab of the [User Alarm Observation] dialog to store the alarm log file as a backup file when the alarm log file is saved.

(g) **Backing up/restoring the data stored in the SRAM user area**

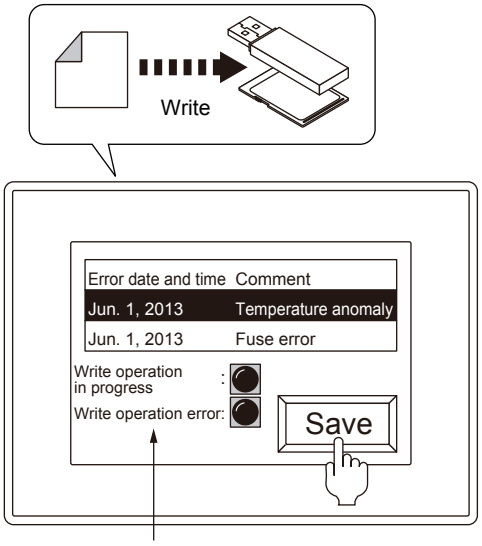
Backup or restore the data stored in the SRAM user area by using the [SRAM control] of the utility.
For the details of the backup/restore, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(h) **Monitoring the writing status**

You can monitor the status during the user alarm data writing and a writing error by using a device.

➟9.1.2 ■7 [User Alarm Observation] dialog



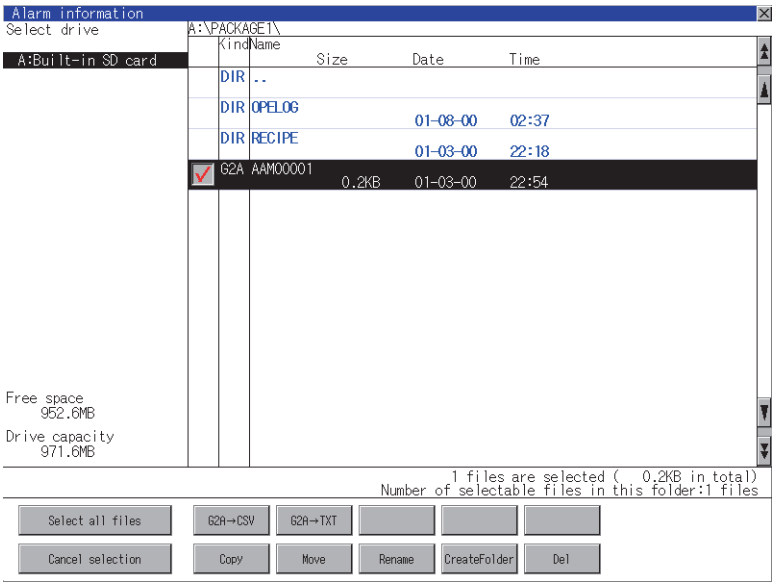
(4) Converting alarm log files

Alarm log files generated by user alarms are binary format files (*.G2A).
To display and edit the alarm log files on a personal computer, convert them into Unicode text files or CSV files.
The following shows how to convert the alarm log files.

(a) Creating a Unicode text file or a CSV file with the utility

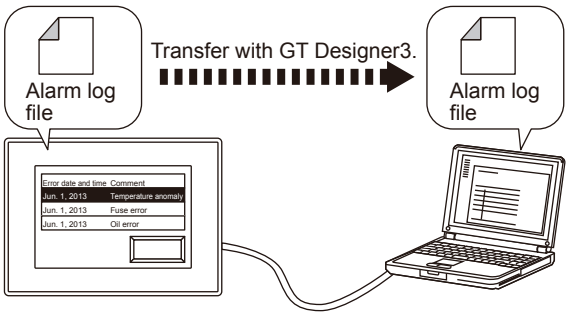
Convert a binary format file (*.G2A) stored in the data storage into a Unicode text file or a CSV file with the utility.

Step 1 Select a (*.G2A) file in [Alarm information] of the utility and touch the [G2A→TXT] or [G2A→CSV] button.

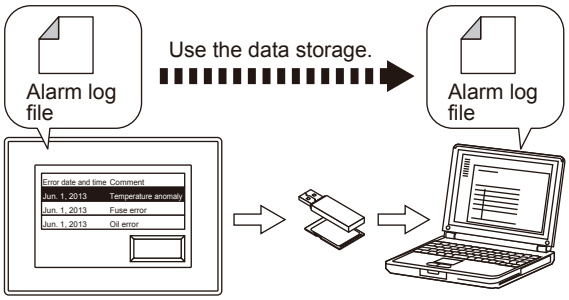


Step 2 Store the created Unicode text file or CSV file into a personal computer by either of the following methods.

- Transferring with GT Designer3
  Reads resource data from the GOT.



- Storing by using the data storage
  Stores the alarm log file to the data storage and reads the alarm log file from the data storage.



Step 3 Display or edit the converted Unicode text file or the CSV file on a personal computer.

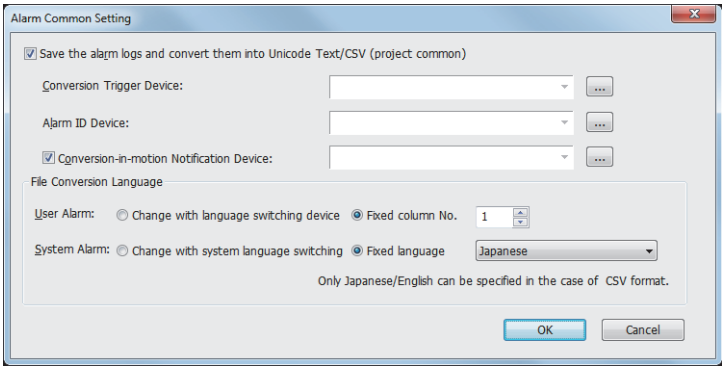
- For the operations of the utility, refer to the following.
  ➟GOT2000 Series User's Manual (Utility)
- To read the resource data from the GOT, refer to the following.

➟4.3.2 ■3 Reading the data from the GOT

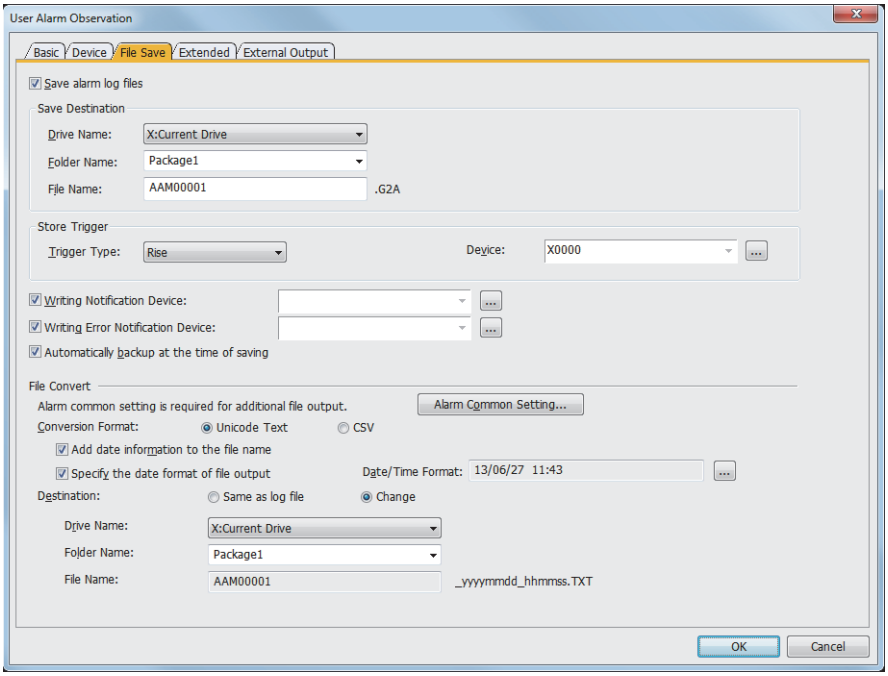
(b) **Converting a Unicode text file or a CSV file with the device**

Turning on a specified device converts a binary format file (*.G2A) stored in the data storage into a Unicode text file or a CSV file.

Step 1 Configure the setting for control the alarm log file conversion with the device in the [Alarm Common Setting] dialog.



Step 2 Configure the setting for storing the alarm log file stored in the buffering area to the data storage in the [File Save] tab of the [User Alarm Observation] dialog.



- For how to configure the setting in the [Alarm Common Setting] dialog, refer to the following.

  ➟9.1.2 ■5 [Alarm Common Setting] dialog

- For the [File Save] tab setting of the [User Alarm Observation] dialog, refer to the following.

  ➟9.1.2 ■7 (3) [File Save] tab

- Precautions on converting files by using external control devices

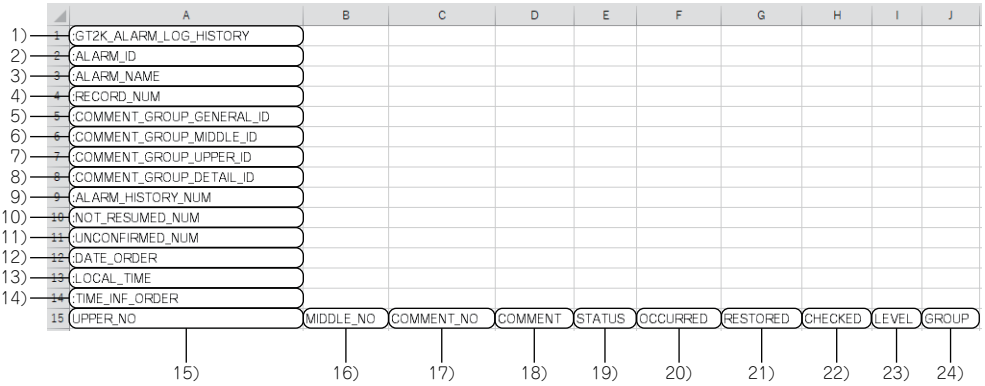
  Before converting the alarm log files, write the user alarm monitor ID that generates a file to the alarm ID specification device. When the conversion trigger device is turned on before the user alarm monitor ID is written, the alarm log file is not converted.

  Always turn off the conversion trigger device after the alarm log file conversion.

  When the alarm log file conversion is completed, the conversion notification device does not turn off when the conversion trigger device is on.

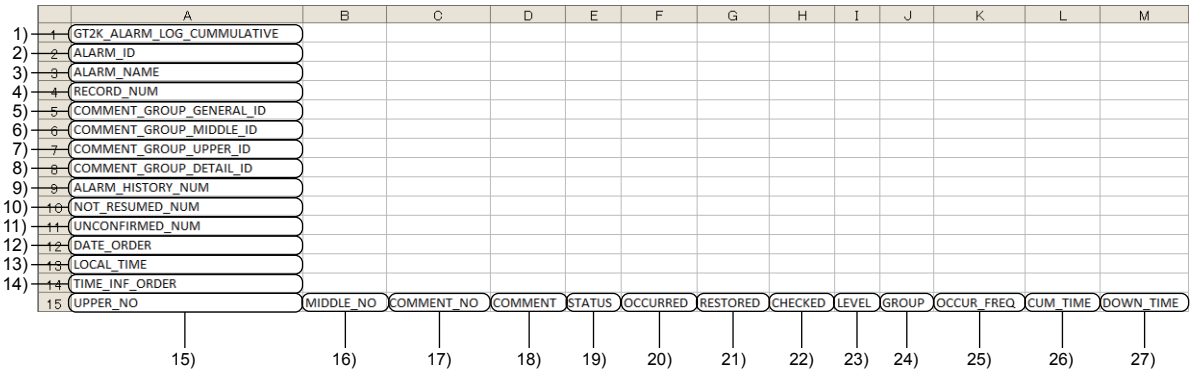
(5) Configurations of a Unicode text file and a CSV file

(a) History mode



No.	Description
1)	An alarm collecting method.
2)	An alarm ID.
3)	An alarm name.
4)	The number of the alarm histories.
5)	The basic comment group No.
6)	The middle comment group No.
7)	The upper comment group No.
8)	The detailed comment group No.
9)	The number of the alarm histories.
10)	The number of unrestored alarms.
11)	The number of unchecked alarms.
12)	The order of the dates.
13)	The difference between the Greenwich Mean Time and "Occurred"/"Restored"/"Checked".
14)	The order of the output time.
15)	The upper comment No.
16)	The middle comment No.
17)	The basic comment No.
18)	The comment for a basic alarm.
19)	Alarm status (O: Occurring, not confirmed; OC: Occurring, confirmed; R: Restored, not confirmed; RC: Restored, confirmed)
20)	The date and time when an alarm occurs.
21)	The date and time when an alarm has restored.
22)	The date and time when an alarm occurrence has been checked.
23)	The level set for an alarm.
24)	The group set for an alarm.

(b) **Cumulative**

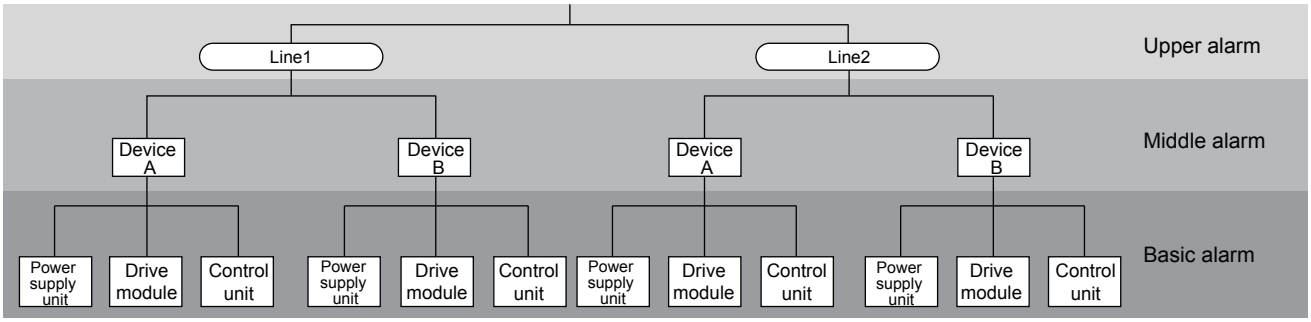


No.	Description
1)	An alarm collecting method.
2)	An alarm ID.
3)	An alarm name.
4)	The number of the alarm histories.
5)	The basic comment group No.
6)	The middle comment group No.
7)	The upper comment group No.
8)	The detailed comment group No.
9)	The number of the alarm histories.
10)	The number of unrestored alarms.
11)	The number of unchecked alarms.
12)	The order of the dates.
13)	The difference between the Greenwich Mean Time and "Occurred"/"Restored"/"Checked".
14)	The order of the output time.
15)	The upper comment No.
16)	The middle comment No.
17)	The basic comment No.
18)	The comment for a basic alarm.
19)	The alarm status. (O: Alarm has been occurring, but has not been confirmed, OC: Alarm has been occurring, and has been confirmed, R: Alarm has been restored, but has not been confirmed, RC: Alarm has been restored, and has been confirmed)
20)	The date and time when an alarm occurs.
21)	The date and time when an alarm has restored.
22)	The date and time when an alarm occurrence has been checked.
23)	The level set for an alarm.
24)	The group set for an alarm.
25)	The number of alarms.
26)	The total time of alarm occurrence including the past alarm occurrence time (total downtime).
27)	The time from the alarm occurrence to the alarm restoration.

(6) Useful operations and functions

(a) Hierarchizing alarms

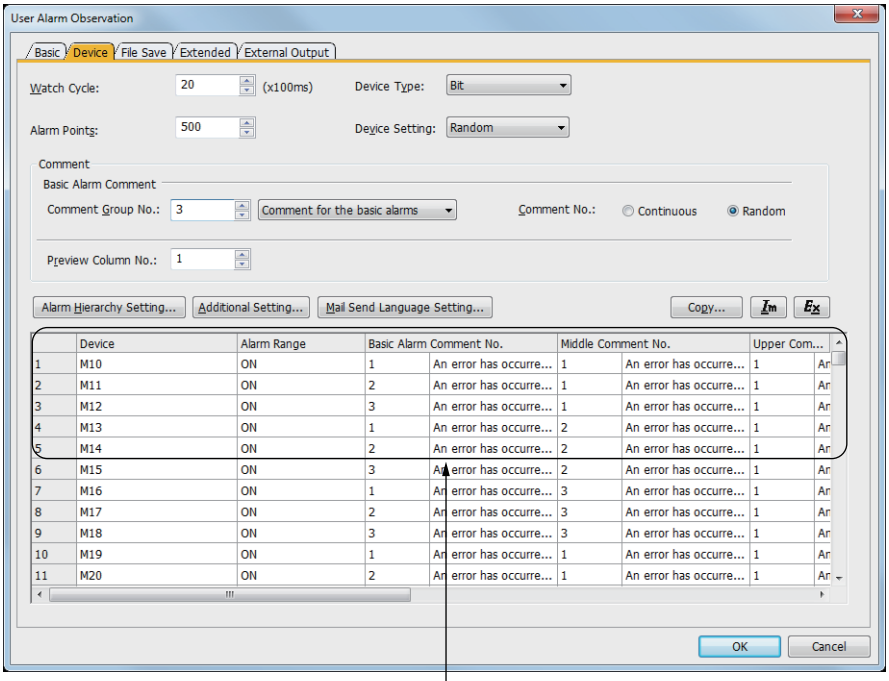
The following shows examples of hierarchizing alarms.



Setting example

Classify the comment for the occurrence of an alarm into three levels in the hierarchy: upper level, middle level, and basic level. Then set as follows.

Setting in the [Device] tab of the [User Alarm Observation] dialog

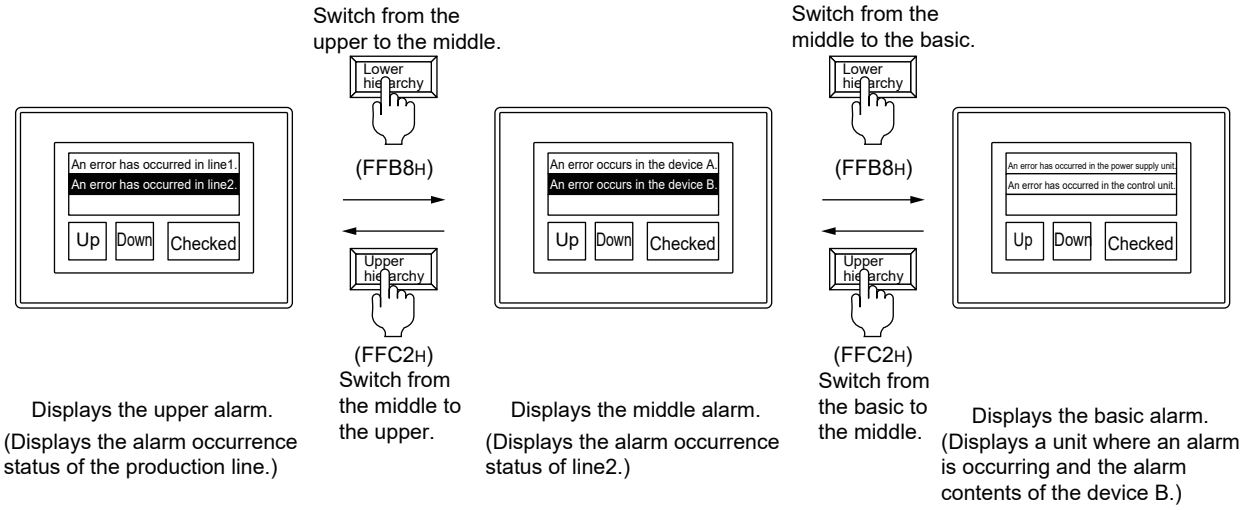


	Device	Alarm Range	Basic Alarm Comment No.		Middle Comment No.		Upper Comment No.	
1	M10	ON	1	An error has occurre...	1	An error has occurre...	1	An error has occurre...
2	M11	ON	2	An error has occurre...	1	An error has occurre...	1	An error has occurre...
3	M12	ON	3	An error has occurre...	1	An error has occurre...	1	An error has occurre...
4	M13	ON	1	An error has occurre...	2	An error has occurre...	1	An error has occurre...
5	M14	ON	2	An error has occurre...	2	An error has occurre...	1	An error has occurre...

Detail Display	Detail No.		Reset		Level	Group	Mail Send
Comment Window	1	An error has occurre...	YES	0	1	1	None
Base Screen	1		YES	0	1	1	None
Window Screen	1		YES	0	1	1	None
Comment Window	4	Cooling water hydra...	YES	0	1	1	None
Comment Window	5	Supply fuel.	YES	0	1	1	None

- Narrowing the alarm location

  The alarm can be displayed from the overview to the detail.

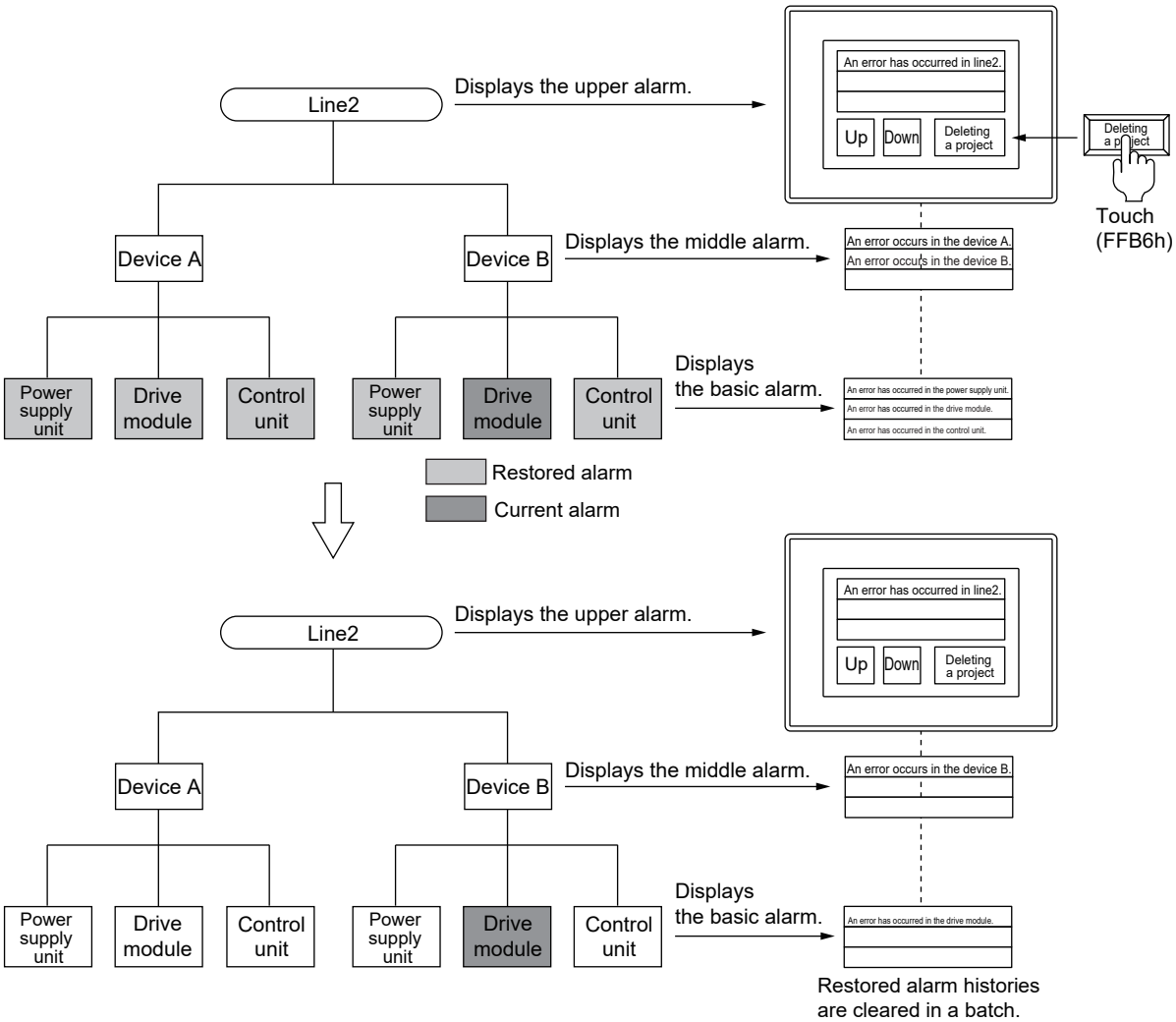


- Executing the check (FFB4h) and the deletion (FFB6h) to multiple alarms in a batch

  The following operation can be executed to multiple alarms in the lower hierarchy in a bath.

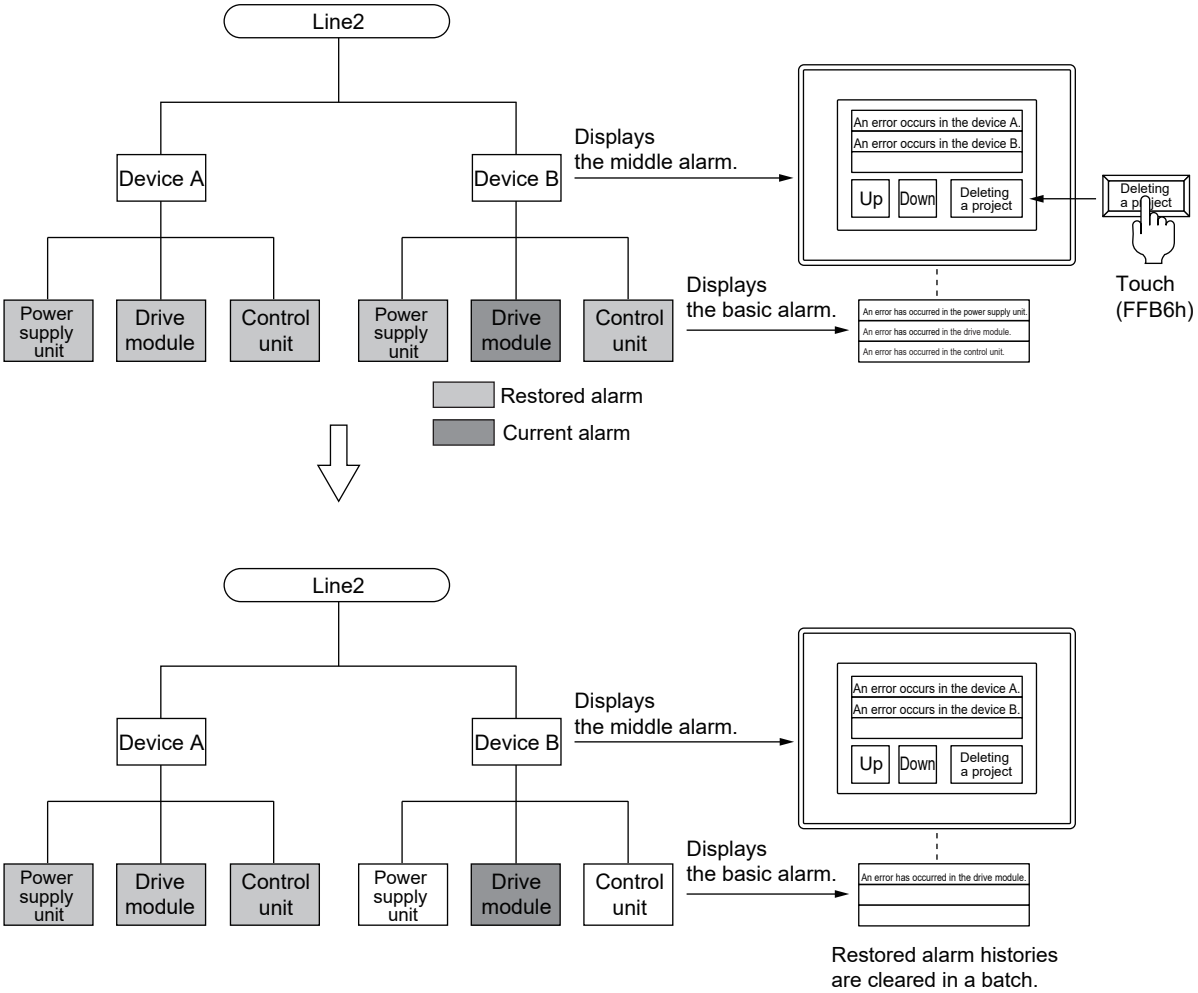
Operation	Description
Check	Records the date and time when an alarm occurrence has been confirmed.
Deleting a project	Deletes the alarm history that has been restored.

Executing the check (FFB4h) or the deletion (FFB6h) in the upper alarms executes the same operation for the middle alarms and the basic alarms under the upper alarms.



Executing the check (FFB4h) or the deletion (FFB6h) in the middle alarms executes the same operation for the basic

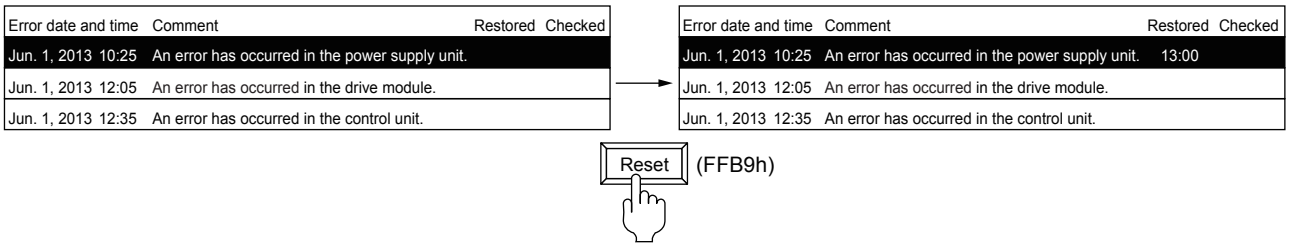
alarms under the middle alarms.



• Reset operation

The operation to eliminate alarms (turning on to off or entering the reset value) manually by the reset (FFB9h) cannot be executed to multiple alarms in a batch.

Execute the resetting in the basic alarm display.



Execute the reset operation for each alarm.

• Classifying alarms into levels or groups

The alarms can be classified into levels or groups.

You can display errors displayed at the error occurrence by narrowing in the alarm importance or the alarm type.

The following shows an example for narrowing an alarm display by changing the switching device value.

Configure the switching device setting in the [Alarm Display(User)] dialog.

For the details of the settings, refer to the following.

➟9.1.5 ■4 [Alarm Display(User)] dialog

Displaying alarms in the chronological order.

Error date and time	Comment	Level	Group
Jun. 1, 2013 16:51	Hydraulic pressure failure	1	1
Jun. 1, 2013 14:25	Cooling water hydraulic pressure drop	2	1
Jun. 1, 2013 12:25	Supply oil	1	2
Jun. 1, 2013 09:40	The amount of the remaining feedstock is low.	1	2
Jun. 1, 2013 07:35	Supply fuel	2	2

Level switching device (D32) 0

Group switching device (D33) 0

Only the alarms in the level 1 are displayed.

Error date and time	Comment	Level	Group
Jun. 1, 2013 16:51	Hydraulic pressure failure	1	1
Jun. 1, 2013 12:25	Supply oil	1	2
Jun. 1, 2013 09:40	The amount of the remaining feedstock is low.	1	2

Level switching device (D32) 1

Group switching device (D33) 0

Only the alarms in the group 2 are displayed.

Error date and time	Comment	Level	Group
Jun. 1, 2013 12:25	Supply oil	1	2
Jun. 1, 2013 09:40	The amount of the remaining feedstock is low.	1	2

Level switching device (D32) 1

Group switching device (D33) 2

(b) **Display example of the basic alarm (detailed display)**

In the basic alarm, the detailed information such as the cause or measure of the alarm in the comment window, the base screen, and the window screen.

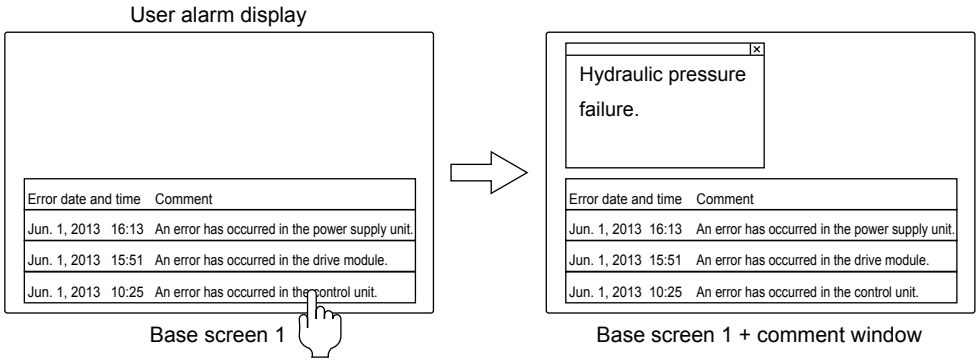
Setting example

Detail Display	Detail No.		Reset		Level	Group	Mail Send
Comment Window	1	An error has occurre...	YES	0	1	1	None
Base Screen	1		YES	0	1	1	None
Window Screen	1		YES	0	1	1	None
Comment Window	4	Cooling water hydra...	YES	0	1	1	None
Comment Window	5	Supply fuel.	YES	0	1	1	None

• Comment window

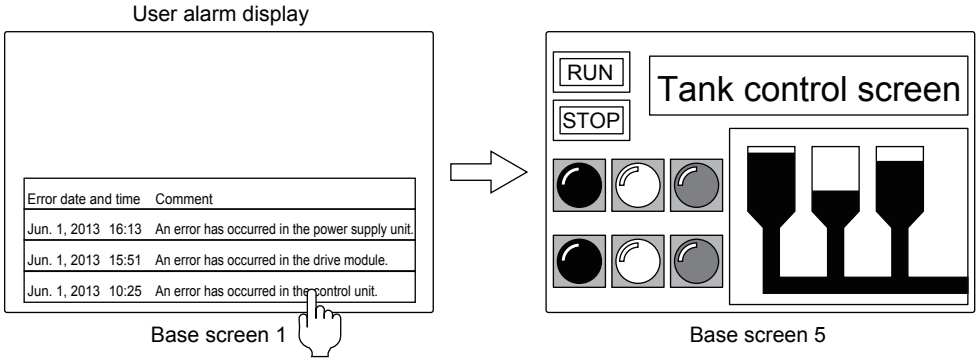
Displays a comment a user registers.

In the comment window, more detailed comments such as the measures for alarms are displayed.



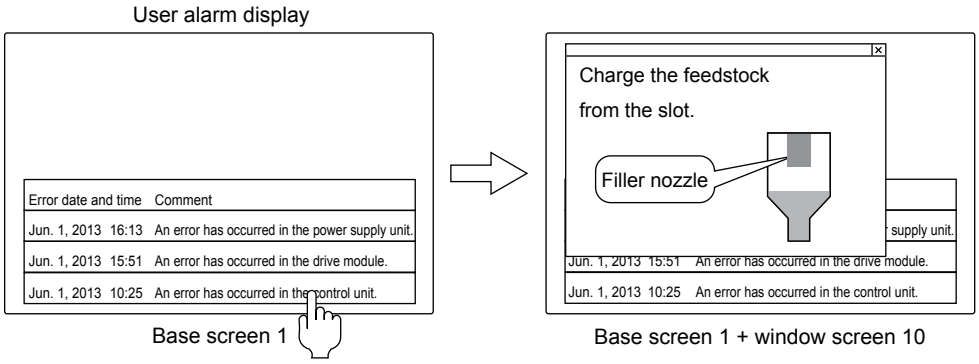
• Base screen

Displays the specified base screen.



• Window screen

Displays the specified window screen (overlap window 1).



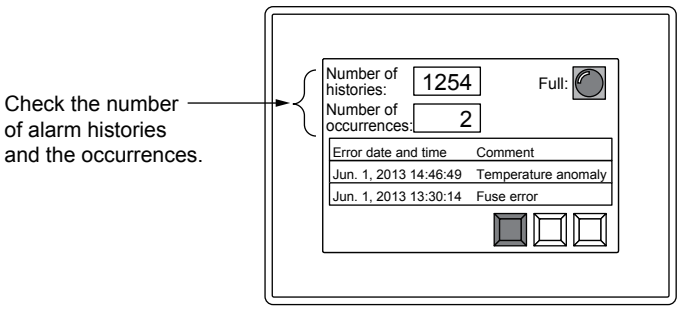
(c) When the buffering area is full

You can set a device for executing a notification when the number of alarms reaches to [Stored Number] set in the [Basic] tab of the [User Alarm Observation] dialog.

• Confirming the number of the alarm histories and the alarms

You can confirm the number of the alarm histories by storing the histories stored in the buffering area temporarily to a device.

The number of the user alarms that are currently occurring can be confirmed as well.

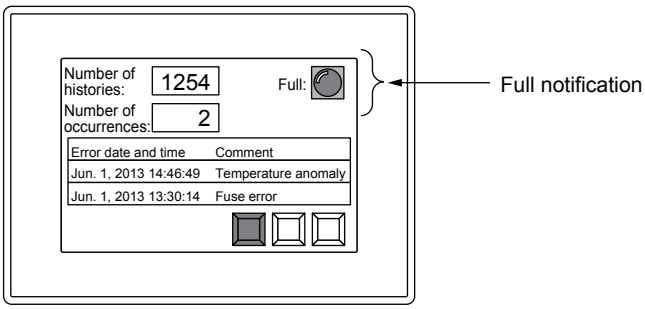


• When the buffering area is full

You can set a device for notifying the full of the buffering area.

To execute the notification before the buffer area becomes full, set [Full Notification Signal Device] in the [Basic] tab of the [User Alarm Observation] dialog.

Select the operation when the buffering area is full in [Action When Buffer is Full] in the [Basic] tab of the [User Alarm Observation] dialog.



• Size of the buffering

The size of the buffering area to be used for the user alarm varies depending on the setting.

Increasing the size of the buffering decreases the user area of the GOT. Adjust the size of the buffering according to the user area capacity.

Setting items for the size of the buffering area

Alarm collecting method	Setting for the size of the buffering area
History mode	• Number of devices set for the alarm ([Alarm Points] in the [Device] tab of the [User Alarm Observation] dialog) • Number of alarm histories to be stored ([Stored Number] in the [Basic] tab of the [User Alarm Observation] dialog)
Cumulative	• Number of devices set for the alarm ([Alarm Points] in the [Device] tab of the [User Alarm Observation] dialog)
Alarms in the "Occurred" status only	

The size of the buffering area required for the set user alarm list can be confirmed in the [Basic] tab of the [User Alarm Observation] dialog.

For the details of the buffering area, refer to the following.

➟9.1.2 ■2 (1) Alarm collecting procedure and alarm history collecting method

For how to configure the setting in the [User Alarm Observation] dialog, refer to the following.

➟9.1.2 ■7 [User Alarm Observation] dialog

■3 Precautions for drawing

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Setting for storing the user alarm data to data storage

To place a button for storing the user alarm data, configure either of the following settings.

- Set the store trigger device in the [File Save] tab of the [User Alarm Observation] dialog and store the user alarm data.

  ➟9.1.2 ■7 [User Alarm Observation] dialog

- Place a touch switch for the alarm display (user) on the screen where the alarm display (user) is set and store the user alarm data.

  ➟9.1.5 ■2 (11) Touch switches for the alarm display

(2) Available file size

Data storage must have larger capacity than the size of the file to be stored.
For the file size, refer to the following.

➟9.1.2 ■1 Specifications of the user alarm observation

(3) Comment group

If the nonexistent value (column No.) is stored in the language switching device, "No message" is not displayed.

(4) Changing the user alarm observation settings

After the first settings and any change of the following setting items, if you change the settings again or import settings from a CSV file, note the following:
The history data may be partially deleted or displayed incorrectly.
Before you change the setting, backing up the alarm files of the GOT is recommended.

- Alarm ID
- Collection Mode
- Stored Number
- Alarm Points
- Middle Comment No.
- Upper Comment No.

(5) Setting when using the mail send function

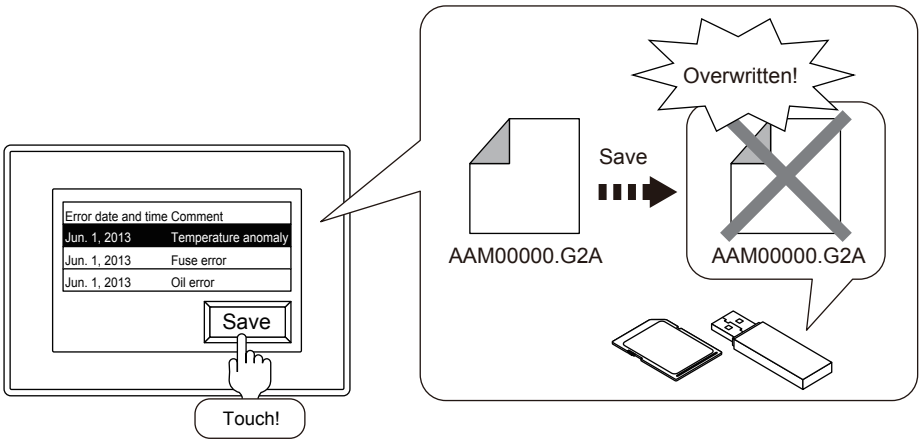
If you select [Only current alarm] for [Collection Mode] in the [User Alarm Observation] dialog ([Basic] tab), no e-mail is sent upon recovery from an alarm because the GOT does not monitor such events.
To send an e-mail upon recovery from an alarm, select an item other than [Only current alarm] for [Collection Mode].

➟9.1.2 ■7 [User Alarm Observation] dialog

■4 Precautions for use

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) When the same data are stored in data storage



The data in the data storage are overwritten. To reserve the data, move the data in the data storage to a personal computer with either of following methods.

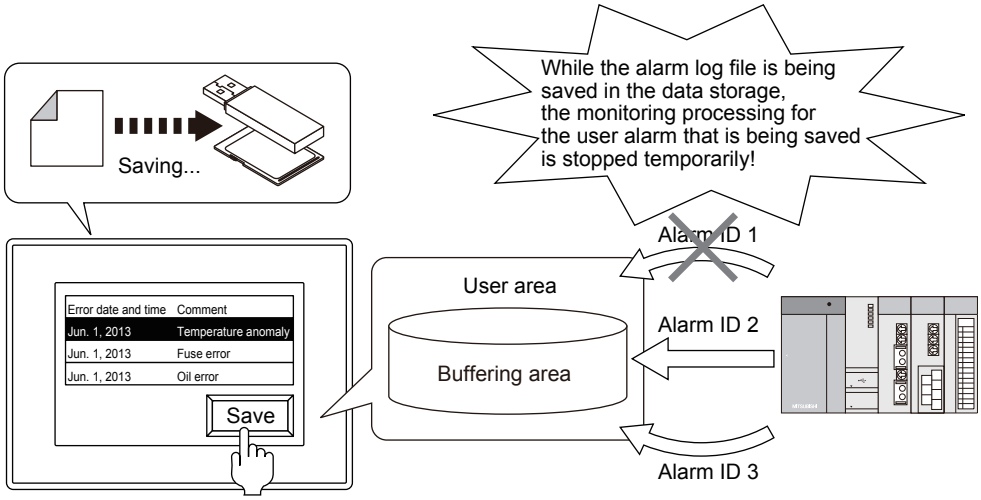
- Reading resource data with GT Designer3

  ➟4.3.2 ■3 Reading the data from the GOT

- Reading a CSV file stored in the data storage with a personal computer

(2) Alarm monitoring during the alarm log file saving

While the alarm log file is being saved in the data storage, the monitoring processing for the user alarm of the alarm ID that is being saved is stopped temporarily.
User alarms occurred or restored during the storing are not displayed.



(3) Storage by the Buffering And File Access Control: Forcefully Save Buffered Data signal (GS520.b0)

It may take minutes for an alarm log file to be saved in data storage because the data of all the target user alarms for the alarm log file is saved.
To prevent the monitoring from stopping for a long time, save the alarm log files in units of objects.

- Setting the store trigger for each user alarm observation setting
- Setting the touch switch (key code: FFBBh) for each alarm display (user)

(4) Precautions for removing an SD card

When you open the SD card cover or turn off the SD card access switch, the files are saved automatically.
Before removing the SD card, make sure that the file saving is complete by checking one of the following conditions.

- The Drive Status Notification signal (system signal 2-2.b0, b1) is turned off.
- The SD card access LED is turned off.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Storing may take longer because all the user alarms and system alarms for saving the alarm log files are stored.

(5) Restoring the alarm histories when powering-off to on the GOT

When the alarm log file in the data storage is not created in the project in the GOT, the file cannot be read from the GOT. In this case, an alarm occurs or a device turns on.

- A system alarm 525 occurs.
- The [Writing Error Notification Device] set in the [File Save] tab of the [User Alarm Observation] dialog turns on.

(6) Collecting alarms when the buffering area is full

The operation when the buffering area is full is either of the followings according to the [Action When Buffer is Full] in the [Basic] tab of the [User Alarm Observation] dialog.

- Deleting restored user alarms and adding a new user alarm
- The user alarms are not collected.

To prevent the operations above, set the [Full Notification Signal Device] in the [Basic] tab of the [User Alarm Observation] dialog and delete the restored alarm when the device turns on.

➟9.1.2 ■7 [User Alarm Observation] dialog

(7) Error occurred during the alarm log file saving

When an error occurs during the alarm log file saving, the [Writing Error Notification Device] set in the [File Save] tab of the [User Alarm Observation] dialog turns on.

If the Writing Error Notification device turns on, check that the following conditions are satisfied.

- The SD card cover of the GOT is closed.
- The SD card access switch of the GOT is turned on.
- The data storage works normally.

The user needs to turn off this device.

(8) Difference from the Drive status notification signal (writing device: system signal 2-2)

The full notification, writing notification and a writing error can be notified by the Drive status notification signal as well, and the operations differ from the devices set in the user alarm monitoring.

Item	Operation (difference)	
	User alarm observation	Drive status notification signal
Difference between [Full Notification Signal Device] set for user alarm monitors and the Drive status notification signal (System signal 2-2.b4, b5)	Turns on when the number of log files reaches the [Stored Number] set in the [Basic] tab (when the buffering area reserved for the user alarms is full).	Turns on when the data storage is full.
Difference between [Writing Notification Device] set for user alarm monitors and the Drive status notification signal (System signal 2-2.b0, b1)	Turns on while the user alarm data are written to the data storage.	Turns on while the data are written to the data storage (turns on while data other than the user alarm are written).
Difference between [Writing Error Notification Device] set for user alarm monitors and the Drive status notification signal (System signal 2-2.b7, b8)	• Turns on when an error occurs at the accessing to the alarm log file in the data storage (when the alarm log file in the data storage is not created in the project in the GOT). • Turns on when the data storage cannot be accessed (e.g. when a data storage is not installed or the SD card cover is open).	Turns on when the data storage cannot be accessed (e.g. when a data storage is not installed or the SD card cover is open).

(9) Character code and conversion destination file

If an alarm log file contains any character other than ASCII and Shift JIS characters, convert the file as shown below.

- Convert the file to Unicode text format.
- Turn on the Character Code for CSV Conversion signal (GS522.b2), and convert the file to CSV format.

(10) Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(11) Changing the alarm history collecting method

If you change the alarm history collecting method of a project, and then write the project to a GOT on which the user alarm observation is running, the alarm history may be incorrectly displayed.

Before changing the alarm history collecting method, delete alarm log files (*.G2A).

(12)To maintain file access performance

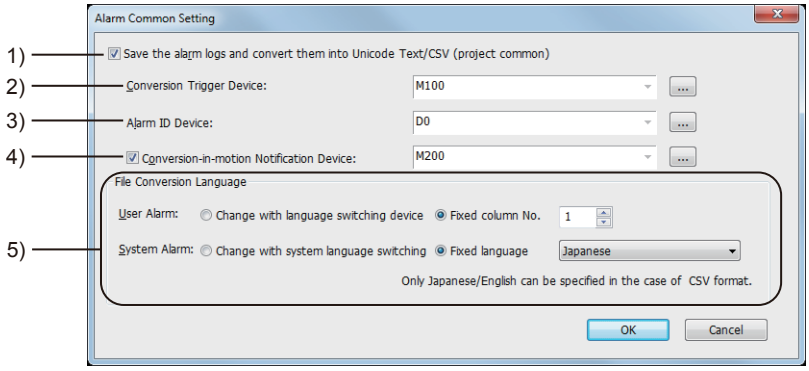
You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

■5 [Alarm Common Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure this setting when controlling the alarm log file conversion by devices.
Select [Common] → [Alarm] → [Alarm Common Setting] from the menu to display the [Alarm Common Setting] dialog.
To control the alarm log file conversion by devices, configure the [File Convert] setting in the [File Save] tab of the [User Alarm Observation] dialog.

➟9.1.2 ■7 [User Alarm Observation] dialog



1) **[Save the alarm logs and convert them into Unicode Text/CSV (project common)]**
Configure this setting for controlling the alarm log file conversion by devices.

2) **[Conversion Trigger Device]**
Set trigger devices for the file conversion.

3) **[Alarm ID Device]**
Set the device that specifies the alarm monitoring ID for generating a conversion target file.

4) **[Conversion-in-motion Notification Device]**
Set the device to notify that a file is being converted.
After the alarm log file conversion is started, make sure to turn off the conversion trigger device.
If the conversion trigger device is on even after the conversion is complete, the conversion notification device does not turn off.

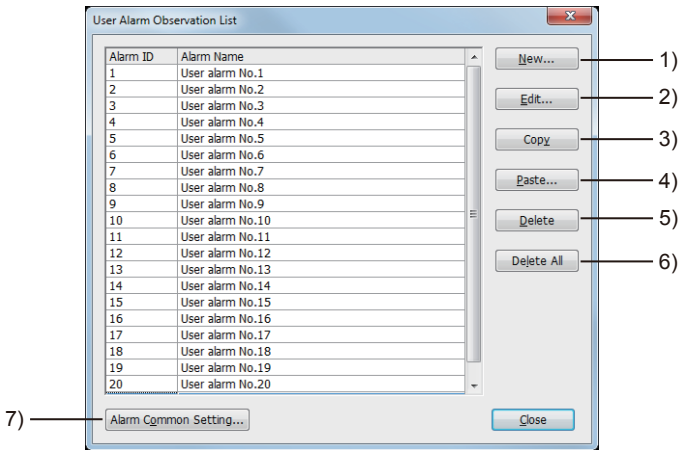
5) **[File Conversion Language]**

Item	Description
User alarm	Set the row No. of the comment group to be used in the file conversion. [Change with language switching device]: Converts files with a row No. switched by the language switching device. [Fixed column No.]: Converts files with a set row No. The setting range is [1] to [30].
System alarm	Not available to GT21 and GS21. Set the system language to be used for the file conversion. [Change with system language switching]: Converts files in the system language displayed on the GOT. [Fixed language]: Converts files with a set language.

■6 [User Alarm Observation List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [Alarm] → [User Alarm Observation] from the menu to display the [User Alarm Observation List] dialog.
Configure the user alarm observation settings (devices to be monitored, monitoring cycle, and alarm collection mode) for each alarm ID.
Up to 300 alarm IDs are settable.

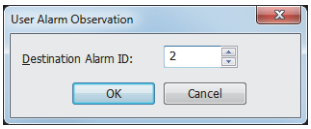


1) **[New] button**
Displays the [User Alarm Observation] dialog to set a new alarm ID.
➟9.1.2 ■7 [User Alarm Observation] dialog

2) **[Edit] button**
Displays the [User Alarm Observation] dialog to configure the setting of selected alarm ID.
➟9.1.2 ■7 [User Alarm Observation] dialog

3) **[Copy] button**
Copies a selected alarm ID.

4) **[Paste] button**
Pastes the copied alarm ID to the alarm ID list.



• **[Destination Alarm ID]**
Set the copy destination of the copied alarm ID.

5) **[Delete] button**
Deletes a selected alarm ID.

6) **[Delete All]] button**
Deletes all selected alarm ID.

7) **[Alarm Common Setting] button**
Displays the [Alarm Common Setting] dialog.
➟9.1.2 ■5 [Alarm Common Setting] dialog

■7 [User Alarm Observation] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Alarm] → [User Alarm Observation] → [New] from the project tree.

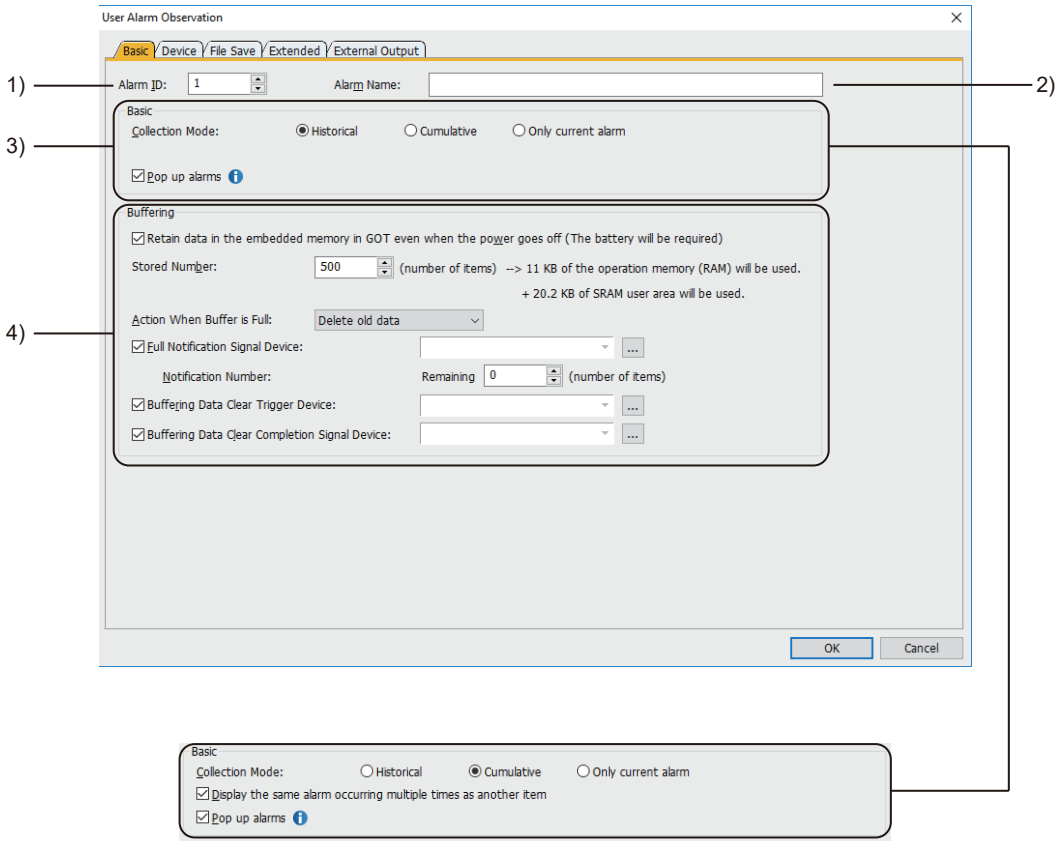
Step 2 Double-click the [New] to display the [User Alarm Observation] dialog.

➟(1) [Basic] tab
(2) [Device] tab
(3) [File Save] tab
(4) [Extended] tab
(5) [External Output] tab
(6) [Alarm Hierarchy Setting] dialog
(7) [Additional Setting] dialog
(8) [Alarm Print Detail Setting] dialog
(9) [Mail Send Language Setting] dialog
(10) [Copy User Alarm Observation] dialog

(1) [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the alarm history collecting method and the buffering that stores the alarm history.



When [Cumulative] is selected for the [Collection Mode].

1) **[Alarm ID]**
Set the alarm ID of the user alarm.
The setting range is [1] to [32767].

2) **[Alarm Name]**
Set an alarm name of the user alarm.
Up to 32 characters can be set as an alarm name.

3) **[Basic]**

Item	Description
[Collection Mode]	Select a user alarm collecting method. • [Historical]: Collects the user alarm occurrence status as histories. Adds a history every time an alarm occurs. • [Cumulative]: Collects the latest user alarm status and the user alarm counts or time together for each user alarm. • [Only current alarm]: Collects the alarms that are currently occurring only. The history of the user alarms that have been restored are not stored.
[Display the same alarm occurring multiple times as another item]	This item can be set only when the [Collection Mode] is [Cumulative]. Displays the same alarm, which occurred multiple times, as another item at each time of occurrence.
[Pop up alarms]	Pops up a user alarm message. Configure the following settings additionally. • Alarm popup display settings ➟9.1.4 ■4 [Alarm Popup Display] dialog • Setting of the screen where an alarm message pops up ➟2.7.1 ■1 [Basic] tab 10.19.7 ■1 [Basic] tab

4) **[Buffering]**

Configure settings for the buffering that stores the collected user alarms.

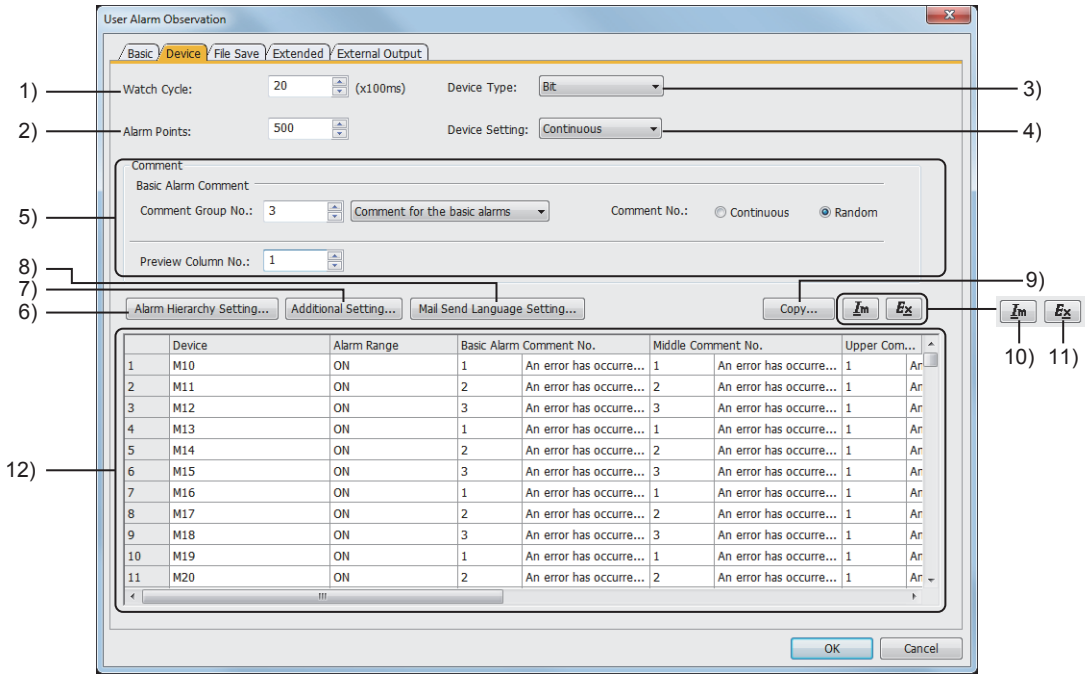
Item	Description
[Retain data in the embedded memory in GOT even when the power goes off (The battery will be required)]	Not available to GT21 and GS21. Saves alarm data in the buffering area in the SRAM user area. Up to 10 user alarm observation settings can be configured with the SRAM power-failure backup function enabled. ➟9.1.1 ■2 (3) (h) Storing the alarm data (power failure backup)
[Stored Number]	Set this item when setting [Collection Mode] to [Historical]. Set the number of user alarm history events to be stored. The setting range depends on the GOT model. For GT27, GT25, GT23, GT SoftGOT2000, and GS25 The setting range is [Alarm Points] set in the [Device] tab to [32767]. For GT2107-W, GT2105-Q, GT2104-R, and GT2104-P The setting range depends on the drive in which events are stored. • Drive D: [Alarm Points] set in the [Device] tab to [1000] • Other drives: [Alarm Points] set in the [Device] tab to [2000] For GT2103-P and GS21 The setting range depends on the drive in which events are stored. • Drive C: [Alarm Points] set in the [Device] tab to [1000] • Other drives: [Alarm Points] set in the [Device] tab to [2000] The buffer size increases as the number of the stored events increases.
[Action When Buffer is Full]	Set this item when setting [Collection Mode] to [Historical]. Select the operation executed when the number of the user alarms stored in the buffering area reaches the [Stored Number]. • [Delete old data]: Deletes the user alarm with the oldest restoration date from the restored user alarms, and collects a new user alarm. • [Add no item]: Stops collecting the user alarms and does not collect a new user alarm.
[Full Notification Signal Device]	Set this item when setting [Collection Mode] to [Historical]. Notifies that the storable number of user alarm histories becomes the number set in the [Notification Number] or less by the set device. ➟6.1.2 How to set devices
[Notification Number]	When setting [Full Notification Signal Device], set this item. Set the number of the user alarm histories for which the [Full Notification Signal Device] is notified. The setting range is [0] to [255]. • Setting example When the [Stored Number] is set to 1000, the [Notification Number] is set to 10 The [Full Notification Signal Device] turns on when the number of stored user alarm histories becomes 990 because the number of storable user alarm histories becomes 10.
[Buffering Data Clear Trigger Device]	Deletes the restored user alarms stored in the buffering area by the set device. ➟6.1.2 How to set devices

Item	Description
[Buffering Data Clear Completion Signal Device]	When setting [Buffering Data Clear Trigger Device], set this item. Notifies you with a set device that deleting buffering data is complete. ➟6.1.2 How to set devices

(2) [Device] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure settings for the timing for collecting user alarms or user alarm settings (devices set for user alarms, comments displayed at a user alarm occurrence, resetting user alarms, and level/group setting).



1) **[Watch Cycle]**

Set a cycle at which the device is monitored.

The following shows the setting range.

- [1] to [36000]
- [5] to [36000] (GT23, GT21, and GS21)

2) **[Alarm Points]**

Set the number of alarms.

The setting range depends on the GOT model.

For GT27, GT25, GT23, GT SoftGOT2000, and GS25

The setting range is [1] to [32767].

For GT2107-W, GT2105-Q, GT2104-R, and GT2104-P

The setting range depends on the drive in which events are stored.

- Drive D: [1] to [1000]
- Other drives: [1] to [2000]

For GT2103-P and GS21

The setting range depends on the drive in which events are stored.

- Drive C: [1] to [1000]
- Other drives: [1] to [2000]

3) **[Device Type]**

Select the data type of the device to be set.

The following shows selectable items.

- [Bit]
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]

- [Unsigned BIN64]
- [Signed BIN8]
- [Unsigned BIN8]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

4) **[Device Setting]**

Select whether to set devices sequentially or not.
The following shows selectable items.

- [Continuous]: Set the comment No. of the comment group sequentially.
- [Random]: Set the comment No. of the comment group one by one.
- [Identical]: Select this item when other than [Bit] is selected for [Device Type].

5) **[Comment]**

Item	Description
[Basic Alarm Comment]	• [Comment Group No.]: Set the comment group No. to be used for the basic alarm comment. • [Comment No.]: Select the setting method of the comment. [Continuous]: Set the comment No. of the comment group sequentially. [Random]: Set the comment No. of the comment group one by one.
[Preview Column No.]	Set the column No. of the comment to be previewed.

6) **[Alarm Hierarchy Setting] button**

In the [Alarm Hierarchy Setting] dialog, set the levels of alarms in the hierarchy.
For details, refer to the following.

➟(6) [Alarm Hierarchy Setting] dialog

7) **[Additional Setting] button**

Displays the [Additional Setting] dialog to configure the setting for items displayed in the alarm setting list.
For details, refer to the following.

➟(7) [Additional Setting] dialog

8) **[Mail Send Language Setting] button**

Displays the [Mail Send Language Setting] dialog to set a language used in a mail to be sent.
For details, refer to the following.

➟(9) [Mail Send Language Setting] dialog

9) **[Copy] button**

Displays the [Copy Advanced User Alarm Observation] dialog to copy the alarm setting list contents.
For details, refer to the following.

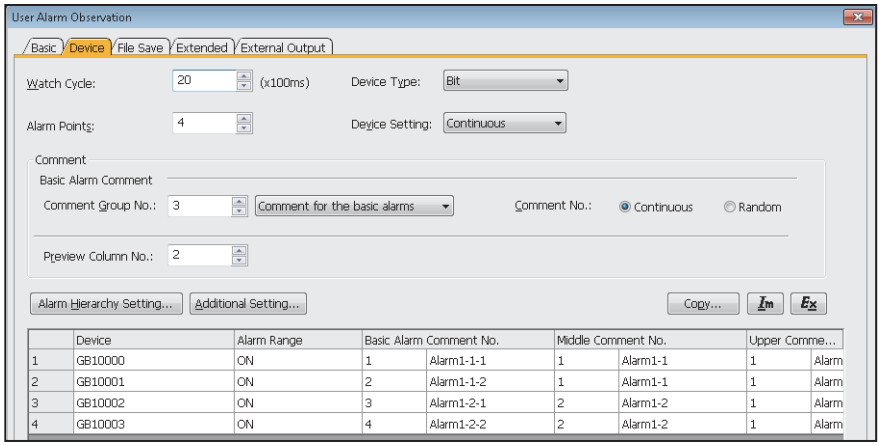
➟(10) [Copy User Alarm Observation] dialog

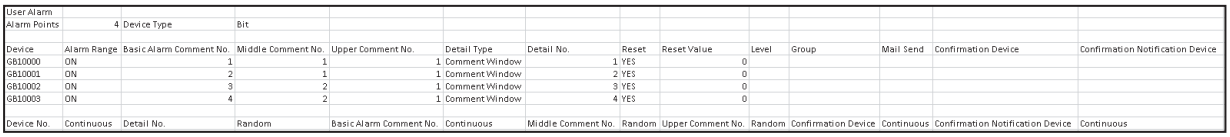
10) **Import button**

Imports the alarm observation (user) setting file that has been exported from GT Designer3 to overwrite the settings of the [Device] tab.

11) **Export button**

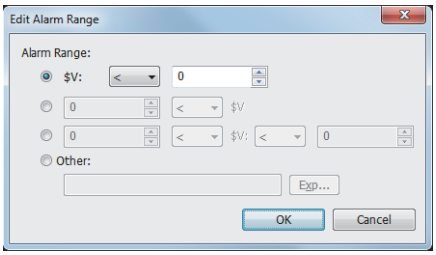
Saves the settings of the [Device] tab to a Unicode text or CSV file.
You can edit the exported file in spreadsheet software and others.
The edited file can be imported with GT Designer3.
Example) When exporting the settings of the [Device] tab to a CSV file





12) **Alarm setting list**

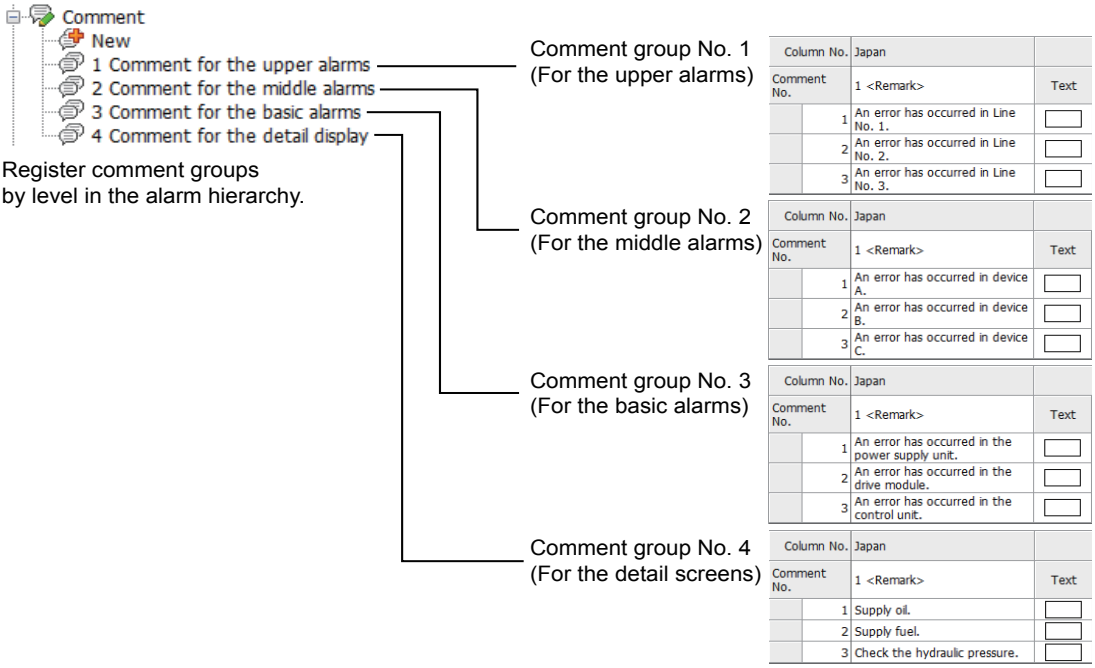
Set devices for alarms and comments displayed at an alarm occurrence.

Item	Description
[Monitored alarm No.]	The numbers displayed in the leftmost column of the alarm setting list. Monitored alarm numbers can be used as a sort criterion for Alarm Display (User). ➟9.1.5 ■4 [Alarm Display(User)] dialog
[Device]	Set devices for alarms. ➟6.1.2 How to set devices
[Alarm Range]	Set a range of device for displaying alarms. • When the [Device Type] is [Bit] [ON]: Displays an alarm by rising the bit device (OFF to ON) [OFF]: Displays an alarm by falling the bit device (ON to OFF) • When the [Device Type] is other than [Bit] Click the [Exp.] button to display the [Edit Alarm Range] dialog and set a range of the word device value for displaying alarms.  • **[Alarm Range]** Select a range expression. When you select [Other], click the [Exp] button to display the [Edit Range] dialog and set the range expression. ➟6.2.2 Setting Trigger Types

Item	Description
[Basic Alarm Comment No.], [Middle Comment No.], [Upper Comment No.] *1	Set the comment No. of the comment group for comments to be displayed at an alarm occurrence. Specify the comment No. of the comment group used in the basic alarm, the middle alarm, and the upper alarm for one alarm. To hide the middle alarms and the upper alarms, set [0].
[Detail Display]	Select the display method of the detail display. • [Not Display]: The details are not displayed. • [Comment Window]: Displays the details in a window for the detail display. In the comment window, the registered comments are displayed. • [Base Screen]: Displays a base screen as the detail display. Displays the base screen set for the detail No. in the device. • [Window Screen]: Displays the window screen (overlap window 1) as the detail display. Displays the window screen set for the detail No. in the device. When setting the [Detail Display] for each alarm, set [Comment No.] to [Random] in the [Detail Comment] of the [Alarm Hierarchy Setting] dialog. When [Comment No.] is set to [Continuous], the [Detail Display] of all alarms are set as same as the head alarm.*2 ⇒(6) [Alarm Hierarchy Setting] dialog
[Detail No.]	Set a comment number, window screen number, and base screen number of the detail display.
[Reset]	Set the reset operation for the alarm. • [YES]: Enables the reset operation for the alarm. The bit device turns off the specified device. The word device turns the specified device value to the reset value. Set the reset value after selecting. • [NO]: Disables the reset operation for the alarm. The specified device is not turned off or the device value is not turned to the reset value.
[Level]	Set the level of alarms. The setting range is [1] to [255]. You can display the alarm with higher level preferentially or display the alarms with specific level only.
[Group]	Set the group of alarms. The setting range is [1] to [255]. You can display the alarms in order of the group or display the alarms with specific group only.
[Mail Send]	Set the mail sending method. • [None]: No mail is sent. • [Occur]: Sends the date of occurrence or comment contents at an alarm occurrence (when a specified device condition is satisfied) by mail. • [Restore]: Sends the date of restoration or comment contents at an alarm restoration (when a specified device condition is not satisfied) by mail. • [Occur/Restore]: Sends the date or occurrence or restoration and comment contents at an alarm occurrence or alarm restoration by mail.
[Confirmation Device]	Set a bit device to change the status of an alarm to "Checked". ⇒6.1.2 How to set devices When the set device is turned on, the status of the corresponding alarm is changed to "Checked". The GOT monitors the set device in the cycle that is specified with [Watch Cycle].
[Confirmation Notification Device]	Set a bit device to notify that the status of an alarm has been changed to "Checked". ⇒6.1.2 How to set devices When the status of the corresponding alarm is changed to "Checked", the set device turns on. You need to turn off the device after it is turned on.

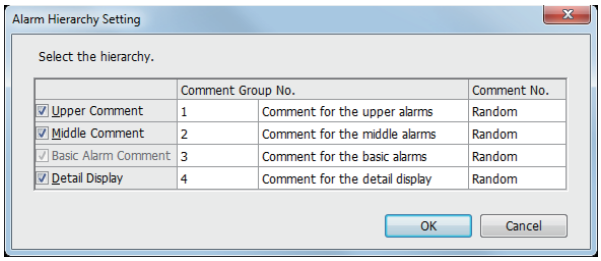
*1 The following shows examples for displaying comments of the comment group in the basic alarm, the upper alarm, the middle alarm, and the detailed screen.

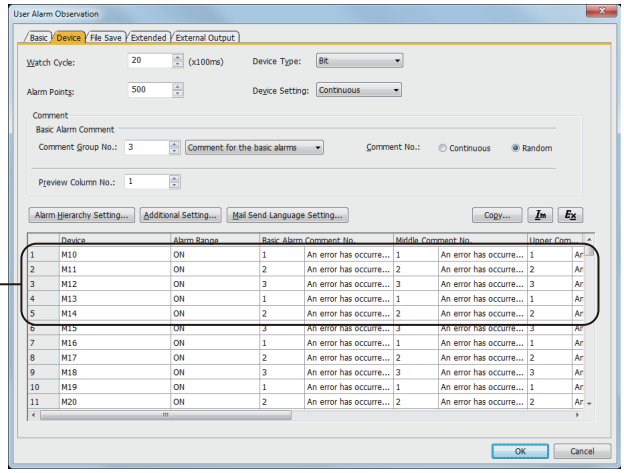
• Register comments to be displayed at an alarm occurrence to the comment group.



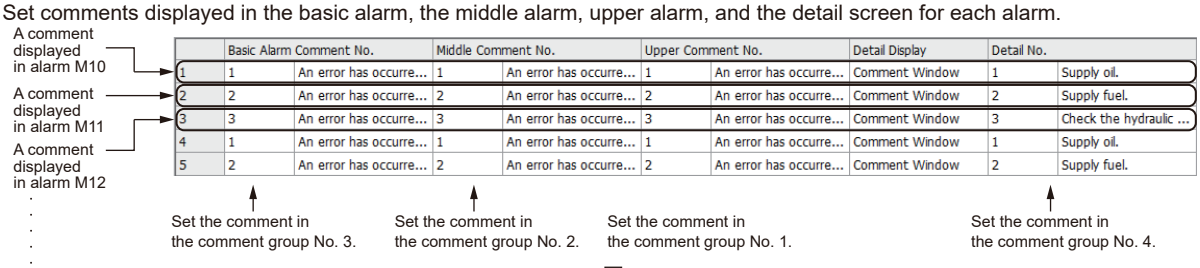
• Set the registered comments to the user alarm monitoring.

1. Set a group No. to be displayed for each level in the hierarchy.

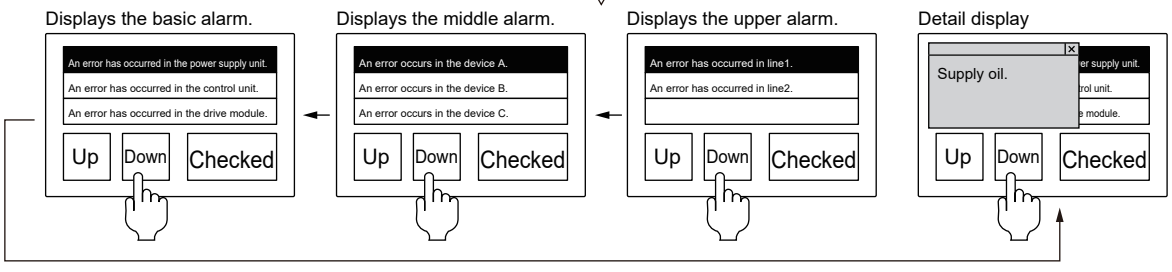




2. Set comments displayed in the basic alarm, the middle alarm, upper alarm, and the detail screen for each alarm.



Example) Comment display when the alarm M10 occurs



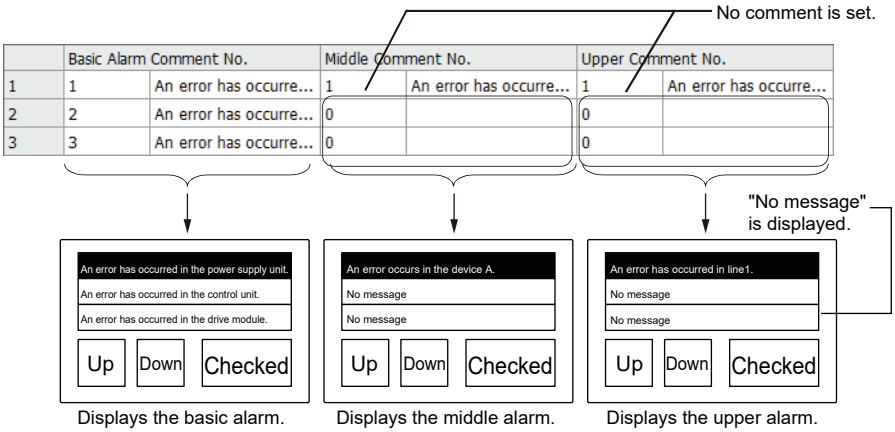
When configuring the following settings to comments displayed at an alarm occurrence, [No Message] is displayed at an alarm

occurrence.

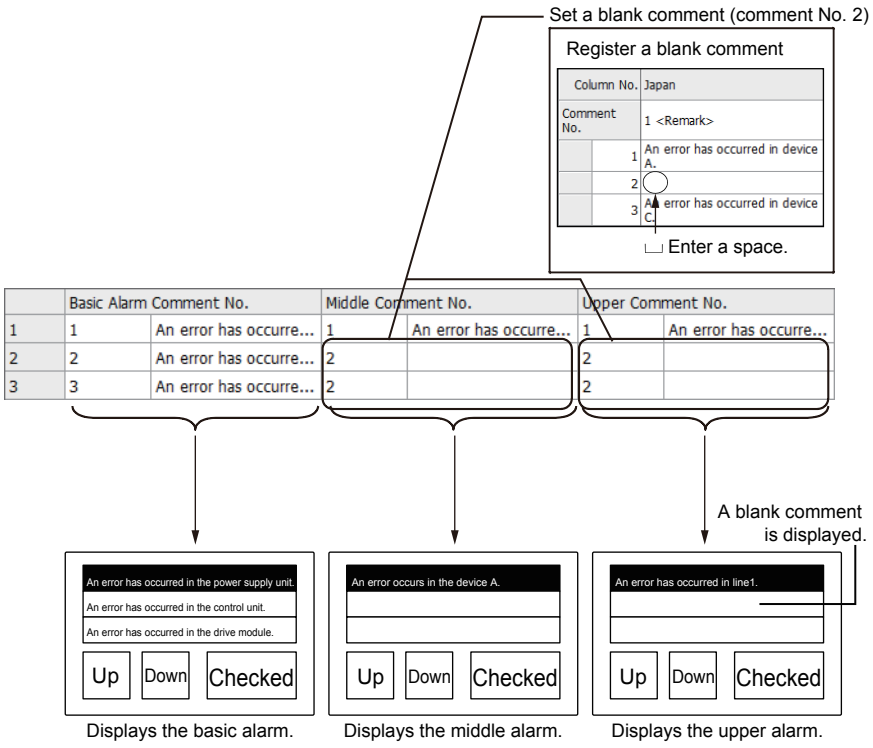
- No comment is set ([0] is specified for the comment No.).
- A comment is not set to the set comment No.

In using hierarchical alarms, if a level in the hierarchy does not need any comment, enter a blank (only space) so as not to display [No Message].

Example 1) No comment is specified No.).



Example 2) Blank comment is specified



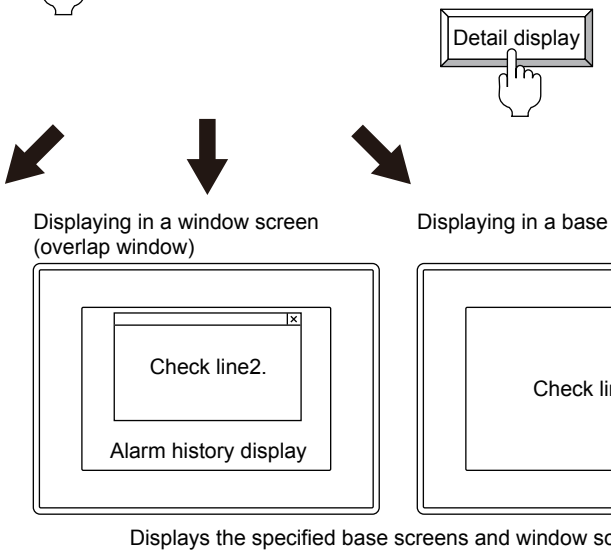
*2 The following shows the display method of the comment window.

1. Displaying the detail display screen by a single touch operation

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 10:25	Line1 error	11:25	10:45
Jun. 1, 2013 12:05	Line2 error		12:28
Jun. 1, 2013 12:35	Line3 error		

2. Displaying the detail display screen by key inputs of a touch switch

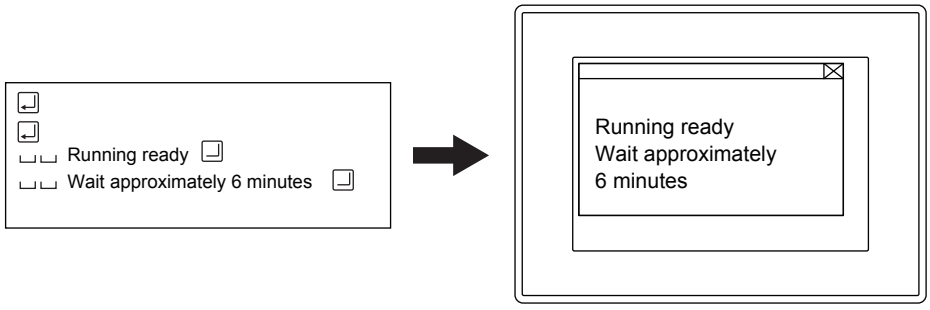
Error date and time	Comment	Restored	Checked
Jun. 1, 2013 10:25	Line1 error	11:25	10:45
Jun. 1, 2013 12:05	Line2 error		12:28
Jun. 1, 2013 12:35	Line3 error		



Displays the specified comment.

Displays the specified base screens and window screens.

Item	Specifications
Number of characters that can be displayed in a comment window	• **For GT27, GT25, GT23, GT SoftGOT2000, and GS25** Up to 39 characters can be displayed in each row and 11 rows can be displayed. Thus, A maximum of 429 characters can be displayed. Two -byte character forms a row with 19 characters and up to 11 rows, 209 characters can be displayed. • **For GT2107-W, GT2105-Q, GT2104-R, and GS21** Up to 161 one-byte characters (7 lines of 23 characters) are displayed. Up to 77 two-byte characters (7 lines of 11 characters) are displayed. • **GT21-P** Up to 203 one-byte characters (7 lines of 29 characters) are displayed. Up to 98 two-byte characters (7 lines of 14 characters) are displayed.
Display position of the comment window	A comment window is displayed on the base screen. The window can be moved and closed in the same way that operates window screens.
Display of comments	Text size is fixed to one time high and one time wide. Regardless of the settings made when comments are registered, a blink and HQ characters are not displayed.
Display of comment rows	From the top left of the comment window, the registered comments are displayed. When a comment is longer than the display range of the comment window, the comment is wrapped around to be displayed. To display the comment in the center of the comment window, adjust the position of the comment by inserting line feeds.



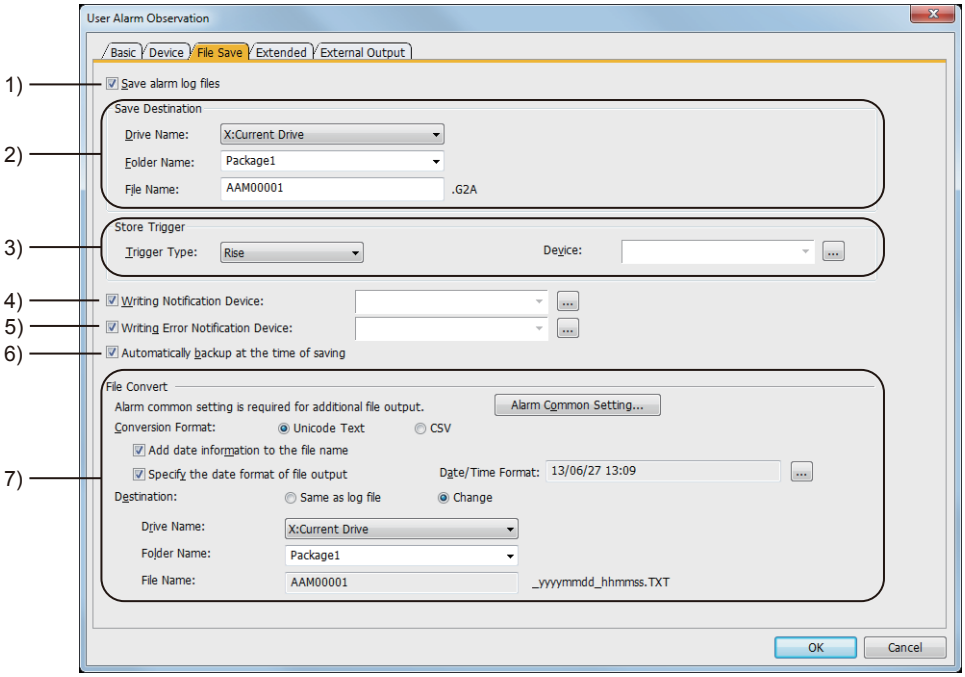
Registering comment

Displaying comment window

(3) [File Save] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the following items to save the alarm histories stored in the buffering area in the data storage.



1) **[Save alarm log files]**

Writes the user alarm histories stored in the buffering area as alarm log files to the data storage when [Historical] or [Cumulative] is selected in [Collection Mode] of the [Basic] tab.
Into data storage, the log file is written as a binary file (*.G2A).

2) **[Save Destination]**

Item	Description
[Drive Name]	Select a destination drive. The following shows selectable items. • [A:Standard SD Card] • [B:USB Drive] • [C:Built-in Flash Memory] • [D:Built-in SRAM] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] • [X:Current Drive] [C:Built-in Flash Memory] or [D:Built-in SRAM] is settable only in one user alarm observation setting in one project. For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Folder Name]	Set the folder name of the destination to save a file. The default is set to the folder name that is specified with [Package Folder Name] in the [Type Setting] dialog. Alphanumeric characters and following symbols are available for the folder name. #$%&'()+-.=@[]^_{}~\ For the restrictions on the folder name used with the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT When [Drive Name] is set to [C:Built-in Flash Memory] or [D:Built-in SRAM], the folder name specified with [Package Folder Name] in the [Type Setting] dialog is applied.
[File Name]	Set the file name of the destination to save a file. As the default, AAM***** is set for the file name. (* indicates alarm IDs.) Alphanumeric characters and following symbols are available for the file name. #$%&'()+-.=@[]^_{}~ For the restrictions of the file name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT

3) **[Store Trigger]**

Item	Description
[Trigger Type]	Select the timing when the user alarm stored in the buffering area is stored to the data storage. The following shows selectable items. • [Rise] • [Fall] • [Sampling] • [ON Sampling] • [OFF Sampling] • [Alarm State Change] When setting [Sampling], [ON sampling], or [OFF sampling], set a cycle. The following shows the setting range. [1] minute to [1440] minutes
[Device]	Set a device used as a store trigger. ➟6.1.2 How to set devices

4) **[Writing Notification Device]**

Set a device which notifies that the alarm log file is in the process of being written.

5) **[Writing Error Notification Device]**

Set a device which notifies an error when alarm log file writing fails.

➟9.1.2 ■4 (7) Error occurred during the alarm log file saving

6) **[Automatically backup at the time of saving]**

Saves the alarm log file created immediately before it is saved as a backup file (*.BAK).

If the name of the alarm log file is AAM00001.G2A, the name of the backup file is AAM00001.bak.

The stored backup file is not displayed in the utility of the GOT.

7) **[File Convert]**

Set the following items to convert files.

To use file conversion, the setting of [Alarm Common Setting] is required.

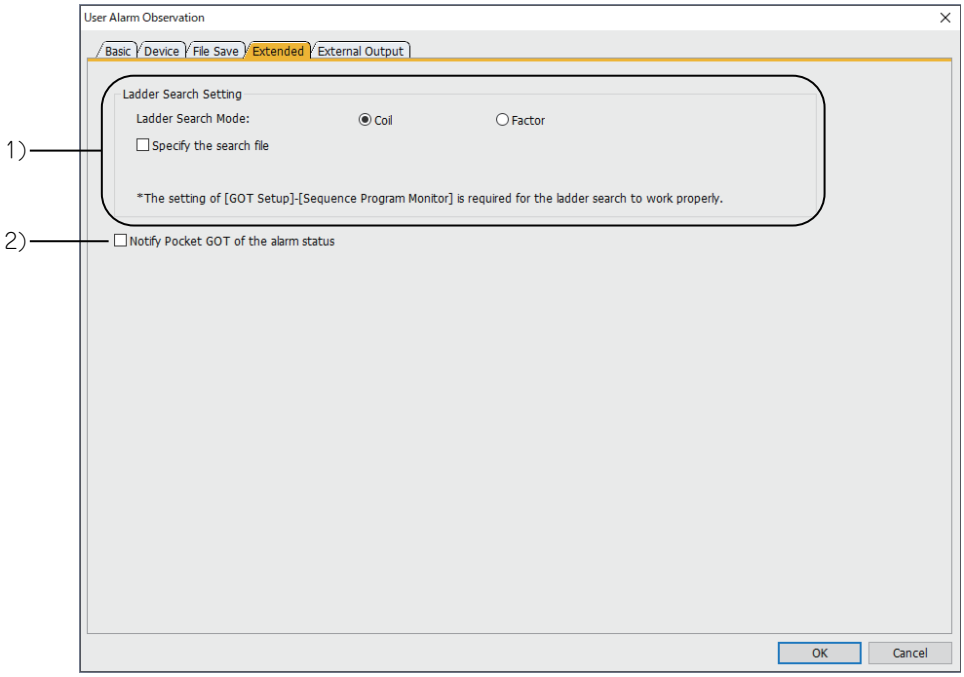
Click the [Alarm Common Setting] button and set the [Alarm Common Setting] dialog.

Item	Description
[Conversion Format]	Set the file format applied after the conversion. • **[Unicode Text]:** Saves as a Unicode text file. • **[CSV]:** Saves as a CSV file.
[Add date information to the file name]	Date information is added to the name of the alarm log file.
[Specify the date/time format for file output]	Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings
[Save Destination]	Select the save destination folder for a converted file. • **[Same as log file]:** Saves in the destination for the alarm log file. • **[Change]:** Saves in a destination different from one for the alarm log file. Set [Drive Name] and [Folder Name]. The setting method is the same as that of [Save Destination] for the alarm log file. [File Name] is the same as that of the alarm log file. The file is saved as (*.TXT) if the conversion format is [Unicode Text] and (*.CSV) if [CSV].

(4) [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select a device search method for alarms at the sequence program monitor startup and whether to notify alarms to Pocket GOT.



1) [Ladder Search Setting]

Item	Description
[Ladder Search Mode]	Select a ladder searching method from [Coil] or [Factor].
[Specify the search file]	Select this item to specify the name of the program file to be searched. A file whose name is up to 60 characters long can be searched for. A file whose name includes both two-byte and one-byte characters can also be searched for. A file whose name includes one-byte spaces or any symbol below cannot be searched for. (" \ / ; : ? < > ¦ + = [ ] . ,)

The settings are not required for GT SoftGOT2000 that does not support the sequence program monitor.

2) [Notify Pocket GOT of the alarm status]

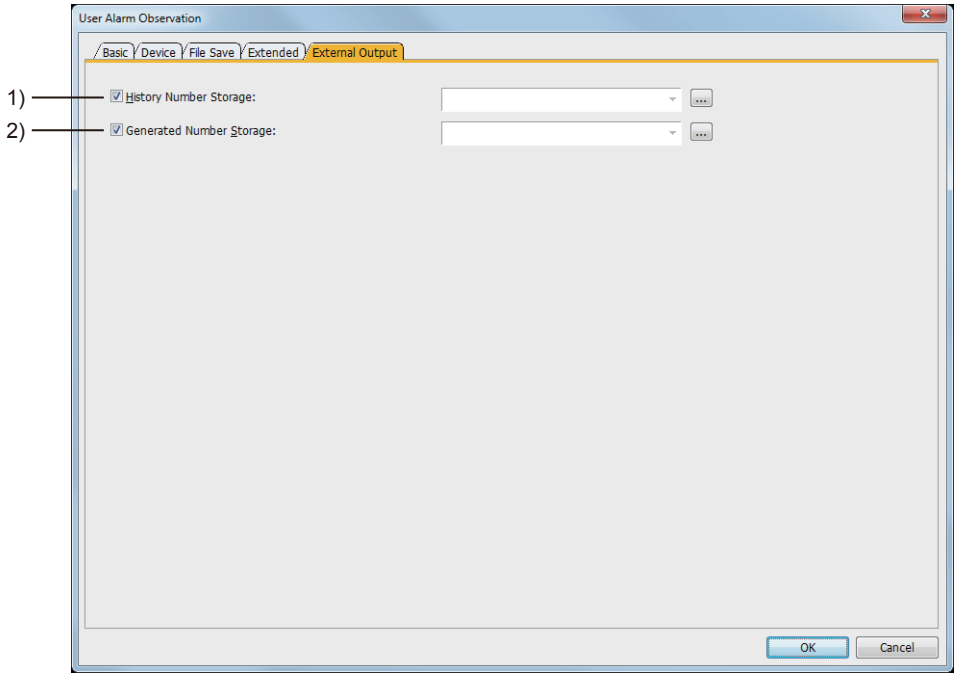
When a user alarm occurs, it is notified to Pocket GOT.
When this item is selected in the user alarm observation setting, notification is enabled for the alarm ID.
In one project, notification is available for up to 40 alarm IDs in ascending order.
Notification will not be available for the 41st and later alarm IDs.
Up to five latest alarms in the history are notified in one alarm ID.
When you select this item, configure the settings in Pocket GOT to obtain alarm information.
For the details, refer to the following manual.

➟Pocket GOT Mobile App Operating Manual

(5) [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the following items to save the number of user alarms and the occurrences.



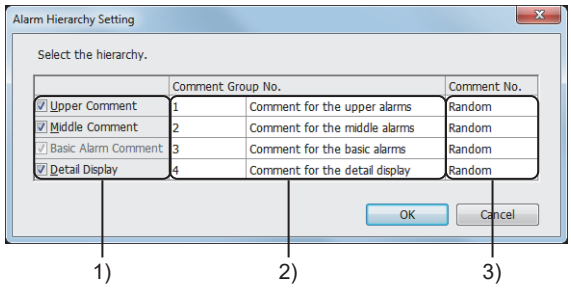
1) **[History Number Storage]**
Select this item to store the number of the user alarm histories in the word device.
All the errors in the status of "Occurred", "Checked", and "Restored" are included in the number of the histories to be stored.

➟6.1.2 How to set devices

2) **[Generated Number Storage]**
Select this item to store the number of the system alarms that are currently occurring in the word device.

➟6.1.2 How to set devices

(6) [Alarm Hierarchy Setting] dialog



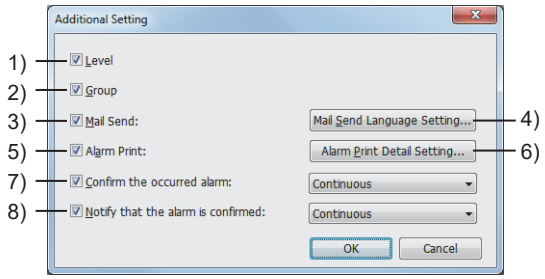
1) **[Hierarchy]**
Select a level to be added in the hierarchy.

2) **[Comment Group No.]**
Set the comment group No. of the comment.
The set comment group name is displayed.

3) **[Comment No.]**
Select the setting method of comment No.

Item	Description
[Continuous]	Sets the comment No. of the comment group sequentially.
[Random]	Sets the comment No. of the comment group one by one.

(7) [Additional Setting] dialog



1) **[Level]**
Adds a level setting.

2) **[Group]**
Adds a group setting.

3) **[Mail Send]**
Adds a mail send setting.

4) **[Mail Send Language Setting] button**
Displays the [Mail Send Language Setting] dialog to set the language used in an e-mail to be sent.

➟(9) [Mail Send Language Setting] dialog

5) **[Alarm Print]**
Adds the alarm print setting.
For information on how to set the alarm print, refer to the following.

➟10.11.3 How to use the report function

6) **[Alarm Print Detail Setting] button**
Displays the [Alarm Print Detail Setting] dialog to set the alarm details printed on a report.

➟(8) [Alarm Print Detail Setting] dialog

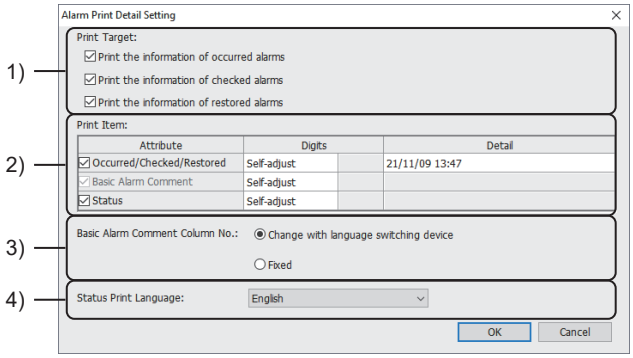
7) **[Confirm the occurred alarm]**
Adds the setting of a device to change the status of an alarm to "Checked".
Select a device setting method.
The following shows selectable items.

Item	Description
[Continuous]	Sets successive devices starting from a set device.
[Random	Set device numbers one by one.

8) **[Notify that the alarm is confirmed]**
Adds the setting of a device to notify that the status of an alarm has been changed to "Checked".
Select a device setting method.
The following shows selectable items.

Item	Description
[Continuous]	Sets successive devices starting from a set device.
[Random	Set device numbers one by one.

(8) [Alarm Print Detail Setting] dialog



1) **[Print Target]**

Details of an alarm to be printed.

Up to 100 alarms can be output when multiple alarms are checked or reset simultaneously. (Example: All the alarms are collectively checked by using the all alarms check operation or the alarm check external control.)

Any files exceeding the limit will be discarded.

Item	Description
[Print the information of occurred alarms]	Prints the details of the alarms in the occurred status.
[Print the information of checked alarms]	Prints the details of the alarms in the checked status. Details of the alarms in the checked status only cannot be printed. Select [Print the information of occurred alarms] or [Print the information of restored alarms] to enable printing of the details of the alarms in the checked status.
[Print the information of restored alarms]	Prints the details of the alarms in the reset status.

2) **[Print Item**

Set the details of data to be printed.

Item	Description	
[Attribute]	[Occurred/Checked/Restored]	Prints the date and time of alarm occurrence, check, or reset.
	[Basic Alarm Comment]	Prints the date and time on which an alarm occurred or was corrected.
	[Status]	Prints the status of an alarm.
[Digits]	[Self-adjust]	Automatically adjusts the number of digits to be printed according to the print contents.
	[Fixed]	Specify the number of digits to be printed.
[Detail]	Click [...] button to set the date and time format. ➥6.3.2 Date/time format settings	

3) **[Basic Alarm Comment Column No.]**

Select a method of specifying the column number to print an alarm comment.

The following shows selectable items.

Item	Description
[Change with language switching device]	Specifies the column number according to the language switching device.
[Fixed]	Set the column number to print a comment. The setting range is [1] to [30].

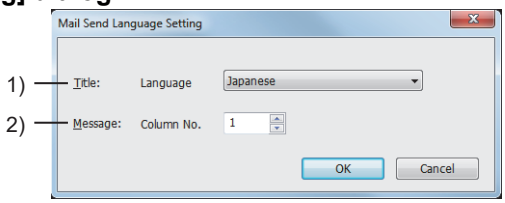
4) **[Status Print Language]**

Select the language to print the alarm status.

The following shows selectable items.

- [Japanese]
- [English]

(9) [Mail Send Language Setting] dialog



1) **[Title]**

Select a language.

The following shows selectable items.

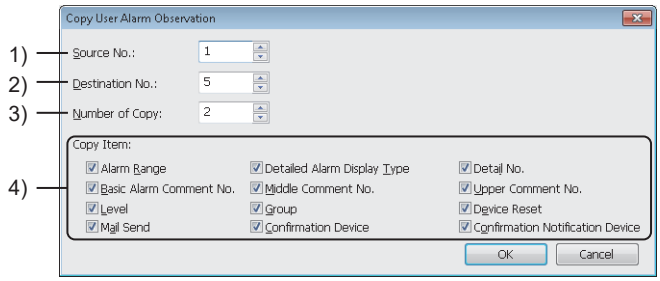
- [Japanese]
- [English]

2) **[Message]**

Input text for the comment.

The setting range is [1] to [30].

(10)[Copy User Alarm Observation] dialog



1) **[Source No.]**
Set a line number to be copied.

2) **[Destination No.]**
Set a line number where the copied contents are pasted.

3) **[Number of Copy]**
Set the number of times the copied contents are pasted.
Pastes the copied contents sequentially for the number of lines set in the [Number of Copy] from the line No. set in the [Source No.].

4) **[Copy Item]**
Select the items to be copied.

Item	Description
[Alarm Range]	Sets the contents of the [Alarm Range] column to be copied.
[Detailed Alarm Display Type]	Sets the contents of the [Detailed Alarm Display Type] column to be copied.
[Detail No.]	Sets the contents of the [Detail No.] column to be copied.
[Basic Alarm Comment No.]	Sets the contents of the [Basic Alarm Comment No.] column to be copied.
[Middle Comment No.]	Sets the contents of the [Middle Comment No.] column to be copied.
[Upper Comment No.]	Sets the contents of the [Upper Comment No.] column to be copied.
[Level]	Sets the contents of the [Level] column to be copied.
[Group]	Sets the contents of the [Group] column to be copied.
[Device Reset]	Sets the contents of the [Reset] column to be copied.
[Mail Send]	Sets the contents of the [Mail Send] column to be copied.
[Confirmation Device]	Sets the contents of the [Confirmation Device] column to be copied.
[Confirmation Notification Device]	Sets the contents of the [Confirmation Notification Device] column to be copied.

■8 [Alarm File Conversion] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

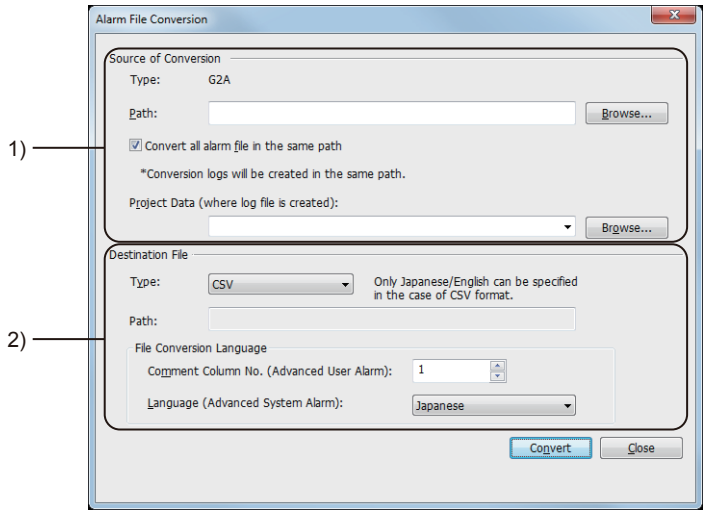
A binary file (*.G2A) stored in the data storage with GT Designer3 can be converted into a Unicode text file or CSV file. Since the file is converted with GT Designer3, converting is processed without any load on the GOT.

Step 1 Store the binary file (*.G2A) in the personal computer.

- Transferring with GT Designer3
  Select [Communication] → [Read from GOT...] from the menu to transfer a binary file to the personal computer.
- Storing by using the data storage
  Save a binary file to the data storage and read the file in the data storage using the personal computer.

Step 2 Select [Tools] → [Resource Data Conversion] → [Alarm File] from the menu.

Step 3 The [Alarm File Conversion] dialog appears.



1) [Source of Conversion]

Item	Description
[Type]	The conversion source file type.
[Path]	Specify a path of the conversion source file.
[Target files in the same path]	Select this item to set all binary files (*.G2A) on the same path to the conversion target. A conversion log is created to a destination with the set path automatically. You can check the full path of the converted files, the conversion results or the creation date of files with the conversion log.
[Project Data (where log file is created)]	Select the project data used for generating the alarm log file for the conversion.

2) [Destination File]

Item	Description
[Type]	Select a file type of a file to be created after the conversion. The following shows selectable items. • [CSV] • [Unicode Text]
[Path]	A path for a destination where a destination file is saved. The same path as the one of the conversion source file is displayed.
[File Conversion Language]	• [Comment Column No. (User Alarm)]: Select the comment column No. when the conversion source file is a user alarm. • [Language (System Alarm)]: Select the language when the conversion source file is a system alarm.

■9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the user alarm monitoring as required.
The following shows the functions that are available by the relevant settings.

(1) GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying the status of the access to the drive *1(Write device: System signal 2-2.b0, b1)	[System Signal 2-2]
Notifying that the free space in the drive is insufficient *1(Write device: System signal 2-2.b4, b5)	[System Signal 2-2]
Notifying the failure of the access to the drive *1*2(Write device: System signal 2-2.b7, b8)	[System Signal 2-2]
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key codes set to the input keys when the keys are input to ASCII input, touch switch, or other objects. (Write device)	[Key Code Input]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]

*1 A signal which notifies the full during the access exists in the user alarm monitoring. The signal differs from that of the Drive status notification signal.
For details, refer to the following.

➟9.1.2 ■4 (8) Difference from the Drive status notification signal (writing device: system signal 2-2)

*2 Reset the Drive A/B File Access Error signal (writing device: System signal 2-2.b7, b8) with the File Access Error Reset signal (read device: System signal 1-2.b0).

(2) GOT internal device

➟1.2.7 ■1 (1) GOT internal devices (GB, GD, and GS)

Function	Setting item
Saving the data in the buffering area to data storage *1	GS520.b0
Changing the character code to Unicode when a binary file is converted to CSV format (Read device)	GS522.b2

*1 Only when [Save alarm log files] is selected in the [File Save] tab of the [User Alarm Observation], the data is saved. When [Save alarm log files] is not selected, the user alarm is not saved.

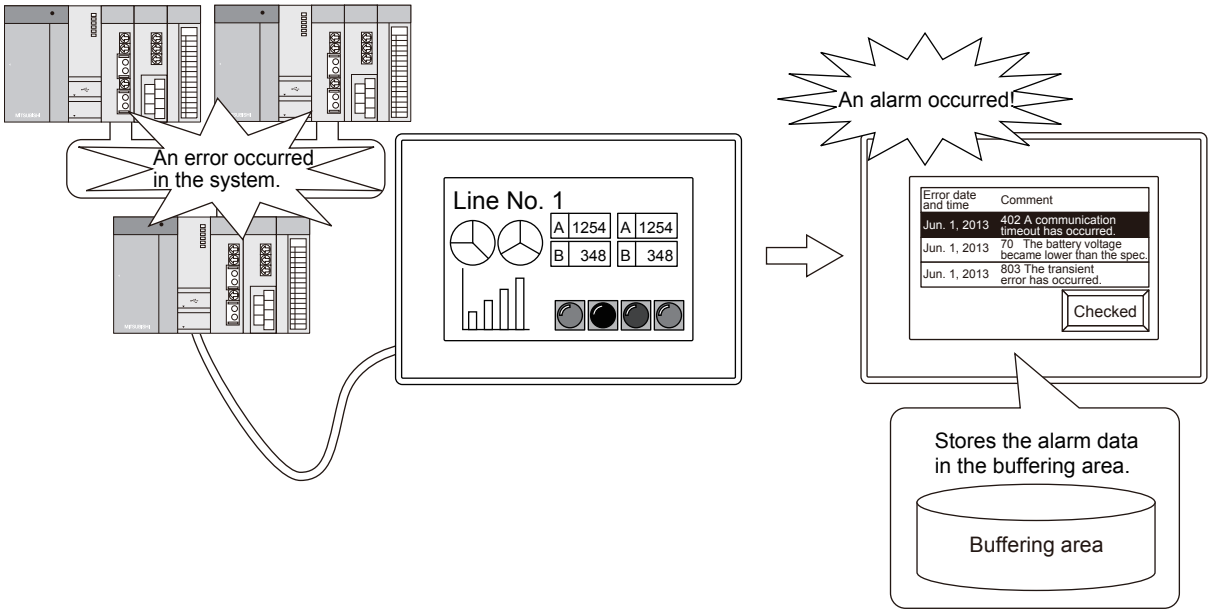
➟9.1.2 ■7 (3) [File Save] tab

9.1.3 Collecting alarms by monitoring the system

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of the system alarm observation
■2 How to use the system alarm observation
■3 Precautions for drawing
■4 Precautions for use
■5 [System Alarm Observation] dialog
■6 Relevant settings

The system alarm observation logs errors occurred in the GOT, controller, or network as system alarm events in the GOT built-in memory.



■1 Specifications of the system alarm observation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Types of the alarms which can be monitored and necessary settings

(a) Alarm type

You can monitor the following alarms with the system alarm observation.

- CPU error
  Indicates an error of a controller.
- GOT error
  Indicates an error of the GOT.
  A GOT Mobile error, which occurs on a GOT Mobile function client, is categorized as a GOT error.
- Network error
  Indicates an error of the communication unit mounted on the GOT.

The type of alarms to be monitored is selectable.
The alarm events are displayable by alarm type, enabling you to rapidly grasp the alarm information.

(b) Required settings for using the system alarm

To use the system alarm, select [Use System Alarm] in the [Basic] tab of the [System Alarm Observation] dialog and set a monitor target.

➥9.1.3 ■5 [System Alarm Observation] dialog

For system alarm monitors, set the type of the alarms to be collected and the collecting method of the alarms.

■2 How to use the system alarm observation

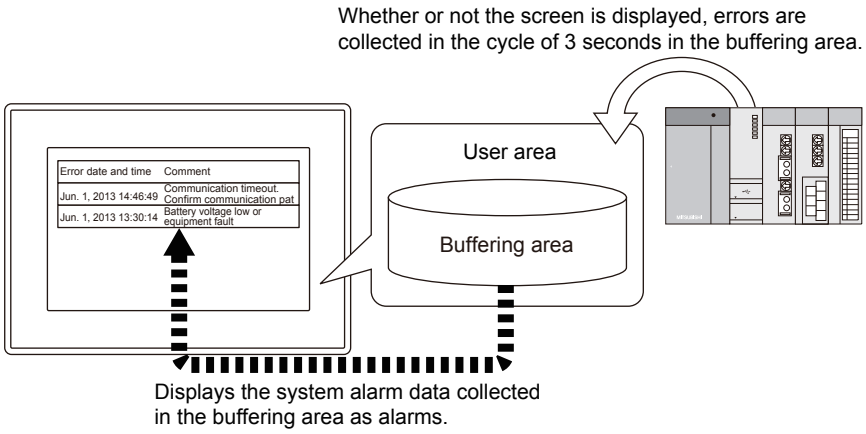
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Alarm collecting procedure and alarm history collecting method

(a) Alarm collecting procedure

• CPU errors, network errors

CPU errors and network errors are collected in the cycle of 3 seconds in the buffering area in the user area of the GOT, regardless of the screen being displayed.
The buffering area stores the collected system alarms as histories temporarily, and displays them on the GOT as alarms.



• GOT error

GOT errors are collected in the buffering area in the user area when alarms occur.

• For how to delete the data in the buffering area, refer to the following.

➟9.1.3 ■2 (2) Recovery from alarms

• The data to be stored in the buffering area of the user area differ depending on the history collecting method.

(b) Alarm history collecting method

The following shows the alarm history collecting method.

• History mode

Adds the alarm contents to the user area of the GOT for each alarm occurrence.

• Only the current alarm

Displays only the alarm in occurrence, and deletes the display after the alarm restoration.

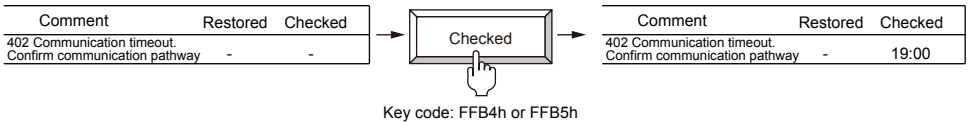
For the setting of the alarm history collecting method, refer to the following.

➟9.1.3 ■5 [System Alarm Observation] dialog

Depending on the collecting method, the types of information collected differs.
Example) Alarm Display (system)

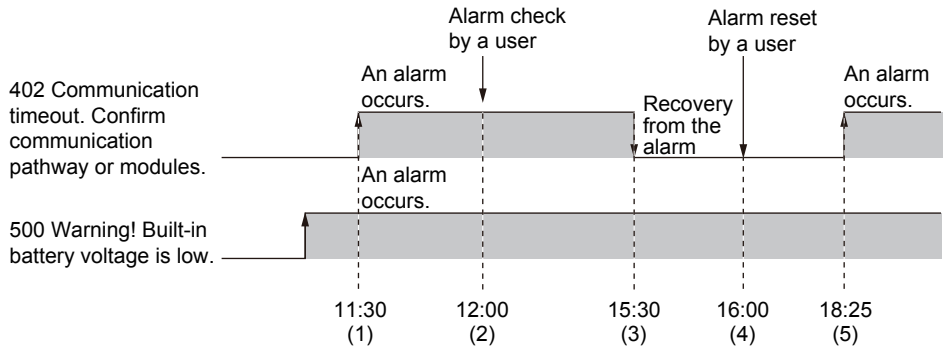
Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 20:00	402 Communication timeout. Confirm communicat		-	-
Jun. 1, 2013 18:30	70 Battery voltage low or equipment fault	Checked	-	18:50
Jun. 1, 2013 16:10	803 Transient error	Checked	16:30	16:20
(1)	(2)	(3)	(4)	(5)

Displayed information	Description	
	History mode	Alarms in the "Occurred" status only
(1) Date of occurrence	Displays the date and time when an alarm occurs.	
(2) Message	Displays an error code and message when an alarm occurs. For error codes and the corrective actions, refer to the following. ➟GOT2000 Series User's Manual (Hardware) Messages registered in the GOT beforehand are displayed as alarm messages.	

Displayed information	Description	
	History mode	Alarms in the "Occurred" status only
(3) Alarm status	Displays the alarm status that is currently displayed. • Occurred: The alarm has occurred. (The occurrence of the alarm has not been checked.) • Checked: The occurrence of the alarm has been checked. • Restored: The monitor target already recovered from the alarm.	
(4) Restored	Displays the date and time when the monitor target recovered from the alarm.	-
(5) Checked	Displays the date and time when an alarm occurrence has been checked. Check the occurrence of the alarm with a touch switch for the alarm check. 9.1.3 ■2 (7) Useful operations and functions  Key code: FFB4h or FFB5h	

(c) **Alarm display example**

The following shows the examples for displaying alarms with the alarm display (system) for each alarm collecting method.



• Historical

Collects the alarm occurrence status as histories.
The history is added every time an alarm occurs.

(1) Occurrence of a communication timeout

Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 11:30	402 Communication timeout. Confirm communic	Occurred		
Jun. 1, 2013 10:25	500 Warning! Built-in battery voltage is low.	Occurred		

A communication timeout has occurred.

(2) Communication timeout check

Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 11:30	402 Communication timeout. Confirm communic	Checked		12:00
Jun. 1, 2013 10:25	500 Warning! Built-in battery voltage is low.	Occurred		

The communication timeout error has already been checked.

Key code: FFB4h

(3) Communication timeout restoration

Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 11:30	402 Communication timeout. Confirm communic	Checked		~~12:00~~
Jun. 1, 2013 10:25	500 Warning! Built-in battery voltage is low.	Occurred		

The alarm status of the GOT does not turn "Restored".

(4) Alarm reset

Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 11:30	402 Communication timeout. Confirm communic	Checked	16:00	~~12:00~~
Jun. 1, 2013 10:25	500 Warning! Built-in battery voltage is low.	Occurred		

The alarm was reset.

Key code: FFB4h

The alarm status of the GOT turns "Restored" and the recovery time is displayed.

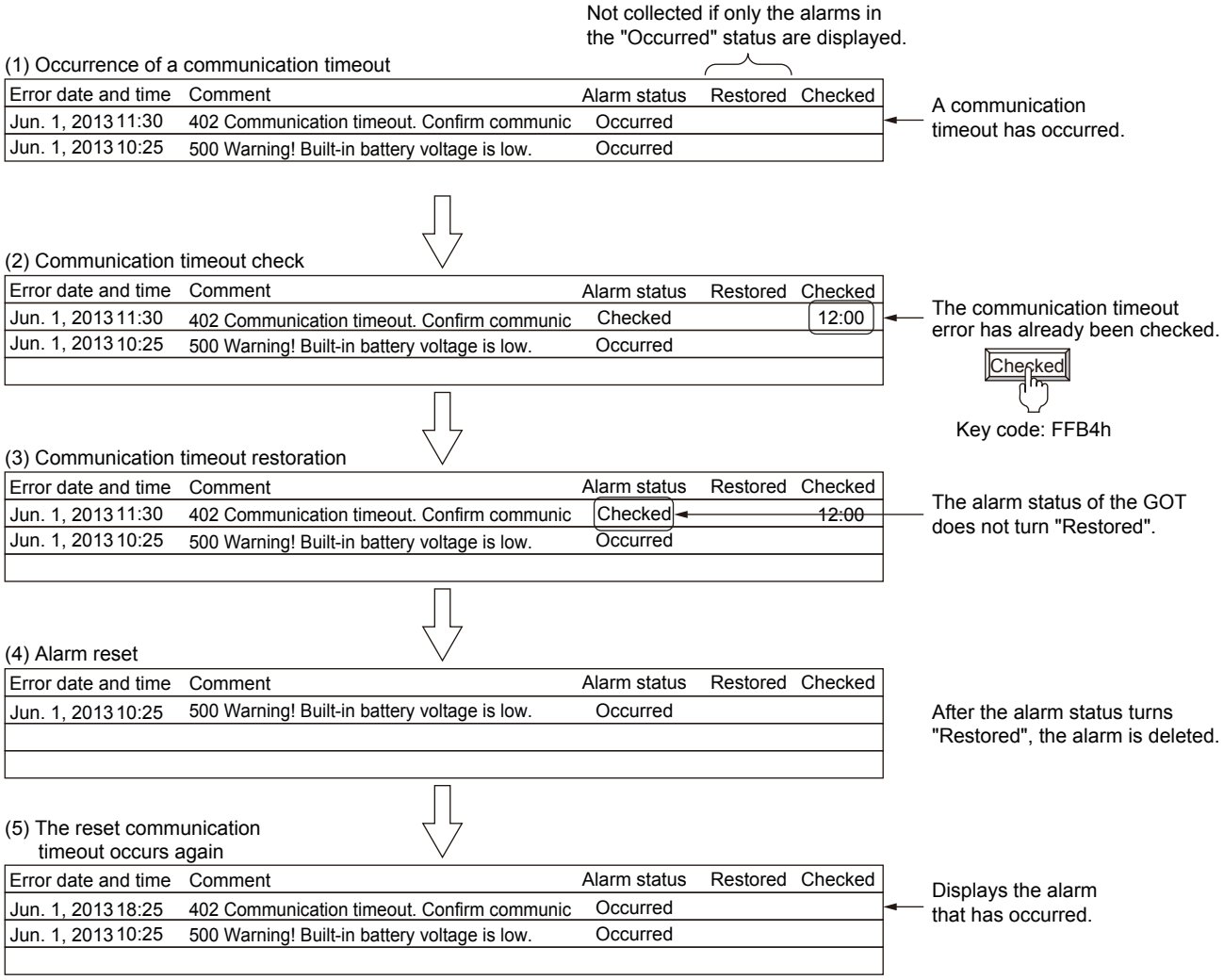
(5) The reset communication timeout occurs again

Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 18:25	402 Communication timeout. Confirm communic	Occurred		
Jun. 1, 2013 11:30	402 Communication timeout. Confirm communic	Checked	16:00	12:00
Jun. 1, 2013 10:25	500 Warning! Built-in battery voltage is low.	Occurred		

Displays the alarm adding a row newly.

- Alarms in the "Occurred" status only

  Only the latest GOT error, CPU error, and network error are collected.
  The histories of the alarms that have been recovered are not stored.



(2) Recovery from alarms

The following shows the procedure for turning the alarm status of each error to "Restored".

(a) CPU errors

Eliminate all the alarm causes of the CPU error.

The alarm status of the system error caused by the CPU error turns "Restored" by eliminating all the alarm causes.

When the multi-channel function is used, the alarm status of all the channels turns "Restored" by eliminating the alarm causes of all the channels.

(b) Network errors

Eliminate all the alarm causes of the network error.

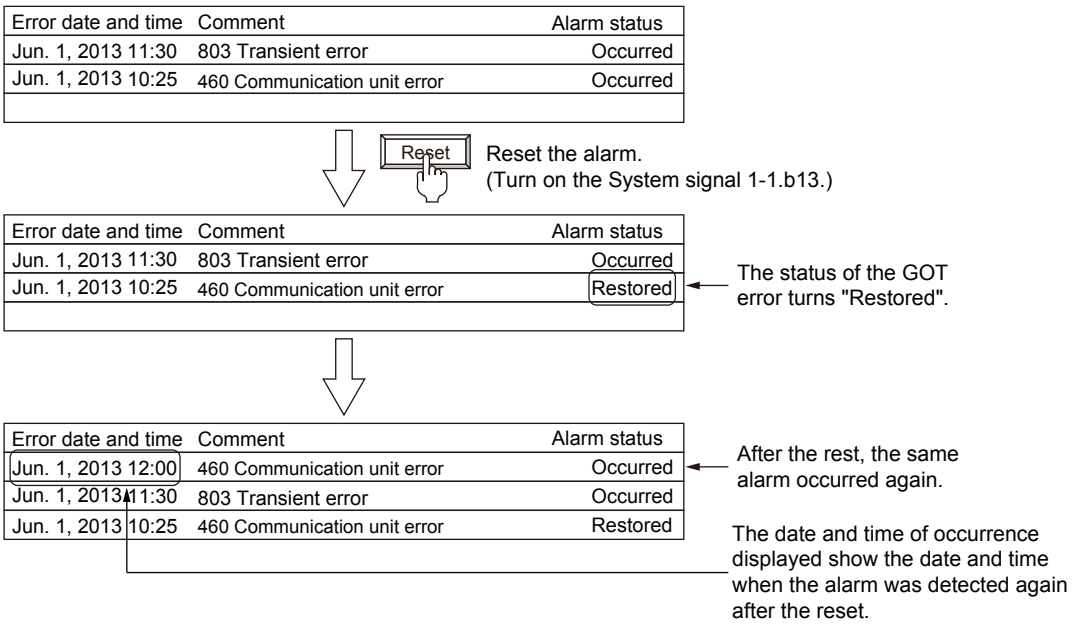
The alarm status of the system error caused by the network error turns "Restored" by eliminating all the alarm causes.

(c) GOT errors

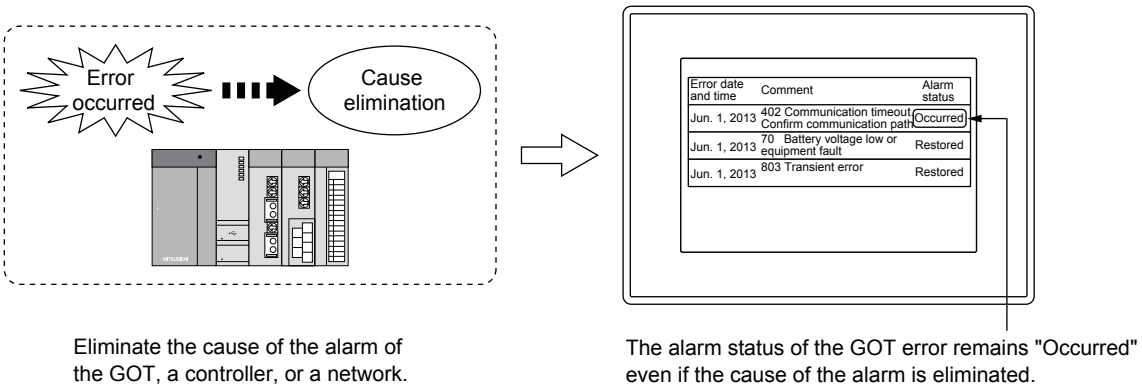
Eliminate all the alarm causes of the GOT error.

Otherwise the same alarm occurs again after the alarm status is turned from "Occurred" to "Restored".

Example) When the alarm of error code 460 occurs and the alarm is reset before the cause is eliminated



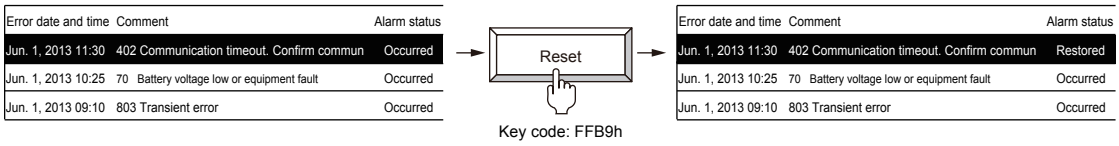
The alarm status of GOT errors does not turn "Restored" even after the alarm causes are eliminated. To turn the status to "Restored", execute any one of the following operations.



• Turning the alarm status of a selected error to "Restored"

Using a touch switch, turn the alarm status of an selected error to "Restored".

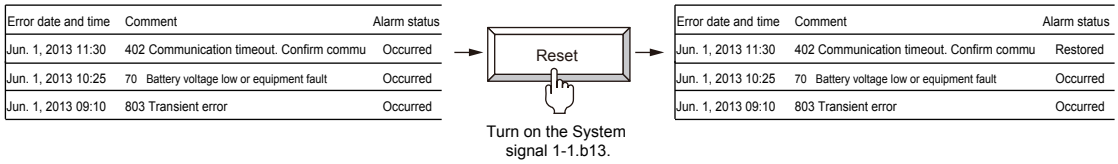
➟9.1.3 ■2 (7) Useful operations and functions



• Using the system information, turning the alarm status of all the GOT errors to "Restored"

By turning on the GOT Error Reset signal (System signal 1-1.b13), turn the alarm status of all the GOT errors to "Restored".

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])



• Using a utility, turning the alarm status of all the GOT errors to "Restored"

Using the alarm display (system) utility, turn the alarm status of all the GOT errors from "Occurred" to "Restored".

➟GOT2000 Series User's Manual (Utility)

(3) Deleting alarm data

Alarms in the "Restored" status can be deleted from the history.

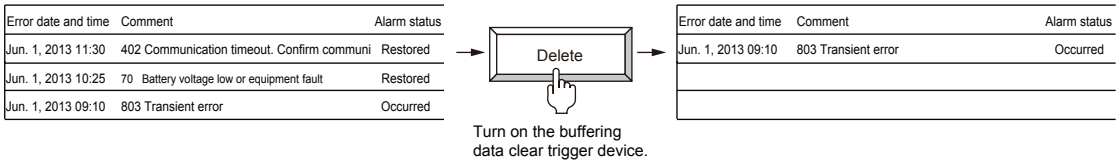
To delete alarms, turn the alarm status from "Occurred" to "Restored".

➟9.1.3 ■2 (2) Recovery from alarms

To delete alarm data, perform one of the following operations.

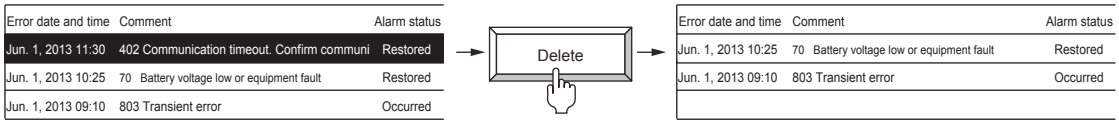
(a) Deleting with a device

Turn on [Buffering Data Clear Trigger Device] set in the [Basic] tab of the [System Alarm Observation] dialog to delete all alarm data in the "Restored" status.



(b) Deleting with a touch switch

Use a touch switch to delete one or all alarm data items in the "Restored" status.



Key code: Delete one event. FFB6h.
Delete all events. FFB7h.

(c) Powering off or resetting the GOT

Power off or reset the GOT to delete alarm data.

However, when the alarm data is stored in a data storage, the data is retained even after the GOT is powered off.

➟9.1.3 ■2 (7) Useful operations and functions

(d) Changing the [Controller] setting in the utility

Change the [Controller] setting in [GOT basic set] in the utility to delete all alarm data in the "Restored" status.

(e) Writing/deleting data to/from the GOT

Perform any of the following operations in the [Communicate with GOT] dialog to delete all alarm data in the "Restored" status.

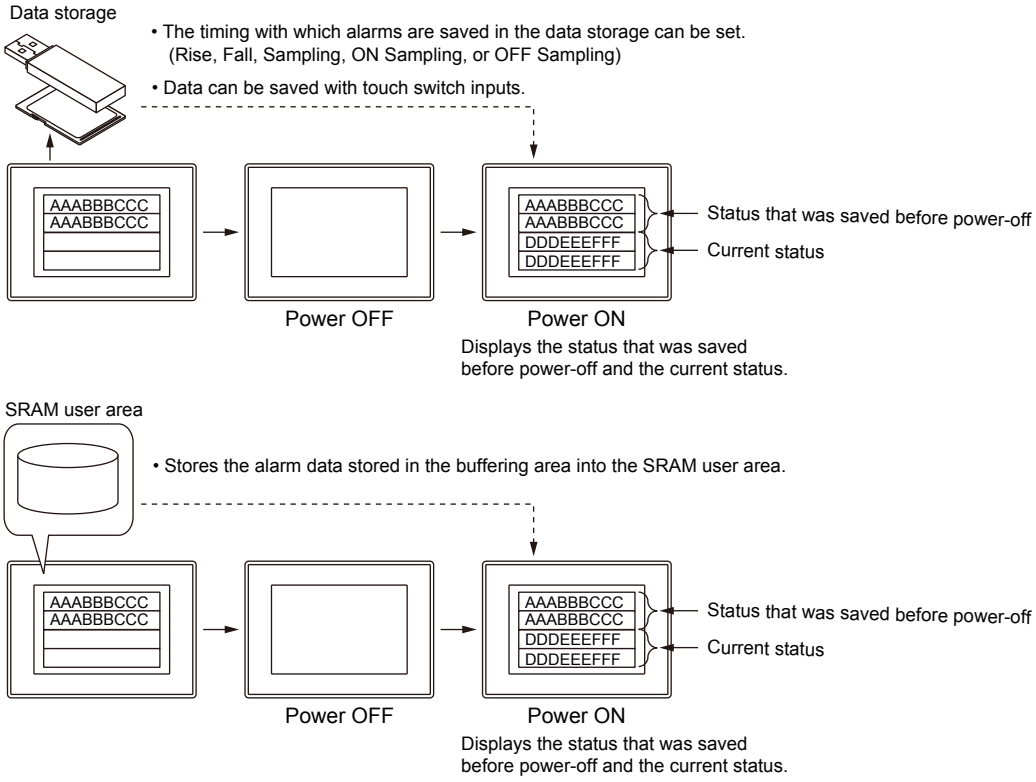
- Writing package data
- Deleting an item from the drive information
- Formatting a drive

(4) Power-failure backup of the system alarm data

(a) Overview of the power failure backup

Once the system alarm data are stored in the data storage or the SRAM user area as the alarm log file, the system alarm data are held even when the GOT is powered off.

When the alarm log file is stored in the data storage or the SRAM user area when the GOT is powered on, the alarm log file is read automatically and the system alarm history before the power-off is recovered.



(b) **Performing the power-failure backup**

To hold the data in the data storage, configure the setting in the [File Save] tab of the [System Alarm Observation] dialog, and use either of the following methods.

- Storage by the store trigger device

  ➟9.1.3 ■5 [System Alarm Observation] dialog
- Storage by the touch switch

  ➟9.1.5 ■2 (11) Touch switches for the alarm display
- Storage by the Buffering And File Access Control: Forcefully Save Buffered Data signal (GS520.b0)

  ➟12.1 GOT Internal Device

To hold the data in the SRAM user area, configure the setting in the [Basic] tab of the [System Alarm Observation] dialog.

- Saving data to the SRAM user area

  ➟9.1.3 ■5 [System Alarm Observation] dialog

(c) **Information to be stored**

The information in the alarm log file to be stored in the data storage and the SRAM user area differ depending on the alarm collecting method.

➟9.1.3 ■1 Specifications of the system alarm observation

(d) **File name and storage timing**

- Saving in data storage

  You can set a file name.

  ➟9.1.3 ■5 [System Alarm Observation] dialog
- Saving data to the SRAM user area

  The name of a file to be stored cannot be set.

  Alarm data is stored with the timing with which the alarm data is saved in the buffering area.

(e) **Available memory capacity**

For the memory capacity available for system alarms to be retained when a power failure occurs, refer to the specifications of each function.

(f) **Backing up the alarm log file stored in the data storage**

Select [Automatically backup at the time of saving] in the [File Save] tab of the [System Alarm Observation] dialog to store the alarm log file as a backup file when the alarm log file is saved.

(g) **Backing up/restoring the data stored in the SRAM user area**

Backup or restore the data stored in the SRAM user area by using the [SRAM control] of the utility.

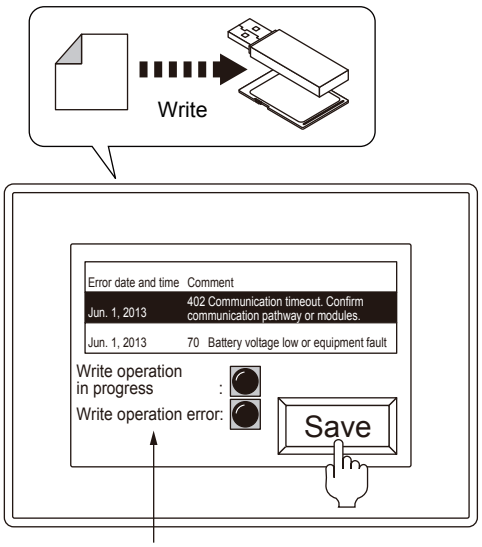
For the details of the backup/restore, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(h) Monitoring the writing status

You can monitor an error occurred during the system alarm data writing and a writing error by using a device.

➟9.1.3 ■5 [System Alarm Observation] dialog



The status of write operations can be monitored.

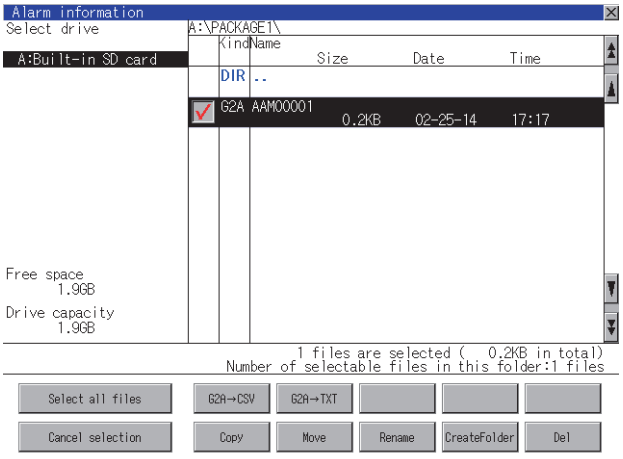
(5) Converting alarm log files

Alarm log files generated by system alarms are binary format files (*.G2A).
To display and edit the alarm log files on a personal computer, convert them into Unicode text files or CSV files.
The following shows how to convert the alarm log files.

(a) Creating a Unicode text file or a CSV file with the utility

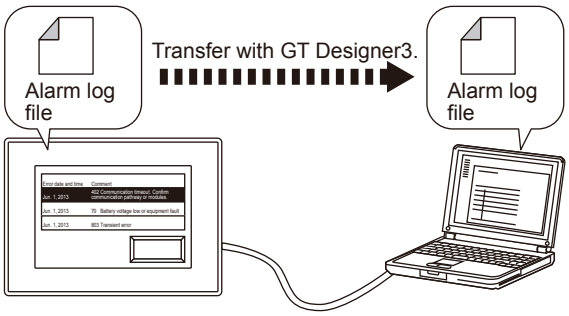
Convert a binary format file (*.G2A) stored in the data storage into a Unicode text file or a CSV file with the utility.

Step 1 Select a (*.G2A) file in [Alarm information] of the utility and touch the [G2A→TXT] or [G2A→CSV] button.



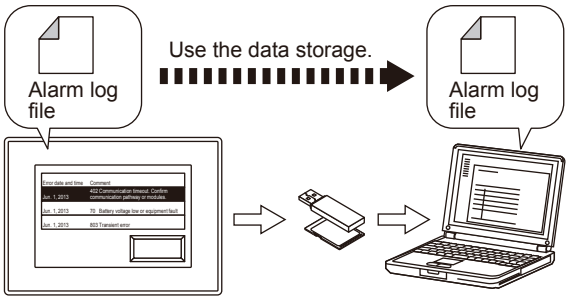
Step 2 Store the created Unicode text file or CSV file into a personal computer by either of the following methods.

- Transferring with GT Designer3
  Reads resource data from the GOT.



• Storing by using the data storage

Stores the alarm log file to the data storage and reads the alarm log file from the data storage.



Step 3 Display or edit the converted Unicode text file or the CSV file on a personal computer.

• For the operations of the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

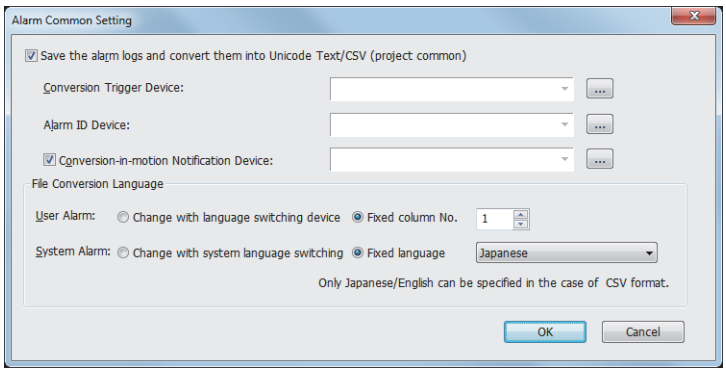
• To read the resource data from the GOT, refer to the following.

➟4.3.2 ■3 Reading the data from the GOT

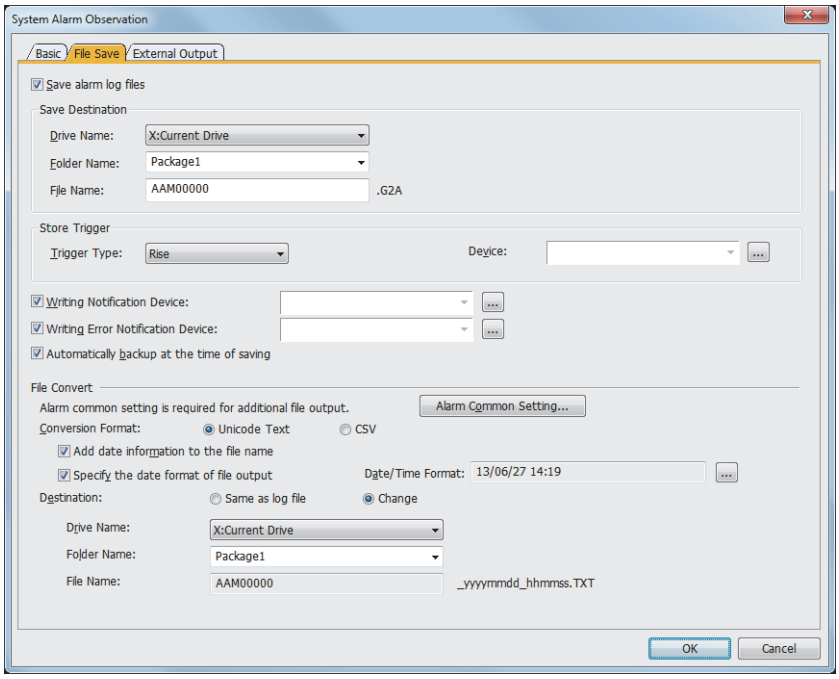
(b) Converting a Unicode text file or a CSV file with the device

Turning on a specified device converts a binary format file (*.G2A) stored in the data storage into a Unicode text file or a CSV file.

Step 1 Configure the setting for control the alarm log file conversion with the device in the [Alarm Common Setting] dialog.



Step 2 Configure the setting for storing the alarm log file stored in the buffering area to the data storage in the [File Save] tab of the [System Alarm Observation] dialog.



- For how to configure the setting in the [Alarm Common Setting] dialog, refer to the following.

  ➟9.1.2 ■5 [Alarm Common Setting] dialog
- For the [File Save] tab setting of the [System Alarm Observation] dialog, refer to the following.

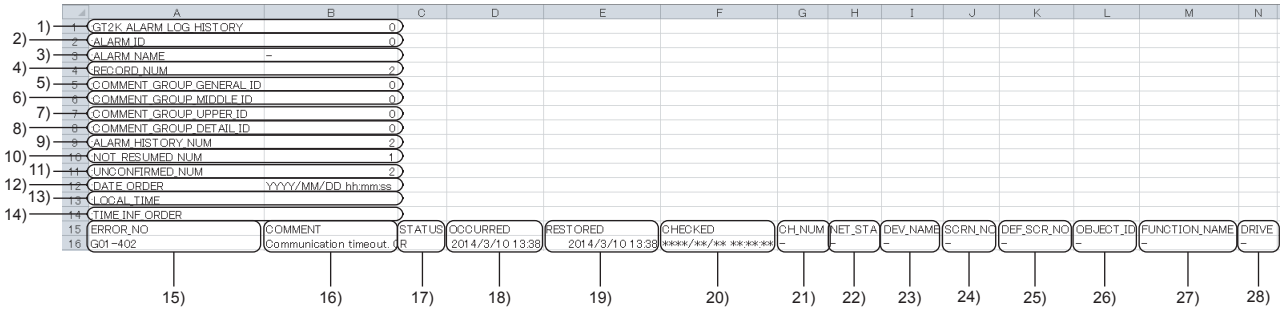
  ➟9.1.3 ■5 (2) [File Save] tab
- Precautions on converting files by using external control devices

  Before converting the alarm log files, store 0 to the device set in [Alarm ID Device] in [Alarm Common Setting] dialog.

  Always turn off the conversion trigger device after the alarm log file conversion.

  When the alarm log file conversion is completed, the conversion notification device does not turn off when the conversion trigger device is on.

(6) Configurations of a Unicode text file and a CSV file



No.	Description
1)	An alarm collecting method.
2)	An alarm ID. For system alarms, this item is fixed to 0.
3)	An alarm name. For system alarms, this item is left blank.
4)	The number of the alarm histories.
5)	The basic comment group No. For system alarms, this item is fixed to 0.
6)	The middle comment group No. For system alarms, this item is fixed to 0.
7)	The upper comment group No. For system alarms, this item is fixed to 0.
8)	The detailed comment group No. For system alarms, this item is fixed to 0.
9)	The number of the alarm histories.
10)	The number of unrestored alarms.
11)	The number of unchecked alarms.

No.	Description
12)	The order of the dates.
13)	The difference between the Greenwich Mean Time and "Occurred"/"Restored"/"Checked".
14)	The order of the output time.
15)	The error No..
16)	System alarm messages.
17)	The alarm status. (O: Alarm has been occurring, but has not been confirmed, OC: Alarm has been occurring, and has been confirmed, R: Alarm has been restored, but has not been confirmed, RC: Alarm has been restored, and has been confirmed)
18)	The date and time when an alarm occurs.
19)	The date and time when an alarm has restored.
20)	The date and time when an alarm occurrence has been checked.
21)	CH No. (CH1 to CH4)
22)	Network No., station No., and module No.
23)	Device name.
24)	The screen type. (BASE: Base screen, OVL1 to OVL5: Overlap window 1 to 5, SPI1 to SPI2: Superimpose window 1 to 2, DLG: Dialog window, PNL: Operation panel, KEY: Key window, RPT: Report screen, MBL-BASE: Base screen (GOT Mobile), MBL-OVL1 to OVL2: Overlap window 1 to 2 (GOT Mobile), MBL-SPI1 to SPI2: Superimpose window 1 to 2 (GOT Mobile))
25)	Definition Screen No. (B: Base screen, W: Window screen, R: Report screen, MB: Mobile screen)
26)	Object ID.
27)	Function name.
28)	Drive Name. (A, B, E, F, G)

(7) Useful operations and functions

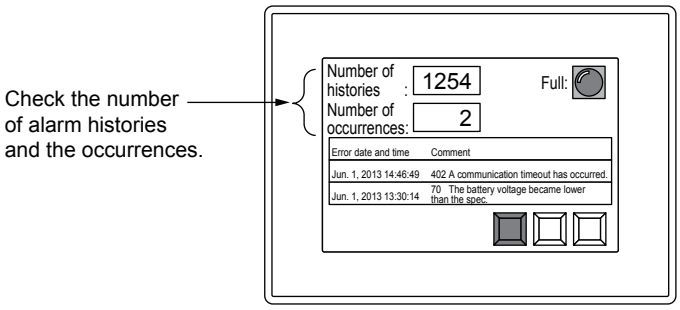
(a) When the buffering area is full

You can set a device for executing a notification when the number of alarms reaches to the [Stored Number] set in the [Basic] tab of the [System Alarm Observation] dialog.

- Confirming the number of the alarm histories and the alarms

  You can confirm the number of the alarm histories by storing the histories stored in the buffering area temporarily to a device.

  The number of the system alarms that are currently occurring can be confirmed as well.

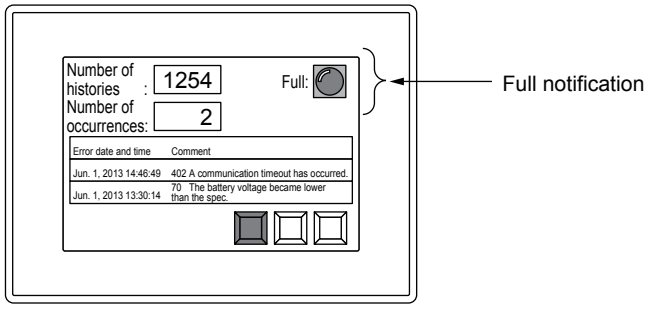


- When the buffering area is full

  You can set a device for notifying the full of the buffering area.

  To execute the notification before the buffer area becomes full, set the [Full Notification Signal Device] in the [Basic] tab of the [System Alarm Observation] dialog.

  Select the operation when the buffering area is full in the [Action When Buffer is Full] in the [Basic] tab of the [System Alarm Observation] dialog.



• Size of the buffering

The size of the buffering area to be used for the system alarm varies depending on the setting.

Increasing the size of the buffering decreases the user area of the GOT. Adjust the size of the buffering according to the user area capacity.

Setting items for the size of the buffering area

Alarm collecting method	Setting for the size of the buffering area
History mode	• Number of alarm histories to be stored ([Stored Number] in the [Basic] tab of the [System Alarm Observation] dialog)
Alarms in the "Occurred" status only	-

The size of the buffering area required for the set system alarm list can be confirmed in the [Basic] tab of the [System Alarm Observation] dialog.

For the details of the buffering area, refer to the following.

➟9.1.3 ■2 (1) Alarm collecting procedure and alarm history collecting method

For how to configure the setting in the [User Alarm Observation] dialog, refer to the following.

➟9.1.3 ■5 [System Alarm Observation] dialog

(b) **Corrective actions on the cause of the alarm of each type and error codes**

For details, refer to the following.

➟3.8.1 Error messages (GOT2000 Series simulator)

■3 Precautions for drawing

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(1) Setting for saving system alarm data to data storage

To place a button for storing the system alarm data, configure either of the following settings.

• Set the store trigger devices in the [File Save] tab of the [System Alarm Observation] dialog and store the system alarm data.

➟9.1.3 ■5 [System Alarm Observation] dialog

• Place a touch switch for the alarm display (system) on the screen where the alarm display (system) is set and store the system alarm data.

➟9.1.3 ■2 (7) Useful operations and functions

(2) Available file size

Data storage must have larger capacity than the size of the file to be stored.

For the file size, refer to the following.

➟9.1.3 ■1 Specifications of the system alarm observation

(3) Changing the setting for recording the label or tag name at an alarm occurrence

On the [Basic] tab in the [System Alarm Observation] dialog, changing the setting of [Record label/tag name at the time of alarm generation] affects the already recorded label and tag names.

For the setting details and the labels and tags to be recorded, refer to the following.

➟9.1.3 ■5 (1) [Basic] tab

• When clearing this item after recording

The already recorded label and tag names are discarded.

• When selecting this item after recording

For the already collected system alarms, the label and tag names remain unrecorded.

(4) Changing the number of characters of a label or tag name to be recorded at an alarm occurrence

On the [Basic] tab in the [System Alarm Observation] dialog, changing the setting of [Number of characters to be recorded] affects the already recorded label and tag names.

For the setting details and the labels and tags to be recorded, refer to the following.

➟9.1.3 ■5 (1) [Basic] tab

• When decreasing the number of characters

Of an already recorded label or tag name, the characters up to the newly-specified number of characters remain and the rest is discarded.

• When increasing the number of characters

The already recorded label and tag names are retained.

■4 Precautions for use

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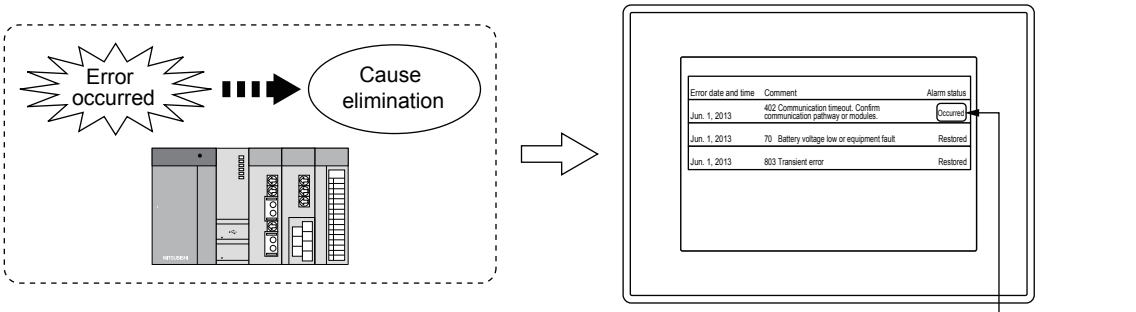
(1) Controllers for which system alarms are not displayed in the GOT

The CPU errors which occur in the following controllers cannot be displayed on the GOT system alarm display (system). Check the errors with the software for the controllers.

- SIEMENS PLC CPU
- AZBIL controller
- RKC temperature controller
- Inverter

(2) Resetting alarms

The alarm status of GOT errors does not turn "Restored" even if the alarm cause of the GOT errors is eliminated.



Eliminate the cause of the alarm of the GOT, a controller, or a network.

The alarm status of the GOT error remains "Occurred" even if the cause of the alarm is eliminated.

For details, refer to the following.

➟9.1.3 ■2 (2) Recovery from alarms

(3) Recovering from network errors and deleting the errors

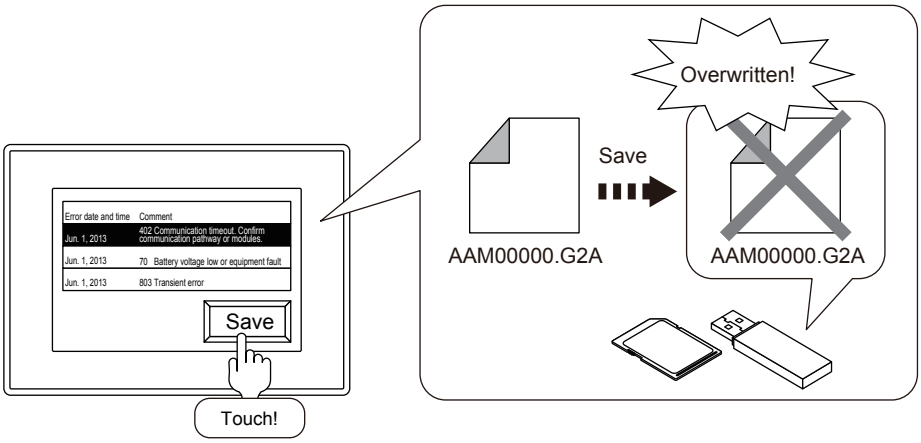
The alarm status of network errors that occur in the CC-Link communication unit and MELSECNET/H communication unit does not turn "Restored" even if the cause of the alarms is eliminated until the GOT is powered off or reset.
For turning the alarm status to "Restored" and deleting the alarms, refer to the followings.

➟9.1.3 ■2 (2) Recovery from alarms

(4) Display of system alarms occurring in multiple channels

If system alarms occur in multiple channels simultaneously, the alarm occurring in the highest numbered channel is displayed.

(5) When the same data are stored in data storage



The data in the data storage are overwritten. To reserve the data, move the data in the data storage to a personal computer with either of following methods.

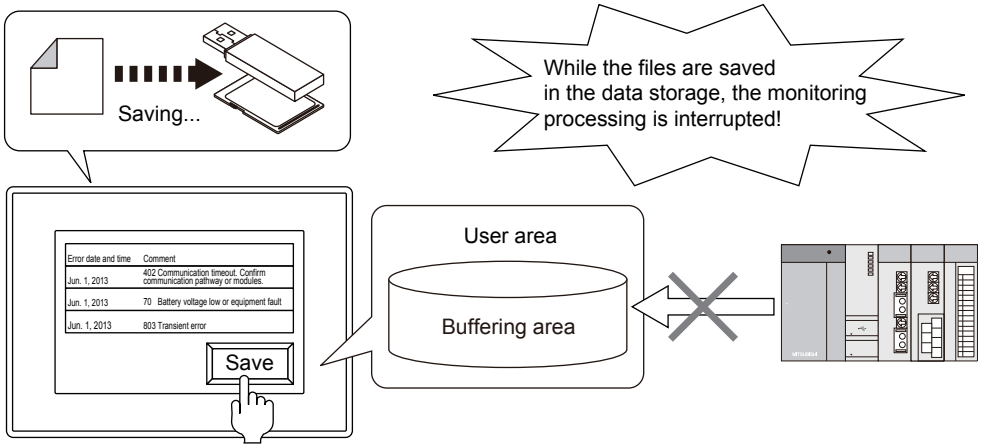
- Reading resource data with GT Designer3

➟4.3.2 ■3 Reading the data from the GOT

• Reading a CSV file stored in the data storage with a personal computer

(6) Alarm monitoring during the alarm log file saving

While alarm log files are saved in the data storage, the system alarm monitoring processing is interrupted.
System alarms occurred or recovered during the storing are not displayed.



(7) Storage by the Buffering And File Access Control: Forcefully Save Buffered Data signal (GS520.b0)

It may take minutes for an alarm log file to be saved in data storage because the data of all the target system alarms for the alarm log file is saved.
To prevent the monitoring from stopping for a long time, save the alarm log files in units of objects.

- Setting the store trigger for each system alarm observation setting
- Setting the touch switch (key code: FFBBh) for each alarm display (system)

(8) Precautions for removing an SD card

When you open the SD card cover or turn off the SD card access switch, the files are saved automatically.
Before removing the SD card, make sure that the file saving is complete by checking one of the following conditions.

- The Drive Status Notification signal (system signal 2-2.b0, b1) is turned off.
- The SD card access LED is turned off.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Storing may take longer because all the user alarms and system alarms for saving the alarm log files are stored.

(9) Restoring the alarm histories when powering-off to on the GOT

When the alarm log file in the data storage is not created in the project in the GOT, the file cannot be read from the GOT.
In this case, an alarm occurs or a device turns on.

- A system alarm 525 occurs.
- The [Writing Error Notification Device] set in the [File Save] tab of the [System Alarm Observation] dialog turns on.

(10) Collecting alarms when the buffering area is full

The operation when the buffering area is full is either of the followings according to the [Action When Buffer is Full] in the [Basic] tab of the [System Alarm Observation] dialog.

- Deleting recovered system alarms and adding a new system alarm
- The system alarms are not collected.

To prevent the operations above, set the [Full Notification Signal Device] in the [Basic] tab of the [System Alarm Observation] dialog and delete the recovered alarm when the device turns on.

➟9.1.3 ■5 [System Alarm Observation] dialog

(11) Error occurred during the alarm log file saving

When an error occurs during the alarm log file saving, the [Writing Error Notification Device] set in the [File Save] tab of the [System Alarm Observation] dialog turns on.
If the Writing Error Notification device turns on, check that the following conditions are satisfied.

- The SD card cover of the GOT is closed.
- The SD card access switch of the GOT is turned on.
- The data storage works normally.

The user needs to turn off this device.

(12)Difference from the Drive status notification signal (writing device: system signal 2-2)

The full notification, writing notification and a writing error can be notified by the Drive status notification signal as well, and the operations differ from the devices set in the system alarm monitoring.

Item	Operation (difference)	
	User alarm observation	Drive status notification signal
Difference between [Full Notification Signal Device] set for system alarm monitors and the Drive status notification signal (System signal 2-2.b4, b5)	Turns on when the number of log files reaches the [Stored Number] set in the [Basic] tab (when the buffering area reserved for the system alarms is full).	Turns on when the data storage is full.
Difference between [Writing Notification Device] set for system alarm monitors and the Drive status notification signal (System signal 2-2.b0, b1)	Turns on while the system alarm data are written to the data storage.	Turns on while the data are written to the data storage (turns on while data other than the system alarm are written).
Difference between [Writing Error Notification Device] set for system alarm monitors and the Drive status notification signal (System signal 2-2.b7, b8)	• Turns on when an error occurs at the accessing to the alarm log file in the data storage (when the alarm log file in the data storage is not created in the project in the GOT). • Turns on when the data storage cannot be accessed (e.g. when a data storage is not installed or the SD card cover is open).	Turns on when the data storage cannot be accessed (e.g. when a data storage is not installed or the SD card cover is open).

(13)Character code and conversion destination file

If an alarm log file contains any character other than ASCII and Shift JIS characters, convert the file as shown below.

- Convert the file to Unicode text format.
- Turn on the Character Code for CSV Conversion signal (GS522.b2), and convert the file to CSV format.

(14)System language applied at the conversion of the system alarm files

When [System Language Switching Operation] is set for [System Alarm] of [File Conversion Language] in the [Alarm Common Setting] dialog, system alarm files are not converted in the language specified in the system language switching device.

A file is converted in the system language set in the utility.

(15)Alarm log file conversion by utility

When converting an alarm log file (*G2A) into a CSV file or a Unicode text file with a utility, execute a conversion by each file.

Even if multiple files are selected at once, they cannot be converted.

(16)Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(17)To maintain file access performance

You are recommended to format the data storage before using it.

The number of files to be stored in a folder should be less than 500.

If 500 or more files are stored in a folder, the access performance may be lowered.

When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.

In such a case, format the data storage.

■5 [System Alarm Observation] dialog

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Step 1 Select [Alarm] → [System Alarm Observation] from the project tree.

Step 2 Double-click the [System Alarm Observation] to display the [System Alarm Observation] dialog.

➟(1) [Basic] tab
(2) [File Save] tab
(3) [External Output] tab

(1) [Basic] tab

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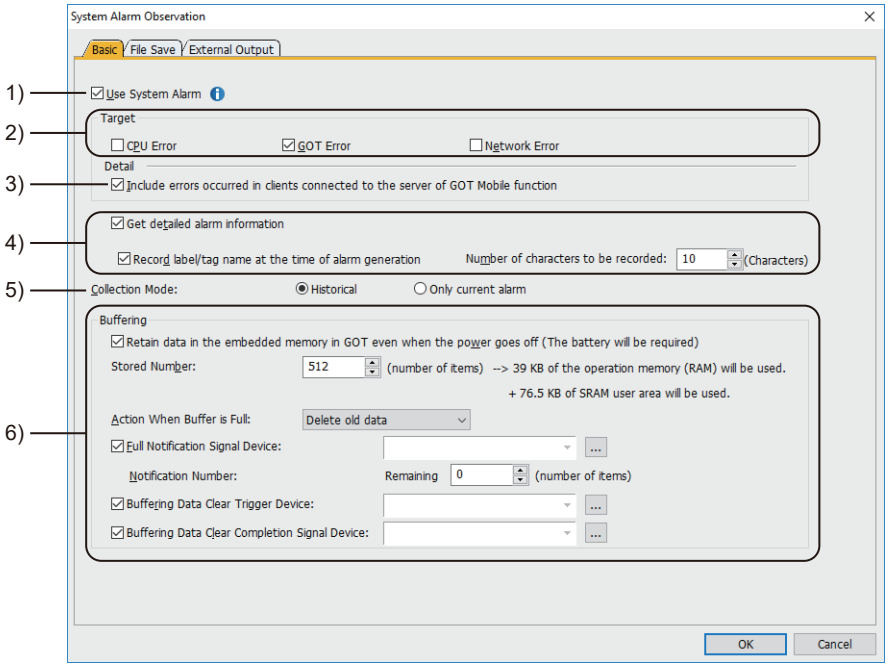
Set the type of the alarm to be monitored, alarm history collecting method and the buffering that stores the alarm history.



1) **[Use system alarm]**
Set whether to enable or disable the system alarm function.
To pop up an alarm message, configure the following settings additionally.
- Alarm popup display settings

  ➟9.1.4 ■4 [Alarm Popup Display] dialog
- Setting of the screen where an alarm message pops up

  ➟2.7.1 ■1 [Basic] tab
  10.19.7 ■1 [Basic] tab

2) **[Target]**
Select the system alarm to be monitored.
The following shows selectable items.
- [CPU Error]
- [GOT Error]
- [Network Error]

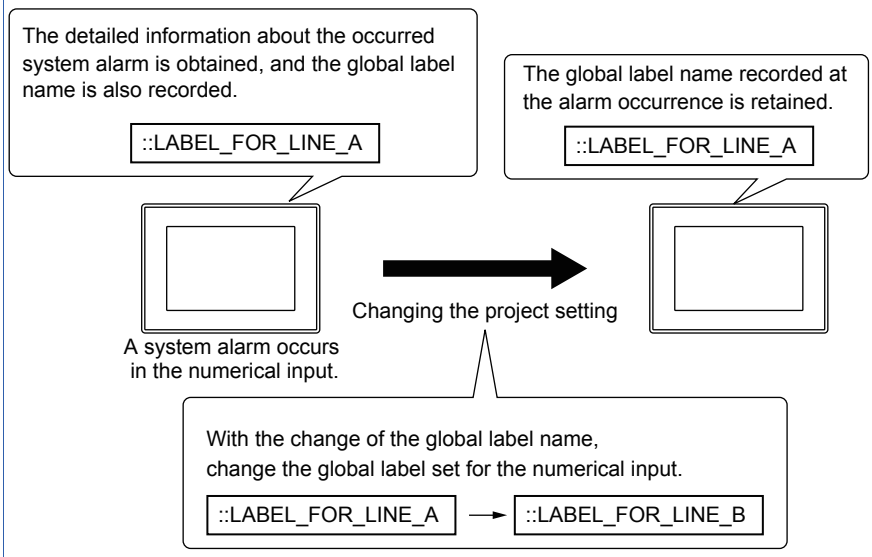
3) **[Include errors occurred in clients connected to the server of GOT Mobile function]**
Available to GT27, GT25, GT SoftGOT2000, and GS25.
This item is settable only when [Target] is set to [GOT Error].
Monitors errors of a GOT Mobile function client (GOT Mobile errors).

4) **[Get detailed alarm information]**
Makes it easy to identify where the alarm has occurred by obtaining the detail information of the system alarm.
After a system alarm has occurred, when another system alarm with the same error code occurs, if their error factors differ, the alarms are handled as different alarms.

The setting determines the information to be obtained.

- Not selected:
  Error code, and the date and time of occurrence/restoration/check
- Selected:
  Error code, date and time of occurrence/restoration/check, channel No., network No., station No., CPU No., device, screen No., definition screen No. (the number of the screen on which an object having an error is placed when the set overlay screen function is used), object ID, function name, and drive name

The information obtained varies according to each system alarm.

Item	Description
[Record label/tag name at the time of alarm generation]	Records the label or tag name and the assigned device when a system alarm occurs. The following shows the labels and tags to be recorded. • Global label • OMRON NJ/NX tag • AB native tag Even if you change the label or tag set for an object or others after the system alarm collection, you can check the label or tag name as of the system alarm collection. Specify the number of characters of a label or tag name to be recorded with [Number of characters to be recorded]. The more the numbers of recorded characters and stored items, the larger the used area of the operation memory (RAM). The following shows the operation when this item is selected. Example) When the global label name set for the numerical input is changed after system alarm collection  Even if this item is not selected, the label or tag name appears on the alarm display or others. The number of characters is unlimited. However, if you change a label or tag, the label or tag name as of the system alarm collection does not appear. The symbol (::) indicating a label or tag and the characters indicating the offset setting are displayed. When an alarm log file is converted to a CSV file or Unicode text file, the label and tag names are not output.
[Number of characters to be recorded]	Specify the number of characters of a label or tag name to be recorded. The characters up to the set number of characters are recorded, and the rest is unrecorded. The setting range is [10] to [300]. The more the number of characters, the larger the used area of the operation memory (RAM) and the size of the alarm log file.

5) **[Collection Mode]**

Select a system alarm collecting method.

- [Historical]:
  Collects the system alarm occurrence status as histories.
  The history is added every time a system alarm occurs.
- [Only the current alarm]:
  Collects only the latest CPU error, GOT error, and network error.
  System alarms which obtained the Restored" status in the GOT are deleted.

6) **[Buffering]**

Set the buffering that stores collected system alarms.

Item	Description
[Retain data in the embedded memory in GOT even when the power goes off (The battery will be required)]	Saves alarm data in the buffering area in the SRAM user area. ➟9.1.1 ■2 (3) (h) Storing the alarm data (power failure backup)
[Stored Number]	Set this item when setting [Collection Mode] to [Historical]. Set the number of the system alarms to be stored. The setting range is [512] to [32767]. The size of the buffering increases as the number of the alarms to be stored increases.
[Action When Buffer is Full]	Set this item when setting [Collection Mode] to [Historical]. Select the operation performed when the number of the system alarms stored in the buffering area reaches [Stored Number]. • [Delete old data]: Among the system alarms in the "Restored" status, deletes the system alarm with the oldest date and time of recovery and collects a new system alarm. • [Add no item]: Stops collecting system alarms even when new ones occur.
[Full Notification Signal Device]	Set this item when setting [Collection Mode] to [Historical]. A set device notifies you that the number of system alarm histories which can be stored in the remaining space in the buffering becomes the same as [Notification Number] or smaller. ➟6.1.2 How to set devices
[Notification Number]	When setting [Full Notification Signal Device], set this item. Set the number of the remaining system alarm histories with which [Full Notification Signal Device] notifies. The setting range is [0] to [255]. • Setting example When the [Stored Number] is set to 1000, the [Notification Number] is set to 10 The [Full Notification Signal Device] turns on when the number of stored system alarm histories becomes 990 because the number of storable system alarm histories becomes 10.
[Buffering Data Clear Trigger Device]	Deletes with a set device the system alarms which the monitor targets recovered from and are stored in the buffering area. ➟6.1.2 How to set devices
[Buffering Data Clear Completion Signal Device]	When setting [Buffering Data Clear Trigger Device], set this item. Notifies you with a set device that deleting buffering data is complete. ➟6.1.2 How to set devices

(2) [File Save] tab

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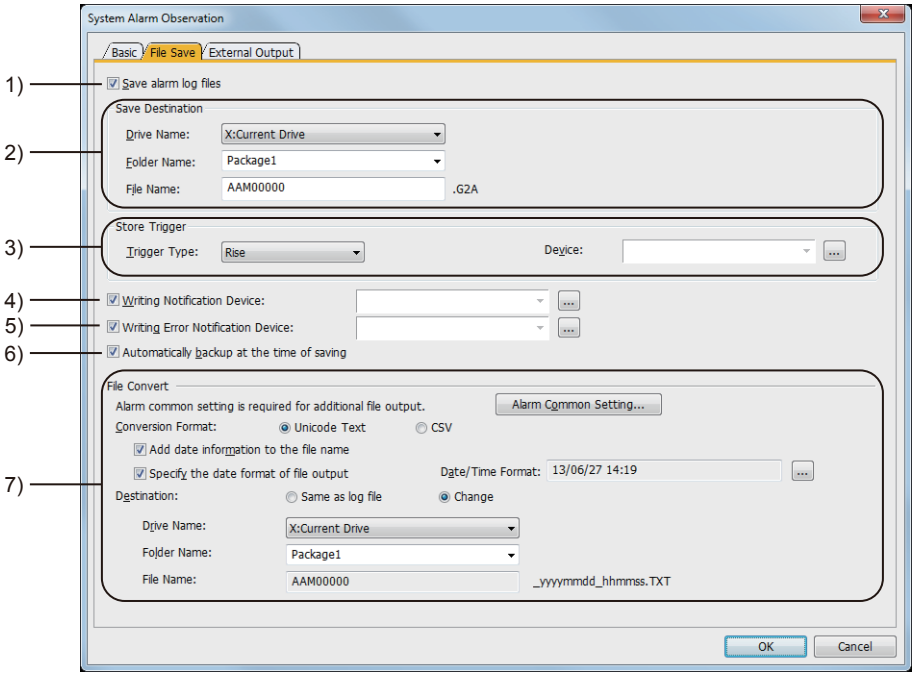
Set the following items to save the alarm histories stored in the buffering area in the data storage.



1) **[Save alarm log files]**

When [Historical] is selected for [Collection Mode] in the [Basic] tab, writes the system alarm histories stored in the buffering area in data storage as an alarm log file.

Into data storage, the log file is written as a binary file (*.G2A).

2) **[Save Destination]**

Item	Description
[Drive Name]	Select a destination drive. The following shows selectable items. • [A:Standard SD Card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] • [X:Current Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer
[Folder Name]	Set the folder name of the destination to save a file. The default is set to the folder name that is specified with [Package Folder Name] in the [Type Setting] dialog. Alphanumeric characters and following symbols are available for the folder name. #$%&'()+-.=@[]^_{}~\ For the restrictions on the folder name used with the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT
[File Name]	Set the file name of the destination to save a file. The default is set to AAM00000. Alphanumeric characters and following symbols are available for the file name. #$%&'()+-.=@[]^_{}~ For the restrictions of the file name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT

3) **[Store Trigger]**

Item	Description
[Trigger Type]	Select the timing with which system alarms stored in the buffering area are stored into the data storage. The following shows selectable items. • [Rise] • [Fall] • [Sampling] • [ON Sampling] • [OFF Sampling] • [Alarm State Change] When setting [Sampling], [ON sampling], or [OFF sampling], set a cycle. The following shows the setting range. [1] minute to [1440] minutes
[Device]	Set a device used as a store trigger. ➟6.1.2 How to set devices

4) **[Writing Notification Device]**

Set a device which notifies that the alarm log file is in the process of being written.

5) **[Writing Error Notification Device]**

Set a device which notifies an error when alarm log file writing fails.

➟9.1.3 ■4 (11) Error occurred during the alarm log file saving

6) **[Automatically backup at the time of saving]**

Saves the alarm log file created immediately before it is saved as a backup file (*.BAK).

If the name of the alarm log file is AAM00000.G2A, the name of the backup file is AAM00000.bak.

The stored backup file is not displayed in the utility of the GOT.

7) **[File Convert]**

Set the following items to convert files.

To use file conversion, the setting of [Alarm Common Setting] is required.

Click the [Alarm Common Setting] button and set the [Alarm Common Setting] dialog.

Item	Description
[Conversion Format]	Set the file format applied after the conversion. • [Unicode Text]: Saves as a Unicode text file. • [CSV]: Saves as a CSV file.
[Add date information to the file name]	Date information is added to the name of the alarm log file.
[Specify the date/time format for file output]	Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings
[Save Destination]	Select the save destination folder for a converted file. • [Same as log file]: Saves in the destination for the alarm log file. • [Change]: Saves in a destination different from one for the alarm log file. Set [Drive Name] and [Folder Name]. The setting method is the same as that of [Save Destination] for the alarm log file. [File Name] is the same as that of the alarm log file. The file is saved as (*.TXT) if the conversion format is [Unicode Text] and (*.CSV) if [CSV].

(3) [External Output] tab

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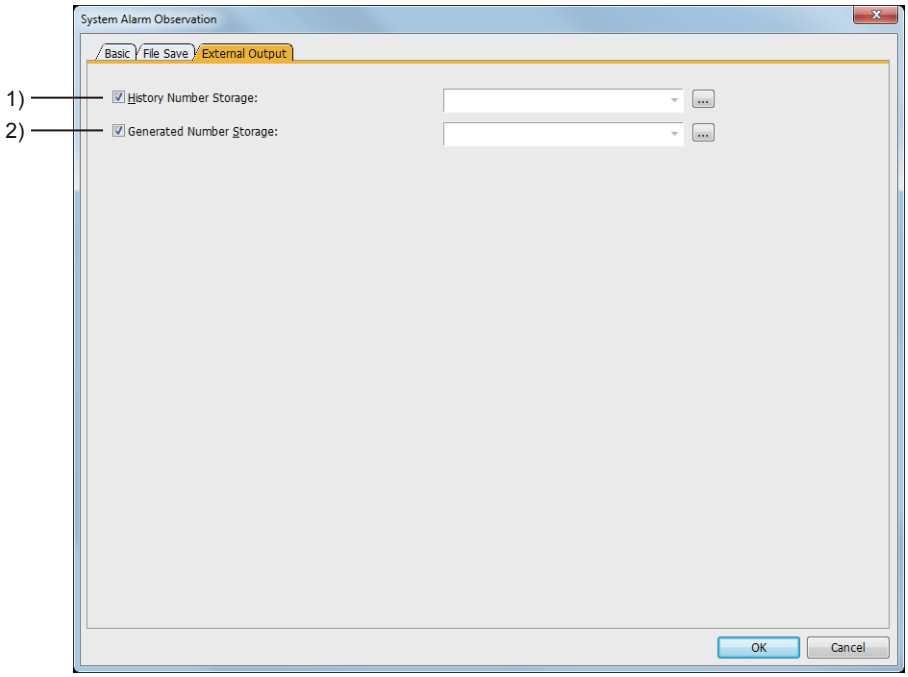
Set the following items to save the number of system alarms and the occurrences.



1) **[History Number Storage]**
Stores the number of system alarm histories in a set word device.
All the errors in the status of "Occurred", "Checked", and "Restored" are included in the number of the histories to be stored.

➟6.1.2 How to set devices

2) **[Generated Number Storage]**
Stores the number of the system alarms in the "Occurred" status in a set word device.

➟6.1.2 How to set devices

■6 Relevant settings

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Set the relevant settings other than the specific settings for the system alarm monitor as required.
The following shows the functions that are available by the relevant settings.

(1) GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Resetting system alarms and system information (GOT error code, GOT Error Detection) (Read device: System signal 1-1.b13)	[System Signal 1-1]
Notifying the status of the access to the drive *1(Write device: System signal 2-2.b0, b1)	[System Signal 2-2]
Notifying that the free space in the drive is insufficient *1(Write device: System signal 2-2.b4, b5)	[System Signal 2-2]
Notifying the failure of the access to the drive *1*2(Write device: System signal 2-2.b7, b8)	[System Signal 2-2]
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Notifying the key codes set to the input keys when the keys are input to ASCII input, touch switch, or other objects. (Write device)	[Key Code Input]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]

*1 A signal which notifies the full during the access exists in the user alarm monitoring. The signal differs from that of the Drive status notification signal.
For details, refer to the following.

➟9.1.2 ■4 (8) Difference from the Drive status notification signal (writing device: system signal 2-2)

*2 Reset the Drive A/B File Access Error signal (writing device: System signal 2-2.b7, b8) with the File Access Error Reset signal (read device: System signal 1-2.b0).

(2) GOT internal device

➟1.2.7 ■1 (1) GOT internal devices (GB, GD, and GS)

Function	Setting item
Saving the data in the buffering area to data storage *1	GS520.b0
Changing the character code to Unicode when a binary file is converted to CSV format (Read device)	GS522.b2
Storing the channel No. that has been assigned to the channel where a system alarm (GOT error) occurs (Write device)	GS262
Storing the channel No. that has been assigned to the channel where a system alarm (CPU error) occurs (Write device)	GS263
Storing the channel No. that has been assigned to the channel where a system alarm (network error) occurs (Write device)	GS264

*1 Only when [Save alarm log files] is selected in the [File Save] tab of the [System Alarm Observation] dialog, the data is saved.

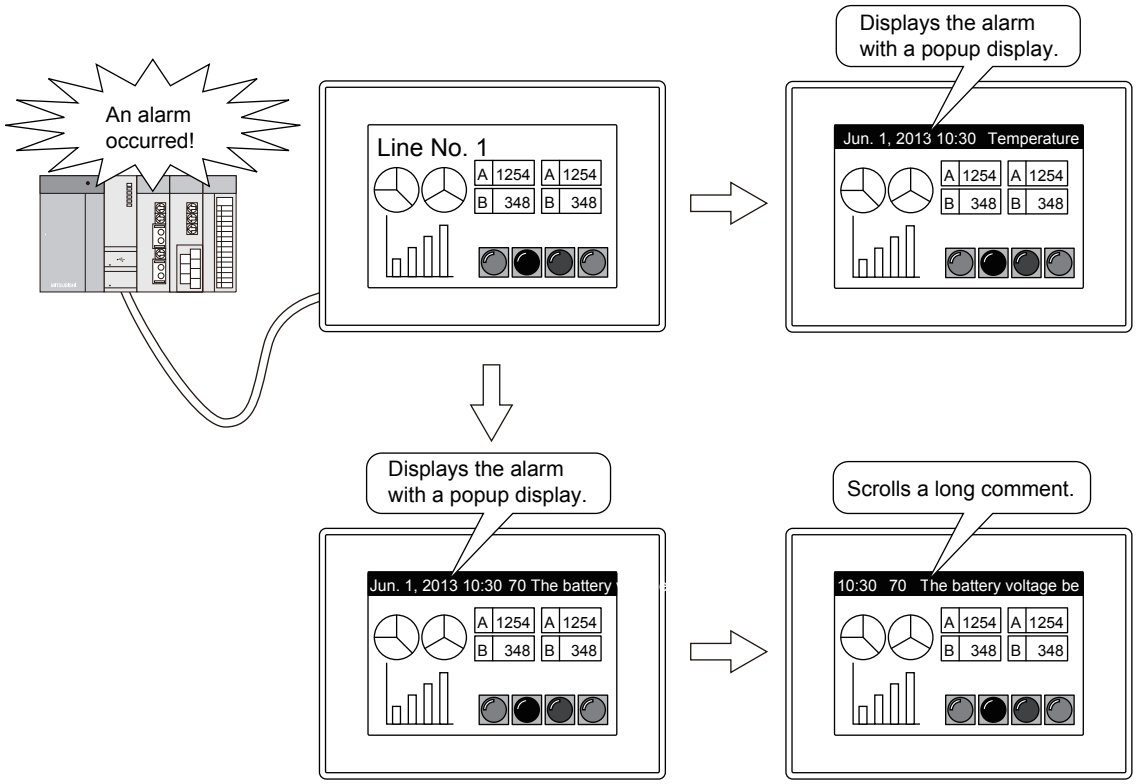
➟9.1.3 ■5 (2) [File Save] tab

9.1.4 Enabling the popup display for when an alarm occurs

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Specifications of the alarm popup display
■2 How to use the alarm popup display
■3 Precautions
■4 [Alarm Popup Display] dialog
■5 Relevant settings

In the alarm popup display, the GOT displays alarms whether or not the target object for the alarm popup display is placed.
Even a long comment can be displayed in the alarm popup display by scrolling across the screen from right to left.



■1 Specifications of the alarm popup display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Types of alarms which can be displayed and necessary settings

(a) Alarm type

User alarms and system alarms can be displayed in the alarm popup display.

- Setting the alarm popup display
  Set the alarms to be displayed in the alarm popup display.
  ➟9.1.4 ■4 [Alarm Popup Display] dialog
- Auxiliary settings for each screen
  For each base screen and mobile screen, set whether to display the alarm popup display, and set the position of the alarm popup display.
  Set the alarm popup display in the [Screen Property] dialog.
  For details, refer to the following.
  ➟2.7.1 ■1 [Basic] tab
  10.19.7 ■1 [Basic] tab
- When the display position overlaps with other objects
  Objects hidden under the alarm popup display are not operable.
- Switching the display position with touch operations
  The position of the alarm popup display can be switched with touch operations.
  For details, refer to the following.
  ➟9.1.4 ■2 (3) Useful operations and functions

(b) Necessary settings for using the alarm popup display

Prior to using the alarm popup display, set the alarm to be displayed with the alarm monitor.

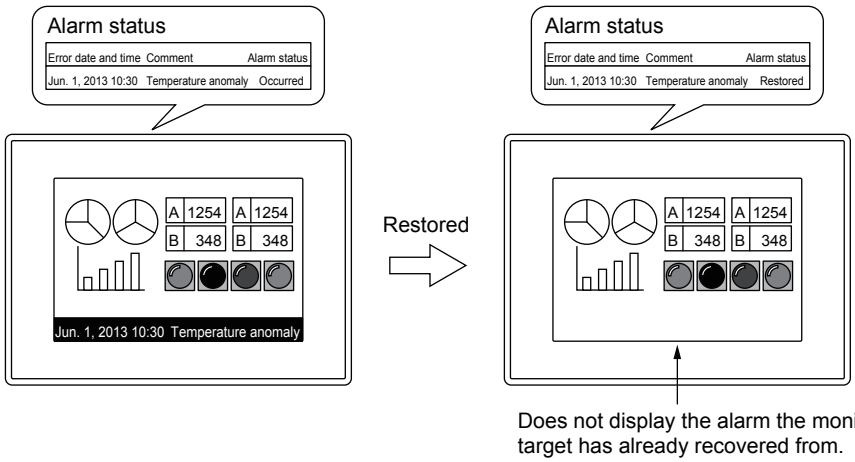
- Displaying user alarms
  Select [Popup Display] in the [Basic] tab in the [User Alarm Observation] dialog.
  When user alarms with multiple alarm ID numbers are displayed, whether to display the popup display or not can be selected.
  ➟9.1.2 ■7 (1) [Basic] tab
  Additionally, by using a device, only one alarm ID number can be displayed.
  ➟9.1.4 ■2 (3) Useful operations and functions
- Displaying system alarms
  GT21 and GS21 do not support the system alarm function.
  Select [Target] in the [Basic] tab in the [User Alarm Observation] dialog.
  The selected system alarm is displayed in the popup display.
  ➟9.1.3 ■5 (1) [Basic] tab

■2 How to use the alarm popup display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Alarms to be displayed in the popup display

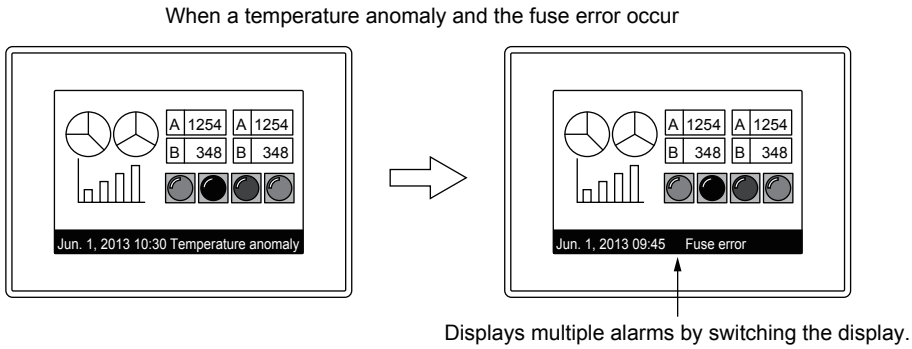
In the alarm popup display, the GOT displays alarms in the "Occurred" or "Checked" status.
When the alarm status becomes "Restored" (including already checked alarms which the monitor targets recovered from), the display is hidden.



(2) Selecting the display method

(a) **Fixed**

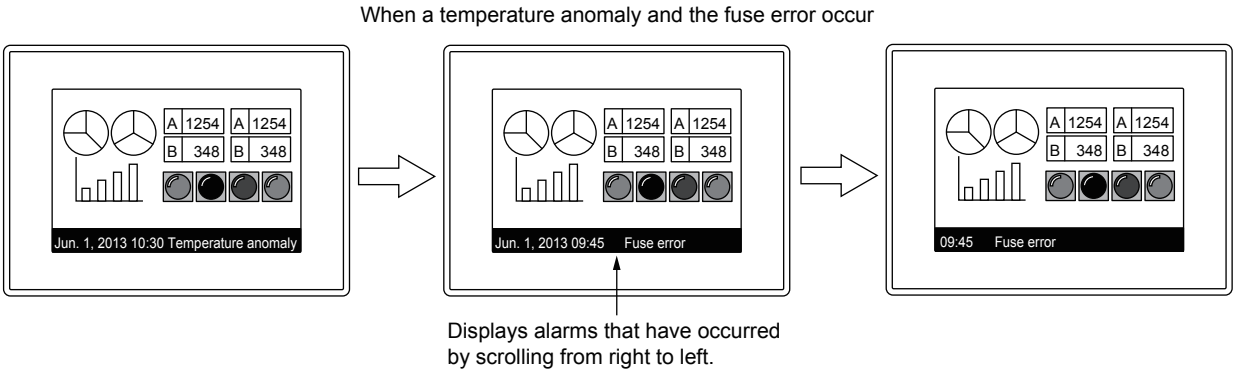
The comments to be displayed at the occurrence of an alarm are not scrolled in the display.
When multiple alarms occur, the alarms are displayed by automatically switching the display.



- When multiple alarms occur
  For the details of the order in which alarms are displayed, refer to the following.
  ➟9.1.4 ■3 Precautions
- When setting a comment using multiple rows
  Only the part in the first row is displayed.
  The parts in the second and the following successive rows cannot be displayed.

(b) **Flow**

Comments displayed when alarms occur are displayed by scrolling from right to left.
When multiple alarms occur, the alarms are displayed in order.



- When multiple alarms occur
  For the details of the order in which alarms are displayed, refer to the following.
  ➟9.1.4 ■3 Precautions
- When setting a comment using multiple rows
  After the part of the comment in the first row is displayed, the parts in the second and the following successive rows

are displayed by scrolling.

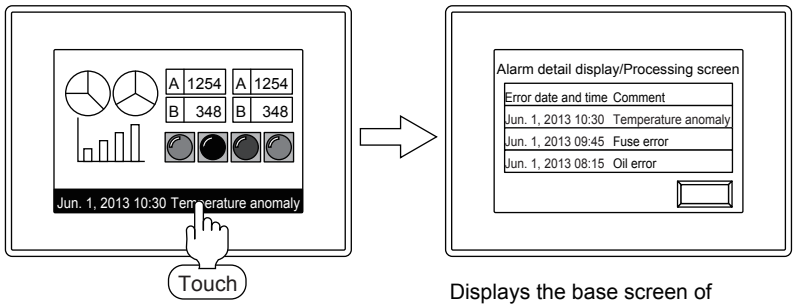
(3) Useful operations and functions

(a) Operations performed when the popup display section is directly touched

• Screen Switching

The display can be switched to the base screen with a specified No. or overlap window 1.
The popup display can be used in a manner that displays an alarm processing screen with detailed information when the popup display section is touched.

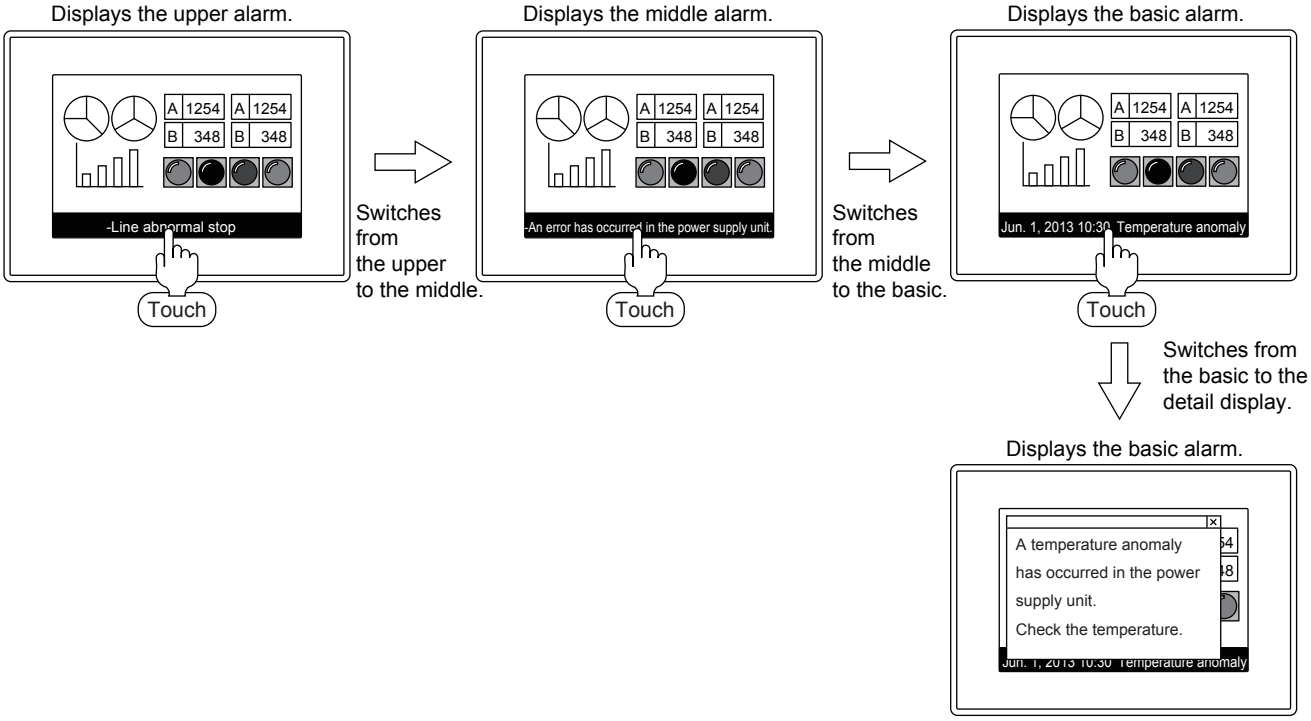
➟9.1.4 ■4 [Alarm Popup Display] dialog



• Switching the levels in the hierarchy of comments/Detail display

When user alarms are displayed in the popup, the target level for the display in the hierarchy of comments can be switched.

➟9.1.4 ■4 [Alarm Popup Display] dialog



• Levels in the hierarchy which can be switched with touch operations

Touch operations can switch only to lower levels in the hierarchy.
To switch to an upper level in the hierarchy, set [Hierarchy] of [Switching Device] in the [Extended] tab in the [Alarm Popup Display] dialog. Then, store the value for the target level in a set device.

➟9.1.4 ■4 [Alarm Popup Display] dialog

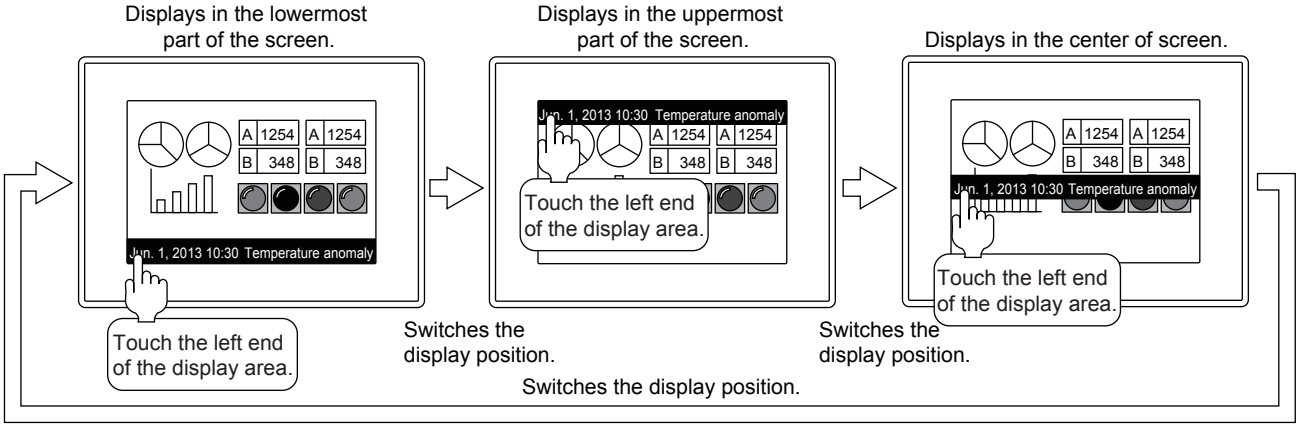
• Difference in the display range between the methods of switching levels in the hierarchy

Depending on the method of switching levels in the hierarchy, touch operations or the switching device, the display range is different.
For details, refer to the following.

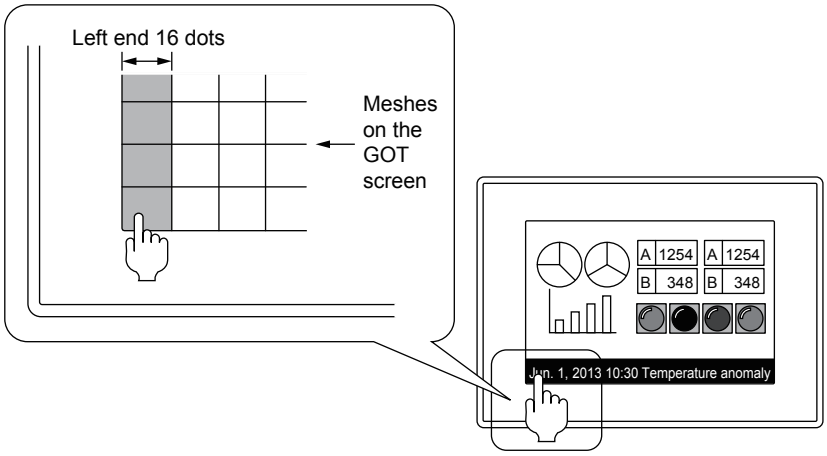
➟9.1.4 ■2 (3) (b) Switching the levels in the alarm hierarchy (for alarm display (user) only)

• Switching the display position

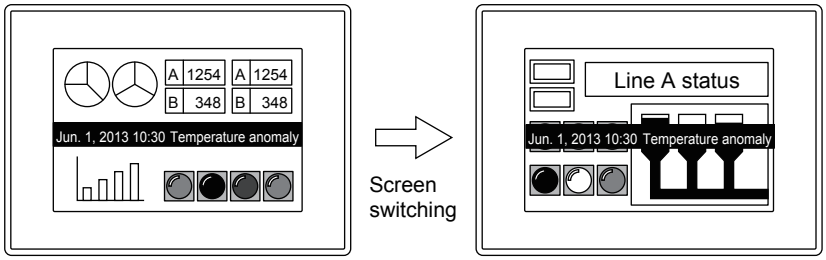
The display position can be switched with touch operations. Doing so, you can display objects hidden under the alarm popup display.
Set [Display Position Switching] in the [Basic] tab in the [Alarm Popup Display] dialog.



Touch the left end of the alarm popup display area to switch the display position. The position changes in the screen at every touch. The switching order of the position is upper-center-lower.
The area where touch operations are enabled is within 16 dots from the left end of the display area.



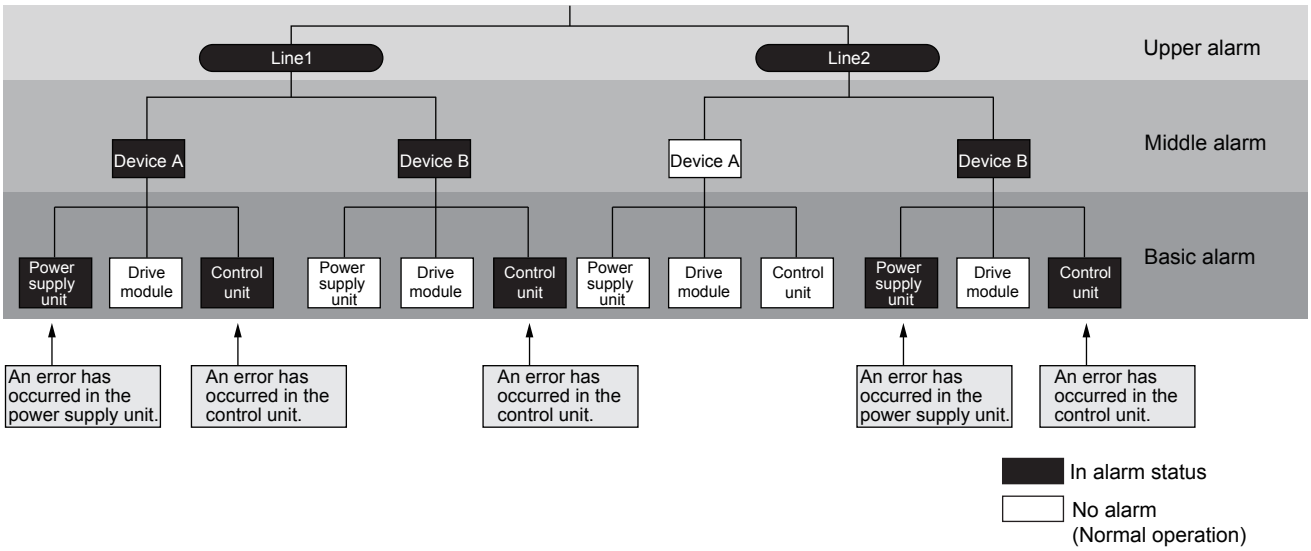
If screen switching is performed while the popup display is displayed, the popup display is displayed where it was before the switch.



The display position set in the [Screen Property] dialog is enabled the next time the popup display is displayed.

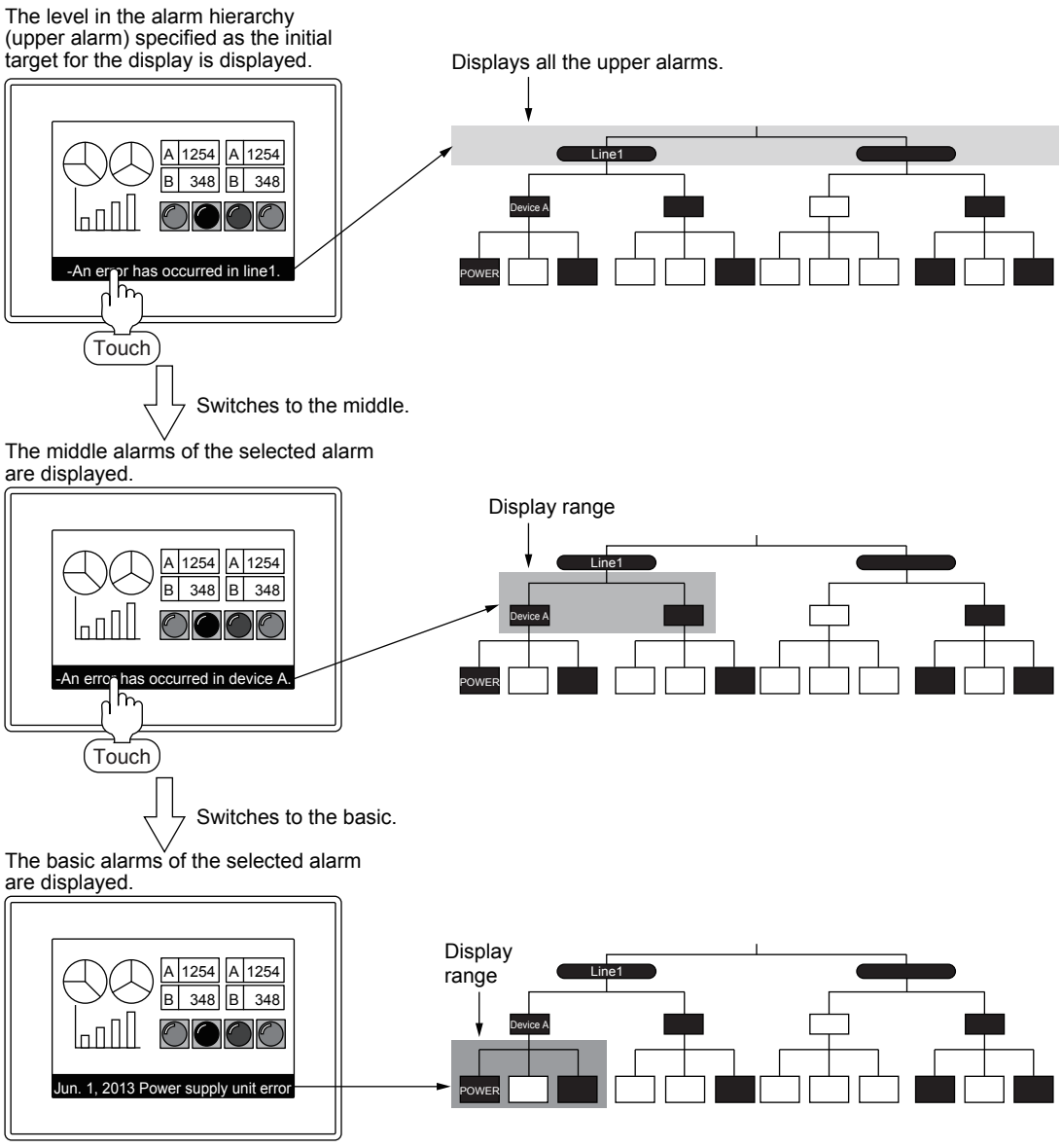
(b) **Switching the levels in the alarm hierarchy (for alarm display (user) only)**

In the alarm popup display, the levels of the alarm hierarchy are switched with either of the following methods. However, the display range differs depending on the switching method.
The following system examples show differences in display ranges according to the switching methods.

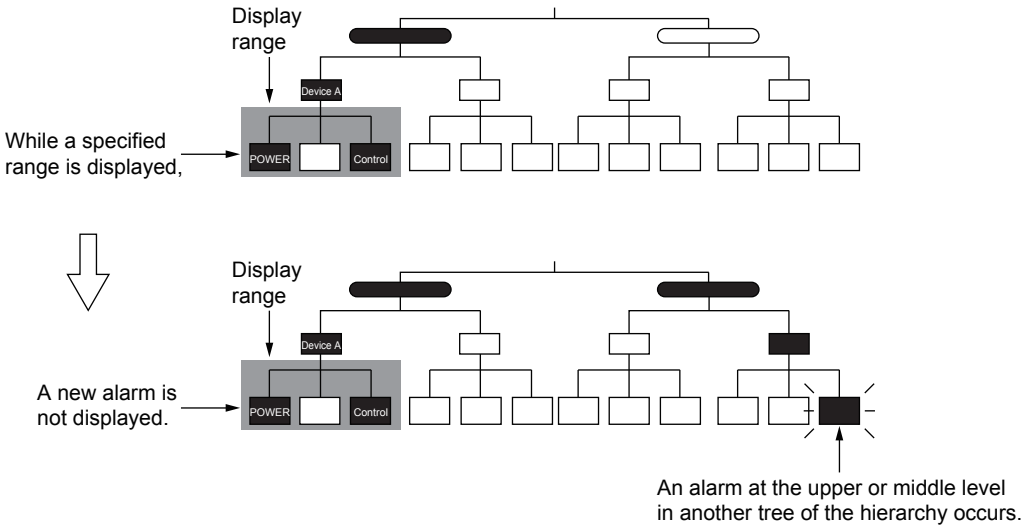


• When switching the display by directly touching the popup display section

When an alarm is touched, alarms at levels in the hierarchy lower than that of the touched alarm are displayed. The following shows an example in which [Initial Display Hierarchy] is set to the upper alarm in the [Basic] tab in the [Alarm Popup Display] dialog.



If an alarm at the upper or middle level in a tree of the hierarchy occurs while alarms at the upper or middle level in another tree of the hierarchy are displayed, the new alarm is not displayed.



To display a new alarm which occurs, use the hierarchy switching device to display all the alarms in the specified level in the hierarchy, or display the upper alarm and switch the display down to the level in the hierarchy where the new alarm occurs.

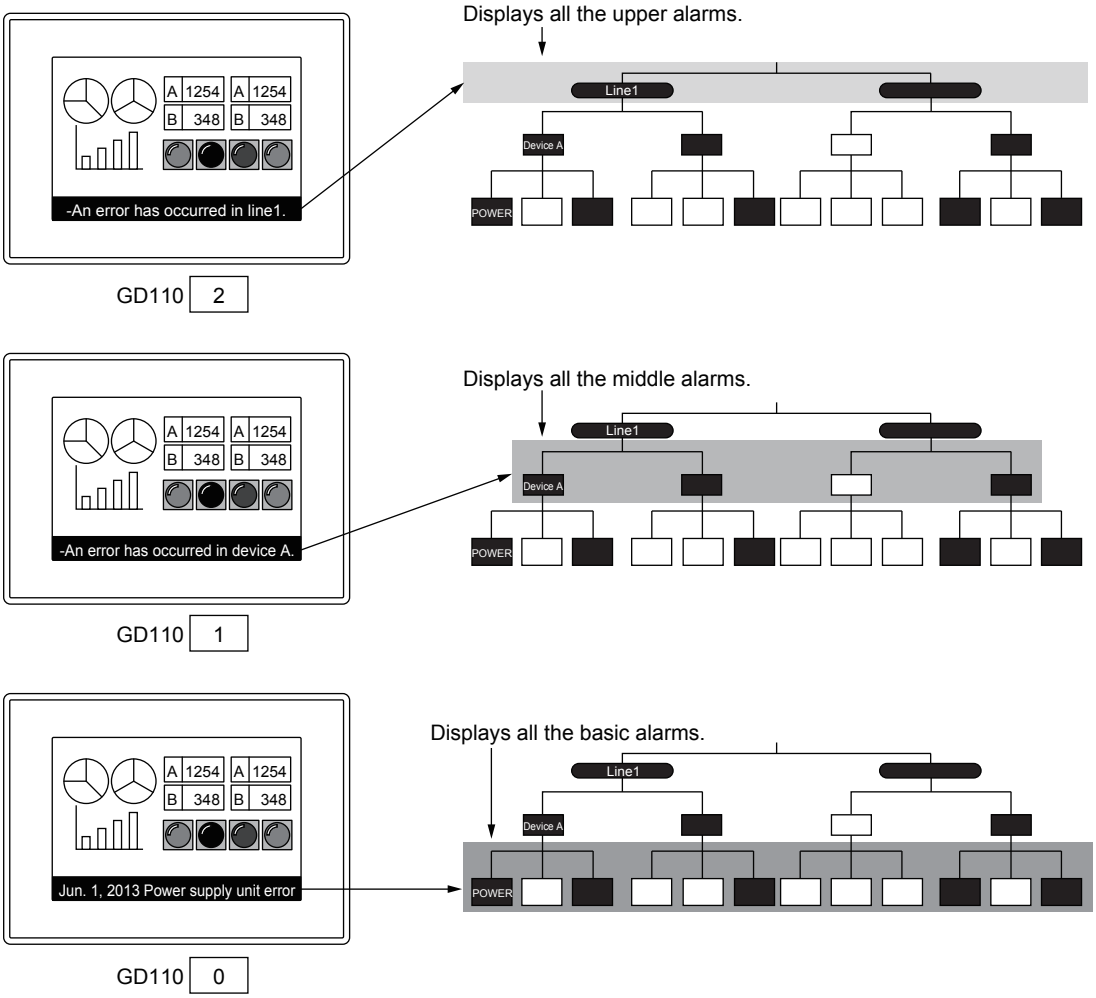
➟9.1.4 ■4 (3) [Extended] tab

• When switching with the device set for [Hierarchy] of [Switching Device] in the [Extended] tab in the [Alarm Popup Display] dialog

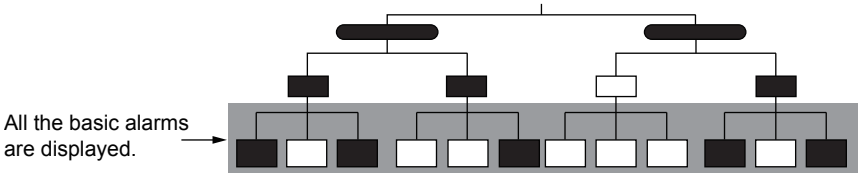
All the alarms at the level in the hierarchy specified with a device are displayed.

➟9.1.4 ■4 [Alarm Popup Display] dialog

The following shows an example in which the hierarchy switching device is set to GD110.



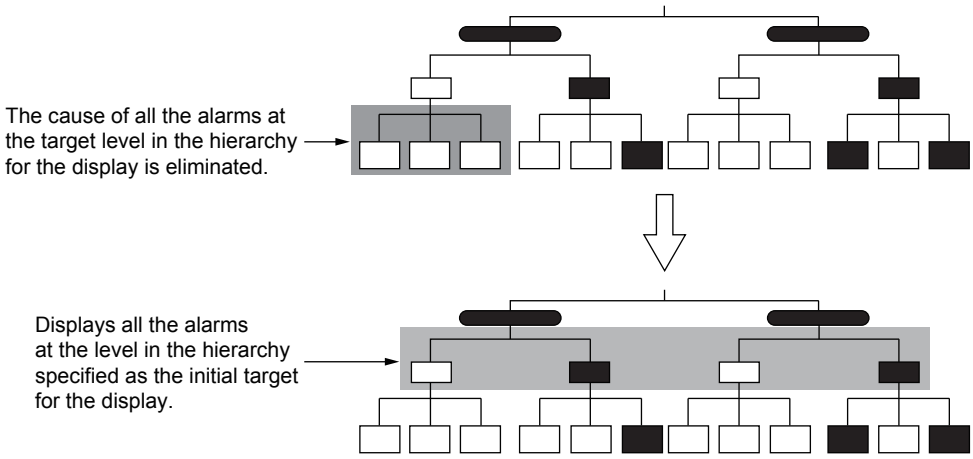
In setting hierarchical alarms, it is recommended that the top of the alarm hierarchy be set for the initial target for the display.
When a lower level in the alarm hierarchy is set for the initial target for the display, all the alarms at the set level are displayed regardless of which tree they belong.
Example) Setting basic alarms for the initial targets for the display



When the cause of all the alarms at the displayed level in the hierarchy are eliminated or the user alarms to be displayed are switched with a device, all the alarms at the level in the hierarchy specified as the initial target for the display are displayed.

➟9.1.4 ■2 (3) (d) Switching the display using devices

Example) When the initial targets for the display are middle alarms and the cause of all the alarms at the displayed level in the hierarchy is eliminated



(c) **Displaying alarms with a set font, character color, and background color**

Set a font, character, and back ground color so as to make the popup display stand out and not to be missed. Although level numbers and group numbers cannot be displayed in the alarm popup display, each of them can be indicated with a set display color.

➟9.1.4 ■4 [Alarm Popup Display] dialog

(d) **Switching the display using devices**

The display can be switched according to the device value.

➟9.1.4 ■4 [Alarm Popup Display] dialog

• Item to which the switching device can be set

Item to which the switching device can be set	Alarms to be displayed	
	User alarm	System Alarm
Hierarchy*1	All the alarms at a specified level in the alarm hierarchy that occur are displayed.	-
Level*1	Alarms with specified alarm numbers are displayed.	
Group*1	Alarms in the specified group are displayed.	
Priority display attribute	The display order is switched between the ascending order and descending order. Date and time of occurrence, level, or group can be selected as the basis on which the order is arranged.	The display order is switched between the ascending order and descending order. Date and time of occurrence, level, or group can be selected as the basis on which the order is arranged.
User alarm observation	The setting of the user alarm observation (alarm ID) displayed with the alarm display (user) can be changed. Multiple alarms can be displayed with one alarm display (user).	-
Basic comment group	Comments to be displayed when an alarm occurs can be changed by comment group. Comments to be displayed can be changed according to the user and the purpose.	
Middle comment group		
Upper comment group		

*1 To set levels in the hierarchy, level numbers, and groups for alarms, use the user alarm observation.

➟9.1.2 ■7 [User Alarm Observation] dialog

• Display example

By changing the device value, the range of the target alarms for the display is narrowed.

The following shows an example in which the level switching device is set to GD10 and the group switching device to GD11.

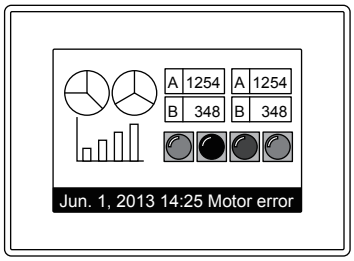
When the following alarms have occurred

Error date and time	Comment	Alarm status	Level	Group
Jun. 1, 2013 16:50	Temperature anomaly	Occurred	1	1
Jun. 1, 2013 14:25	Motor error	Occurred	3	1
Jun. 1, 2013 11:20	Oil error	Checked	3	2
Jun. 1, 2013 10:00	Fuel error	Occurred	3	2
Jun. 1, 2013 08:10	Internal pressure error	Occurred	2	1
Jun. 1, 2013 07:40	Fuse error	Restored	1	1

← An alarm in the "Restored" status cannot be displayed in the alarm popup display.

GD10 3

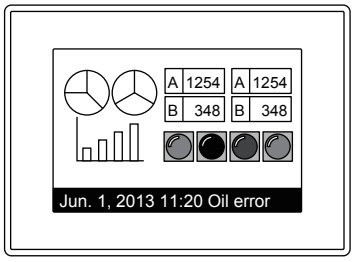
GD11 0



Error date and time	Comment	Alarm status	Level	Group
Jun. 1, 2013 14:25	Motor error	Occurred	3	1
Jun. 1, 2013 11:20	Oil error	Checked	3	2
Jun. 1, 2013 10:00	Fuel error	Occurred	3	2

GD10 3

GD11 2



Display target alarms

Error date and time	Comment	Alarm status	Level	Group
Jun. 1, 2013 11:20	Oil error	Checked	3	2
Jun. 1, 2013 10:00	Fuel error	Occurred	3	2

For details of switching the display without devices, refer to the following.

➟9.1.4 ■3 Precautions

When the order in which alarms are displayed is changed by setting [Priority Display Attribute] in the [Extended] tab in the [Alarm Popup Display] dialog, it can be changed only while alarms are displayed if the targets are basic alarms. While upper alarms or middle alarms are displayed, the order cannot be changed.

Even if you specify an alarm ID number for which [Popup Display] in the [Basic] tab in the [User Alarm Observation] dialog is not set, the alarm is displayed regardless of the setting of [Popup Display].

If you specify the alarm ID number for which [Popup Display] is set, only the alarm ID number is displayed.

(e) **Writing the alarm information to devices**

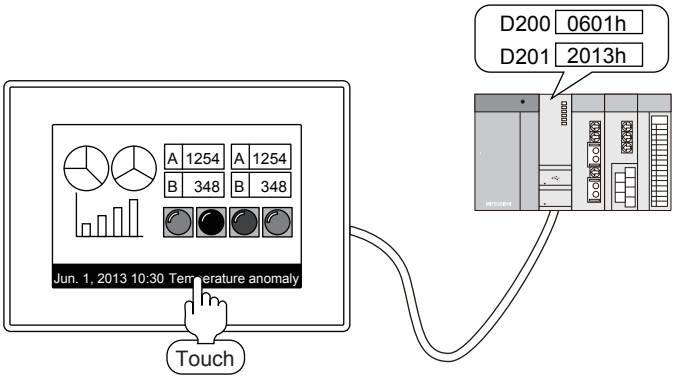
The alarm information touched in the alarm popup display can be written to devices.

Information that cannot be displayed in the alarm popup display, such as downtime, can be also written into devices.

The following lists the types of alarm information that can be written into devices.

- Alarm ID
- Comment group No.
- Comment No.
- Alarm status
- Occurrence date
- Occurrence time
- Date of restoration
- Time of restoration
- Date of confirmation

• Time of confirmation
• Level
• Group
• Frequency
• Cumulative time
• Downtime



Output the dates of the occurrences of selected alarms to devices.

Set [Touch Mode] to [Screen Switching] or [Stage Hierarchy Switching/Detail Display] in the [Basic] tab in the [Alarm Popup Display] dialog.

➟9.1.4 ■4 [Alarm Popup Display] dialog

■3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the precautions for the alarm popup display.

(1) Precautions for drawing

(a) Initial display hierarchy and hierarchy switching device

In the alarm display (user) and alarm popup display, the level in the hierarchy specified in [Initial Display Hierarchy] is written into the hierarchy switching device with the following timing.
The level in the hierarchy to be displayed is switched.

• When switching screens (alarm display (user) only)
• At the first display of objects
• When the alarm observation ID number to be displayed is switched with the switching device for user alarm observation ID

For the setting of [Initial Display Hierarchy], refer to the following.

➟9.1.4 ■4 (1) [Basic] tab

For the setting of the switching devices for levels in the hierarchy and user alarm ID, refer to the following.

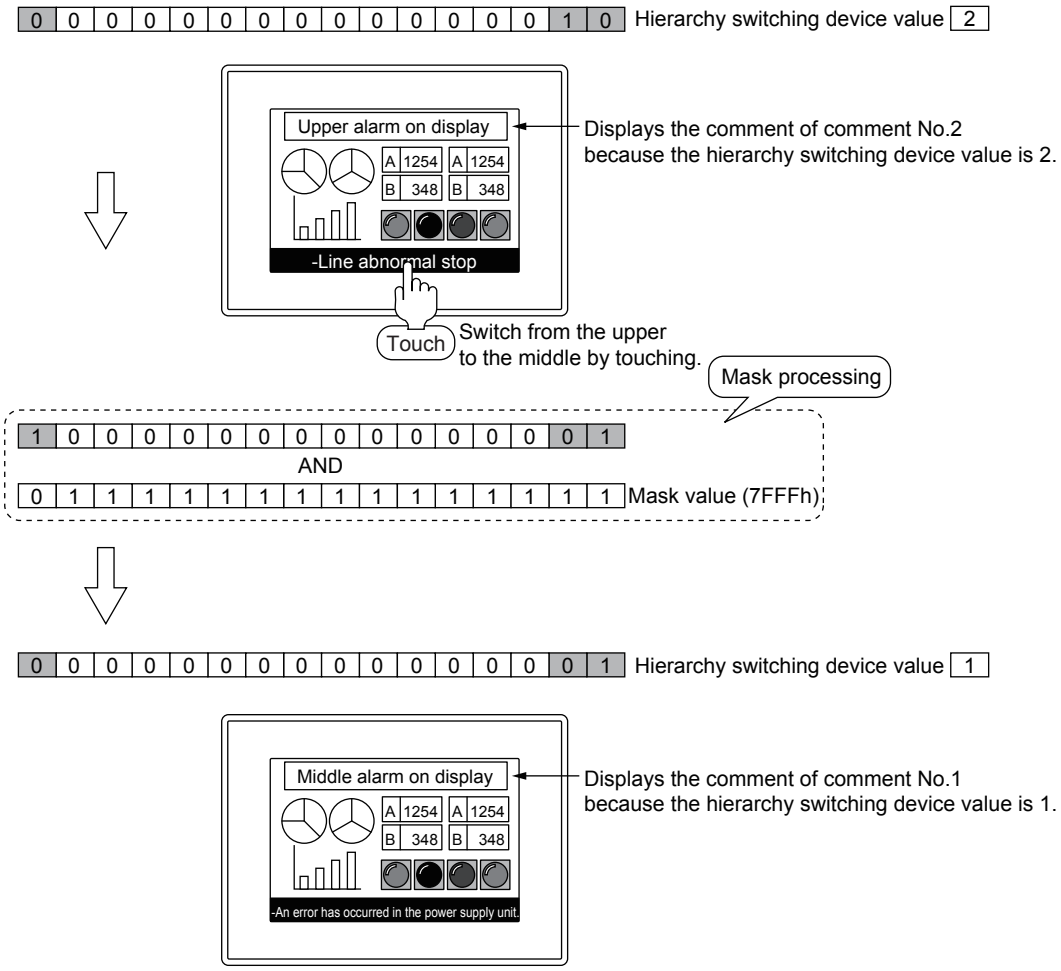
➟9.1.4 ■4 (3) [Extended] tab

(b) Switching comment displays or others with the hierarchy switching device

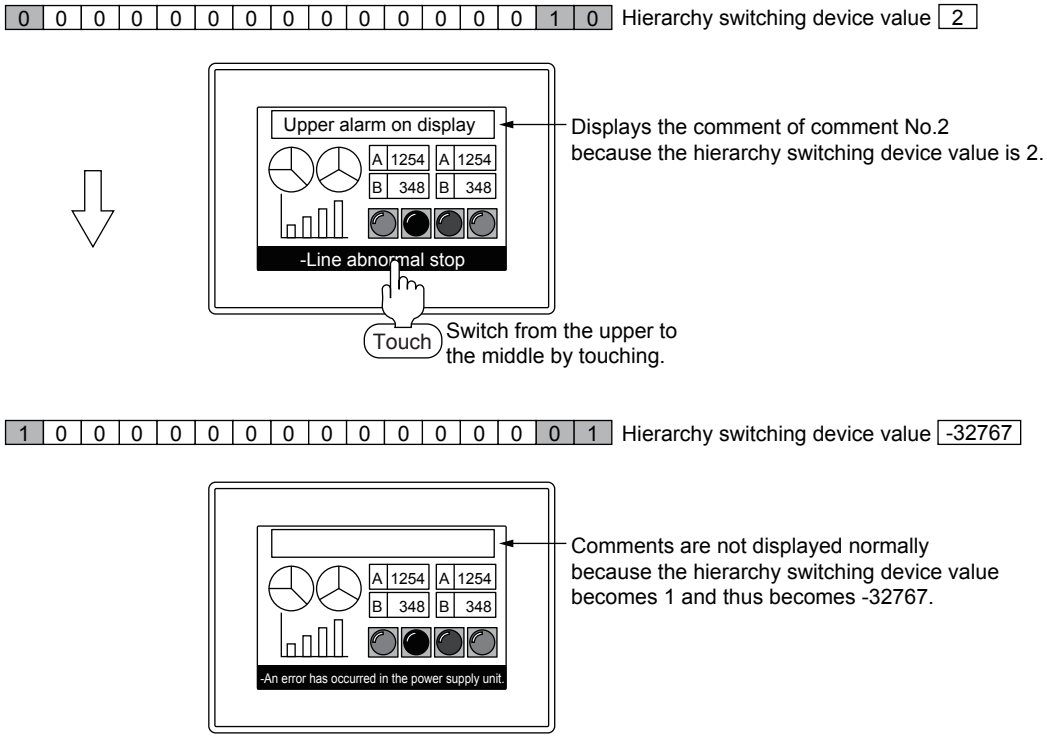
The leftmost bit of the hierarchy switching device changes to 1 by touch operations. Use mask processing and mask the device with 7FFFh so that the leftmost bit is always masked to 0.
Comment displays and others cannot work normally without mask processing.
Example) When switching comments to be displayed with the value of the hierarchy switching device

Hierarchy switching device value	Corresponding comment	Comment to be displayed
0	0	Basic alarm on display
1	1	Middle alarm on display
2	2	Upper alarm on display

• With mask processing



• Without mask processing



(c) **Settings for storing alarm data to data storage**

To the alarm popup display, a touch switch for storing alarms cannot be assigned.
To place a button for storing alarm data, make either of the following settings.

• When setting the store trigger device for the alarm observation
Set [Store Trigger] in the [File Save] tab of the [User Alarm Observation] dialog or the [System Alarm Observation] dialog to store the alarm data.

➟9.1.2 ■7 [User Alarm Observation] dialog

➟9.1.3 ■5 [System Alarm Observation] dialog

• When saving alarm data with a touch switch for alarm display
On the screen where an alarm display object is placed, place a touch switch for alarm display to save the alarm data.

➟9.1.2 ■2 (6) Useful operations and functions

➟9.1.3 ■2 (7) Useful operations and functions

(d) **Precautions for using comment groups**

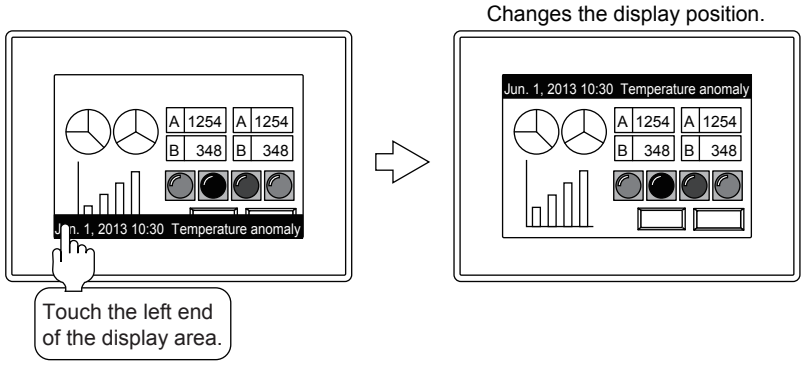
If a nonexistent value (column No.) is stored in the language switching device, the GOT displays "No message".

(2) Precautions for use

(a) **When the display position overlaps with the positions of other objects**

Objects such as touch switches hidden under the alarm popup display cannot be operated.
To operate those objects, change the display position of the alarm popup display.

➟9.1.4 ■2 (3) Useful operations and functions



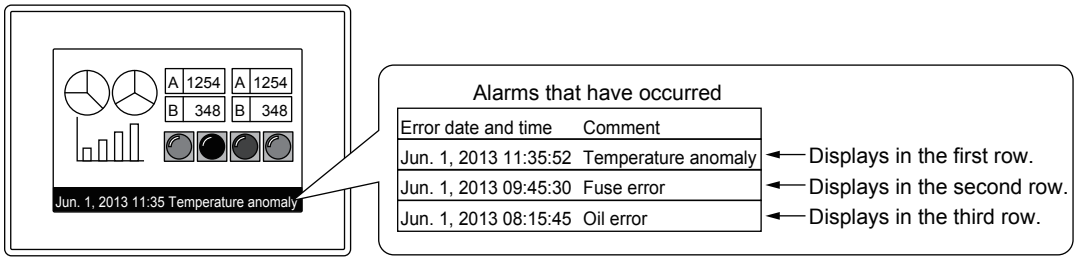
(b) **When the alarm popup display does not work**

Review the settings of the alarm popup display.
For the details of the settings, refer to the following.

➟9.1.4 ■4 [Alarm Popup Display] dialog

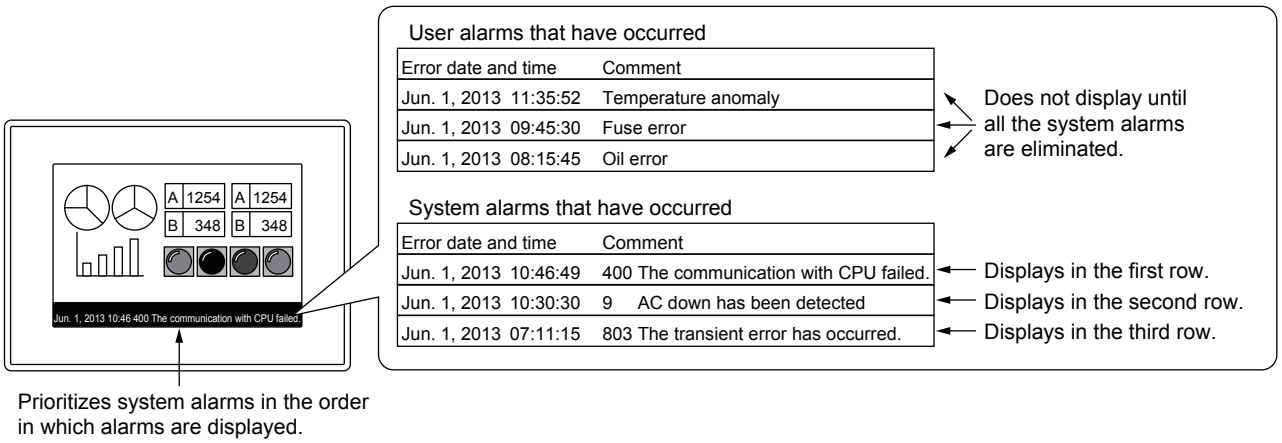
(c) **Order of priority in which alarms are displayed**

• When selecting no target item for [Switching Device] in the [Extended] tab of the [Alarm Popup Display] dialog
Displays in order of date and time, from the latest.
For user alarms, displays only the alarms with the alarm ID numbers for which [Popup Display] of the user alarm observation is selected.



• When selecting the target items for [Switching Device] in the [Extended] tab of the [Alarm Popup Display] dialog
Displays according to the selected target items for the switching device.

• When selecting [User Alarm + System Alarm] for [Display Alarm] set in the [Basic] tab of the [Alarm Popup Display] dialog
If user alarms and system alarms occur simultaneously, only the system alarms are displayed.
The user alarms are displayed when the alarm status of all the system alarms turns "Restored".



For how to recover from system alarms, refer to the following.

➟9.1.3 ■2 (2) Recovery from alarms

(d) **Switching levels in the hierarchy to be displayed with the hierarchy switching device**

When [Display Type] is set to [Fixed] in the [Basic] tab of the [Alarm Popup Display] dialog and the display target level in the hierarchy is switched with the hierarchy switching device, the display is updated with the timing set for [Switching Cycle].

Therefore, the display may not be switched soon after the level in the hierarchy is switched.

(e) **Narrowing the range of alarms to be displayed when the number of alarms to be monitored is large**

When the number of alarms to be monitored is large and the range of alarms to be displayed is narrowed, displaying the alarms may take seconds.

➟9.1.4 ■2 (3) (d) Switching the display using devices

(f) **Display of the time of occurrence, confirmation, and restoration**

For the time of occurrences, the clock data of the GOT is used.

For the precautions and restrictions of the clock function which manages the GOT clock data, refer to the following.

➟5.3.5 Setting the GOT time setting method ([Time Setting])

(g) **Deleting the alarm popup display (network error)**

When the alarm popup display appears for network errors which occur in the CC-Link communication unit and MELSECNET/H communication unit, the display is not deleted until the GOT is powered off or reset even if the cause of the alarms is eliminated.

■4 [Alarm Popup Display] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Alarm] → [Alarm Popup Display] from the menu.

Step 2 The [Alarm Popup Display] dialog appears.

➟(1) [Basic] tab
(2) [Text Format] tab
(3) [Extended] tab
(4) [External Output] tab

(1) [Basic] tab

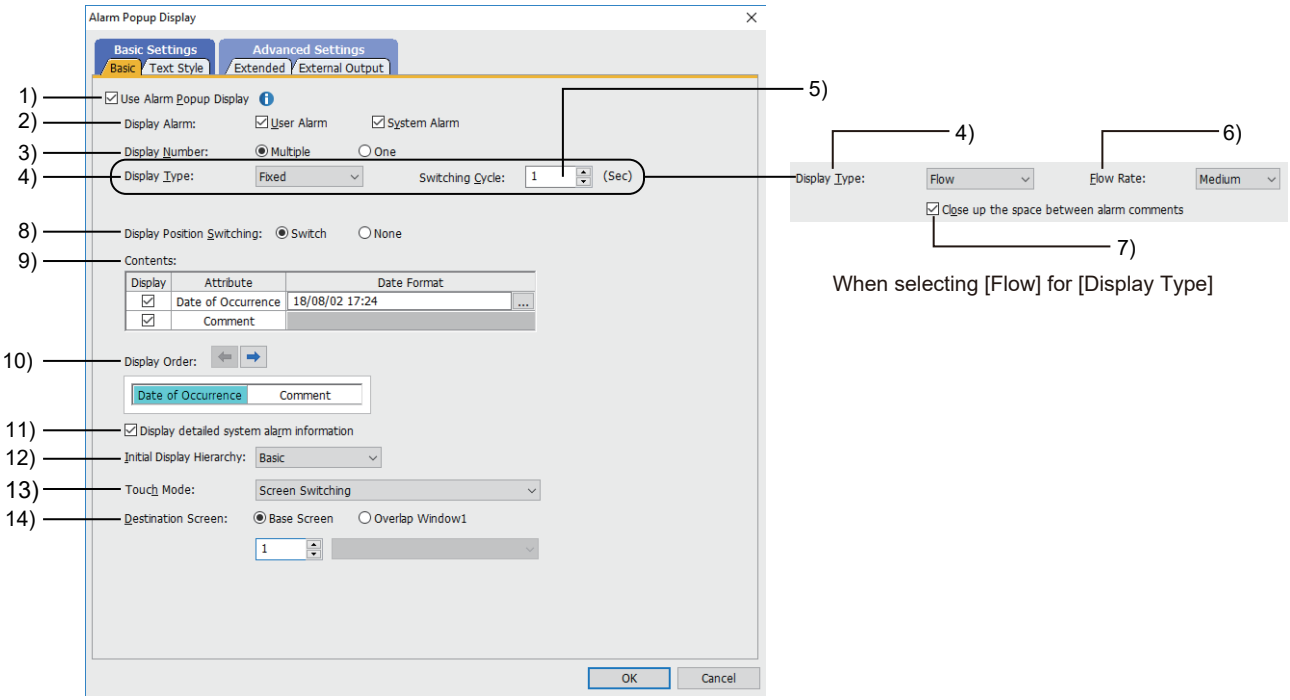
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If you display this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display]), some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the type of the alarm popup display, the contents of the display, and the touch mode.

- When displaying this dialog by selecting [Common] → [Alarm] → [Alarm Popup Display] from the menu
  The setting contents are applied to the alarm popup display appearing on the GOT.
- When displaying this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display])
  The setting contents are applied to the alarm popup display appearing on a GOT Mobile function client.



When selecting [Flow] for [Display Type]

1) **[Use Alarm Popup Display]**

Uses the alarm popup display.

Configure the following settings additionally.

- Alarm popup display settings

  ➟9.1.2 ■7 [User Alarm Observation] dialog
  9.1.3 ■5 [System Alarm Observation] dialog

- Setting of the screen where an alarm message pops up

  ➟2.7.1 ■1 [Basic] tab
  10.19.7 ■1 [Basic] tab

2) **[Display Alarm]**

Select the alarm type to be displayed.

The following shows selectable items.

- [User Alarm]
- [System Alarm]

For GT21 and GS21, the setting is fixed to [User Alarm].

For the order of priority in which multiple alarms that occur are displayed, refer to the following.

➟9.1.4 ■3 Precautions

3) **[Display Number]**

Select the number of the alarms to be displayed.

The following shows selectable items.

- [Multiple]: Displays multiple alarms in order.
- [One]: Displays the single alarm given the top priority.

For the order of priority in which multiple alarms that occur are displayed, refer to the following.

➟9.1.4 ■3 Precautions

4) **[Display Type]**

Select the display method of the comments for alarms.

The following shows selectable items.

- [Fixed]:

  The comments to be displayed at the occurrence of an alarm are not scrolled in the display.
  The part of a comment that extends off the display area, and the second and the following successive rows of a comment that involves multiple rows are not displayed.

- [Flow]:

  The comments to be displayed at the occurrence of an alarm are displayed by scrolling from right to left.
  For a comment which consists of multiple rows, the GOT displays whole comments including the comments after the second row.

➟9.1.4 ■2 (2) Selecting the display method

5) **[Switching Cycle]**

This item can be set only when [Display Type] is [Fixed].
Set a cycle at which alarms to monitor are switched when multiple alarms occur.
The setting range is [1] to [60].

6) **[Flow Rate]**

This item can be set only when [Display Type] is [Flow].
Set the speed at which the display is scrolled.
The following shows selectable items.

- [High]: The text of comments flows at the speed of 200 dots a second.
- [Medium]: The text of comments flows at the speed of 100 dots a second.
- [Low]: The text of comments flows at the speed of 50 dots a second.

7) **[Close up the space between alarm comments]**

This item can be set only when [Display Type] is [Flow].
Set whether to reduce the space between scrolling comments.
When this item is selected, the space between comments is reduced to two one-byte characters.
When this item is deselected, a space of a half the screen width is inserted between comments.

8) **[Display Position Switching]**

Set whether to enable or disable display position switching of the alarm popup display.

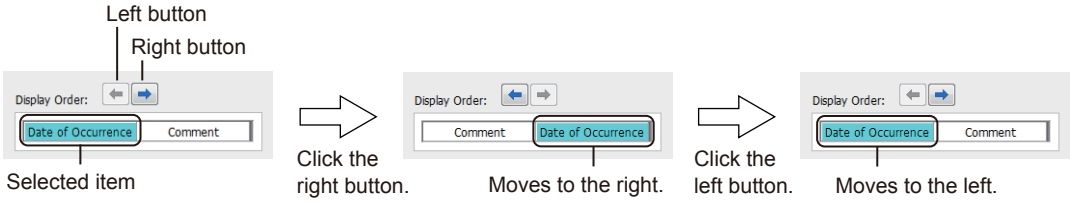
- [Switch]: Enables the display position to be switched.
- [None]: Disables the display position to be switched.

9) **[Contents]**

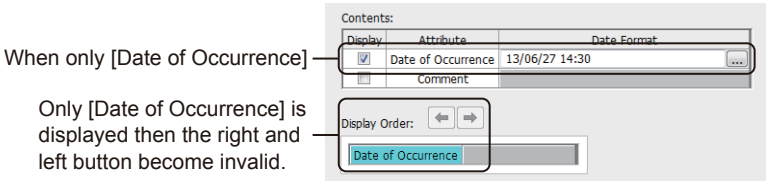
Item	Description
[Display]	Select the items to be displayed in the alarm popup display.
[Attribute]	Displays the items to be displayed in the alarm popup display. • [Occurred]: Displays the date and time of occurrence of an alarm. • [Comment]: Displays the comment which is set for the alarm.
[Date/Time Format]	Set the format in which the date and time of occurrence are displayed. Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings

10) **[Display Order]**

Set the order in which the items set for [Attribute] in [Contents] are displayed.
Move the display position of the selected item sideways by using the right button, the left button.



If either [Date of Occurrence] or [Comment] is selected for [Attribute] of [Contents], the right button and the left button are invalid.



11) **[Display detailed system alarm information]**

Not available to GT21 and GS21.
Displays the detailed information of system alarms.

12) **[Initial Display Hierarchy]**

This item can be set only when [Display Alarm] is [User Alarm] or [User Alarm + System Alarm].
Select a level in the alarm hierarchy to be displayed first when a user alarm occurs.

➟9.1.4 ■2 (3) Useful operations and functions

The following shows selectable items.

• [Basic]
• [Middle]
• [Upper]

13) **[Touch Mode]**

Set the action taken when the alarm popup display is touched.

➟9.1.4 ■2 (3) Useful operations and functions

The following shows selectable items.

• [None]:
Select this item to disable touch operations.

• [Screen Switching]:
Displays the base screen with the screen No. set for [Destination Screen] or overlap window 1.

• [Hierarchy Switching /Detail Display]:
Switches levels in the hierarchy and displays the detail screen.
The operations differ depending on the alarm being displayed.
When upper alarms or middle alarms are displayed, the display is switched to a lower level in the alarm hierarchy.
When basic alarms are displayed, the detail screen is displayed.

14) **[Destination Screen]**

This item can be set only when [Touch Mode] is [Screen Switching].
Set the screen that appears when the alarm popup display is touched.
The following shows selectable items.

• [Base Screen]
• [Overlap 1]

After selecting either of the above screens, set the target screen number for the display.
The setting range is [0] to [32767].
The title of the selected screen is displayed.

(2) [Text Format] tab

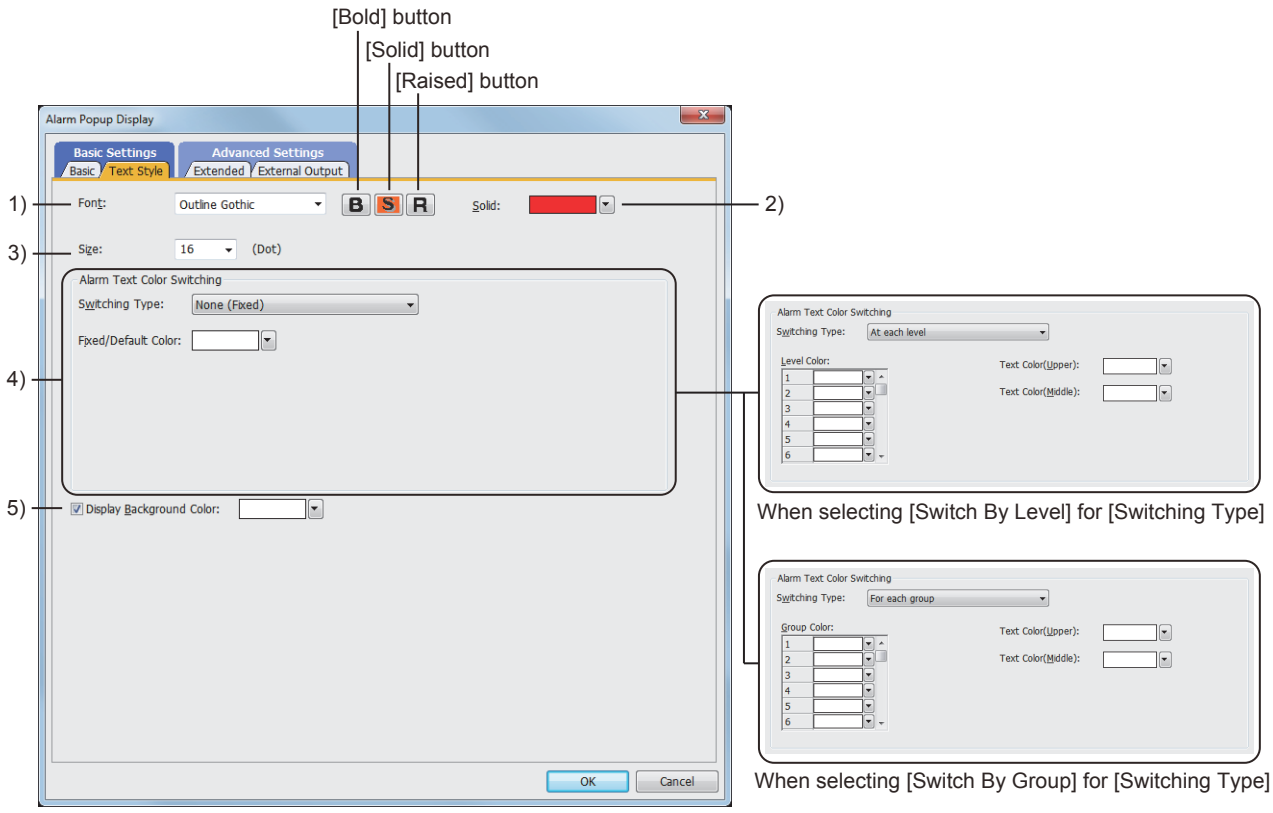
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If you display this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display]), some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the text format of alarms.

- When displaying this dialog by selecting [Common] → [Alarm] → [Alarm Popup Display] from the menu
  The setting contents are applied to the alarm popup display appearing on the GOT.
- When displaying this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display])
  The setting contents are applied to the alarm popup display appearing on a GOT Mobile function client.



When selecting [Switch By Level] for [Switching Type]

When selecting [Switch By Group] for [Switching Type]

When selecting [No Switching (Fixed)] or
[Comment Color (System Alarm Fixed Color)] for [Switching Type]

1) **[Font]**

Select the font of the displayed text.

The following shows selectable items.

- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline] (GT2107-W and GS21-W-N)

Set the style of the text to be displayed.

One style ([Bold], [Solid], or [Raised]) is settable only.

[Bold] button: Displays the text in bold.

[Solid] button: Displays the text with a shadow.

[Raised] button: Displays the text embossed.

2) **[Solid Color]**

When [Solid] or [Raised] is selected as the text style, set the color of the shadow.

3) **[Text Size]**

For the details of each font and size, refer to the following.

➟1.2.5 Font specifications

4) **[Alarm Text Color Switching]**

Item	Description
[Switching Type]*1	Select how to use different text colors in displaying alarms. The following shows selectable items. • [No Switching (Fixed)]: Displays texts in a single color. • [Switch By Level]: Gives different colors by level number. • [Switch By Group]: Gives different colors by group. • [Comment Color (System Alarm: Fixed)] ([Comment Color] for GT21 and GS21): Displays the alarm display (user) in text colors set for comment groups. The settings other than that of the text color are displayed in the settings of the [Alarm Popup Display] dialog. For the alarm display (system), texts are displayed in the color set for [Fixed/Default Color]. [Switch By Level], [Switch By Group], and [Comment Color (System Alarm Fixed Color)] can be set when [User Alarm] or [User Alarm + System Alarm] is selected for [Display Alarm] in the [Basic] tab.
[Fixed/Default Color]	When selecting one of the following items for [Alarm Text Color Switching], select a text color. • None (Fixed) • [Comment Color (System Alarm: Fixed)] ([Comment Color] for GT21 and GS21)
[Level Color]	When selecting [Switch By Level] for [Alarm Text Color Switching], select a text color for each level.
[Group Color]	When selecting [Switch By Group] for [Alarm Text Color Switching], select a text color for each group.

*1 The following shows the relation between the set text color and text color displayed.

Alarms to be displayed	Target			
	Fixed	Level	Group	Comment
User alarm	Displays in the color set for [Fixed/Default Color].	Displays in the color set in [Level]. Displays upper alarms and middle alarms in the color set for 1 of [Level].	Displays in the color set for [Group Color]. Displays upper alarms and middle alarms in the color set for 1 of [Group Color].	Displays in the color set for each comment group. In a case where no comment exists, displays in the color set for [Fixed/Default Color].
System Alarm		Displays in the color set for 1 of [Level].	Displays in the color set for 1 of [Group Color].	Displays in the color set for [Fixed/Default Color].

5) **[Display Background Color]**

Select the background color of the alarm popup display.

GOT Graphic Ver.2

A semitransparent popup window appears in a user-specified color.

GOT Graphic Ver.1

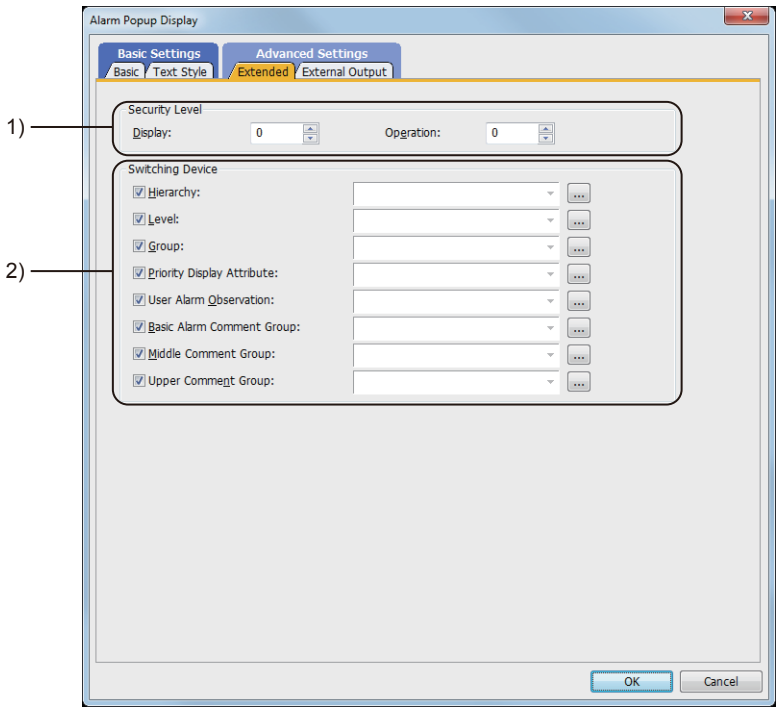
An opaque popup window appears in a user-specified color.

(3) [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the operation of switching displays for the alarm popup display by devices.

- When displaying this dialog by selecting [Common] → [Alarm] → [Alarm Popup Display] from the menu
  The setting contents are applied to the alarm popup display appearing on the GOT.
- When displaying this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display])
  The setting contents are applied to the alarm popup display appearing on a GOT Mobile function client.

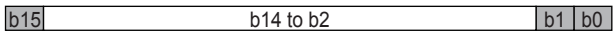
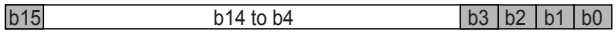


1) **[Security Level]**
Set the security level of display and operation.

Item	Description
[Display]	Set the security level of display. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security.
[Operation]	Set the security level of operation. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security. The setting of security level of [Operation] must be set to the one exceeding the security level of [Display].

2) **[Switching Device]**
Select items to switch the display using devices.

➟9.1.4 ■2 (3) Useful operations and functions

Item	Description
[Hierarchy]	Available only for the alarm display (user). Switches the level in the alarm hierarchy to be displayed using the device value. All the alarms at the specified level in the alarm hierarchy are displayed. Set the switching device. ➟6.1.2 How to set devices Store values to the device as follows to switch the level in the alarm hierarchy.  • Specifies the destination level in the alarm hierarchy for b1 to b0. 00 (0): Basic alarm 01 (1): Middle alarm xxx10 (2): Upper alarm • Using b14 to b2 is prohibited. • To b15, store the type of operations of switching levels in the hierarchy. (Identifier of hierarchy switching controllers) To switch levels in the hierarchy using the hierarchy switching device, always set 0 to this bit. 0: Switching by using the switching device 1: Switching by touching the display part For the precautions of switching the comment display or other items using devices, refer to the following. ➟9.1.4 ■3 Precautions
[Level]	Available only for the alarm display (user). Only the alarms with a specified level No. are displayed. Set the switching device. ➟6.1.2 How to set devices Store the level No. of alarms to be displayed to the device. • To display a specific level, specify a level No. within 1 to 255. • If a nonexistent level No is specified, alarms are not displayed. • To display all levels, specify the level No. 0 or a No. over 256.
[Group]	Available only for the alarm display (user). Only the alarms with a specified group No. are displayed. Set the switching device. ➟6.1.2 How to set devices Store the group No. of alarms to be displayed to devices. • To display a specific group, specify a group No. within 1 to 255. • If a nonexistent group No is specified, alarms are not displayed. • To display all groups, specify the group No. 0 or a No. over 256.
[Priority Display Attribute]	Switch the item to be the sort criteria according to the device values. Set the switching device. ➟6.1.2 How to set devices Store values to the device to switch the order of alarm display.  • For b3 to b0, specify the sort criteria. □000h: Normal (date and time of occurrence) □001h: Date and time of occurrence □005h: Level (User alarm only) □006h: Group (User alarm only) • Using b14 to b4 is prohibited. • Ascending or descending is specified for b15. 000□h: Descending 800□h: Ascending If a value other than the above is stored, alarms are displayed in the order of the date and time of occurrence.
[User Alarm Observation]	Available only for the alarm display (user). The specified user alarm is displayed. Set the switching device. ➟6.1.2 How to set devices • Store the alarm ID of the user alarm observation to the device. • The alarm with a stored alarm ID number is displayed regardless of the settings of [Popup Display] of user alarm observation. • When 0 is stored to a device, only the alarm with an alarm ID for which [Popup Display] of the user alarm observation is set is displayed. • If a nonexistent alarm ID is specified, alarms are not displayed.

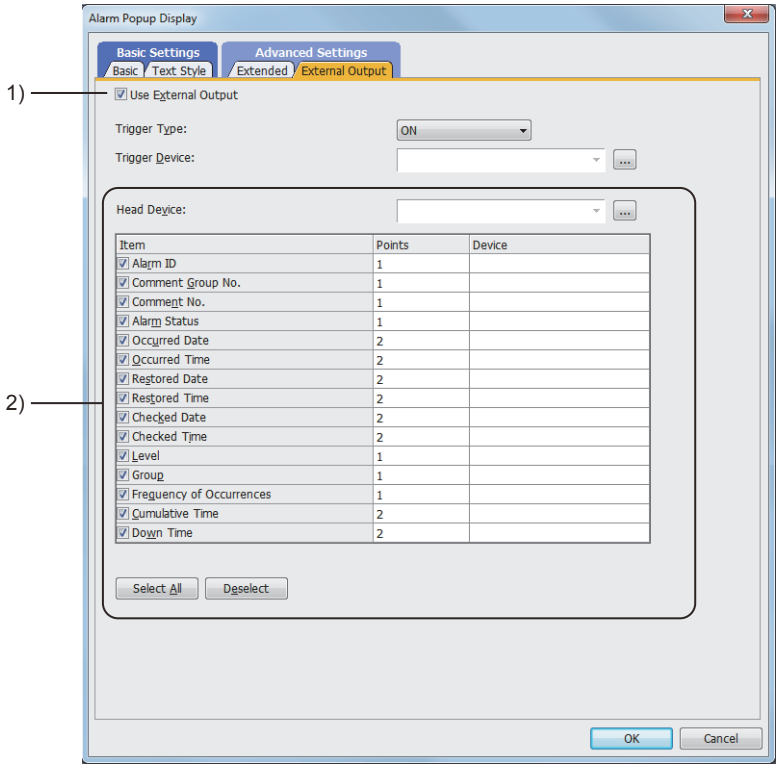
Item	Description
[Basic Alarm Comment Group]	Available only for the alarm display (user). Switch the comment group to be displayed in the basic alarm according to the device values. Set the switching device. ➟6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.
[Middle Alarm Comment Group]	Available only for the alarm display (user). Switch the comment group to be displayed in the middle alarm according to the device values. Set the switching device. ➟6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.
[Upper Alarm Comment Group]	Available only for the alarm display (user). Switch the comment group to be displayed in the upper alarm according to the device values. Set the switching device. ➟6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.

(4) [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the setting for writing the information of touched alarm in the alarm popup display into devices.

- When displaying this dialog by selecting [Common] → [Alarm] → [Alarm Popup Display] from the menu
  The setting contents are applied to the alarm popup display appearing on the GOT.
- When displaying this dialog from the [GOT Mobile Setting] window ([Alarm Popup Display])
  The setting contents are applied to the alarm popup display appearing on a GOT Mobile function client.



1) **[Enable External Output]**

Write the information of touched alarm into devices.

➟9.1.4 ■2 (3) Useful operations and functions

- [Trigger Type]:

Select the timing to write the alarm information into a device.
Select [Ordinary] to write the alarm information into the device when the alarm is touched.
Select [ON] to write the alarm information into the device when the alarm display area is touched while the device is on.
Select [OFF] to write the alarm information into the device when the alarm display is touched while the device is off.

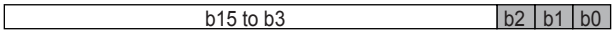
• [Trigger Device]:
When selecting [ON] or [OFF] in [Trigger Type], set the device to be a trigger.

➟6.1.2 How to set devices

2) **[Device]**

Set the devices to which the information of a touched alarm is written.

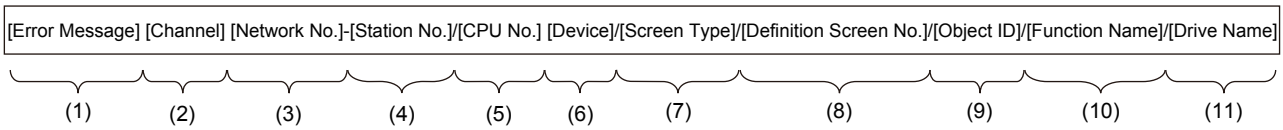
Item	Description
[First Device]	Set the start device (word device) to which the information of the alarm is written. When items to be written are selected, the successive devices following the start device are automatically set.
[Alarm ID]	Available only for the alarm display (user). Select this item to write the alarm ID into devices.
[Comment Group No.]	Available only for the alarm display (user). Select this item to write the comment group No. of the comment displayed with the alarm display.
[Comment No.]	Available only for the alarm display (user). Select this item to write the comment No. of the comment displayed with the alarm display.
[Identification Data]	Available only for the alarm display (system). Select this item to write the alarm identification data into devices.
[Error No.]	Available only for the alarm display (system). Select this item to write the error No. of an alarm into devices.
[Channel]	Available only for the alarm display (system). Select this item to write the channel No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[Network No.]	Available only for the alarm display (system). Select this item to write the network No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[Station No.]	Available only for the alarm display (system). Select this item to write the station No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[CPU No.]	Available only for the alarm display (system). Select this item to write the CPU No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[Screen No.]	Available only for the alarm display (system). Select this item to write the screen No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[Definition Screen No.]	Available only for the alarm display (system). Select this item to write the definition screen No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information
[Object ID]	Available only for the alarm display (system). Select this item to write the object ID of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.4 ■4 (4) (a) Added information

Item	Description
[Alarm Status]	Select this item to write the alarm status into devices.  • b0: When the alarm is in the "Occurred" status, 1 is stored, and when the alarm is in the "Restored" status, 0 is stored. • b1: When the alarm is in the "Checked" status, 1 is stored, and when the alarm is unchecked, 0 is stored. • b2: When writing the alarm status into devices is enabled, 1 is stored, and when writing the alarm status into devices is disabled, 0 is stored. • b15 to b3: Using these bits is prohibited. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger
[Occurred Date]	Select this item to write the date when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Occurred Time]	Select this item to write the time when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Restored Date]	Select this item to write the date when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Restored Time]	Select this item to write the time when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Checked Date]	Select this item to write the date when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Checked Time]	Select this item to write the time when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.4 ■4 (4) (c) Descriptions of the date and time to be written
[Level]	Available only for the alarm display (user). Select this item to write the level No. of an alarm into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger
[Group]	Available only for the alarm display (user). Select this item to write the group No. of an alarm into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger
[Frequency]	Available only for the alarm display (user). Select this item to write the frequency of alarm occurrences into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger
[Cumulative Time]	Available only for the alarm display (user). Select this item to write the cumulative time of alarms into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger The cumulative time (in hours and minutes) is stored in BCD code in two word devices. Example) When the cumulative time is 12 hours and 35 minutes Device value: 1235

Item	Description
[Down Time]	Available only for the alarm display (user). Select this item to write the down time of alarms into devices. For the details of the write trigger, refer to the following. ➟9.1.4 ■4 (4) (b) Write trigger The downtime (in hours and minutes) is stored in BCD code in two word devices. Example) When the downtime is 2 hours and 10 minutes Device value: 210
[Select All] button	Selects all alarm information.
[Deselect] button	Cancels all the selected alarm information.

(a) **Added information**

• By adding the information of an error that has occurred, it becomes easy to identify where the error has occurred. The added information which is not related to the error is not added even if the information is set.



Added information		Description	
(1)	Error message	Displays the error code of a system alarm and the error message.	
(2)	Channel	Displays the channel No. The display type is DEV: Ch No.	
(3)	Network No.	Displays the network No. with three digits number. *2	
(4)	Station	Displays the station No. with three digits number. *2	
(5)	CPU No.	Displays the CPU No.	
(6)	Device	Displays the device.	
(7)	Screen No.*1*2	Displays the screen type and the screen No.	
		Base screen	BASE: *****
		Overlap window 1 to 5	OVL1: ***** to OVL5: *****
		Superimpose window 1 to 2	SPI1: ***** to SPI2: *****
		User customize dialog	DLG: *****
		Operation panel	PNL: *****
		Key window	KEY: ******
		Base screen (GOT Mobile)	MBL-BASE: *****
		Overlap window 1 to 2 (GOT Mobile)	MBL-OVL1: ***** to MBL-OVL2: *****
		Superimpose window 1 to 2 (GOT Mobile)	MBL-SPI1: ***** to MBL-SPI2: *****
(8)	Definition screen No.*1*2	Displays the definition screen type and the screen No.	
		Base screen	B: *****
		Window screen	W: *****
		Report screen	R: *****
		Mobile screen	MB: *****
(9)	Object ID	Displays the object ID.	
(10)	Function name	Displays the function name. Switches languages with the language switching.	
(11)	Drive name	Displays the drive name. The display type is DRV: Drive name.	

*1 The number of the symbol * represents the number of the digits of the screen No.

*2 When a displayed number contains a number of digits less than that shown in the table, the number is displayed with 0 padded.

• The following shows a display example of added information.

Channel (1), device (X1000), screen No. (overlap window 3, screen No. 251), definition screen No. (window screen, screen No. 251), object ID (10000), function name (shape display)

If added information is displayed, the message is longer.
When all information is not be displayed, select Flow as the display type.

- For the device to which offset is specified, the device name and address after the offset are displayed.
  If the address after the offset is out of the range, ?? is displayed.
  The following shows the display example of a case where the device M1000 (range: 0 to 61424) is offset.
  Offset device 60000 → The device M61000 after offset is displayed.
  Offset device 61000 → ?? is displayed because the device after offset is out of the range.

(b) **Write trigger**

- Available alarm hierarchy for writing alarm information for the alarm display (user)
  Only when the basic alarm is touched, the alarm information is written into devices.
- Writing by the collection mode
  The available data for writing differs according to the collection mode which is set in the alarm observation.
  For details, refer to the following.

➟9.1.2 ■1 Specifications of the user alarm observation

(c) **Descriptions of the date and time to be written**

The date and time are respectively stored in two word devices.
The following describes the case in which the time of occurrence is written into D254 (2 points) and the date of occurrence is written into D256 (2 points).

- Date
  Store the year, month, and day with BCD code.

	b15 to b8	b7 to b0
D254	Month (1 to 12)	Date (1 to 31)

	b15 to b8	b7 to b0
D255	Two upper digits of year	Two lower digits of year

- Time
  Stores the hour, minute, and second with BCD code.

	b15 to b8	b7 to b0
D256	Minute (0 to 59)	Second (0 to 59)

	b15 to b8	b7 to b0
D257	00	Hour (0 to 23)

Example) Jun. 1, 2013 12:24:56

	b15 to b8	b7 to b0
D254	06	01
	(Month)	(Date)

	b15 to b8	b7 to b0
D255	20	13
	(Year)	

	b15 to b8	b7 to b0
D256	24	56
	(Minute)	(Second)

	b15 to b8	b7 to b0
D257	00	12
		(Hour)

■5 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the alarm popup display as required.
The following shows the functions that are available by the relevant settings.

(1) Property of screens

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The property can be set for each screen.
Select the screen editor on which the key window is to be set and select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog.

➟2.7 Changing Screen Property

Function	Setting item
Setting whether to display the alarm popup display or not for each screen Selecting the display position of the alarm popup display from among three positions: the top row, the center row, or the lower row	Set this function with the following items of the [Basic] tab. • [Use Alarm Popup Display] • [Display Position]

(2) GOT environmental settings (System information)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Turning off the key Input signal (Read device: System signal 1-1.b3)	[System Signal 1-1]
Disabling all the key inputs (Read device: System signal 1-1.b9)	[System Signal 1-1]
Resetting system alarms and system information (GOT error code, GOT Error Detection signal) (Read device: System signal 1-1.b13)*1	[System Signal 1-1]
Notifying the key input. (Write device: System signal 2-1.b3)	[System Signal 2-1]

*1 Not available to GT21 and GS21.

(3) GOT internal device

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟1.2.7 ■1 (1) GOT internal devices (GB, GD, and GS)

Function	Setting item
Storing the channel No. that has been assigned to the channel where a system alarm (GOT error) occurs (Write device)	GS262
Storing the channel No. that has been assigned to the channel where a system alarm (CPU error) occurs (Write device)	GS263
Storing the channel No. that has been assigned to the channel where a system alarm (network error) occurs (Write device)	GS264

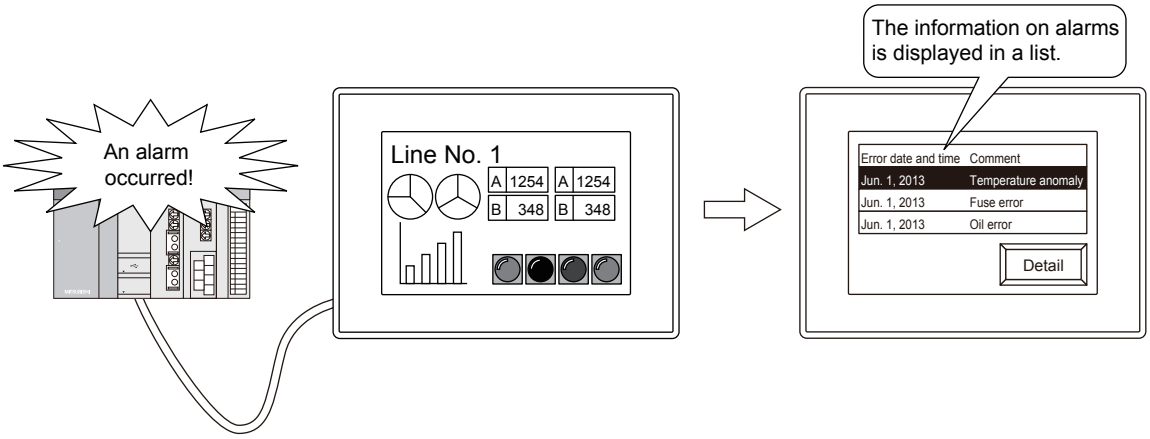
9.1.5 Viewing alarm events (Alarm display)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Specifications of the alarm display
■2 How to use the alarm display
■3 Precautions
■4 [Alarm Display(User)] dialog
■5 [Alarm Display(System)] dialog
■6 Relevant settings

The alarm display object lists the collected user or system alarm events.
For collecting user or system alarm events, refer to the following.

➟9.1.2 Collecting alarms by monitoring devices
9.1.3 Collecting alarms by monitoring the system



■1 Specifications of the alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Maximum number of objects on one screen

The maximum number of objects on one screen depends on the GOT model.

GOT	Maximum number of objects on one screen	
	Alarm Display (User)	Alarm Display (System)
GT27, GT25, GT23, GT SoftGOT2000, GS25	33	9
GT21, GS21	1	Not available to GT21 and GS21.

(2) Alarm events to be listed

➟9.1.5 ■4 [Alarm Display(User)] dialog
➟9.1.5 ■5 [Alarm Display(System)] dialog

Select the type of alarm events to be listed.

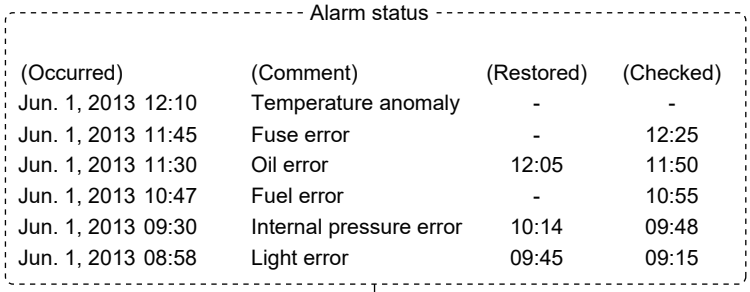
• All alarms

All alarm events are listed.

• Alarms being raised

The alarm events excluding the reset alarm events are listed.

Example) Alarm display (user)



[All Alarm]

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 12:10	Temperature anomaly		
Jun. 1, 2013 11:45	Fuse error		12:25
Jun. 1, 2013 11:30	Oil error	12:05	11:50
Jun. 1, 2013 10:47	Fuel error		10:55
Jun. 1, 2013 09:30	Internal pressure error	10:14	09:48
Jun. 1, 2013 08:58	Light error	09:45	09:15

All alarm events are listed.

[Generating Alarm]

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 12:10	Temperature anomaly		
Jun. 1, 2013 11:45	Fuse error		12:25
Jun. 1, 2013 10:47	Fuel error		10:55

As the alarms for the oil error, internal pressure error, and light error have been reset, the events are not listed accordingly.

■2 How to use the alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Placing an alarm display object

The following outlines how to set an alarm display object.

Step 1 Place an alarm display object on the screen editor.

➟6.5.1 Placing figures and objects

Step 2 The relevant key code switches are placed together.

The user ID of the alarm display object is assigned to the switches.
Delete unnecessary key code switches.
Place additional key code switches as necessary.

➟8.2.11 [Key Code Switch] dialog

Step 3 Configure the settings of the alarm display object.

➟9.1.5 ■4 [Alarm Display(User)] dialog
9.1.5 ■5 [Alarm Display(System)] dialog

For the settings common to the objects, refer to the following.

➟6.5.5 Common setting for objects

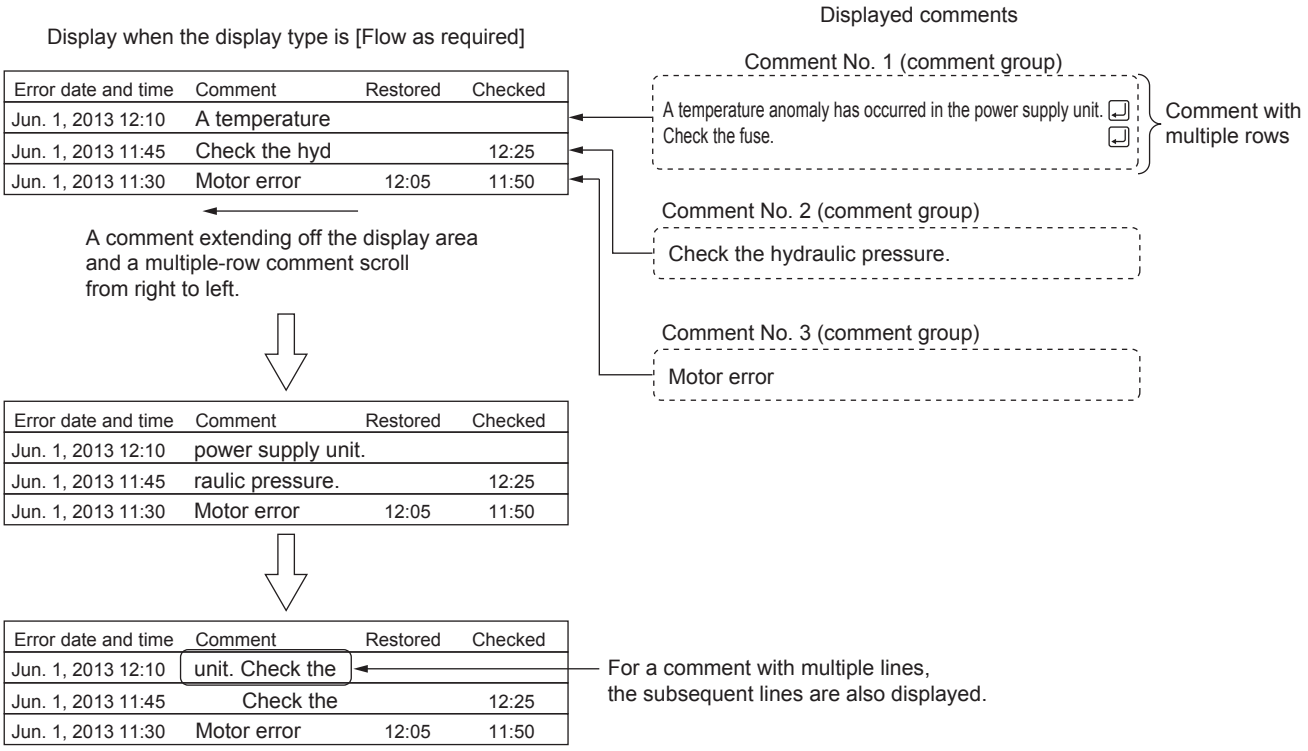
(2) Display method of comments

You can select either of the following display methods.

➟9.1.5 ■4 [Alarm Display(User)] dialog
9.1.5 ■5 [Alarm Display(System)] dialog

- [Fixed]
  Does not scroll a comment displayed at an alarm occurrence.
  When a comment extends off the display area, the part outside the area and the second and subsequent rows are not displayed.
- [Flow all]
  Scrolls a full comment displayed at an alarm occurrence from right to left.
- [Flow as required]
  Does not scroll a comment fully displayed within the display area.
  Scrolls a comment extending off the display area and a multiple-row comment from right to left.
- [Flow the selected row]
  Scrolls only the comment selected among the comments displayed at an alarm occurrence from right to left.

Display example) Alarm display (user)



Error date and time	Comment	Restored	Checked
Jun. 1, 2013 12:10	A temperature		
Jun. 1, 2013 11:45	Check the hyd		12:25
Jun. 1, 2013 11:30	Motor error	12:05	11:50

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 12:10	power supply unit.		
Jun. 1, 2013 11:45	raulic pressure.		12:25
Jun. 1, 2013 11:30	Motor error	12:05	11:50

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 12:10	unit. Check the		
Jun. 1, 2013 11:45	Check the		12:25
Jun. 1, 2013 11:30	Motor error	12:05	11:50

(3) Display order of alarms

Set the display order of alarms as follows.

Step 1 Specify an item for sorting the display of alarms.

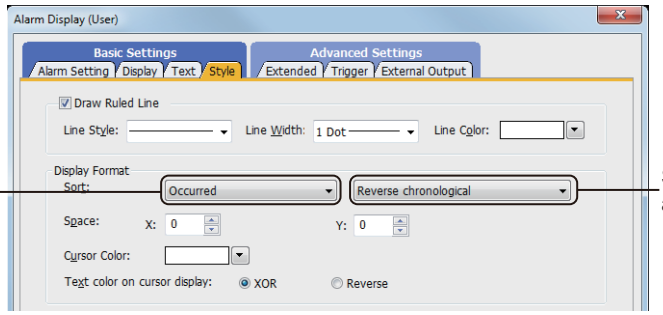
The display of alarms is sorted according to the specified item.

Display example) Displaying user alarms in the chronological order

Sorting user alarms in the chronological order

Error date and time	Comment	Alarm status	Restored	Checked	Frequency	Cumulative Time	Down Time	Level	Group
Jun. 1, 2013 20:00	Power supply unit error	Occurred	-	-	1	-	-	1	2
Jun. 1, 2013 18:30	Hydraulic pressure failure	Checked	-	18:50	2	00:20	-	1	1
Jun. 1, 2013 16:10	Drive module error	Checked	16:30	16:20	5	04:10	00:20	2	1
Jun. 1, 2013 14:00	Motor error	Checked	15:00	14:10	4	02:30	01:00	2	1
Jun. 1, 2013 13:30	Light error	Checked	14:30	13:50	1	01:00	01:00	2	1

Setting example) Configure the setting in the [Style] tab of the [Alarm Display(User)] dialog as follows.



Set [Occurred] as an item for sorting alarms.

Set [Reverse chronological] as the display direction.

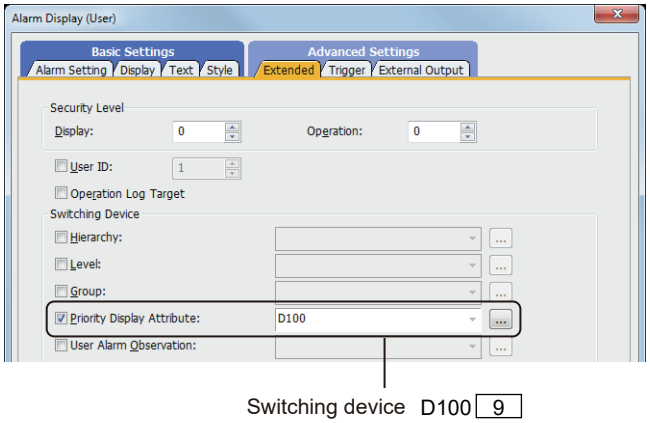
Step 2 You can change the item for sorting the display of alarms.

Display example) Sorting user alarms in the descending order of frequency of occurrences

Sorting user alarms according to the frequency of occurrences (in the descending order)

Error date and time	Comment	Alarm status	Restored	Checked	Frequency	Cumulative Time	Down Time	Level	Group
Jun. 1, 2013 16:10	Drive module error	Checked	16:30	16:20	5	04:10	00:20	2	1
Jun. 1, 2013 14:00	Motor error	Checked	15:00	14:10	4	02:30	01:00	2	1
Jun. 1, 2013 18:30	Hydraulic pressure failure	Checked	-	18:50	2	00:20	-	1	1
Jun. 1, 2013 20:00	Power supply unit error	Occurred	-	-	1	-	-	1	2
Jun. 1, 2013 13:30	Light error	Checked	14:30	13:50	1	01:00	01:00	2	1

Setting example) Configure the setting in the [Extended] tab of the [Alarm Display(User)] dialog as follows.



The sort criteria can be changed according to the value in the switching device (priority display attribute).

0: Without specification
(sorting by the occurrence date and time)
1: Occurred
2: Restored
3: Checked
4: Comment (comment No.)
5: Level
6: Group
7: Status
(Ascending: Checked → Restored → Occurred)
(Descending: Occurred → Restored → Checked)
9: Freque
10: Cumulative Time
11: Down Time
12: Monitored alarm No.

• Display order of when both [Display Order] in the [Display] tab and [Priority Display Attribute] in [Switching Device] in the [Extended] tab are set

When both [Display Order] in the [Display] tab and [Priority Display Attribute] in [Switching Device] in the [Extended] tab are set, the display order set in [Priority Display Attribute] has priority.

(4) Switching the levels in the alarm hierarchy

Only available to the alarm display (user).

Switch the levels in the alarm hierarchy by one of the following methods.

- Touching the screen

  Touch the alarm display (user) or a touch switch for the alarm display (user).

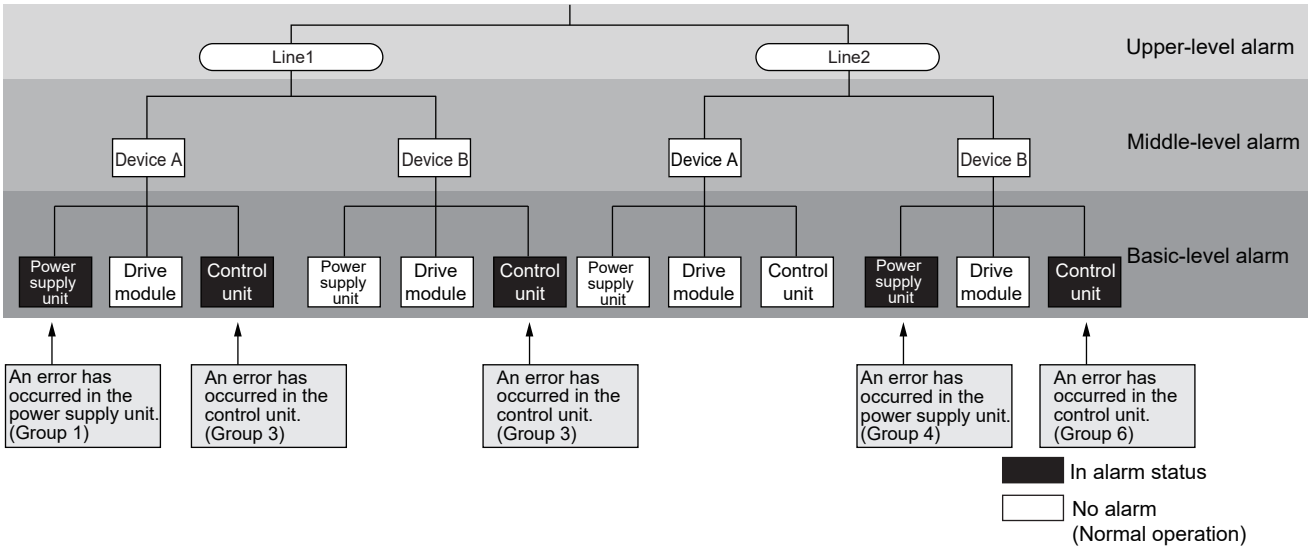
  ➟9.1.5 ■2 (11) Touch switches for the alarm display

- Using a device

  Specify a device for [Hierarchy] in [Switching Device].

  ➟9.1.5 ■4 (5) [Extended] tab

The following shows a system hierarchy example to explain alarm events to be displayed by each method.



(a) Touching the screen

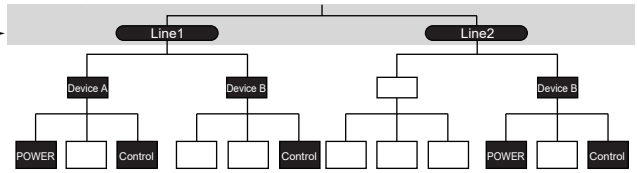
The alarm display object lists the alarm events in the level directly below the current level in the alarm hierarchy.

Example) When switching the upper level to another level by touching an event on the alarm display (user)

The upper-level alarm events are initially displayed.

Error date and time		Comment	Restored	Checked
-	-	Line1 abnormal stop	-	-
-	-	Line2 abnormal stop	-	-

All upper-level alarm events are displayed.



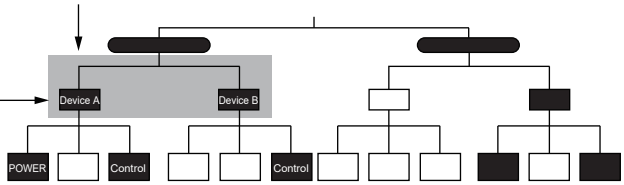
Select an event to switch to the middle level in the alarm hierarchy.

Error date and time		Comment	Restored	Checked
-	-	Line1 abnormal stop	-	-
-	-	Line2 abnormal stop	-	-

The middle-level alarm events are displayed.

Error date and time		Comment	Restored	Checked
-	-	An error occurs in the device A.	-	-
-	-	An error occurs in the device B.	-	-

Display range



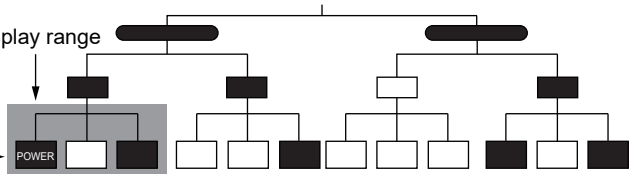
Select an event to switch to the basic level in the alarm hierarchy.

Error date and time		Comment	Restored	Checked
-	-	An error occurs in the device A.	-	-
-	-	An error occurs in the device B.	-	-

The basic-level alarm events are displayed.

Error date and time		Comment	Restored	Checked
Jun. 1, 2013	14:25	An error has occurred in the power supply unit.		
Jun. 1, 2013	12:10	An error has occurred in the control unit.		12:25

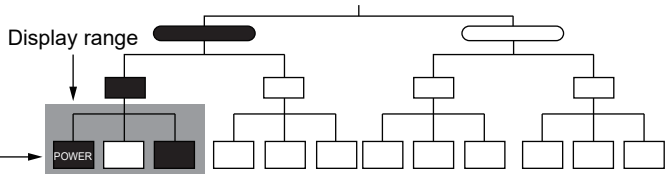
Display range



While alarm events are displayed, if an alarm occurs in any other branch of the system hierarchy, the alarm event will not be displayed.

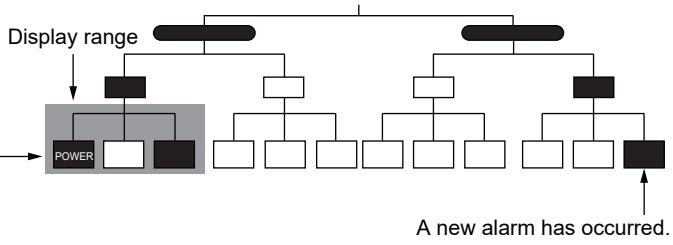
Alarm events in device A in line 1 are displayed.

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 14:25	An error has occurred in the power supply unit.		
Jun. 1, 2013 12:10	An error has occurred in the control unit.		12:25



The new alarm event in device B in line 2 is not displayed.

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 14:25	An error has occurred in the power supply unit.		
Jun. 1, 2013 12:10	An error has occurred in the control unit.		12:25



To display the new alarm event, perform one of the following operations.

- Set a hierarchy switching device to display all the alarm events in the specified level in the alarm hierarchy.
- Switch the level in the alarm hierarchy.

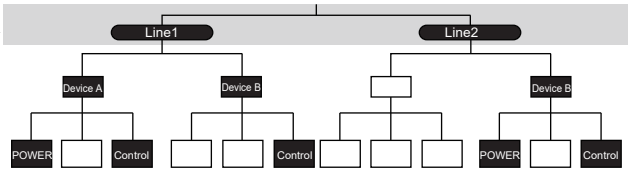
(b) **Using a device**

The alarm display object lists all the alarm events in the level specified with the hierarchy switching device.
Example) When the hierarchy switching device is set to GD110

GD110 [2]

Error date and time	Comment	Restored	Checked
- -	Line1 abnormal stop	-	-
- -	Line2 abnormal stop	-	-

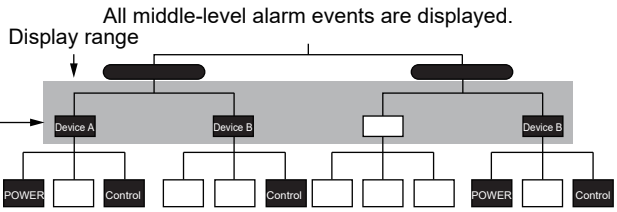
All upper-level alarm events are displayed.



GD110 [1]

Error date and time	Comment	Restored	Checked
- -	An error occurs in the device A.	-	-
- -	An error occurs in the device B.	-	-
- -	An error occurs in the device B.	-	-

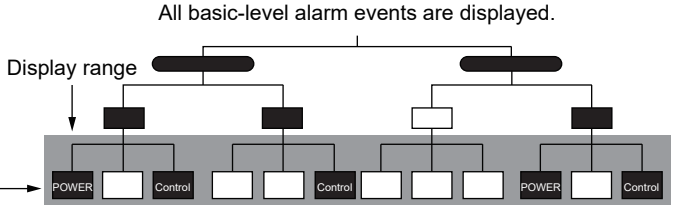
All middle-level alarm events are displayed.



GD110 [0]

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 14:25	An error has occurred in the power supply unit.		
Jun. 1, 2013 12:10	An error has occurred in the control unit.		12:25
Jun. 1, 2013 10:00	An error has occurred in the control unit.		11:00
Jun. 1, 2013 09:15	An error has occurred in the power supply unit.	10:10	09:55
Jun. 1, 2013 08:35	An error has occurred in the control unit.	10:20	09:40

All basic-level alarm events are displayed.



(c) **How to switch to a higher level in the alarm hierarchy**

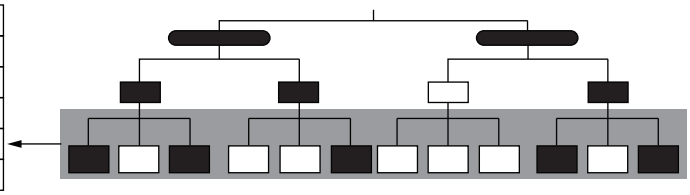
To switch the basic level to the upper or middle level in the alarm hierarchy, use a touch switch for the alarm display (user).

➟9.1.5 ■2 (11) Touch switches for the alarm display

(d) **Initially-displayed level in the alarm hierarchy**

You are recommended to set upper-level alarm events to be initially displayed.
If you set lower-level alarm events to be initially displayed, all the alarm events in the level will be displayed.
Example) When the initially-displayed level is set to the basic level

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 14:25	An error has occurred in the power supply unit.		
Jun. 1, 2013 12:10	An error has occurred in the control unit.		12:25
Jun. 1, 2013 10:00	An error has occurred in the control unit.		11:00
Jun. 1, 2013 09:00	An error has occurred in the power supply unit.	11:00	09:20
Jun. 1, 2013 08:40	An error has occurred in the control unit.	10:20	08:50



All basic-level alarm events are displayed.

(e) **Timing for switching to the initially-displayed level**

When you perform any of the following operations using a device, the alarm display object lists all alarm events in the initially-displayed level in the alarm hierarchy.

- Switching between alarm IDs
- Switching between languages

(5) Switching the display using devices

The alarm events can be switched according to the value of the specified device.
Set [Switching Device] on the [Extended] tab.

➟9.1.5 ■4 (5) [Extended] tab
9.1.5 ■5 (5) [Extended] tab

The following shows the setting items in [Switching Device].

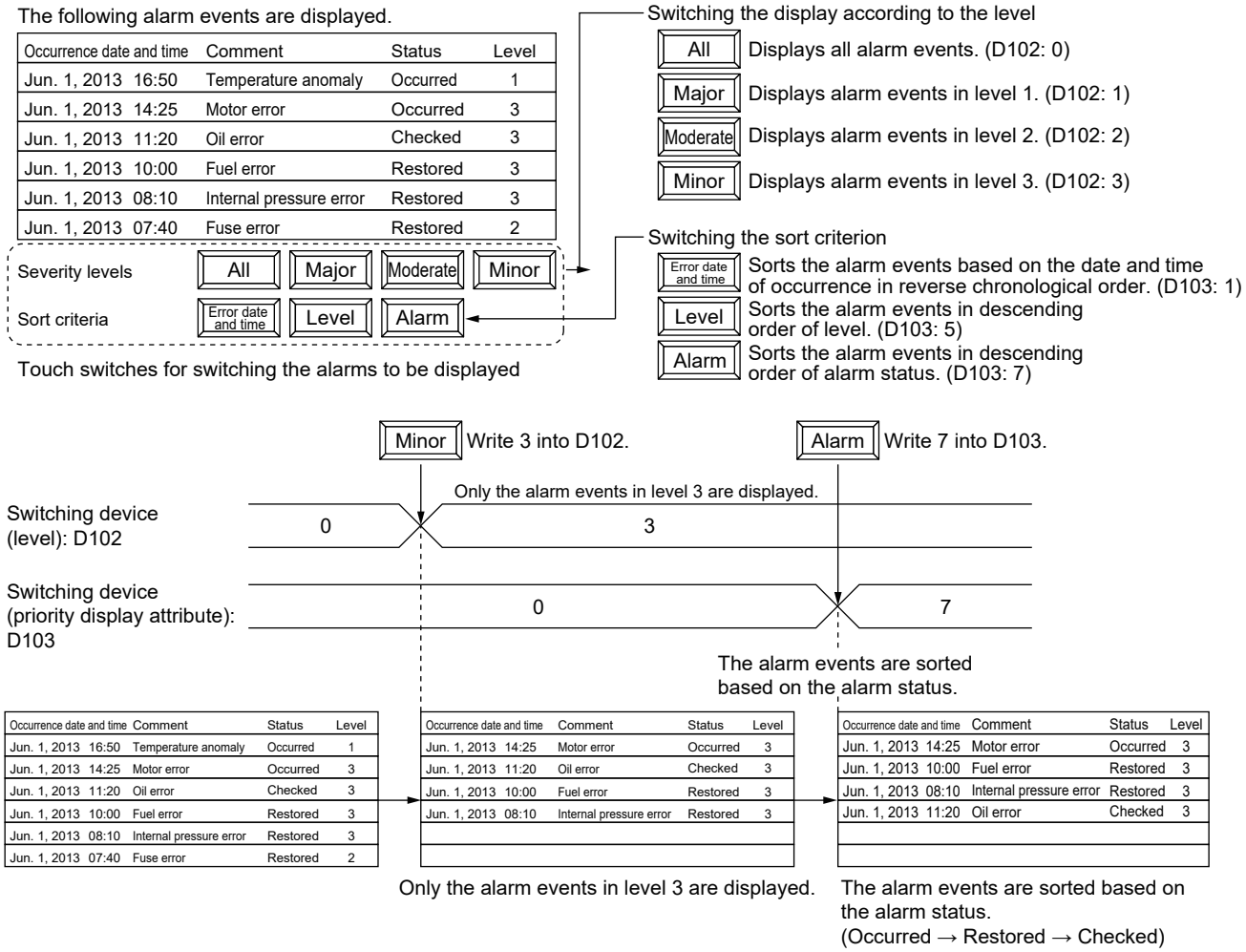
- Alarm display (user)

Setting item	Description
[Hierarchy]	The alarm events in the specified level in the alarm hierarchy are displayed.
[Level]	The alarm events in the specified level are displayed.
[Group]	The alarm events in the specified group are displayed.
[Priority Display Attribute]	The alarm events are sorted in ascending or descending order. Select a sort criterion from the following. • Date and time of occurrence • Date and time of restoration • Date and time of confirmation • Comment number • Level • Group • Alarm status (Occurring, reset, or checked) • Frequency • Cumulative time • Down time This setting is applied only to basic-level alarm events.
[Basic Alarm Comment Group]	The alarm events are displayed using the comments of the specified comment group. You can change the comments according to your purpose.
[Middle Comment Group]	
[Upper Comment Group]	

- Alarm display (system)

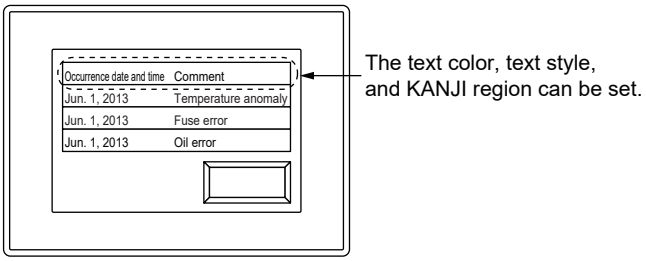
Setting item	Description
[Priority Display Attribute]	The alarm events are sorted in ascending or descending order. Select a sort criterion from the following. • Date and time of occurrence • Date and time of restoration • Date and time of confirmation • Alarm status (Occurring, reset, or checked)

The following shows an example of displaying alarm events on the alarm display (user).
Example) When D102 is set for [Level] and D103 is set for [Priority Display Attribute] in [Device Switching]



(6) Formatting the column header of the table

The format of the column header is user-changeable.

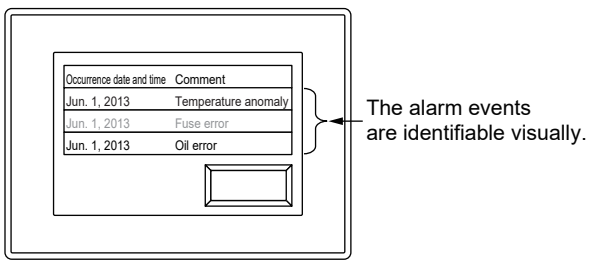


Set [Title Format] on the [Text] tab.

➟9.1.5 ■4 (3) [Text] tab
9.1.5 ■5 (3) [Text] tab

(7) Setting text colors for alarm events

Setting text colors facilitates visual identification of alarm events.



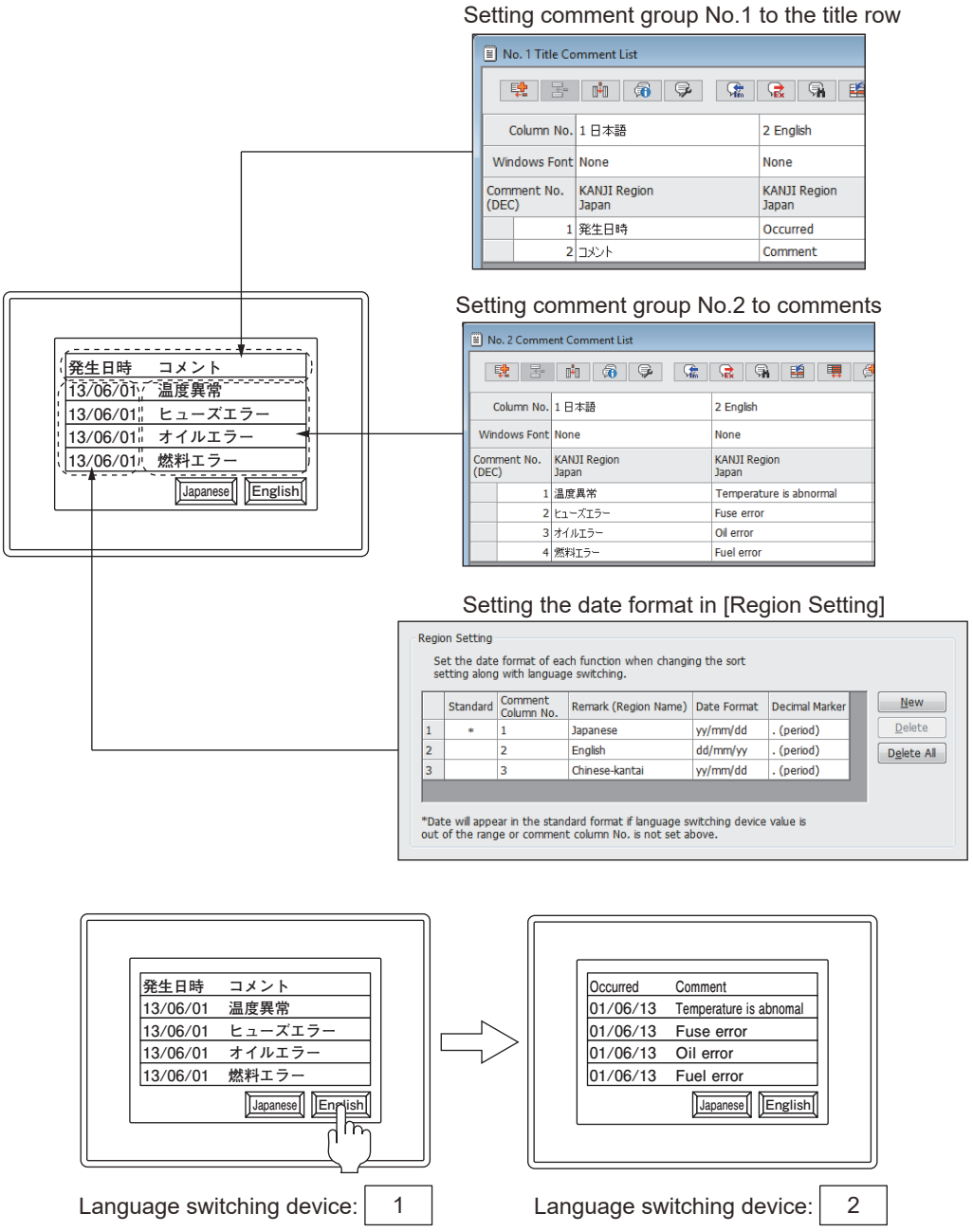
Set [Table Format] on the [Text] tab.

➟9.1.5 ■4 (3) [Text] tab
9.1.5 ■5 (3) [Text] tab

(8) Switching the title row language or comment language with the language switching device

By setting multiple languages in a comment group, you can switch the display language with the language switching device.

Set the date format in [Language Switching] in the GOT environmental settings.



Switching between display languages with the language switching device

For setting comments, refer to the following.

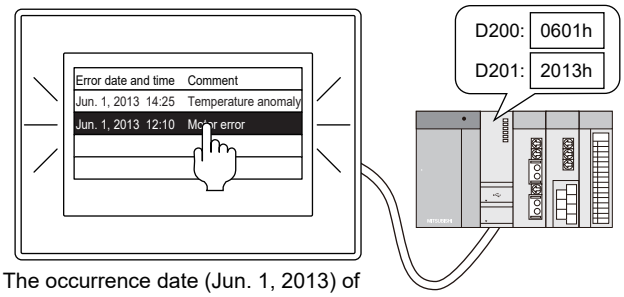
➟5.8 Comment Setting ([Comment])

For the language switching settings, refer to the following.

➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

(9) Writing the information on the touched alarm event into devices

The information on the alarm event touched on the alarm display object is writable to devices.



The occurrence date (Jun. 1, 2013) of the selected alarm event is written to devices.

Configure the following settings.

- On the [Alarm Setting] tab, select [Selection] or [Operation] for [Touch Mode].
- On the [External Output] tab, select [Use External Output].

➟9.1.5 ■4 (7) [External Output] tab
9.1.5 ■5 (7) [External Output] tab

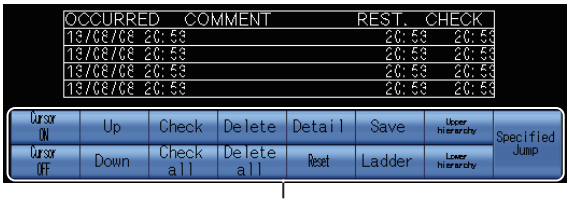
(10)Writing the number of alarms into devices

The number of alarms targeted for listing is writable to devices.
On the [External Output] tab, set [Display Target Alarm Number Output].

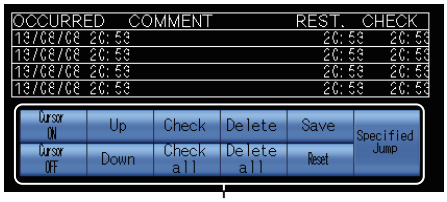
➟9.1.5 ■4 (7) [External Output] tab
9.1.5 ■5 (7) [External Output] tab

(11)Touch switches for the alarm display

To use the touch switches for the alarm display, select them from the library of GT Designer3.
The text and shape of each switch is user-changeable.
Alternatively, assign relevant key codes to touch switches.



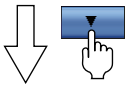
Touch switches for the alarm display (user)



Touch switches for the alarm display (system)

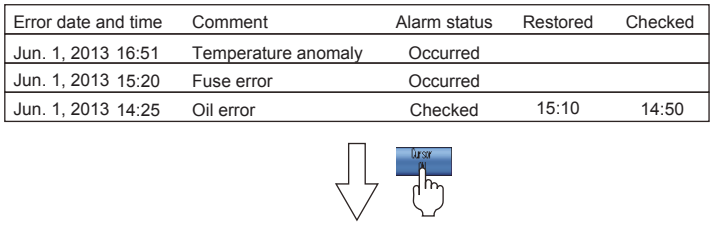
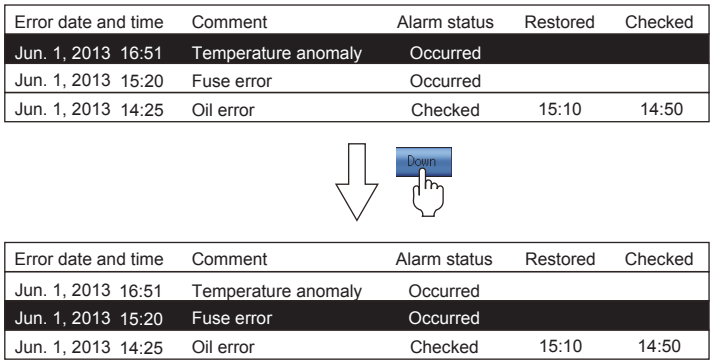
Touch switch	Key code	Description
Scroll up by one line ▲	00F2h	Switches the display between one row above and one row below.
Scroll down by one line ▼	00F3h	

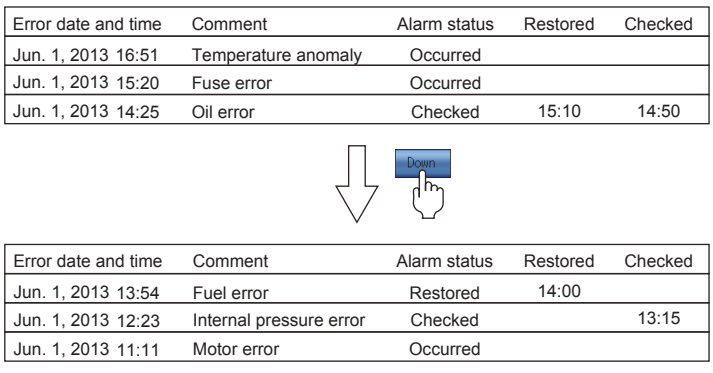
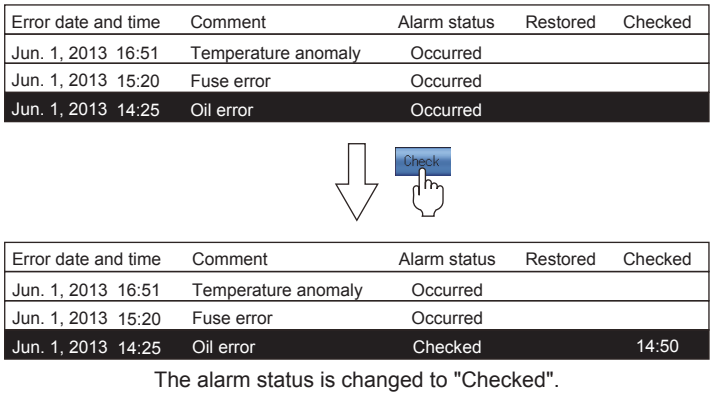
Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 16:51	Temperature anomaly	Occurred		
Jun. 1, 2013 15:20	Fuse error	Occurred		
Jun. 1, 2013 14:25	Oil error	Checked	15:10	14:50

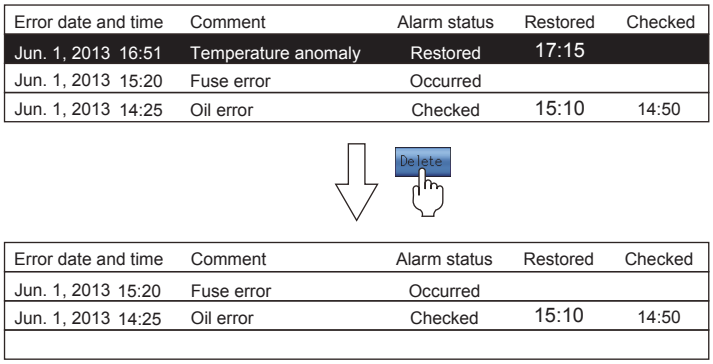
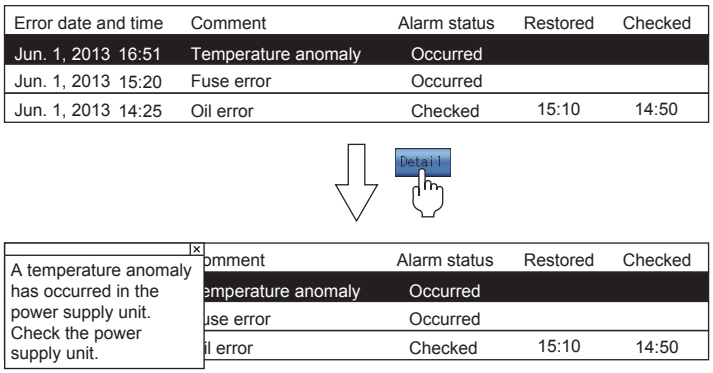
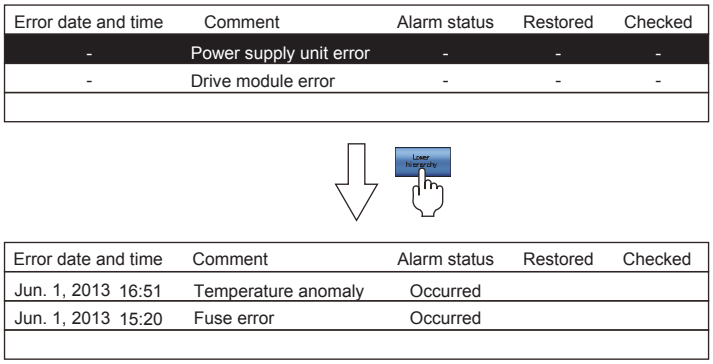


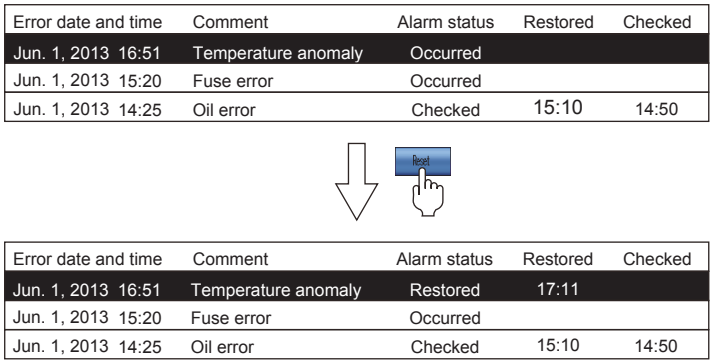
Error date and time	Comment	Alarm status	Restored	Checked
Jun. 1, 2013 15:20	Fuse error	Occurred		
Jun. 1, 2013 14:25	Oil error	Checked	15:10	14:50
Jun. 1, 2013 11:11	Motor error	Occurred		

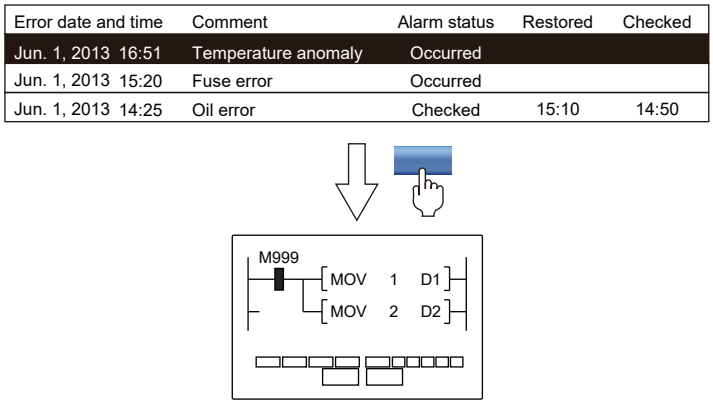
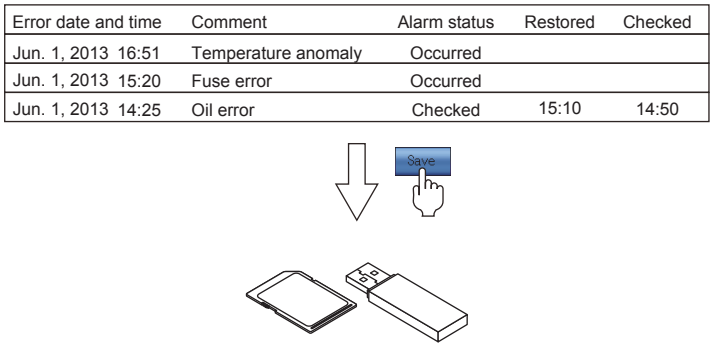
Scroll down one row.

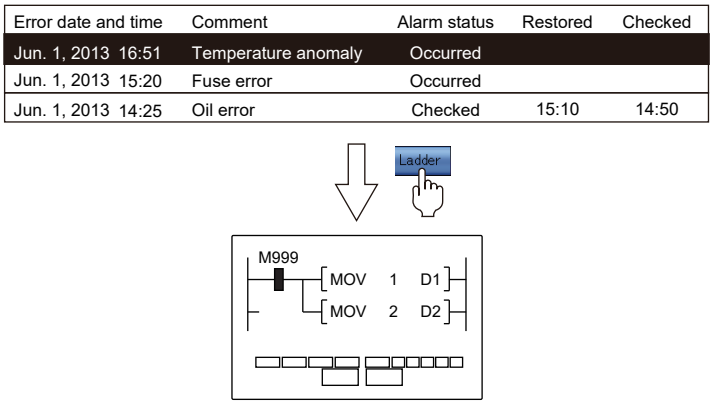
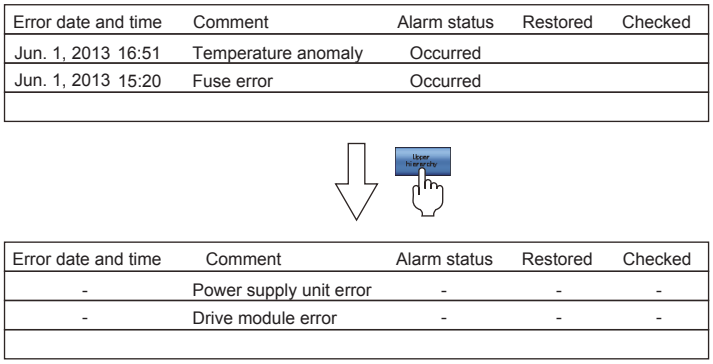
<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Show cursor
 </td><td>FFB0h</td><td rowspan="2">Displays or deletes the cursor.
 
The cursor is shown.</td></tr>
<tr><td>Hide cursor
 </td><td>FFB1h</td></tr>
<tr><td>Move cursor upward
 </td><td>FFB2h</td><td rowspan="2">• When the cursor is hidden
Displays the previous page or next page by page.
 
The cursor is moved.

• While the cursor is displayed
Moves the cursor upward or downward by row.
 
The next page is displayed.</td></tr>
<tr><td>Move cursor downward
 </td><td>FFB3h</td></tr>
<tr><td>Change the selected alarm status to "Checked" (Check)
 </td><td>FFB4h</td><td rowspan="2">Changes the alarm status to "Checked".
 
The alarm status is changed to "Checked".</td></tr>
<tr><td>Change all the alarm statuses to "Checked" (Check all)
 </td><td>FFB5h</td></tr>
</table>

<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Delete the selected restored alarm (Delete)
 </td><td>FFB6h</td><td rowspan="2">Deletes a selected alarm event or all alarm events in the "Restored" status.
 
The alarm event in the "Restored" status is deleted.</td></tr>
<tr><td>Delete all the restored alarms (Delete all)
 </td><td>FFB7h</td></tr>
<tr><td>Display detail
 </td><td rowspan="2">FFB8h</td><td>Only available to the alarm display (user).
Displays the detail screen of a selected alarm when this cursor is touched with basic alarms displayed.
 
The detail screen is displayed.</td></tr>
<tr><td>Move to the lower hierarchy
 </td><td>Only available to the alarm display (user).
Displays the alarms at lower levels in the hierarchy when this cursor is touched with upper alarms or middle alarms displayed.
 
The alarms at the lower level in the hierarchy are displayed.</td></tr>
</table>

<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Reset the selected alarm data
 </td><td>FFB9h</td><td>Resets the selected alarm.
 
The selected alarm is reset.

To use this touch switch for the alarm display (user), satisfy all the following conditions.
• [Reset] is set on the [Device] tab in the [User Alarm Observation] dialog.
➟9.1.2 ■7 (2) [Device] tab
• Basic-level alarm events are displayed on the object.</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (iQ-R/iQ-L Ladder))</td><td>FFBAh</td><td rowspan="3">Only available to the alarm display (user).
Set [Ladder Search Setting] on the [Extended] tab in the [User Alarm Observation] dialog.
➟9.1.2 ■7 (4) [Extended] tab
Performs the coil search or factor search through the specified program file for the device that is set for the selected alarm event.
The hit is displayed on the ladder monitor screen.
(One-touch ladder jump function)
 
The ladder diagram is displayed.</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (Ladder))</td><td>FFBDh</td></tr>
<tr><td>Display ladder (Sequence Program Monitor (iQ-F Ladder))</td><td>FFC3h</td></tr>
<tr><td>Saves the alarm details to the data storage.
 </td><td>FFBBh</td><td>Saves alarm events to an alarm log file in the data storage.
 
The alarm data is stored in the data storage.</td></tr>
</table>

<table>
<tr><th>Touch switch</th><th>Key code</th><th>Description</th></tr>
<tr><td>Display ladder
 </td><td>FFBCh</td><td>Only available to the alarm display (user).
Set [Ladder Search Setting] on the [Extended] tab in the [User Alarm Observation] dialog.
➟9.1.2 ■7 (4) [Extended] tab
Performs the coil search or factor search through the specified program file for the device that is set for the selected alarm event.
The hit is displayed on one of the following screens.
• Ladder monitor screen of the FX ladder monitor
• Ladder monitor screen of the sequence program monitor (Ladder)
(One-touch ladder jump function)
 
The ladder diagram is displayed.</td></tr>
<tr><td>Move to the upper hierarchy
 </td><td>FFC2h</td><td>Only available to the alarm display (user).
Switches the middle or basic level to the upper level in the alarm hierarchy.
 
The alarms at the upper level in the hierarchy are displayed.</td></tr>
<tr><td>Move display position to the specified time
 </td><td>FFBEh</td><td>Displays the time specified with the display position time device.
(Time specification jump function)
Set [Display Position Time Device] on the [Extended] tab.
➟9.1.5 ■4 (5) [Extended] tab
9.1.5 ■5 (5) [Extended] tab</td></tr>
<tr><td>Display first alarm</td><td>FFBFh</td><td>Returns to the top of the list.
The cursor becomes invisible.
Returns to the top of the list sorted in the specified order.</td></tr>
</table>

(12)SRAM power-failure backup function

This function saves the logging data collected in the buffering area to the SRAM user area. The logging data saved in the SRAM user area is retained even at power failure. Saving data to the SRAM user area for backup at power failure can be used for the following functions.

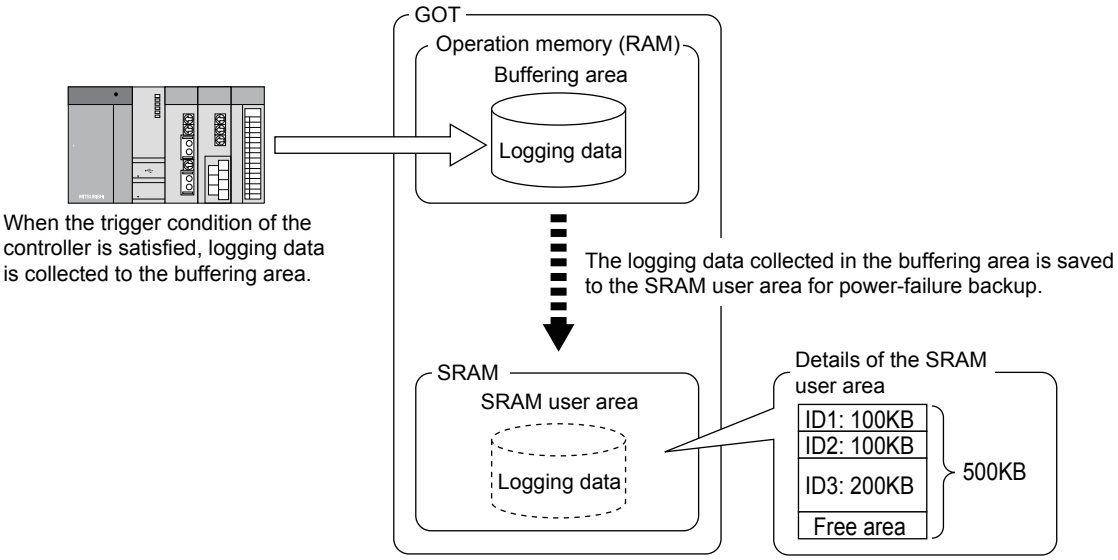
- User alarm observation
- System alarm observation
- Logging function

To use the logging data as a file, configure the setting for the file save and power-failure backup to the SRAM user area.

(13)Saving data to the SRAM user area

When logging data is collected to the buffering area, the logging data is also saved to the SRAM user area. This saving timing cannot be changed.

When the SRAM user area has logging data, the logging data is automatically read when the GOT is powered on.



(14)Specifications of the SRAM user area

For the specifications of the SRAM user area, refer to the following.

➟12.12 Specifications of the SRAM user area

(15)Deleting and backing up the data in the SRAM user area

The data saved in the SRAM user area is deleted under the following conditions.

- Project data and system applications are written to the GOT when [Initialize SRAM user area when writing project data/ OS] is selected in the [Communicate with GOT] dialog.
- The SRAM user area is initialized by using [SRAM management] in the utility.
- The clear trigger device set in [Buffering] of the user alarm observation setting or the system alarm observation setting turns on.
- The SRAM user area is set to be initialized when GT SoftGOT2000 starts the first monitoring.

To retain the data saved in the SRAM user area, execute the backup/restoration function in the utility.

For the details of the backup/restoration function, refer to the following.

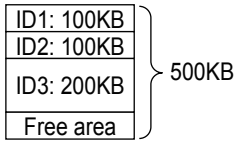
➟GOT2000 Series User's Manual (Utility)

(16)Precautions for using the SRAM user area

Data may not be saved into the SRAM user area due to some reasons, including the setting change of an applicable function and physical memory corruption.

(a) **Normal conditions**

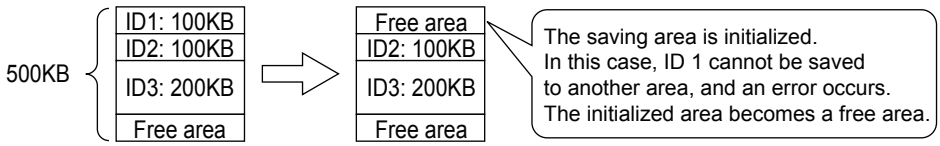
The data collected by each applicable function is saved to the SRAM user area.



(b) **Setting change**

If the size of data to be collected by the user alarm observation, system alarm observation, or logging function is changed, the data of the function saved in the SRAM user area will be deleted.

- When the size is reduced:
  The data is saved to the initialized area. The remaining area is reserved as a free area.
- When the size is increased:
  The area used is initialized and the data is saved to another area.
  If the area required for saving the data is insufficient, an error occurs.
  If an error occurs, initialize the SRAM user area, reduce the data size to 500 KB or less, and save the data again.
  Example) When the size for ID 1 is increased from 100 KB to 200 KB

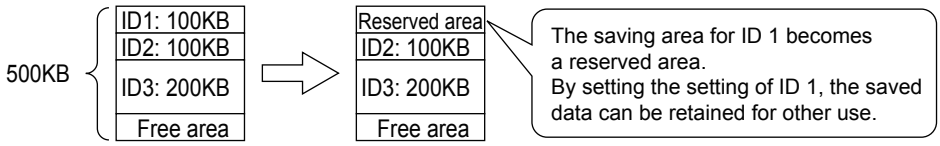


(c) **Setting deletion**

When the setting of each function is deleted, the SRAM user area used for saving the data is reserved as an unused area.
Initialize the unused area to use it.
For the initialization of the SRAM user area, refer to the following.

➟GOT2000 Series User's Manual (Utility)

Example) When the setting of ID 1 is deleted



(d) **Others**

If the data saved in the SRAM user area is not restored at the GOT startup, a system alarm occurs.
In such a case, check the battery status.

- When the battery status is normal:
  A part of the SRAM user area may be damaged.
  Initialize the SRAM user area.

  ➟GOT2000 Series User's Manual (Utility)
- When the voltage is low:
  Replace the battery.
  If the data is still not restored after the battery is replaced, initialize the SRAM user area.
  For information on how to replace the battery, refer to the following.

  ➟GOT2000 Series User's Manual (Hardware)

  For the initialization of the SRAM user area, refer to the following.

  ➟GOT2000 Series User's Manual (Utility)

■3 Precautions

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The following shows the precautions for the alarm display.

(1) Precautions for drawing

(a) Initial display hierarchy and hierarchy switching device

In the alarm display (user) and alarm popup display, the level in the hierarchy specified in [Initial Display Hierarchy] is written into the hierarchy switching device with the following timing.
The level in the hierarchy to be displayed is switched.

- When switching screens (alarm display (user) only)
- At the first display of objects
- When the alarm observation ID number to be displayed is switched with the switching device for user alarm observation ID

For the setting of [Initial Display Hierarchy], refer to the following.

➟9.1.4 ■4 (1) [Basic] tab

For the setting of the switching devices for levels in the hierarchy and user alarm ID, refer to the following.

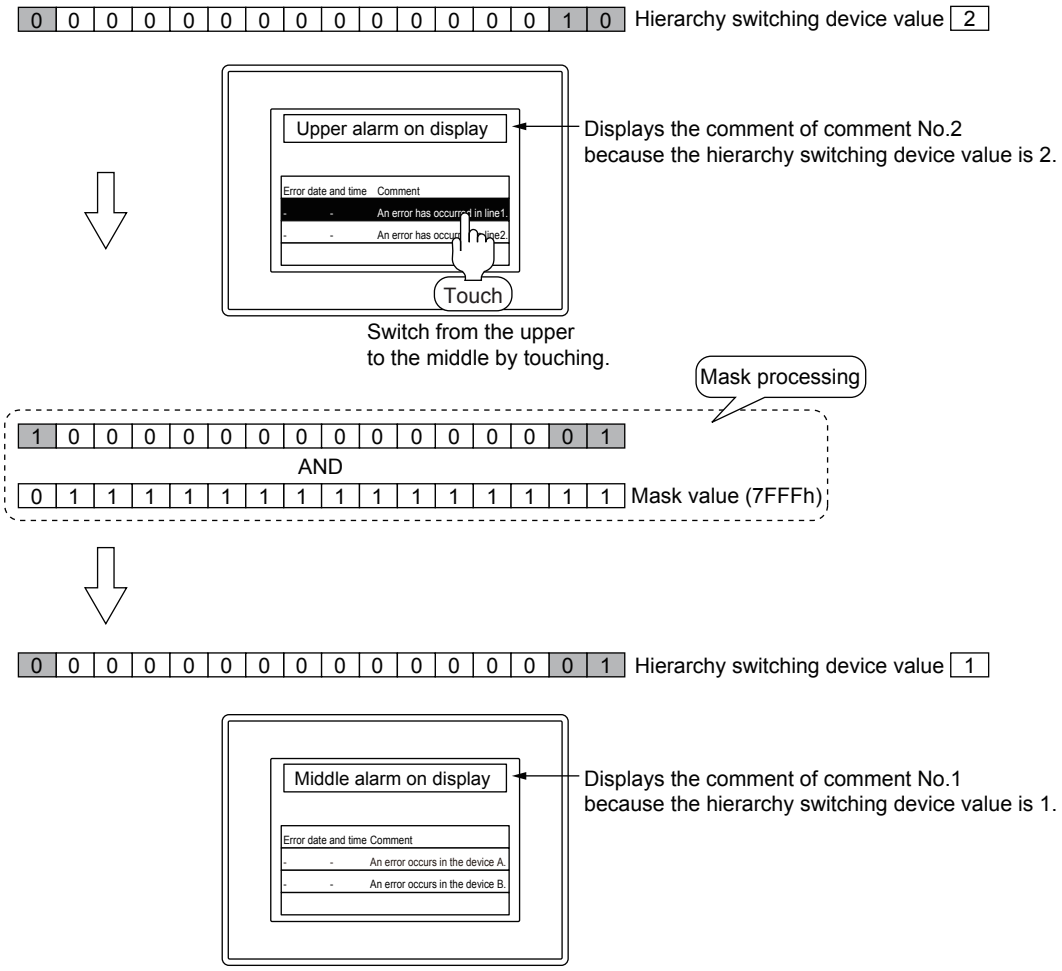
➟9.1.4 ■4 (3) [Extended] tab

(b) Switching comment displays or others with the hierarchy switching device

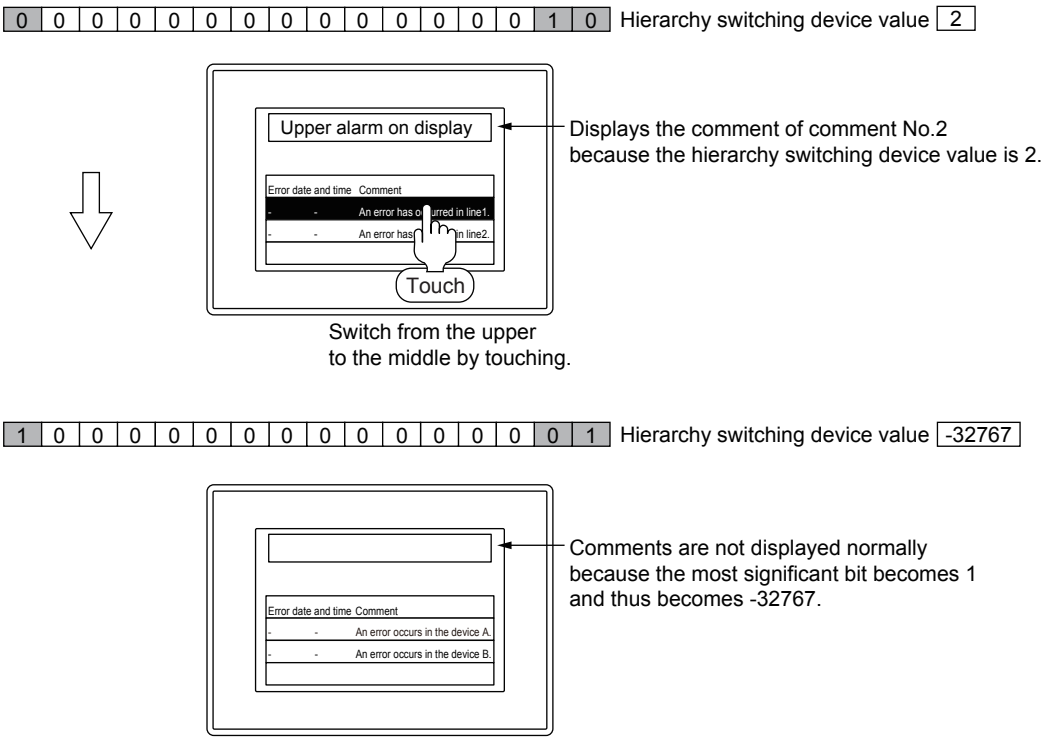
The leftmost bit of the hierarchy switching device changes to 1 by touch operations. Use mask processing and mask the device with 7FFFh so that the leftmost bit is always masked to 0.
Comment displays and others cannot work normally without mask processing.
Example) When switching comments to be displayed with the value of the hierarchy switching device

Hierarchy switching device value	Corresponding comment	Comment to be displayed
0	0	Basic alarm on display
1	1	Middle alarm on display
2	2	Upper alarm on display

- With mask processing


0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
Hierarchy switching device value 2
Upper alarm on display
Error date and time Comment
An error has occurred in line1.
An error has occurred in line2.
Touch
Displays the comment of comment No.2
because the hierarchy switching device value is 2.
Switch from the upper
to the middle by touching.
Mask processing
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
AND
0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Mask value (7FFFh)
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
Hierarchy switching device value 1
Middle alarm on display
Error date and time Comment
An error occurs in the device A.
An error occurs in the device B.
Displays the comment of comment No.1
because the hierarchy switching device value is 1.

• Without mask processing



(c) **Text display in the row where the cursor is inserted**

If the text color of the target set in [Target] in [Text] tab of the [Alarm Display] dialog is set to black, the text color and cursor color are shown in the same color, and the text in the row where the cursor is inserted becomes invisible.
To display the text in the row where the cursor is inserted, set a color other than black.

(d) **Number of settings**

The set size of an object cannot exceed the user area of the GOT.
Therefore, not all the setting values such as device values can be set to their maximum values.
Set the setting values within the capacity of the available user area for the GOT.
For the calculation method of the setting size of the alarm display, refer to the following.

➟1.2.3 ■3 Functions arrangeable on the screen

For the capacity of the available user area for the GOT, refer to the following.

➟12.10.1 Data transferred to the GOT and capacity of the destination drive

(e) **User ID assigned to key code switches**

When you place an alarm display object on the screen editor, the relevant key code switches are placed together.
The user ID of the alarm display object is automatically assigned to each key code switch ([User ID for a key input]).
If you change the user ID of the alarm display object, also change the set value of [User ID for a key input] for each switch.
Otherwise, the alarm display object is inoperable using the switches.

➟8.2.11 [Key Code Switch] dialog

(f) **Settings of a touch switch**

If the key cord (FFB5h) to change all the alarm statuses to "Checked" (Check all) is set with any of the following key cords, the key cord (FFB5h) becomes inoperable.

- 00F2 (Scrolls up one row)
- 00F3 (Scrolls down one row)
- FFBF (Displays the first alarm)

(2) Precautions for use

(a) **Display of the time of occurrence, confirmation, and restoration**

For the time of occurrences, the clock data of the GOT is used.
For the precautions and restrictions of the clock function which manages the GOT clock data, refer to the following.

➟5.3 Setting the Utility Function ([GOT Setup])

(b) **Narrowing down the large number of monitored alarms**

If the number of alarms is narrowed down when the number of monitored devices are large in the user alarm observation,

displaying the alarms may require a few seconds.

➟9.1.3 ■2 (7) Useful operations and functions

(c) **Order of priority in which alarms are displayed**

When the display order is not changed in the setting for [Switching Device] in the [Text] tab of the [Alarm Display] dialog, alarms are displayed in the descending order of the date and time of occurrences.
When the display order is changed, alarms are displayed in the order set in [Switching Device].

(d) **Alarm display for using the set overlay screen function**

When setting the overlay screen function to display a screen for which the alarm display is set, do not set the alarm display for the basic screen.
If the alarm display is set for the basic screen, alarms are not displayed on the called screen.
For how to set the set overlay screen function, refer to the following.

➟6.6.7 ■5 [Overlay Screen]

(e) **Precautions for the use of the time specification jump function**

- When carrying out another operation while a time specification jump is performed
  While the data obtained at a specified time is searched with the time specification jump function, the operations with functions other than the alarm display cannot be performed.
- When multiple values of alarm data are obtained around a specified time
  If alarm data are not obtained at a specified time, the data obtained at the nearest time is searched.
  When the multiple values are obtained at the nearest time, the first detected value is displayed.
- When displaying the alarm data obtained at the start of collecting the data and the data obtained around the time when the latest data is obtained
  When the alarm data obtained at a specified time is the one obtained at the start of the collecting the data or the data obtained around the time when the latest data is obtained, the data to be displayed may not be displayed in the center of the alarm display.
- When there is no alarm data that can be displayed in alarm displays
  When there is no alarm data that can be displayed in an alarm display, no time specification jump is performed.
- Levels in the alarm hierarchy available for the time specification jump function
  Only the basic alarm is available for the time specification jump function.
  The middle alarm and upper alarm are unavailable for the time specification jump function.

■4 [Alarm Display(User)] dialog

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Step 1 Select [Object] → [Alarm Display] → [Alarm Display (User)] from the menu.

Step 2 Click the position where you place the alarm display. Placing the alarm display is complete.

Step 3 Double-click the alarm display which has been placed to display the setting dialog.

➟(1) [Alarm Setting] tab
(2) [Display] tab
(3) [Text] tab
(4) [Style] tab
(5) [Extended] tab
(6) [Trigger] tab
(7) [External Output] tab

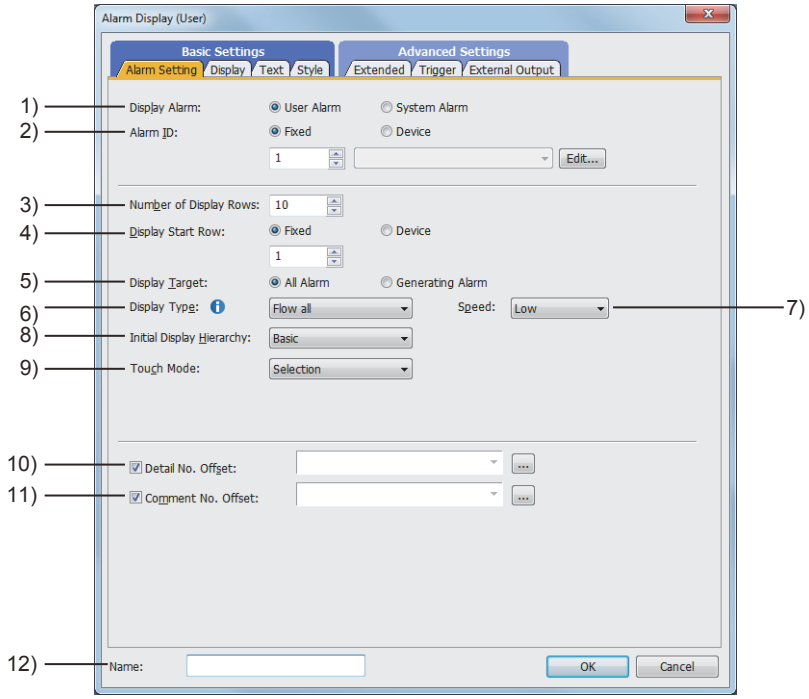
(1) [Alarm Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Configure the settings such as the type of the alarm observation to be displayed, the display method of the message, and the operation performed when the alarm display is touched.



1) **[Display Alarm]**

Select the alarm type to be displayed in the alarm display.

The following shows selectable items.

- [User Alarm]: Displays user alarms.
- [System Alarm]: Displays system alarms.(Not available to GT21 and GS21)

For the alarm display (user), select [User Alarm].

2) **[Alarm ID]**

Set the alarm ID of the user alarm to be displayed.

Item	Description
[Fixed]	Enter the alarm ID directly. The setting range is [1] to [32767]. Click the [Edit] button to display the [User Alarm Observation] dialog. ➟9.1.2 ■7 [User Alarm Observation] dialog
[Device]	Set the device that specifies the alarm ID. ➟6.1.2 How to set devices If a nonexistent alarm ID is specified, user alarms are not displayed.

3) **[Number of Display Rows]**

Set the number of rows displayed in a screen.

The following shows the setting range.

- [1] to [64] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [1] to [27] (GT21 and GS21)

Example) When [Number of Display Rows] is set to three rows

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 10:25	Temperature anomaly	11:25	10:45
Jun. 1, 2013 12:05	Fuel error	12:25	12:28
Jun. 1, 2013 08:30	Motor error	09:45	09:40

Alarms are displayed for three rows excluding the title row.

4) **[Display Start Row]**

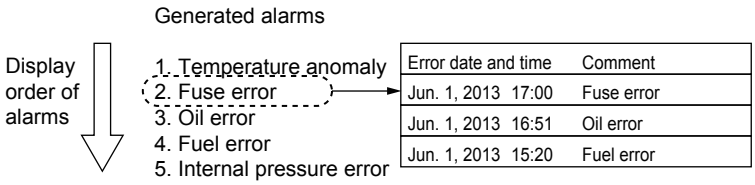
Select a row to be displayed in the top row when the number of alarms exceeds the number of rows set in [Number of Display Rows].

Item	Description
[Fixed]	Enter the number of rows to be displayed directly. The setting range is [1] to [32767].
[Device]	Set the device that specifies the start row. ➡6.1.2 How to set devices

• When the number of alarms is larger than the value set in [Display Start Row]

The alarm corresponding to the row number set in [Display Start Row] is displayed in the top row.

Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 2, and the number of alarms is 5

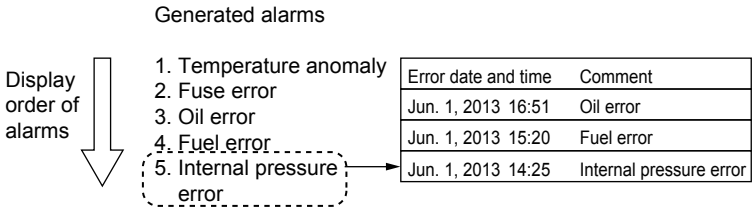


The alarm corresponding to the row number set in [Display Start Row] is displayed in the top row.

• When the number of alarms is smaller than the value set in [Display Start Row]

The last alarm is displayed in the bottom row.

Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 10, and the number of alarms is 5

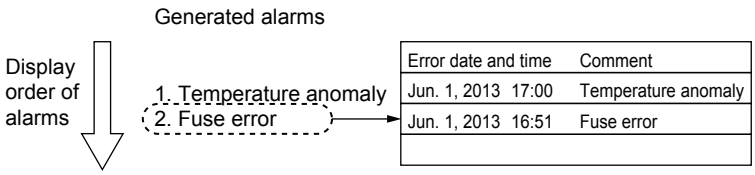


The last alarm is displayed in the bottom row.

• When the number of alarms is smaller than the value set in [Number of Display Rows]

The setting for [Display Start Row] becomes disabled, and all the alarms that have occurred are displayed.

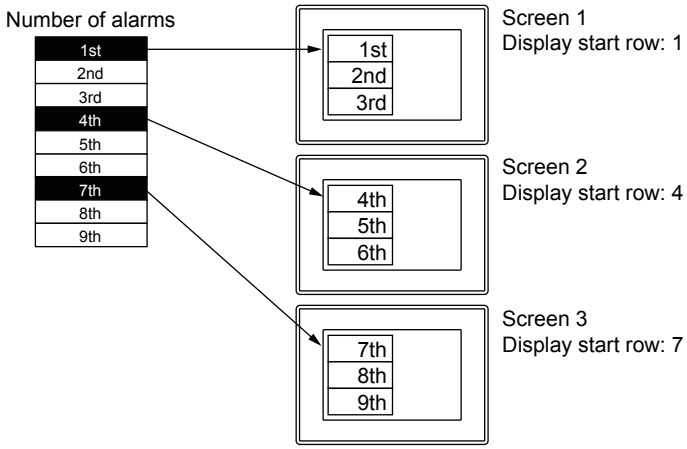
Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 3, and the number of alarms is 2



All the alarms that have occurred are displayed.

• Using the setting for multiple screens

When different values of [Display Start Row] are set for each screen, the user alarm displays differ depending on the screens.



Even if the number of alarms exceeds the value set in [Display Start Row] when user alarms are displayed on the GOT, the setting for [Display Start Row] does not become enabled.
To enable the setting for [Display Start Row], switch the screen to another one, then switch back the screen to the one in which the user alarm is displayed.

5) **[Display Target]**

Select the display method of collected alarms.
The following shows selectable items.

- [All Alarm]:
  Select this item to display the history of alarms including the past alarms.
- [Generating Alarm]:
  When this item is set, only the existing alarms are displayed.

➟9.1.5 ■1 (2) Alarm events to be listed

6) **[Display Type]**

Select the display method of the comments for alarms.
The following shows selectable items.

- [Fixed]:
  Does not scroll a comment displayed at an alarm occurrence.
  When a comment extends off the display area, the part outside the area and the second and subsequent rows are not displayed.
- [Flow all]:
  Scrolls a full comment displayed at an alarm occurrence from right to left.
- [Flow as required]:
  Does not scroll a comment fully displayed within the display area.
  Scrolls a comment extending off the display area and a multiple-row comment from right to left.
- [Flow the selected row]:
  Scrolls only the comment selected among the comments displayed at an alarm occurrence from right to left.

➟9.1.5 ■2 (2) Display method of comments

Scrolling a comment is available for up to 16 alarm display objects including Alarm Display (User) and Alarm Display (System) on one screen.
If scrolling a comment is set for 17 alarm display objects or more, comment display on the 17th object and later are fixed.

7) **[Speed]**

This item is settable when [Display Type] is set to [Flow all], [Flow as required], or [Flow the selected row].
Set the speed at which the display is scrolled.
The following shows selectable items.

- [High]: The text of comments flows at the speed of 200 dots a second.
- [Medium]: The text of comments flows at the speed of 100 dots a second.
- [Low]: The text of comments flows at the speed of 50 dots a second.

8) **[Initial Display Hierarchy]**

Select a level in the alarm hierarchy to be displayed first when a user alarm occurs.
The following shows selectable items.

- [Basic]
- [Middle]

• [Upper]

9) **[Touch Mode]**

Select the operation performed when the alarm display (user) is touched.
The following shows selectable items.

• [None]:
Select this item to disable touch operations.

• [Selection]:
Selects a touched alarm.

• [Operation]:
Selects a touched alarm.
Switches between levels in the alarm hierarchy with each touch of the selected alarm.
Touching a selected upper alarm displays the middle alarm.
Touching a selected middle alarm displays the basic alarm.
Touching a selected basic alarm displays the detail screen.
While GS450.b15 is on, even when a basic alarm is not selected, a single touch of the basic alarm displays the detail screen.

10) **[Detail No. Offset]**

Select this item to switch detailed information displayed in the user alarm according to the value of a device.
The device value is added to the detail No.

11) **[Comment No. Offset]**

Select this item to switch comments displayed in the user alarm according to the value of a device.
The set device value is added to the comment No.

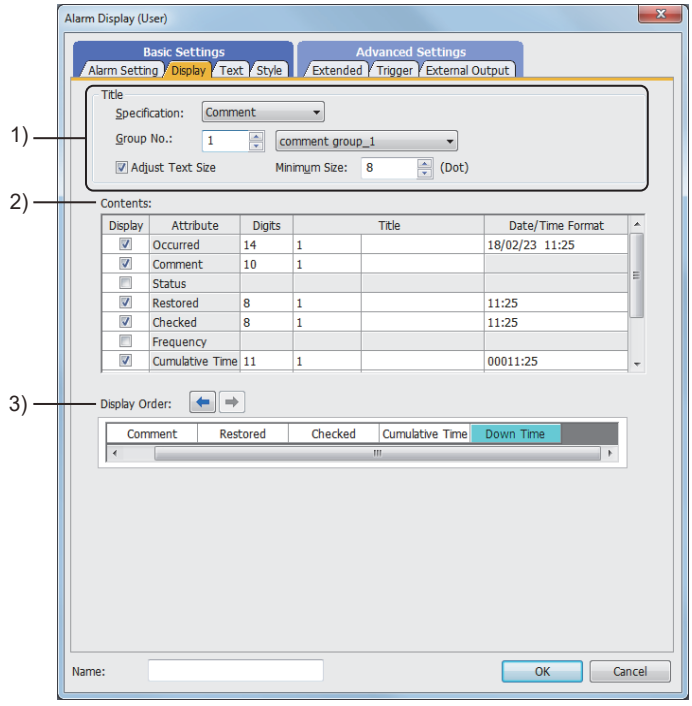
12) **[Name]**

Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

(2) [Display] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the items to be displayed in the user alarm and the display order.



1) **[Title]**

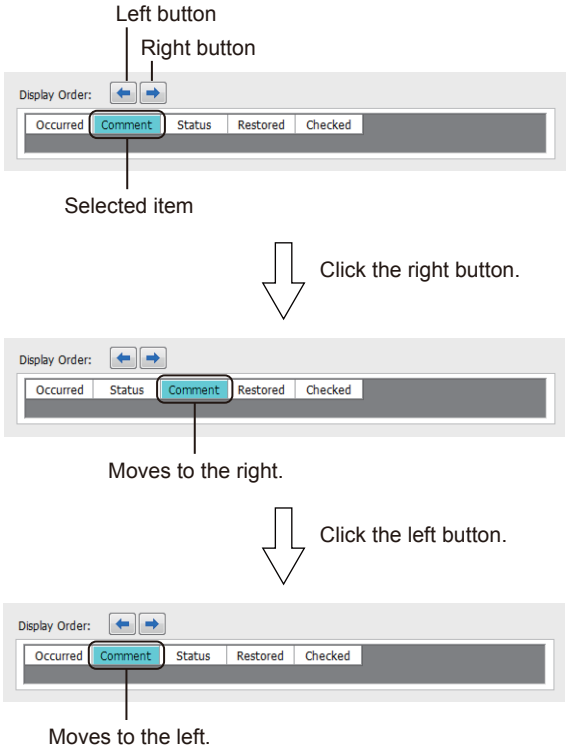
Item	Description
[Specification]	Select the method of specifying the text to be displayed in the title. The following shows selectable items. • [Direct]: Select this item to input the text to be displayed in the title directly into [Title] in [Contents]. • [Comment]: Select this item to display the text to be displayed in the title using the comment in the comment group. • [None]: Select this item not to display the title.
[Group No.]	Only when [Comment] is selected for [Specification], this item can be set. Set the comment group in which the text to be displayed in the title is registered.
[Adjust Text Size]	Only when [Comment] is selected for [Specification], this item can be set. The text size is adjusted according to the width of the title. When [Adjust Text Size] is not selected, the text size is adjusted by inserting a line feed.
[Minimum Size]	Only when [Comment] is selected for [Specification] and [Adjust Text Size] is selected, this item can be set. Set the minimum text size for adjustment. The setting range is [8] to [240] dot(s).

2) **[Contents]**

Item	Description
[Display]	Select the items to be displayed in the alarm display (user).
[Attribute]	Items to be displayed in the alarm display (user) • [Occurred]: Displays the date and time of occurrence of an alarm. • [Comment]: Displays the date and time of occurrence of an alarm. • [Status]: Displays the alarm status. • [Restored]: Displays the date and time when an alarm has restored. • [Checked]: Displays the date and time when an alarm occurrence has been checked. • [Frequency]: Displays the number of error occurrence. • [Cumulative Time]: Displays the total time during which the relevant alarm has occurred. • [Down Time]: Displays the time from the alarm occurrence to the alarm restoration. • [Level]: Displays the levels set for alarms. • [Group]: Displays the groups set for alarms. When any item other than [Cumulative] is selected for [Collection Mode] in the [Basic] tab of [User Alarm Observation], the data of [Frequency], [Cumulative Time], and [Down Time] will not be displayed.
[Digits]	Set the number of the digits displayed in each item. Set a one-byte character as one digit and a two-byte character as two digits. The following shows the setting range of each item. • [Occurred]: The number of digits for this item is automatically set according to the setting for [Date/Time Format]. • [Comment]: [10] digits to [128] digits (For GT21 and GS21: [10] digits to [80] digits) • [Status]: [6] digits to [128] digits (For GT21 and GS21: [6] digits to [80] digits) • [Restored]: The number of digits for this item is automatically set according to the setting for [Date/Time Format]. • [Checked]: The number of digits for this item is automatically set according to the setting for [Date/Time Format]. • [Frequency]: [5] digits to [128] digits (For GT21 and GS21: [5] digits to [80] digits) • [Cumulative Time]: [8] digits to [128] digits (For GT21 and GS21: [8] digits to [80] digits) • [Down Time]: [8] digits to [128] digits (For GT21 and GS21: [8] digits to [80] digits) • [Level]: [3] digits to [128] digits (For GT21 and GS21: [3] digits to [80] digits) • [Group]: [3] digits to [128] digits (For GT21 and GS21: [3] digits to [80] digits)
[Title]	Set a title of the alarm display (user). The setting depends on the value selected for [Specification]. When [Direct] is selected, input characters within the number of digits set in [Digits]. When [Comment] is selected, the comment No. and the comment to be displayed in the title are displayed. When [None] is selected, the title cannot be set.
[Date/Time Format]	Set the date and time format for each attribute item. The setting method varies by attribute item. For [Occurred], [Restored], and [Checked], click the [...] button to set the date and time format in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings For [Cumulative Time] and [Down Time], select a time format of hours:minutes or hours:minutes:seconds.

3) **[Display Order]**

Set the order in which the items set for [Attribute] in [Contents] are displayed.
The items of [Attribute] which are set in [Display] are displayed.
Move the display position of the selected item sideways by using the right button and the left button.



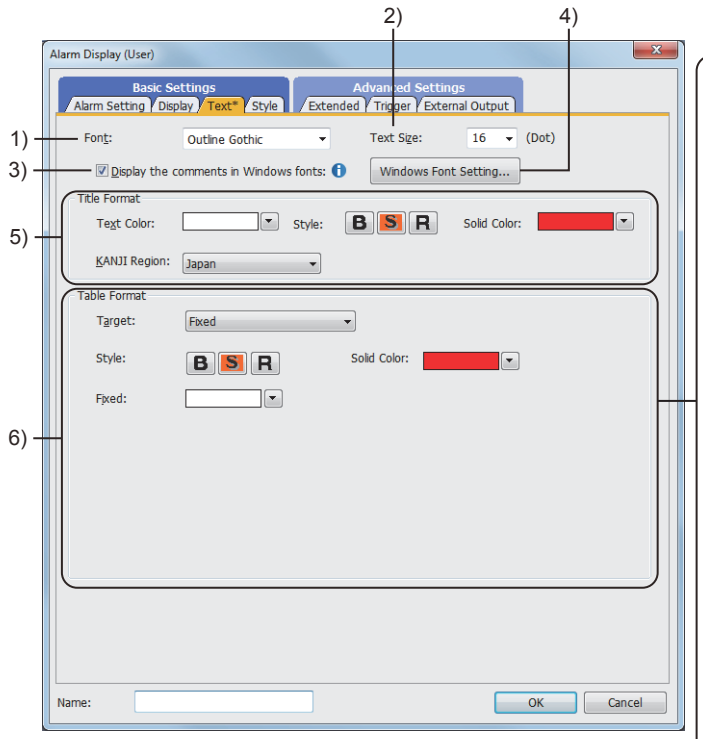
(3) [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

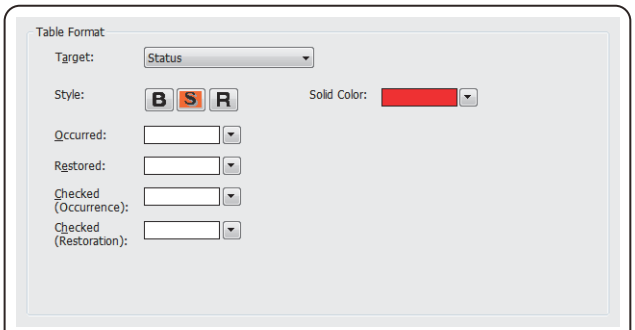
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

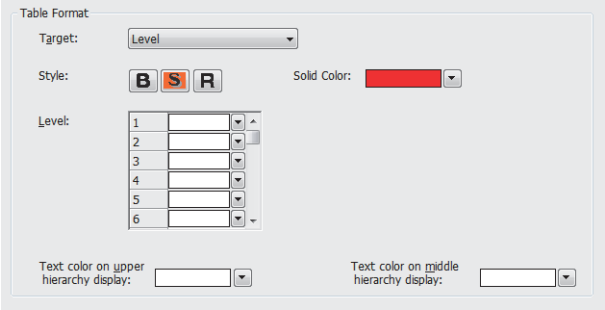
Set the font of displayed alarms.



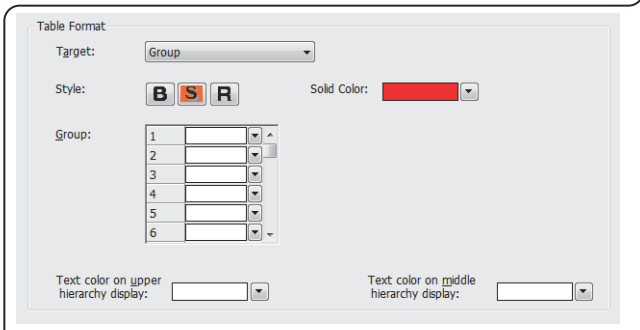
When [Fixed] is selected for [Target]



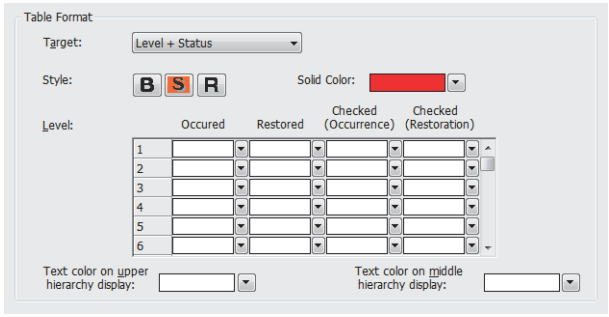
When [Status] is selected for [Target]



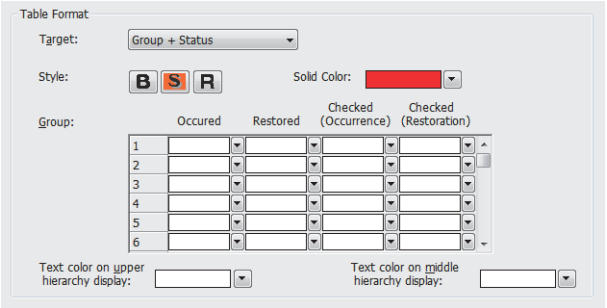
When [Level] is selected for [Target]



When [Group] is selected for [Target]



When [Level + Status] is selected for [Target]



When [Group + Status] is selected for [Target]

When [Comment Attribute] is selected for [Target]

1) **[Font]**

Select the font of the displayed text.

The following shows selectable items.

- [6x8dot]
- [12dot Standard]

• [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
• [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
• [16dot Standard] (GT23, GT21, and GS21)
• [12dot HQ Mincho]
• [12dot HQ Gothic]
• [16dot HQ Mincho]
• [16dot HQ Gothic]
• [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
• [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
• [Outline] (GT2107-W and GS21-W-N)

2) **[Text Size]**

For the details of each font and size, refer to the following.

➟1.2.5 Font specifications

3) **[Display the comments in Windows fonts]**

Displays the following registered comments in Windows fonts.

• Comments set for the basic alarm comment, upper comment, middle comment, and detail display in the user alarm observation

• Comments set for the titles in the [Display] tab (when [Comment] is selected for [Specification])

This setting is deleted when one of the following settings is made.

• [Device] is selected for [Alarm ID] in the [Alarm Setting] tab.

• An item other than [Fixed] is selected for [Display Type] in the [Alarm Setting] tab.

• [Basic Alarm Comment Group], [Middle Comment Group], or [Upper Comment Group] is selected in the [Extended] tab.

4) **[Windows Font Setting] button**

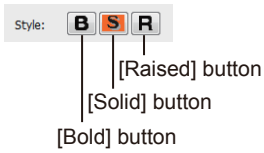
Displays the [Comment Group Property] dialog. (The properties of the comment group used for the basic alarm comment are displayed.)

Set Windows fonts to display comments.

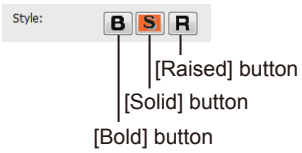
➟5.8.4 ■2 (1) [Comment Group Property] dialog

5) **[Title Format]**

Set the format of the text displayed in the title of the alarm display (user).

Item	Description
[Text Color]	Set the text color. ➟6.4 Color Settings
[Style]	Set the style of the text to be displayed. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed.
[Solid Color]	When [Solid] or [Raised] is selected for [Style], set the color of the shadow.
[KANJI Region]	Select the KANJI region of the displayed text. ➟1.2.5 Font specifications The following shows selectable items. • [Japan] • [China(GB)-Mincho] • [China(Big5)-Gothic]

6) **[Table Format]**

Item	Description
[Switching]	Select how to use different text colors in displaying alarms. The following shows selectable items. • [Fixed]: Displays texts only in the color set as a text color. • [Status]: Changes the text color for each alarm status. • [Level]: Changes the text color for each level. • [Group]: Changes the text color for each group. • [Level + Status]: Changes the text color for each level and alarm status. • [Group + Status]: Changes the text color for each group and alarm status. • [Comment Attribute]: Applies colors of text according to the character attribute set for the comment group, and displays the comments.
[Style]	Set the style of the text to be displayed. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed.
[Solid Color]	When [Solid] or [Raised] is selected for [Style], set the color of the shadow.
[Fixed]	When [Fixed] is selected for [Switching], set the text color.
[Occurred]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm occurs.
[Restored]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm is restored.
[Checked (Occurrence)]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm occurrence is checked.
[Checked (Restoration)]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm restoration is checked.
[Level Color]	When [Level] or [Level + Status] is selected for [Switching], set the text color for the level.
[Group Color]	When [Group] or [Group + Status] is selected for [Switching], set the text color for the group.
[Text Color (Upper)]	When selecting [Level], [Group], [Level + Status], or [Group + Status] for [Switching], set the text color for alarms displayed at the upper level in the hierarchy.
[Text Color (Middle)]	When selecting [Level], [Group], [Level + Status], or [Group + Status] for [Switching], set the text color for alarms displayed at the middle level in the hierarchy.

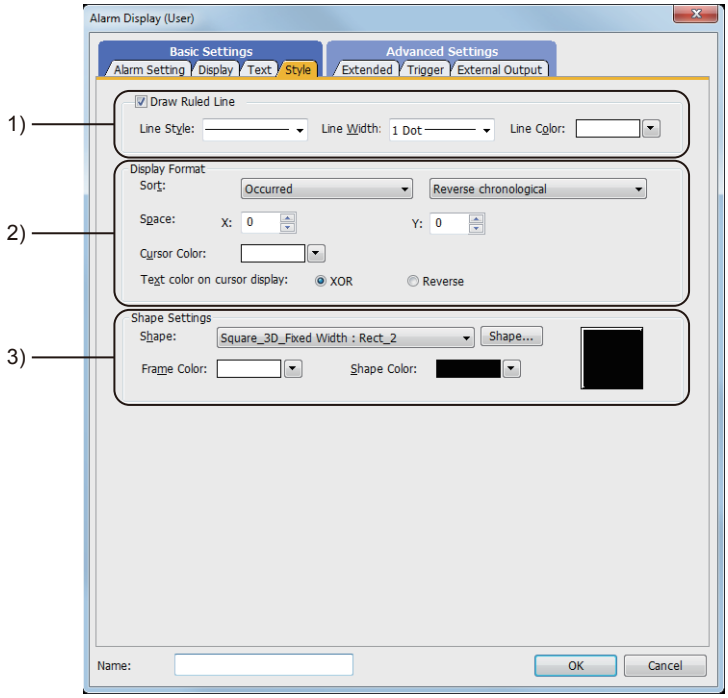
(4) [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the ruled line and shape of the alarm display (user).



1) [Draw Ruled Line]

Item	Description
[Line Style]	Select the type of the ruled line of the alarm display (user).
[Line Width]	Select the width of the ruled line of the alarm display (user).
[Line Color]	Select the color of the ruled line of the alarm display (user).

2) [Display Format]

Item	Description
[Sort]	Select an item and a method for sorting the display of user alarms. • For [Occurred], [Restored], and [Checked], the sorting order can be selected from [Reverse chronological] or [Chronological]. • For [Comment], [Frequency], [Cumulative Time], [Down Time], [Level], [Group], and [Observation Alarm No.], the sorting order can be selected from [Ascending] or [Descending]. • For [Status], the sorting order can be selected from [Checked->Restored->Occurred] or [Occurred->Restored->Checked].
[Space]	Set the space between the text to be displayed and the line. • [X]: Set the space in 1 dot unit. The setting range is [0] to [32]. • [Y]: Set the space in 1 dot unit. The setting range is [0] to [32].
[Cursor Color]	Set the cursor color for selecting a user alarm.

Item	Description
[Text color on cursor display]	Method to set the color of text on the cursor. • [XOR] Displays the text in the synthesized color with XOR specification. • [Reverse] Inverts the text. **GOT Graphic Ver.2** As the setting is fixed to [XOR], no additional setting is required accordingly. **GOT Graphic Ver.1** The following shows the items to be selected. • [XOR] • [Reverse]

3) **[Shape Settings]**

Item	Description
[Shape]	Set a shape for the alarm display (user). To select a shape other than those in the list box, click the [Shape] button.
[Frame Color]	Set the frame color of the shape.
[Shape Color]	Set the color of the shape.

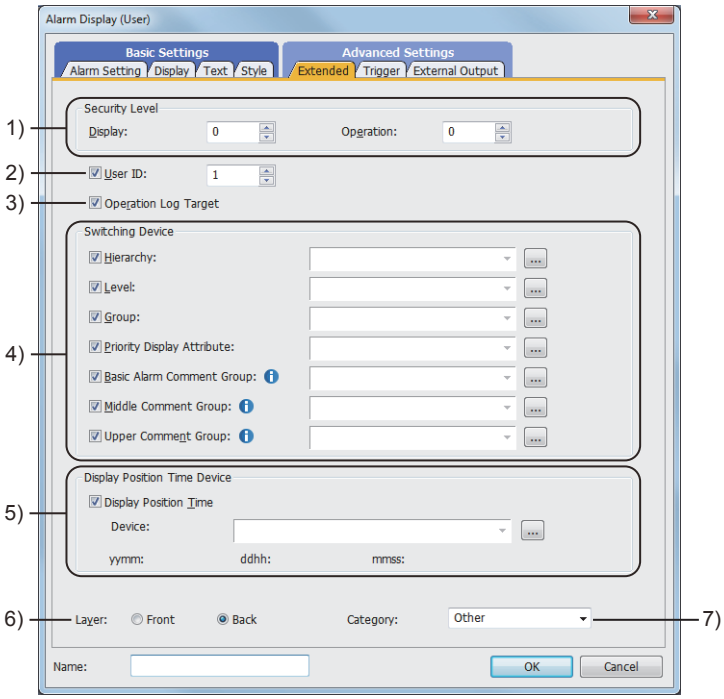
(5) [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the operation of switching displays for the alarm display (user) by devices.



1) **Security level**

Set the security level of display and operation.

Item	Description
[Display]	Set the security level of display. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security.
[Operation]	Set the security level of operation. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security. The setting of security level of [Operation] must be set to the one exceeding the security level of [Display].

2) **[User ID]**

Set the user ID of the alarm display (user).

If an alarm display (user) and another alarm display are set on a screen, touch switches for the alarm display (user) may not function.

For secure operations of the touch switches for alarm displays (user), set user ID for the alarm displays (user).

➟9.1.5 ■2 How to use the alarm display

3) **[Operation Log Target]**

Only available to GT2107-W for GT21.

Only available to GS21-W-N for GS21.

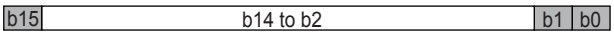
Select this item to target the object for the operation log.

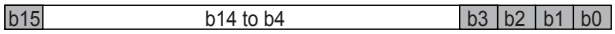
➟5.2.11 ■1 Specifications of the operation log

4) **[Switching Device]**

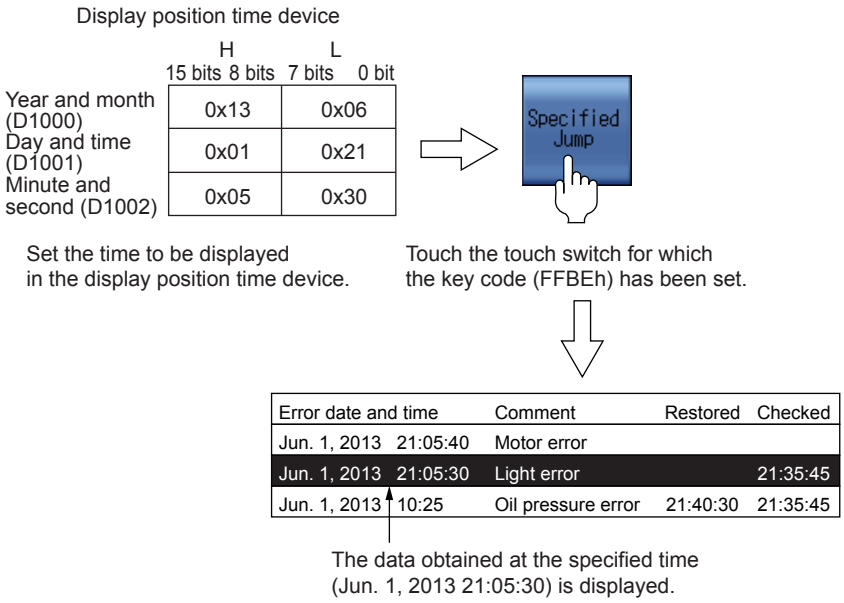
Select items to switch the display using devices.

➟9.1.5 ■2 How to use the alarm display

Item	Description
[Hierarchy]	Switches the level in the alarm hierarchy to be displayed using the device value. All the user alarms at the specified level in the alarm hierarchy are displayed. Set the switching device. ➟6.1.2 How to set devices Store values to the device as follows to switch the level in the alarm hierarchy.  • With b1 to b0, specify the target level in the user alarm hierarchy for switching. 00 (0): Basic alarm 01 (1): Middle alarm 10 (2): Upper alarm • Using b14 to b2 is prohibited. • To b15, store the type of operations of switching levels in the hierarchy. (Identifier of hierarchy switching controllers) To switch levels in the hierarchy using the hierarchy switching device, always set 0 to this bit. 0: Switching by using the switching device 1: Switching by touching the display part For the precautions of switching the comment display or other items using devices, refer to the following. ➟9.1.4 ■3 Precautions
[Level]	Only the user alarms with a specified level No. are displayed. Set the switching device. ➟6.1.2 How to set devices Store the level No. of user alarms to be displayed to the device. • To display a specific level, specify a level No. within 1 to 255. • If a nonexistent level No. is specified, user alarms are not displayed. • To display all levels, specify the level No. 0 or a No. over 256.
[Group]	Only the user alarms with a specified group No. are displayed. Set the switching device. ➟6.1.2 How to set devices Store the group No. of user alarms to be displayed to the device. • To display a specific group, specify a group No. within 1 to 255. • If a nonexistent group No is specified, alarms are not displayed. • To display all groups, specify the group No. 0 or a No. over 256.

Item	Description
[Priority Display Attribute]	Switch the item to be the sort criteria according to the device values. Set the switching device. ➡6.1.2 How to set devices Store values to the device to switch the order of alarm display.  • b0 to b3: Specify the sort criteria. □000h: Normal (date and time of occurrence) □001h: Date and time of occurrence □002h: Date and time of restoration □003h: Date and time of confirmation □004h: Comment No. □005h: Level □006h: Group □007h: Alarm status □009h: Frequency □00Ah: Cumulative time □00Bh: Down time □00Ch: Monitored alarm No. • b4 to b14: Using these bits is prohibited. • b15: Specifies the ascending or descending order. 000□h: Descending 800□h: Ascending The date and time of occurrence, cumulative time, and down time can be set only when the collection mode in the user alarm observation is [Cumulative]. If a value other than the above is stored, alarms are displayed in the order of the date and time of occurrence.
[Basic Alarm Comment Group]	Switch the comment group to be displayed in the basic alarm according to the device values. Set the switching device. ➡6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.
[Middle Alarm Comment Group]	Switch the comment group to be displayed in the middle alarm according to the device values. Set the switching device. ➡6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.
[Upper Alarm Comment Group]	Switch the comment group to be displayed in the upper alarm according to the device values. Set the switching device. ➡6.1.2 How to set devices • If 0 is stored to the device, alarms are displayed with the comment group which is set in the user alarm observation. • When a nonexistent comment group No. is specified, No message is displayed.

5) **[Display Position Time Device]**

Item	Description
[Display Position Time]	Displays the data of a specified time. (Time specification jump function) Set a device in which a specified time is stored. ➟6.1.2 How to set devices The successive devices from a set device are set to store the data of year and month, day and hour, and minute and second. By using the display position time device and a touch switch, the basic alarm or a specified time is displayed. If alarm data are not obtained at a specified time, the data obtained at the nearest time is displayed. • Time specification jump function of when [Priority Display Attribute] is set Alarms are displayed in the order set in [Priority Display Attribute]. The display order is "Restored", "Checked", and "Occurred". When [Priority Display Attribute] is not set, alarms in a specified time are displayed regardless of the above order. • Specification of the time which can be set The data type is BCD16 (binary coded decimal). The data range varies with the GOT model. GT27, GT25, GT23, and GS25: Jan. 1, 2000 to Dec. 31, 2099 GT21 and GS21: Jan. 1, 2000 to Dec. 31, 2037 • Required settings*1 • Operation example The following shows an example of a time specification jump function operation. Example) When setting D1000 as the display position time specification device and displaying the data of Jun.1, 2013 21:05:30  For precautions of the time specification jump function, refer to the following. ➟9.1.5 ■1 Specifications of the alarm display

*1 Place the following objects on the screen and set them.

Object	Settings
Switch, key code switch	Read an applicable object from the library of GT Designer3, or create it. ➟9.1.5 ■2 How to use the alarm display When creating the objects, set [Action] of [Code Setting] to [Display Position Time Device] for each object. ➟8.2 Placing a Touch Switch
Alarm display (user)	Select [Display Position Time] in the [Extended] tab and set a device. ➟9.1.5 ■4 (5) [Extended] tab
Alarm display (system)	Select [Display Position Time] in the [Extended] tab and set a device. ➟9.1.5 ■5 (5) [Extended] tab

6) **[Layer]**

Not available to GT21 and GS21.

Select the layer to arrange the object on.

The following shows selectable items.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

7) **Category I**

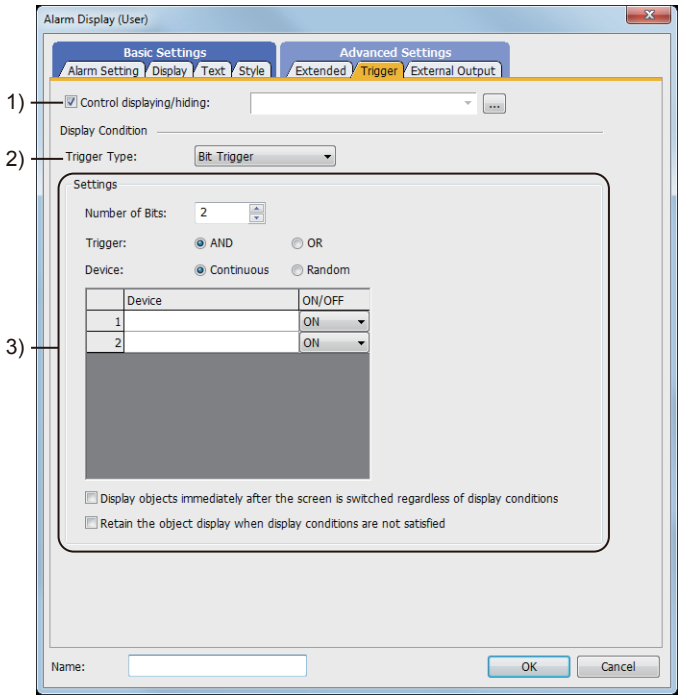
Select the category to assign the object.

➟11.7 Managing figures and objects by category

(6) [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**

Set the control device to display or hide all the objects including the shape frame.

2) **[Trigger Type]**

Select the condition of displaying and operating the object.

The following shows selectable items.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Settings]**

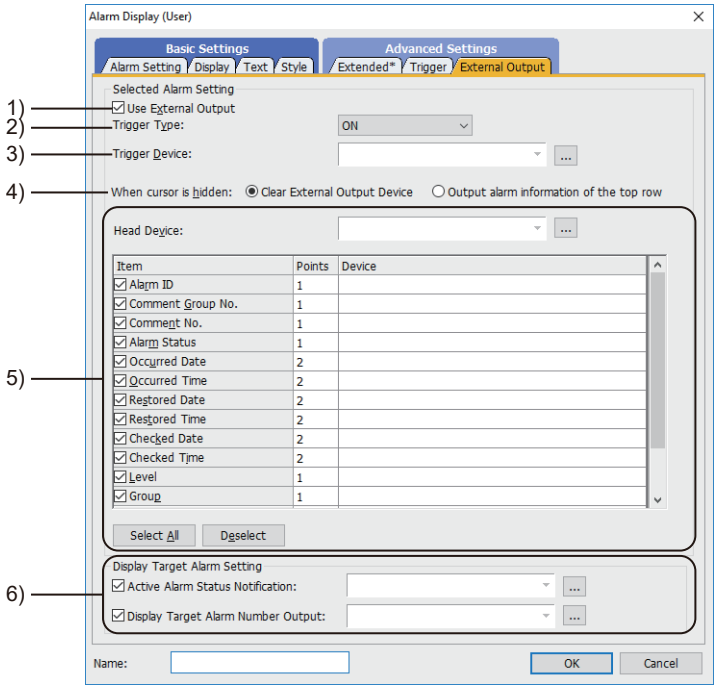
For details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

(7) [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the setting for writing the information of the alarm selected in the alarm display (user) into devices.



1) **[Enable External Output]**

Write the information of touched alarm into devices.

➟9.1.5 ■2 How to use the alarm display

2) **[Trigger Type]**

Select the timing to write the alarm information into a device.

Select [Ordinary] to write the alarm information into the device when the alarm is touched.

Select [ON] to write the alarm information into the device when the alarm display area is touched while the device is on.

Select [OFF] to write the alarm information into the device when the alarm display is touched while the device is off.

3) **[Trigger Device]**

When selecting [ON] or [OFF] in [Trigger Type], set the device to be a trigger.

➟6.1.2 How to set devices

4) **[When cursor is hidden]**

Configure the setting for external outputs of when the cursor is hidden.

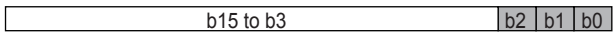
- [Clear External Output Device]:
  Select this item to clear the value of the external output device when no alarm is selected.
- [Output alarm information of the top row]:
  Select this item to output externally the alarm information displayed at the top row when no alarm is selected.

5) **[First Device]**

Set the start device (word device) to which the information of the alarm is written.

When items to be written are selected, the successive devices following the start device are automatically set.

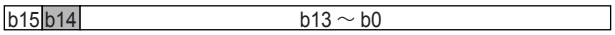
Item	Description
[Alarm ID]	Select this item to write the alarm ID into devices.
[Comment Group No.]	Select this item to write the comment group No. of the comment displayed with the alarm display.
[Comment No.]	Select this item to write the comment No. of the comment displayed with the alarm display.

Item	Description
[Status]	Select this item to write the alarm status into devices.  • b0: When the alarm is in the "Occurred" status, 1 is stored, and when the alarm is in the "Restored" status, 0 is stored. • b1: When the alarm is in the "Checked" status, 1 is stored, and when the alarm is unchecked, 0 is stored. • b2: When writing the alarm status into devices is enabled, 1 is stored, and when writing the alarm status into devices is disabled, 0 is stored. • b15 to b3: Using these bits is prohibited. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger
[Occurred Date]	Select this item to write the date when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Occurred Time]	Select this item to write the time when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Restored Date]	Select this item to write the date when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Restored Time]	Select this item to write the time when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Checked Date]	Select this item to write the date when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Checked Time]	Select this item to write the time when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■4 (7) (b) Descriptions of the date and time to be written
[Level]	Select this item to write the level No. of an alarm into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger
[Group]	Select this item to write the group No. of an alarm into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger
[Frequency]	Select this item to write the frequency of alarm occurrences into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger
[Cumulative Time]	Select this item to write the cumulative time of alarms into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger The cumulative time (in hours and minutes) is stored in BCD code in two word devices. Example) When the cumulative time is 12 hours and 35 minutes Device value: 1235

Item	Description
[Down Time]	Select this item to write the down time of alarms into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■4 (7) (a) Write trigger The downtime (in hours and minutes) is stored in BCD code in two word devices. Example) When the downtime is 2 hours and 10 minutes Device value: 210
[Select All] button	Selects all alarm information.
[Deselect] button	Cancels all the selected alarm information.

6) **[Display Target Alarm Setting]**

Set the devices to which the information on the displayed alarms is written.

Item	Description
[Active Alarm Status Notification]	Set the device that notifies the status of the displayed alarms. The following shows the notification details of each bit.  • b0 to 13: Using these bits is prohibited. • b14: Stores 1 when a value greater than the number of displayed alarms is input to the device, which is set for [Display Start Row] on the [Alarm Setting] tab. • b15: Using these bits is prohibited.
[Display Target Alarm Number Output]	Set the device that stores the number of displayed alarms.

(a) **Write trigger**

- Levels in the alarm hierarchy for which the alarm information can be written

  Only when the basic alarm is touched, the alarm information is written into devices.
- Writing by the collection mode

  The available data for writing differs according to the collection mode which is set in the alarm observation. For details, refer to the following.

  ➟9.1.2 ■1 Specifications of the user alarm observation

(b) **Descriptions of the date and time to be written**

The date and time are respectively stored in two word devices.

The following describes the case in which the time of occurrence is written into D254 (2 points) and the date of occurrence is written into D256 (2 points).

- Date

  Store the year, month, and day with BCD code.

	b15 to b8	b7 to b0
D254	Month (1 to 12)	Date (1 to 31)

	b15 to b8	b7 to b0
D255	Two upper digits of year	Two lower digits of year

- Time

  Stores the hour, minute, and second with BCD code.

	b15 to b8	b7 to b0
D256	Minute (0 to 59)	Second (0 to 59)

	b15 to b8	b7 to b0
D257	00	Hour (0 to 23)

Example) Jun. 1, 2013 12:24:56

	b15 to b8	b7 to b0
D254	06	01
	(Month)	(Date)

	b15 to b8	b7 to b0
D255	20	13
	(Year)	

	b15 to b8	b7 to b0
D256	24	56
	(Minute)	(Second)

	b15 to b8	b7 to b0
D257	00	12
		(Hour)

■5 [Alarm Display(System)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Object] → [Alarm Display] → [Alarm Display (System)] from the menu.

Step 2 Click the position where you place the alarm display. Placing the alarm display is complete.

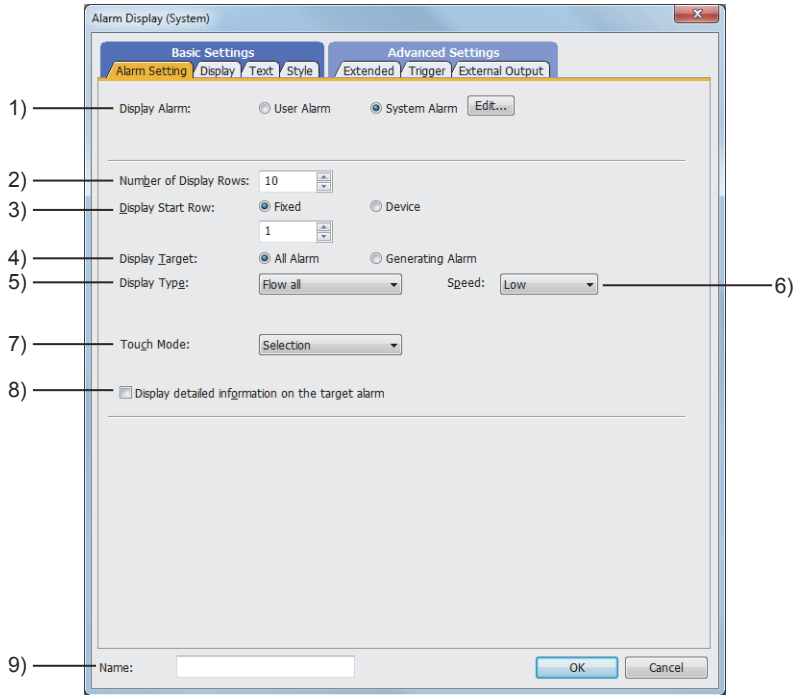
Step 3 Double-click the alarm display which has been placed to display the setting dialog.

➟(1) [Alarm Setting] tab
(2) [Display] tab
(3) [Text] tab
(4) [Style] tab
(5) [Extended] tab
(6) [Trigger] tab
(7) [External Output] tab

(1) [Alarm Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the settings such as the type of the alarm observation to be displayed, the display method of the message, and the operation performed when the alarm display is touched.



1) **[Display Alarm]**
Select the alarm type to be displayed in the alarm display.

The following shows selectable items.

- [User Alarm]: Select this item to display the user alarm.
- [System Alarm]: Select this item to display the system alarm.

For the alarm display (system), select [System Alarm].

Click the [Edit] button to display the [System Alarm Observation] dialog.

➟9.1.3 ■5 [System Alarm Observation] dialog

2) **[Number of Display Rows]**

Set the number of rows displayed in a screen.

The following shows the setting range.

- [1] to [64] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [1] to [27] (GT21 and GS21)

Example) When [Number of Display Rows] is set to three rows

Error date and time	Comment	Restored	Checked
Jun. 1, 2013 10:25	402 A communication tim	11:25	10:45
Jun. 1, 2013 12:05	70 The battery voltage	12:25	12:28
Jun. 1, 2013 08:30	460 Communication unit	09:45	09:40

Alarms are displayed for three rows excluding the title row.

3) **[Display Start Row]**

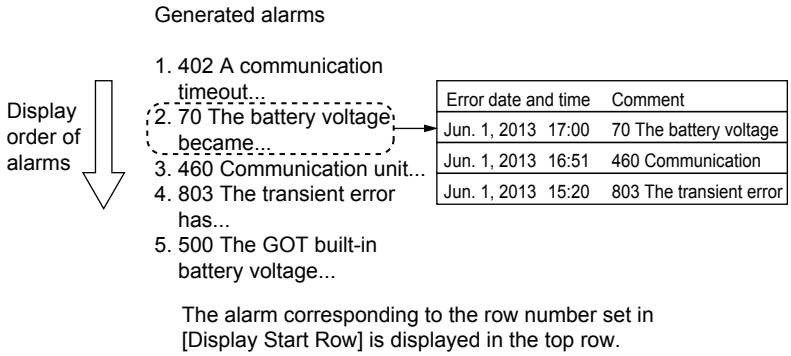
Select a row to be displayed in the top row when the number of alarms exceeds the number of rows set in [Number of Display Rows].

Item	Description
[Fixed]	Enter the number of rows to be displayed directly. The setting range is [1] to [32767].
[Device]	Set the device that specifies the start row. ➟6.1.2 How to set devices

- When the number of alarms is larger than the value set in [Display Start Row]

  The alarm corresponding to the row number set in [Display Start Row] is displayed in the top row.

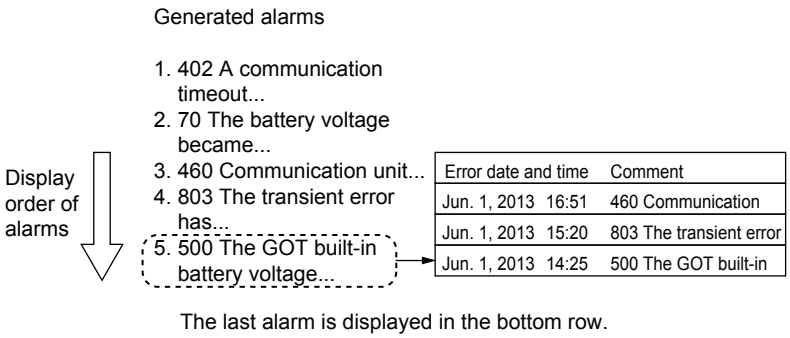
  Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 2, and the number of alarms is 5



- When the number of alarms is smaller than the value set in [Display Start Row]

  The last alarm is displayed in the bottom row.

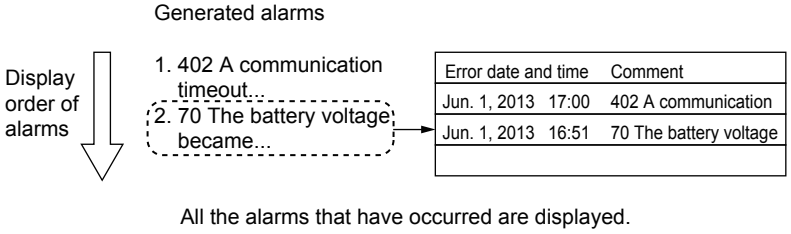
  Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 10, and the number of alarms is 5



- When the number of alarms is smaller than the value set in [Number of Display Rows]

  The setting for [Display Start Row] becomes disabled, and all the alarms that have occurred are displayed.

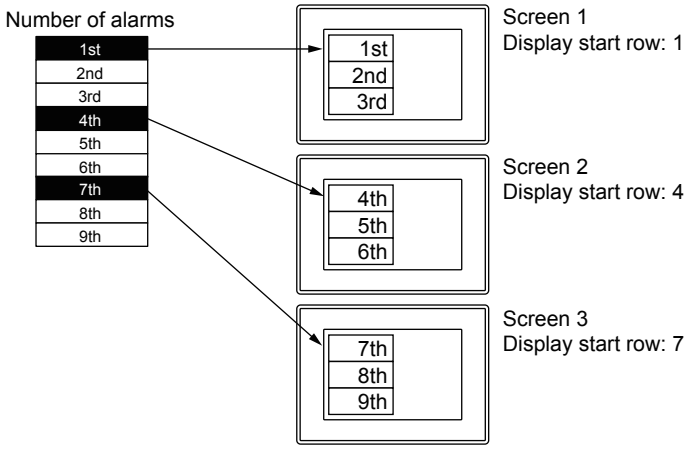
Example) When [Number of Display Rows] is set to 3, [Display Start Row] is set to 3, and the number of alarms is 2



All the alarms that have occurred are displayed.

• Using the setting for multiple screens

When different values of [Display Start Row] are set for each screen, the system alarm displays differ depending on the screens.



Even if the number of alarms exceeds the value set in [Display Start Row] when system alarms are displayed on the GOT, the setting for [Display Start Row] does not become enabled.

To enable the setting for [Display Start Row], switch the screen to another one, then switch back the screen to the one in which the system alarm is displayed.

4) **[Display Target]**

Select the display method of collected alarms.

The following shows selectable items.

• [All Alarm]:

Select this item to display the history of alarms including the past alarms.

• [Generating Alarm]:

When this item is set, only the existing alarms are displayed.

➟9.1.5 ■1 (2) Alarm events to be listed

5) **[Display Type]**

Select the display method of the comments for alarms.

The following shows selectable items.

• [Fixed]:

Does not scroll a comment displayed at an alarm occurrence.

When a comment extends off the display area, the part outside the area and the second and subsequent rows are not displayed.

• [Flow all]:

Scrolls a full comment displayed at an alarm occurrence from right to left.

• [Flow as required]:

Does not scroll a comment fully displayed within the display area.

Scrolls a comment extending off the display area and a multiple-row comment from right to left.

• [Flow the selected row]:

Scrolls only the comment selected among the comments displayed at an alarm occurrence from right to left.

➟9.1.5 ■2 (2) Display method of comments

Scrolling a comment is available for up to 16 alarm display objects including Alarm Display (User) and Alarm Display (System) on one screen.

If scrolling a comment is set for 17 alarm display objects or more, comment display on the 17th object and later are fixed.

6) **[Speed]**

This item is settable when [Display Type] is set to [Flow all], [Flow as required], or [Flow the selected row].
Set the speed at which the display is scrolled.
The following shows selectable items.

- [High]: The text of comments flows at the speed of 200 dots a second.
- [Medium]: The text of comments flows at the speed of 100 dots a second.
- [Low]: The text of comments flows at the speed of 50 dots a second.

7) **[Touch Mode]**

Select the operation performed when the alarm display (user) is touched.
The following shows selectable items.

- [None]: Select this item to disable touch operations.
- [Selection]: Select this item to select a touched alarm.

8) **[Display detailed information on the target alarm]**

Displays detailed information added to system alarms.
This item is enabled only when [Display detailed information on the target alarm] is selected in the [Basic] tab of the [System Alarm Observation].
The following shows the detailed information to be added.

- [Channel]
- [Network No.]
- [Station No.]
- [CPU No.]
- [Device]
- [Screen No.]
- [Definition Screen No.]
- [Object ID]
- [Function Name]
- [Drive Name]

[-] is displayed for information which is not related to the alarm or information in which no alarm is detected.

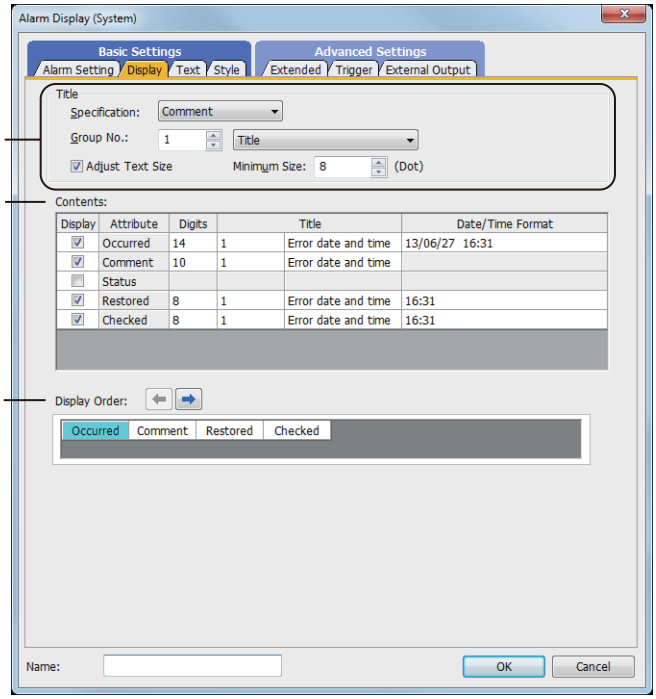
9) **[Name]**

Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

(2) [Display] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the items to be displayed in the system alarm and the display order.



1) [Title]

Item	Description
[Specification]	Select the method of specifying the text to be displayed in the title. The following shows selectable items. • [Direct]: Select this item to input the text to be displayed in the title directly into [Title] in [Contents]. • [Comment]: Select this item to display the text to be displayed in the title using the comment in the comment group. • [None]: Select this item not to display the title.
[Group No.]	Only when [Comment] is selected for [Specification], this item can be set. Set the comment group in which the text to be displayed in the title is registered.
[Adjust Text Size]	Only when [Comment] is selected for [Specification], this item can be set. The text size is adjusted according to the width of the title. When [Adjust Text Size] is not selected, the text size is adjusted by inserting a line feed.
[Minimum Size]	Only when [Comment] is selected for [Specification] and [Adjust Text Size] is selected, this item can be set. Set the minimum text size for adjustment. The setting range is [8] to [128] dot(s).

2) [Contents]

Item	Description
[Display]	Select the items to be displayed in the alarm display (system).
[Attribute]	Items to be displayed in the alarm display (system) • [Occurred]: Displays the date and time of occurrence of an alarm. • [Comment]: Displays the date and time of occurrence of an alarm. • [Status]: Displays the alarm status. • [Restored]: Displays the date and time when an alarm has restored. • [Checked]: Displays the date and time when an alarm occurrence has been checked. When an option other than [Cumulative] is selected for [Collection Mode] in the [Basic] tab of [User Alarm Observation], the item name is displayed, but the value is not displayed.

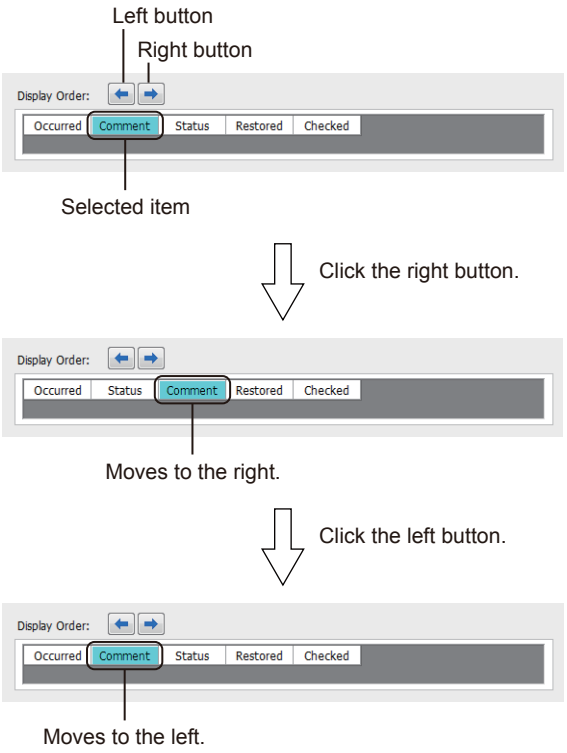
Item	Description
[Digits]	Set the number of the digits displayed in each item. Set a one-byte character as one digit and a two-byte character as two digits. The following shows the setting range of each item. • [Occurred]: The number of digits for this item is automatically set according to the setting for [Date/Time Format]. • [Comment]: [10] digits to [128] digits (For GT21 and GS21: [10] digits to [80] digits) • [Status]: [6] digits to [128] digits (For GT21 and GS21: [6] digits to [80] digits) • [Restored]: The number of digits for this item is automatically set according to the setting for [Date/Time Format]. • [Checked]: The number of digits for this item is automatically set according to the setting for [Date/Time Format].
[Title]	Set a title of the alarm display (user). The setting depends on the value selected for [Specification]. When [Direct] is selected, input characters within the number of digits set in [Digits]. When [Comment] is selected, the comment No. and the comment to be displayed in the title are displayed. When [None] is selected, the title cannot be set.
[Date/Time Format]	Set the display format to display the date and time of occurrence of an alarm. Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog. ➟6.3.2 Date/time format settings

3) **[Display Order]**

Set the order in which the items set for [Attribute] in [Contents] are displayed.

The items of [Attribute] which are set in [Display] are displayed.

Move the display position of the selected item sideways by using the right button and the left button.



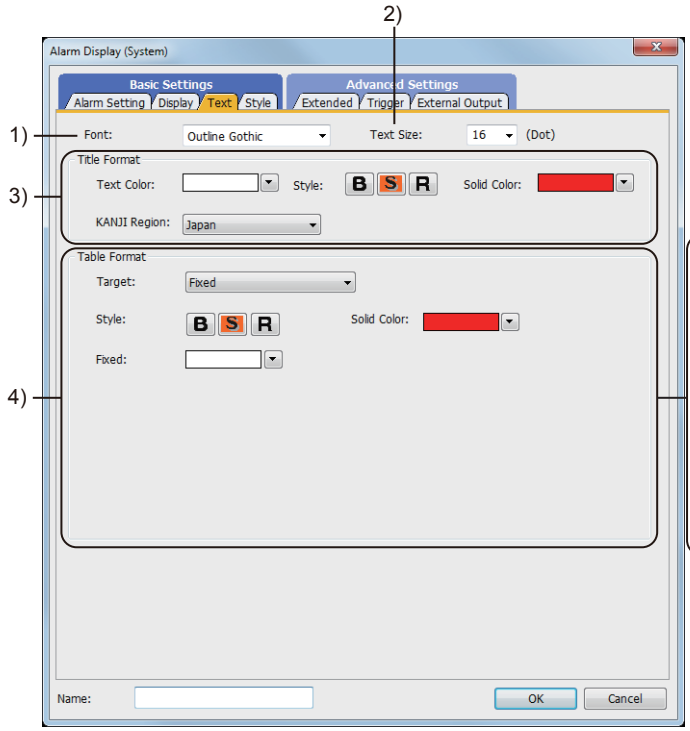
(3) [Text] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

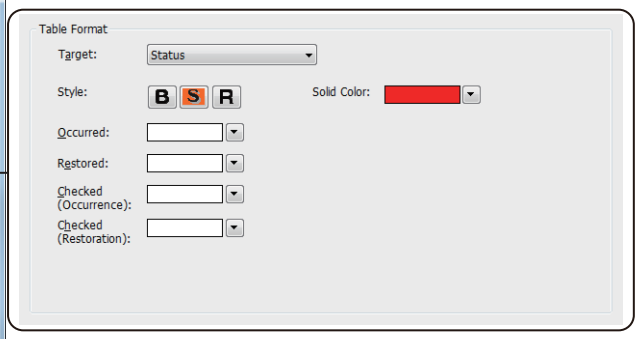
For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the font of displayed alarms.



When [Fixed] is selected for [Target]



When [Status] is selected for [Target]

1) **[Font]**

Select the font of the displayed text.

The following shows selectable items.

- [6x8dot]
- [12dot Standard]
- [16dot Standard Mincho] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard Gothic] (GT27, GT25, GT SoftGOT2000, and GS25)
- [16dot Standard] (GT23, GT21, and GS21)
- [12dot HQ Mincho]
- [12dot HQ Gothic]
- [16dot HQ Mincho]
- [16dot HQ Gothic]
- [Outline Kaisho] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Outline Gothic] (GT27, GT25, GT23, GT SoftGOT2000, and GS25)

2) **[Text Size]**

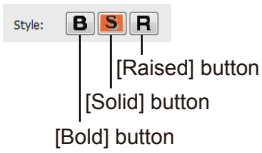
For the details of each font and size, refer to the following.

➟1.2.5 Font specifications

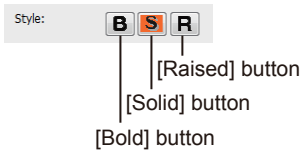
3) **[Title Format]**

Set the format of the text displayed in the title of the alarm display (user).

Item	Description
[Text Color]	Set the text color. ➟6.4 Color Settings

Item	Description
[Style]	Set the style of the text to be displayed. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed.
[Solid Color]	When [Solid] or [Raised] is selected for [Style], set the color of the shadow.
[KANJI Region]	Select the KANJI region of the displayed text. ➡1.2.5 Font specifications The following shows selectable items. • [Japan] • [China(GB)-Mincho] • [China(Big5)-Gothic]

4) **[Table Format]**

Item	Description
[Switching]	Select how to use different text colors in displaying alarms. The following shows selectable items. • [Fixed]: Displays texts only in the color set as a text color. • [Status]: Changes the text color for each alarm status.
[Style]	Set the style of the text to be displayed. One style ([Bold], [Solid], or [Raised]) is settable only.  • **[Bold] button** Displays the text in bold. • **[Solid] button** Displays the text with a shadow. • **[Raised] button** Displays the text embossed.
[Solid Color]	When [Solid] or [Raised] is selected for [Style], set the color of the shadow.
[Fixed]	When [Fixed] is selected for [Switching], set the text color.
[Occurred]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm occurs.
[Restored]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm is restored.
[Checked (Occurrence)]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm occurrence is checked.
[Checked (Restoration)]	When one of [Status], [Level + Status], or [Group + Status] is selected for [Switching], set the text color of when an alarm restoration is checked.

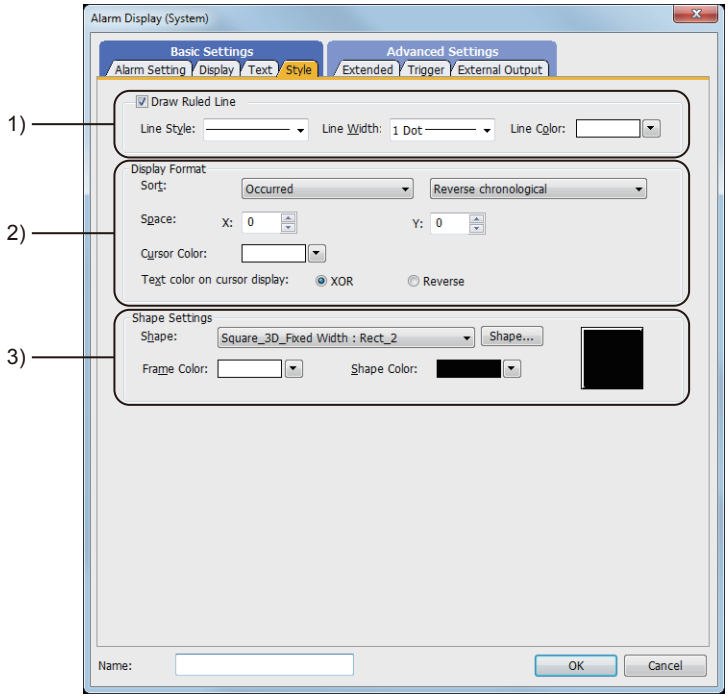
(4) [Style] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the ruled line and shape of the alarm display (system).



1) [Draw Ruled Line]

Item	Description
[Line Style]	Select the type of the ruled line of the alarm display (system).
[Line Width]	Select the width of the ruled line of the alarm display (system).
[Line Color]	Select the color of the ruled line of the alarm display (system).

2) [Display Format]

Item	Description
[Sort]	Select an item and a method for sorting the display of user alarms. • For [Occurred], [Restored], and [Checked], the sorting order can be selected from [Reverse chronological] or [Chronological]. • For [Comment], the sorting order can be selected from [Ascending] or [Descending]. • For [Status], the sorting order can be selected from [Checked->Restored->Occurred] or [Occurred->Restored->Checked].
[Space]	Set the space between the text to be displayed and the line. • [X]: Set the space in 8 dot units. The setting range is [0], [8], [16], [24], and [32]. • [Y]: Set the space in 1 dot unit. The setting range is [0] to [32].
[Cursor Color]	Set the cursor color for selecting a user alarm.

Item	Description
[Text color on cursor display]	Method to set the color of text on the cursor. • [XOR] Displays the text in the synthesized color with XOR specification. • [Reverse] Inverts the text. **GOT Graphic Ver.2** As the setting is fixed to [XOR], no additional setting is required accordingly. **GOT Graphic Ver.1** The following shows the items to be selected. • [XOR] • [Reverse]

3) **[Shape]**

Item	Description
[Shape Settings]	Set a shape for the alarm display (system). To select a shape other than those in the list box, click the [Shape] button.
[Frame Color]	Set the frame color of the shape.
[Shape Color]	Set the color of the shape.

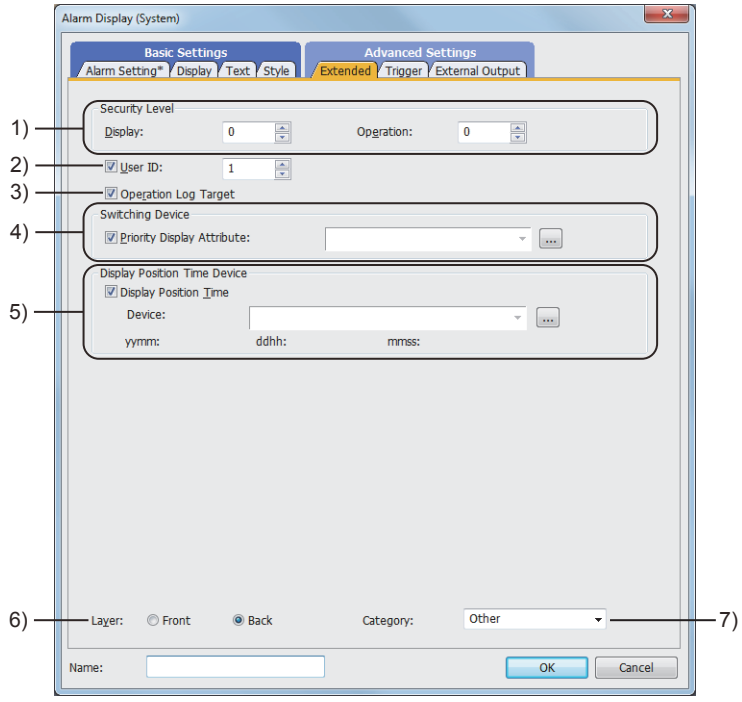
(5) [Extended] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For mobile screens, some setting items are not available.

➟10.19.2 ■2 Usable functions

Set the operation of switching displays for the alarm display (system) by devices.



1) **[Security level]**

Set the security level of display and operation.

Item	Description
[Display]	Set the security level of display. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security.
[Operation]	Set the security level of operation. The setting range is [0] to [15]. Select [0] not to set the security and select [1] to [15] to set the security. The setting of security level of [Operation] must be set to the one exceeding the security level of [Display].

2) **[User ID]**

Set the user ID of the alarm display (system).

If an alarm display (system) and another alarm display are set on a screen, touch switches for the alarm display (system) may not function.

For secure operations of the touch switches for alarm displays (system), set user ID for the alarm displays (system).

➟9.1.5 ■2 How to use the alarm display

3) **[Operation Log Target]**

Select this item to target the object for the operation log.

➟5.2.11 ■1 Specifications of the operation log

4) **[Switching Device]**

Select items to switch the display using devices.

➟9.1.5 ■2 How to use the alarm display

Item	Description
[Priority Display Attribute]	Switch the item to be the sort criteria according to the device values. Set the switching device. ➟6.1.2 How to set devices Store values to the device to switch the order of alarm display. • For b3 to b0, specify the sort criteria. □000h: Normal (date and time of occurrence) □001h: Date and time of occurrence □002h: Date and time of restoration □003h: Date and time of confirmation □007h: Alarm status • Using b14 to b4 is prohibited. • Ascending or descending is specified for b15. 000□h: Descending 800□h: Ascending The date and time of occurrence, cumulative time, and down time can be set only when the collection mode in the user alarm observation is [Cumulative]. If a value other than the above is stored, alarms are displayed in the order of the date and time of occurrence.

5) **[Display Position Time Device]**

Item	Description
[Display Position Time]	Displays the data of a specified time. (Time specification jump function) Set a device in which a specified time is stored. ➟6.1.2 How to set devices The successive devices from a set device are set to store the data of year and month, day and hour, and minute and second.

6) **[Layer]**

Select the layer to arrange the object on.

The following shows selectable items.

- [Front]
- [Back]

➟6.5.5 ■3 Superimposition

7) **[Category]**

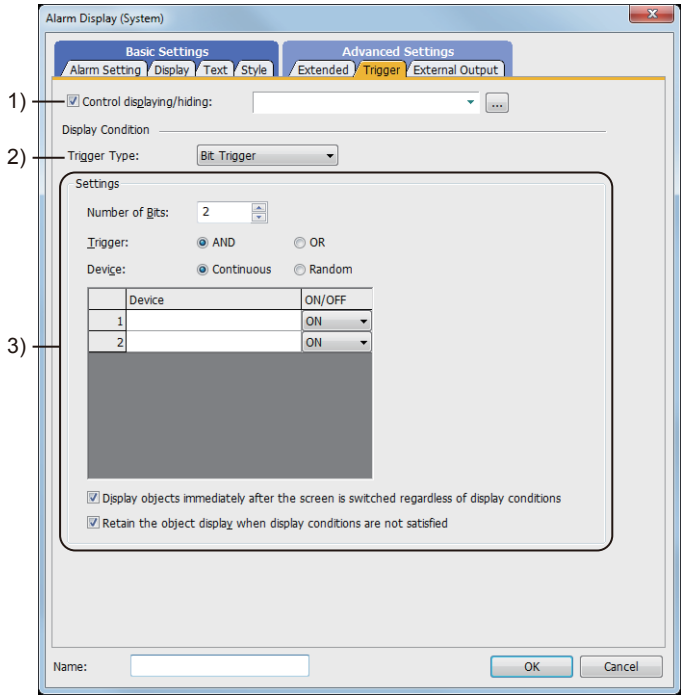
Select the category to assign the object.

➟11.7 Managing figures and objects by category

(6) [Trigger] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set conditions for displaying the object.



1) **[Control displaying/hiding]**
Set the control device to display or hide all the objects including the shape frame.

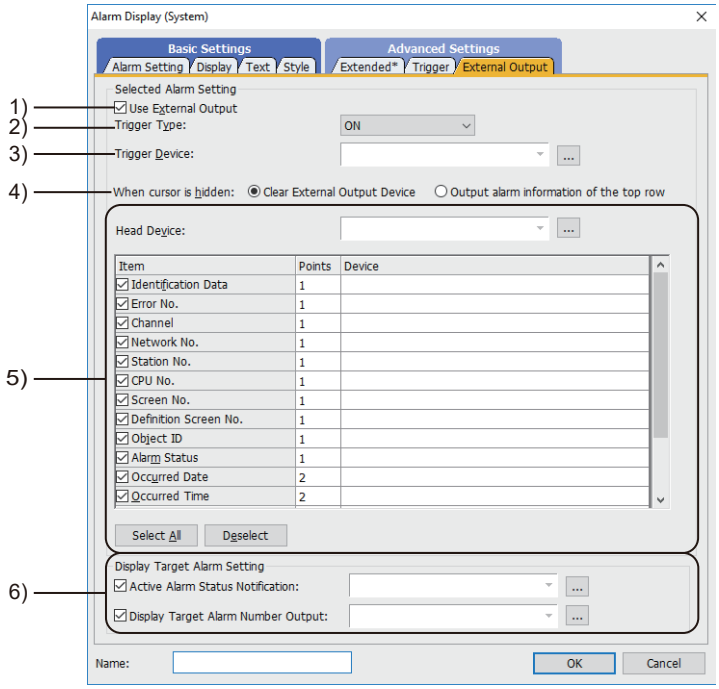
2) **[Trigger Type]**
Select the condition of displaying and operating the object.
The following shows selectable items.
- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

3) **[Settings]**
For details of each item, refer to the following.
➟6.2.2 Setting Trigger Types

(7) [External Output] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the setting for writing the information of the alarm selected in the alarm display (system) into devices.



1) **[Enable External Output]**

Write the information of touched alarm into devices.

➟9.1.5 ■2 How to use the alarm display

2) **[Trigger Type]**

Select the timing to write the alarm information into a device.

Select [Ordinary] to write the alarm information into the device when the alarm is touched.

Select [ON] to write the alarm information into the device when the alarm display area is touched while the device is on.

Select [OFF] to write the alarm information into the device when the alarm display is touched while the device is off.

3) **[Trigger Device]**

When selecting [ON] or [OFF] in [Trigger Type], set the device to be a trigger.

➟6.1.2 How to set devices

4) **[When cursor is hidden]**

Configure the setting for external outputs of when the cursor is hidden.

- [Clear External Output Device]:
  Select this item to clear the value of the external output device when no alarm is selected.
- [Output alarm information of the top row]:
  Select this item to output externally the alarm information displayed at the top row when no alarm is selected.

5) **[First Device]**

Set the start device (word device) to which the information of the alarm is written.

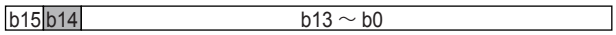
When items to be written are selected, the successive devices following the start device are automatically set.

Item	Description
[Identification Data]	Select this item to write the alarm identification data into devices.
[Error No.]	Select this item to write the error No. of an alarm into devices.
[Channel]	Select this item to write the channel No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[Network No.]	Select this item to write the network No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information

Item	Description
[Station No.]	Select this item to write the station No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[CPU No.]	Select this item to write the CPU No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[Screen No.]	Select this item to write the screen No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[Definition Screen No.]	Select this item to write the definition screen No. of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[Object ID]	Select this item to write the object ID of an alarm as added information into devices. For the added information, refer to the following. ➟9.1.5 ■5 (7) (a) Added information
[Alarm Status]	Select this item to write the alarm status into devices. • b0: When the alarm is in the "Occurred" status, 1 is stored, and when the alarm is in the "Restored" status, 0 is stored. • b1: When the alarm is in the "Checked" status, 1 is stored, and when the alarm is unchecked, 0 is stored. • b2: When writing the alarm status into devices is enabled, 1 is stored, and when writing the alarm status into devices is disabled, 0 is stored. • b15 to b3: Using these bits is prohibited. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger
[Occurred Date]	Select this item to write the date when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Occurred Time]	Select this item to write the time when an alarm has occurred into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Restored Date]	Select this item to write the date when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Restored Time]	Select this item to write the time when an alarm has been restored into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Checked Date]	Select this item to write the date when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Checked Time]	Select this item to write the time when an alarm has been checked into devices. For the details of the write trigger, refer to the following. ➟9.1.5 ■5 (7) (b) Write trigger For the description of the date and time to be written, refer to the following. ➟9.1.5 ■5 (7) (c) Descriptions of the date and time to be written
[Select All] button	Selects all alarm information.
[Deselect] button	Cancels all the selected alarm information.

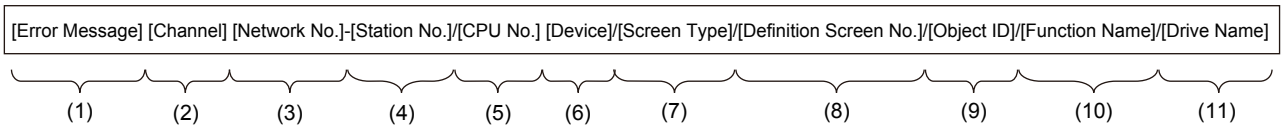
6) **[Display Target Alarm Setting]**

Set the devices to which the information on the displayed alarms is written.

Item	Description
[Active Alarm Status Notification]	Set the device that notifies the status of the displayed alarms. The following shows the notification details of each bit.  • b0 to 13: Using these bits is prohibited. • b14: Stores 1 when a value greater than the number of displayed alarms is input to the device, which is set for [Display Start Row] on the [Alarm Setting] tab. • b15: Using these bits is prohibited.
[Display Target Alarm Number Output]	Set the device that stores the number of displayed alarms.

(a) **Added information**

• By adding the information of an error that has occurred, it becomes easy to identify where the error has occurred.
The added information which is not related to the error is not added even if the information is set.



Added information		Description	
(1)	Error message	Displays the error code of a system error and the error message.	
(2)	Channel	Displays the channel No. The display type is DEV: Ch No.	
(3)	Network No.	Displays the network No. with three digits number. *2	
(4)	Station	Displays the station No. with three digits number. *2	
(5)	CPU No.	Displays the CPU No.	
(6)	Device	Displays the device.	
(7)	Screen No.*1*2	Displays the screen type and the screen No.	
		Base screen	BASE: *****
		Overlap window 1 to 5	OVL1: ***** to OVL5: *****
		Superimpose window 1 to 2	SPI1: ***** to SPI2: *****
		User customize dialog	DLG: *****
		Operation panel	PNL: *****
		Key window	KEY: ******
		Base screen (GOT Mobile)	MBL-BASE: *****
		Overlap window 1 to 2 (GOT Mobile)	MBL-OVL1: ***** to MBL-OVL2: *****
		Superimpose window 1 to 2 (GOT Mobile)	MBL-SPI1: ***** to MBL-SPI2: *****
(8)	Definition screen No.*1*2	Displays the definition screen type and the screen No.	
		Base screen	B: *****
		Window screen	W: *****
		Report screen	R: *****
		Mobile screen	MB: *****
(9)	Object ID	Displays the object ID.	
(10)	Function name	Displays the function name. Switches languages with the language switching.	
(11)	Drive name	Displays the drive name. The display type is DRV: Drive name.	

*1 The number of the symbol * represents the number of the digits of the screen No.

*2 When a displayed number contains a number of digits less than that shown in the table, the number is displayed with 0 padded.

• The following shows a display example of added information.

Channel (1), device (X1000), screen No. (overlap window 3, screen No. 251), definition screen No. (window screen, screen No. 251), object ID (10000), function name (shape display)

G01-322 The specified device No. is out of the range. Check the available range. DEV:Ch1 X1000/OVL3:00251/W:00251/ID:10000/Shape display

If added information is displayed, the message is longer.
When all information is not be displayed, select Flow as the display type.

- For the device to which offset is specified, the device name and address after the offset are displayed.
  If the address after the offset is out of the range, ?? is displayed.
  The following shows the display example of a case where the device M1000 (range: 0 to 61424) is offset.
  Offset device 60000 → The device M61000 after offset is displayed.
  Offset device 61000 → ?? is displayed because the device after offset is out of the range.

(b) **Write trigger**

- Writing by the collection mode
  The available data for writing differs according to the collection mode which is set in the alarm observation.
  For details, refer to the following.
  ➟9.1.3 ■1 Specifications of the system alarm observation

(c) **Descriptions of the date and time to be written**

The date and time are respectively stored in two word devices.
The following describes the case in which the time of occurrence is written into D254 (2 points) and the date of occurrence is written into D256 (2 points).

- Date
  Store the year, month, and day with BCD code.

	b15 to b8	b7 to b0
D254	Month (1 to 12)	Date (1 to 31)

	b15 to b8	b7 to b0
D255	Two upper digits of year	Two lower digits of year

- Time
  Stores the hour, minute, and second with BCD code.

	b15 to b8	b7 to b0
D256	Minute (0 to 59)	Second (0 to 59)

	b15 to b8	b7 to b0
D257	00	Hour (0 to 23)

Example) Jun. 1, 2013 12:24:56

	b15 to b8	b7 to b0
D254	06	01
	(Month)	(Date)

	b15 to b8	b7 to b0
D255	20	13
	(Year)	

	b15 to b8	b7 to b0
D256	24	56
	(Minute)	(Second)

	b15 to b8	b7 to b0
D257	00	12
		(Hour)

■6 Relevant settings

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Set the relevant settings other than the specific settings for the alarm display as required.
The following shows the functions that are available by the relevant settings.

(1) GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Checking if the objects are overlapping to each other.	[Check for overlapping objects in the GOT]
Adjusting the display order of the overlapped objects on the GOT to that in GT Designer3.	**GOT Graphic Ver.2** Always enabled. (Not available to GT21 and GS21) **GOT Graphic Ver.1** [Adjust object display order in GOT to the one in GT Designer3] (Not available to GT21 and GS21)

(2) GOT internal device

➟12.1.3 GOT special register (GS)

Function	Setting item
Displaying the detail screen with a single touch of a basic alarm even when the alarm is not selected in the alarm display (user) (Write device)	GS450.b15
Moving the cursor to a different alarm on the alarm display (user) when the alarm under the cursor is deleted (Write device)	GS467.b0

9.2 Collecting Device Data ([Logging])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.2.1 Overview of the logging function

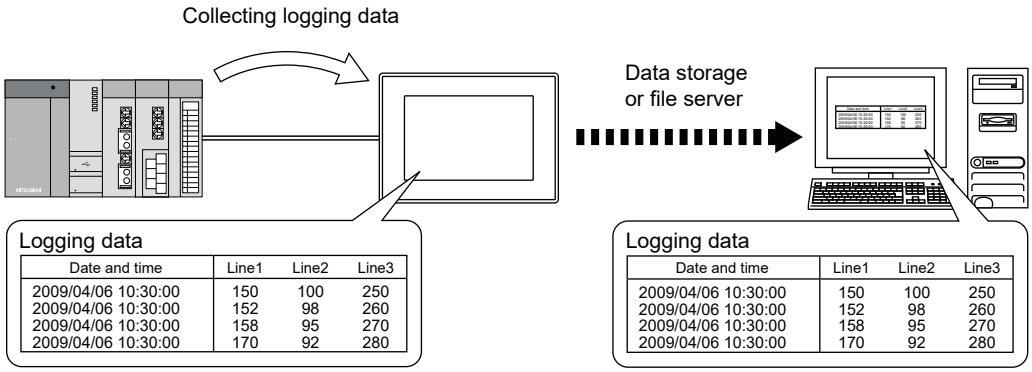
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The logging function collects the device values of a controller at the specified time or intervals, and saves the collected data into the buffering area, data storage, or file server.
The logging function has two modes.

• File save mode

In this mode, logging data is saved into a data storage or file server.
The saved logging data can be output to a Unicode text file or CSV file and displayed on a personal computer.
For the details of the file save mode, refer to the following.

➟9.2.3 ■4 File save mode



Date and time	Line1	Line2	Line3
2009/04/06 10:30:00	150	100	250
2009/04/06 10:30:00	152	98	260
2009/04/06 10:30:00	158	95	270
2009/04/06 10:30:00	170	92	280

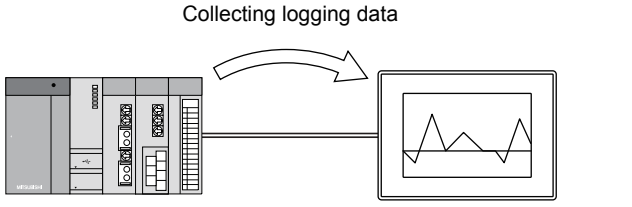
• Buffer historical mode

In this mode, logging data is displayed on the GOT while the data is being collected.
To display the logging data on the GOT, use the historical trend graph or historical data list display.
For the details of the buffer historical mode, refer to the following.

➟9.2.3 ■5 Buffer historical mode

For the details of the historical trend graph and historical data list display, refer to the following.

➟8.10 Placing a Historical Data List Display
8.21 Placing a Historical Trend Graph



For the logging data that can be displayed by the historical trend graph or historical data list display in the file save mode or buffer historical mode, refer to the following.

➟9.2.3 ■6 Display and operation

9.2.2 Specifications of the logging

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the specifications of the logging.

■1 Maximum number of logging settings

The maximum number of logging settings for one project depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  Up to 60 settings can be configured for one project.

- For GT21 and GS21

  Up to four settings can be configured for one project.

■2 Size of the buffering area

The size of the buffering area reserved for logging data varies depending on the setting of [Log Storage Number] in the [Logging] dialog.
Increasing the set value of [Log Storage Number] decreases the available space in the user area.
Set [Log Storage Number] according to the capacity of the user area.

➟9.2.6 [Logging] dialog

■3 Number of logging events and saving them to a file

The setting of [Log Storage Number] determines the frequency and time required for saving data to a file.
When the set value of [Log Storage Number] is large, data saving occurs infrequently, requiring a long time.
When the set value of [Log Storage Number] is small, data saving occurs frequently, requiring a short time.

The following shows the relationship between the logging trigger, log storage number, and file saving frequency.

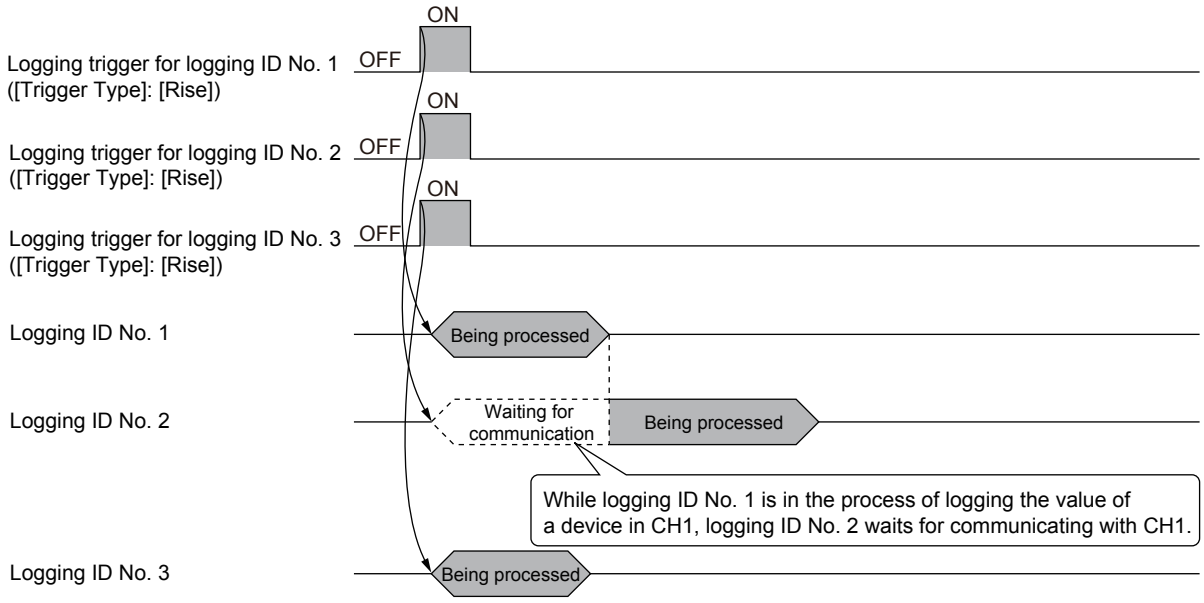
Logging trigger ([When to collect device values])	[Log Storage Number]		
	1	100	10000
Time interval: 10 (×100 ms)	Saving every 1 sec	Saving every 100 sec	Saving every 10000 sec
Time interval: 1000 (×100 ms)	Saving every 100 sec	Saving every 10000 sec	Saving every 1000000 sec

Collecting device values stops while logging data is being saved, so device values may not be collected correctly.
Change the setting of [Log Storage Number] according to the above settings including the logging trigger.

■4 Logging trigger and logging process

If the conditions of multiple logging triggers are satisfied simultaneously, device data logs are taken in parallel.
Example) When the logging trigger conditions of logging ID No. 1 to 3 are satisfied simultaneously

- Logging ID No. 1 and 2: A device of channel No. 1 is set as the logging target.
- Logging ID No. 3: A device of channel No. 2 is set as the logging target.



The device data logs of the same channel are taken one by one, and therefore a waiting time occurs, causing a longer logging time.

9.2.3 How to use the logging

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The logging function can be executed according to the device status or in intervals.

➟9.2.6 [Logging] dialog

■1 Logging mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The file save mode and buffer historical mode are provided as the logging mode.

Item	Logging mode	
	File save mode	Buffer historical mode
Application	To save large amount of logging data	To execute display by the historical trend graph or historical data list display at high speed and to execute high-speed logging
Location where the collected data is saved	Logging data is temporarily saved in the buffering area, and then saved into a data storage or file server. *1	Logging data is temporarily saved into the buffering area. *2
Operation when the buffering area is full *3	The logging data in the buffering area is saved into a data storage or file server.	Select either of the following. • Do not add the new data. • Delete the old data.
Saved-file format	Binary file (*.G2L) *4	Binary file (*.G2L) *4
Uses of the logging data in a data storage or file server	To display the collected data	Power-failure backup for the buffering area

*1 When the number of events in a logging file exceeds the limit, a new logging file is automatically created.
To specify the limit, set [Number of logs to be stored in 1 logging file] in the [Logging] dialog.

*2 To restore logging data in the event of a power failure, save the data in the buffering area into a data storage or file server.

➟9.2.3 ■5 (1) Saving data

*3 To specify the number of events to be temporarily stored in the buffering area, set [Log Storage Number] in the [Logging] dialog.

*4 The data can be output to a Unicode text file or CSV file to be displayed on a personal computer.

➟9.2.3 ■7 Creating a Unicode text file or CSV file

■2 Device

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The logging status can be output to devices.
The following shows the devices to be used by the logging function.

(1) Logging Notification device

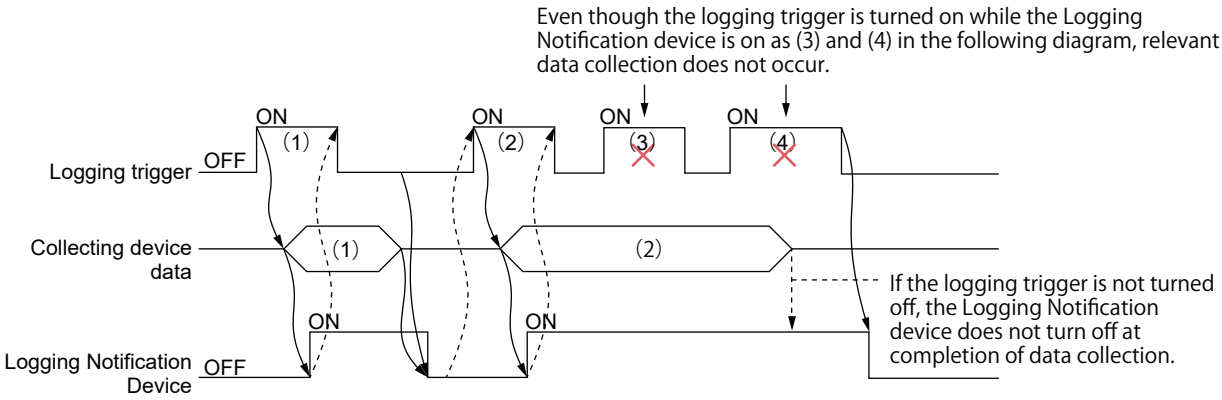
Notifies that device data is being collected in the buffering area.
Set this device for each logging setting (logging ID).
The operation varies depending on the trigger type of the logging trigger.
When the trigger type is [Rise] or [Fall], establish a handshake between the Logging Notification device and the logging trigger to ensure data collection by logging.

(a) **When the trigger type of the logging trigger is [Rise] or [Fall]**

When the logging trigger turns on and device data collection starts, the Logging Notification device turns on.
When the logging trigger turns off and the processing is completed, the Logging Notification device turns off.
To ensure data collection by establishing a handshake, the following operations are required.

- Check that the Logging Notification device turns on, and then turn off the logging trigger.
- While the Logging Notification device is off, turn on the next logging trigger.

Example) When the trigger type is [Rise]



(b) **When the trigger type of the logging trigger is [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling]**

When the logging trigger turns on and device data collection starts, the Logging Notification device turns on.
When the processing is completed, the Logging Notification device turns off.
If the interval for the trigger is set to a high speed (for example, 100 msec), the Logging Notification device may not provide notification at each logging depending on the communication performance.

(2) Full Notification Signal device

Notifies that the buffering area is full.
Use this device in the buffer historical mode.
This device is settable in the [Logging] dialog (traditional display) only.

(3) Buffer Historical Data Cleared device

Turning on the buffer historical data clear trigger starts clearing the logging data in the buffering area. The Buffer Historical Data Cleared device notifies the completion of clearing the data.
To specify the buffer historical data clear trigger, set [Delete all the histories] in the [Logging] dialog.
To specify the Buffer Historical Data Cleared device, set [Notify when all the histories are deleted] in the [Logging] dialog.
Use this device in the buffer historical mode.

(4) Logging Count device

Notifies the number of collection times of device values after the GOT is started.
You can check that the logging operates normally with this device.
The count cycles through 0 to 65535. (for unsigned BIN16)
The count is cleared when the GOT is powered off, reset, or restarted.
This device is settable in the [Logging] dialog (traditional display) only.

(5) Writing Notification device

This device is settable only when file save mode is selected in the [Logging] dialog (traditional display).
The device notifies that the logging data stored in the buffering area is being written to a temporary file.
Set this device for each logging setting (logging ID).
The device is used with the storage trigger and causes different operations depending on the trigger type of the storage trigger.
When the trigger type of the storage trigger is [Rise] or [Fall], establish a handshake between the Writing Notification device and the storage trigger to ensure execution of writing.

(a) **When the trigger type of the storage trigger is [Rise] or [Fall]**

When the storage trigger turns on and writing starts, the Writing Notification device turns on.
When the storage trigger is off and the processing is completed, the Writing Notification device turns off.
To ensure execution of writing by establishing a handshake, the following operations are required.

- Check that the Writing Notification device turns on, and then turn off the storage trigger.
- While the Writing Notification device is off, turn on the storage trigger.

When the Writing Notification device is on, writing does not occur even if the storage trigger turns on.
The relationship between the storage trigger, writing, and the Writing Notification device is the same as the relationship between the logging trigger, data collection, and the Logging Notification device.
For details, refer to the following.

➟(1) Logging Notification device

(b) **When the trigger type of the storage trigger is [Rise/Fall], [Sampling], [ON Sampling], or [OFF Sampling]**

When the storage trigger turns on and writing starts, the Writing Notification device turns on.
When the processing is completed, the Writing Notification device turns off.

(6) Writing Error Notification device

This device is settable only when file save mode is selected in the [Logging] dialog (traditional display).
The device notifies that an error has occurred while the logging data stored in the buffering area is being written to a temporary file.
Set this device for each logging setting (logging ID).
If this device is turned on, check the following.

- The SD card cover of the GOT is closed.
- The SD card access switch of the GOT is turned on.
- The data storage or file server works normally.

The user needs to turn off this device.

(7) Notify File Creation device (File Terminal Notification device)

Use this device with the file creation trigger (file terminal trigger) in file save mode.
The device notifies that the data in the buffering area is being saved to a logging file. Set this device for each logging setting (logging ID).

When the file creation trigger turns on and a logging file save starts, the Notify File Creation device turns on.
When the file creation trigger is off and the processing is completed, the Notify File Creation device turns off.

In the following cases, a logging file save does not occur even when the file creation trigger turns on.

- When the device data is being read: The Notify File Creation device does not turn on until one logging's worth of device data has been collected.
- When the Notify File Creation device is on

For the file save operation when the file creation trigger is used, refer to the following.

➟9.2.3 ■4 (1) Saving data

Note that when the Notify File Creation device is on, data collection does not occur even when the trigger device turns on.

■3 SRAM power-failure backup function

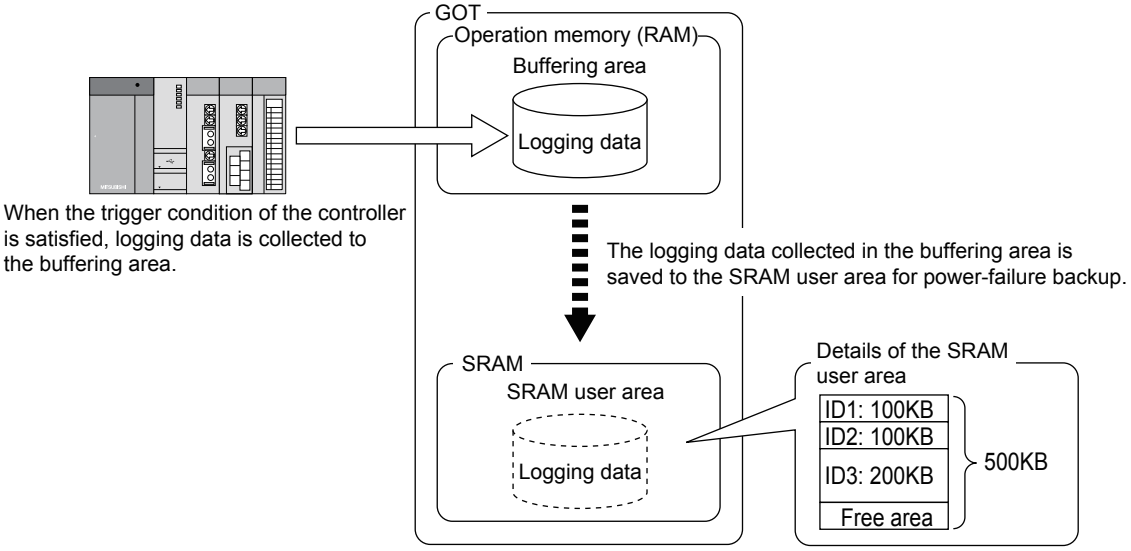
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This function saves the logging data collected in the buffering area to the SRAM user area.
The logging data saved in the SRAM user area is retained even at power failure.
Saving data to the SRAM user area for backup at power failure can be used for the following functions.

- User alarm observation
- System alarm observation
- Logging function

(1) Saving data to the SRAM user area

When logging data is collected to the buffering area, the logging data is also saved to the SRAM user area.
This saving timing cannot be changed.
When the SRAM user area has logging data, the logging data is automatically read when the GOT is powered on.
Up to 20 logging settings can be configured with the SRAM power-failure backup function enabled.



(2) Specifications of the SRAM user area

For the specifications of the SRAM user area, refer to the following.

➟12.12 Specifications of the SRAM user area

(3) Deleting and backing up the data in the SRAM user area

The data saved in the SRAM user area is deleted under the following conditions.

- Project data and system applications are written to the GOT when [Initialize SRAM user area when writing project data/OS] is selected in the [Communicate with GOT] dialog.
- The SRAM user area is initialized by using [SRAM management] in the utility.
- The clear trigger device set in [Buffering] of the user alarm observation setting or the system alarm observation setting turns on.
- The SRAM user area is set to be initialized when GT SoftGOT2000 starts the first monitoring.

To retain the data saved in the SRAM user area, execute the backup/restoration function in the utility.
For the details of the backup/restoration function, refer to the following.

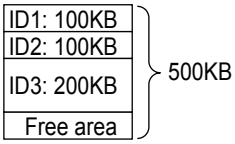
➟GOT2000 Series User's Manual (Utility)

(4) Precautions for the power-failure backup of the SRAM user area

Data may not be saved into the SRAM user area due to some reasons, including the setting change of an applicable function and physical memory corruption.

(a) Normal conditions

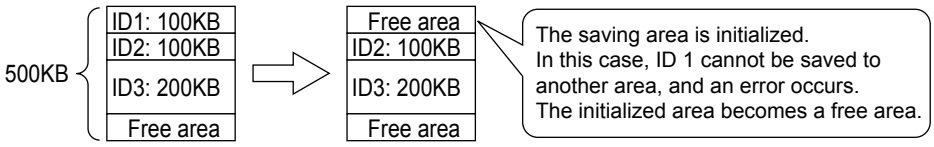
The data collected by each applicable function is saved to the SRAM user area.



(b) Setting change

If the size of data to be collected by the user alarm observation, system alarm observation, or logging function is changed, the data of the function saved in the SRAM user area will be deleted.

- When the size is reduced:
  The data is saved to the initialized area. The remaining area is reserved as a free area.
- When the size is increased:
  The area used is initialized and the data is saved to another area.
  If the area required for saving the data is insufficient, an error occurs.
  If an error occurs, initialize the SRAM user area, reduce the data size to 500 KB or less, and save the data again.
  Example) When the size for ID 1 is increased from 100 KB to 200 KB



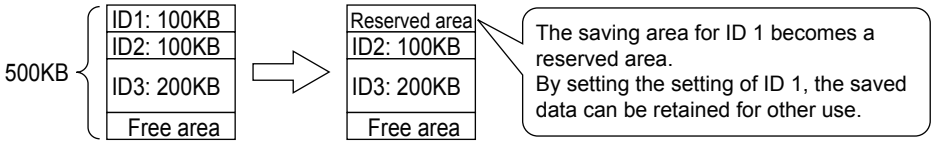
(c) **Setting deletion**

When the setting of each function is deleted, the SRAM user area used for saving the data is reserved as an unused area. Initialize the unused area to use it.

For the initialization of the SRAM user area, refer to the following.

➟GOT2000 Series User's Manual (Utility)

Example) When the setting of ID 1 is deleted



(d) **Others**

If the data saved in the SRAM user area is not restored at the GOT startup, a system alarm occurs.

In such a case, check the battery status.

- When the battery status is normal:

  A part of the SRAM user area may be damaged.

  Initialize the SRAM user area.

  ➟GOT2000 Series User's Manual (Utility)

- When the voltage is low:

  Replace the battery.

  If the data is still not restored after the battery is replaced, initialize the SRAM user area.

  For information on how to replace the battery, refer to the following.

  ➟GOT2000 Series User's Manual (Hardware)

  For the initialization of the SRAM user area, refer to the following.

  ➟GOT2000 Series User's Manual (Utility)

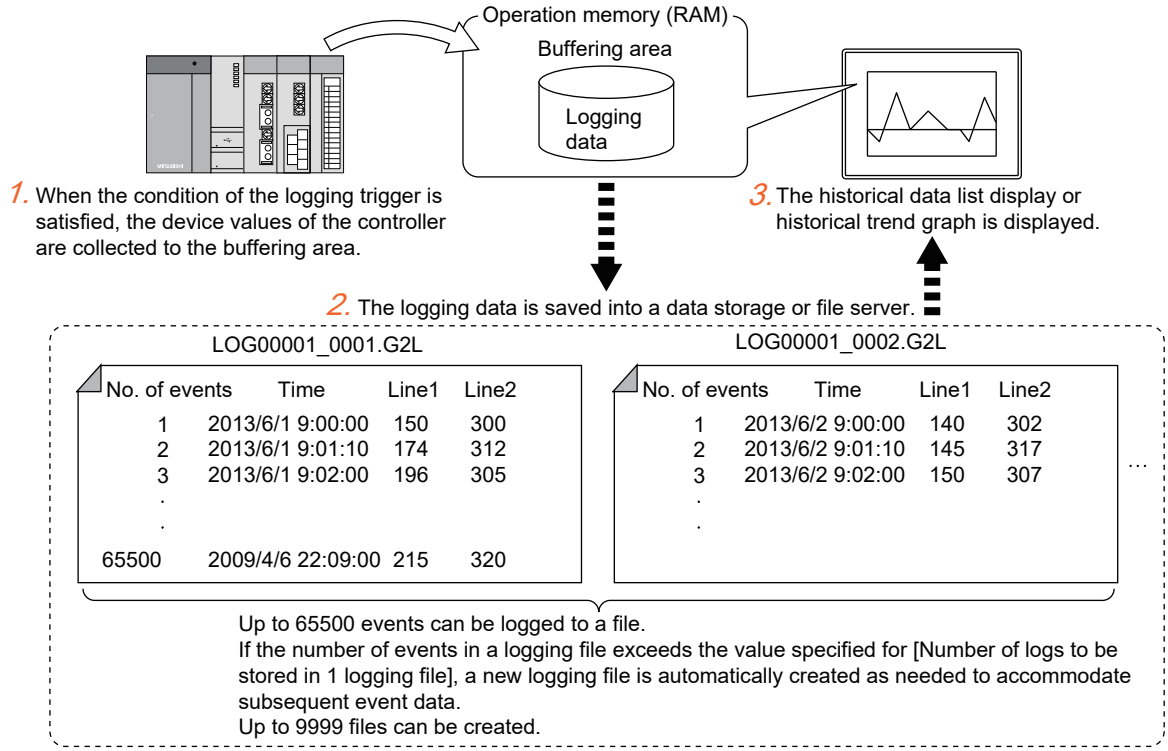
■4 File save mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this mode, logging data is saved into a data storage or file server.
When a file is filled with data, a new file is created to save the subsequent data, enabling saving a large amount of logging data.
Use the file save mode in the following cases.

- To save a large amount of logging data
- To automatically create a file to save logging data if the number of the events saved in the current file has reached the limit

Example) Saving one day's logging data into files



Step 1 When the condition of the logging trigger is satisfied, the device values of the controller are collected and temporarily saved in the buffering area.

Step 2 The logging data in the buffering area is saved into a data storage or file server.

Step 3 The collected logging data can be used for the following applications.

- Log analysis after the data is output to a Unicode text file or CSV file

➟9.2.3 ■7 Creating a Unicode text file or CSV file

- Display by the historical trend graph or historical data list display

➟9.2.3 ■6 Display and operation

(1) Saving data

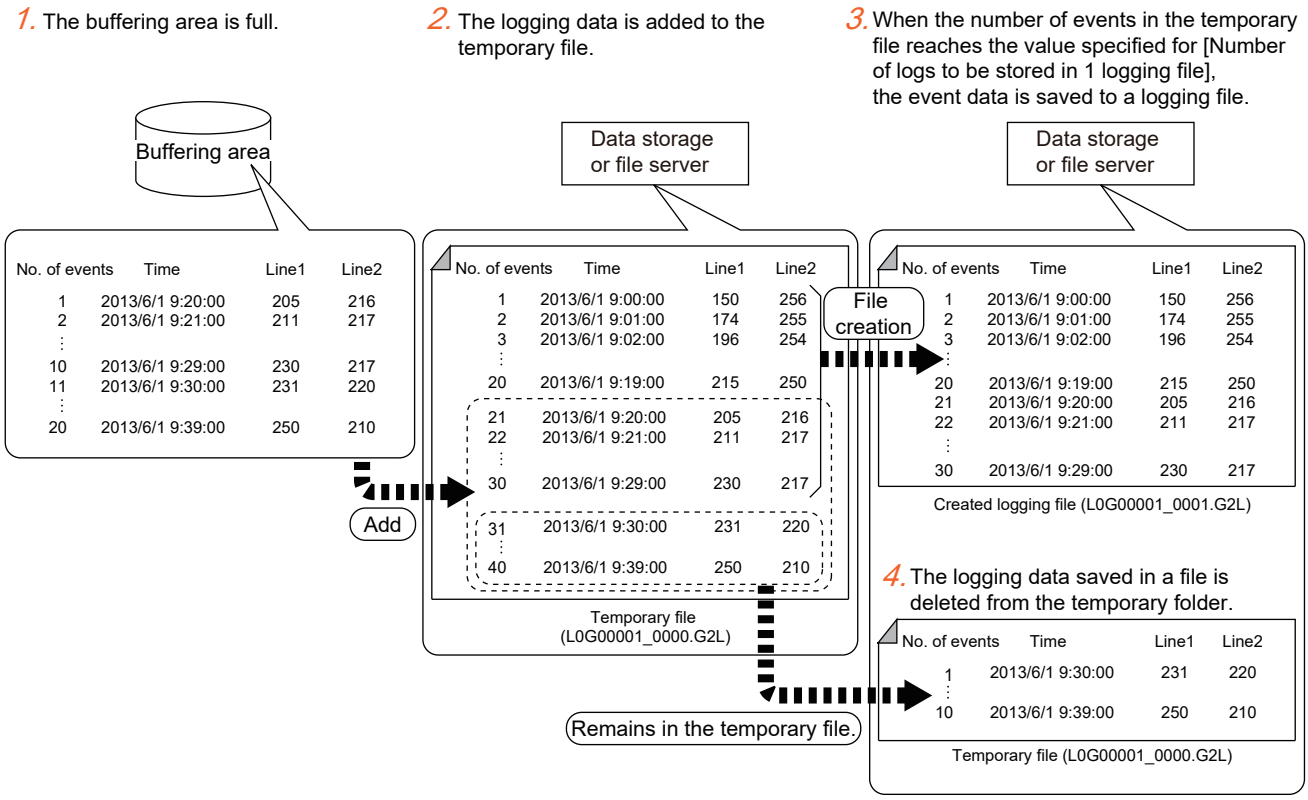
In the file save mode, the logging data in the buffering area is saved into a data storage or file server at the following timing.

- When the reserved portion of the buffering area becomes full
- When the file creation trigger is turned on regardless of the number of events in the buffering area

(a) Saving logging data when the reserved portion of the buffering area becomes full

When the number of events in the buffering area has reached the set value of [Log Storage Number] in the [Logging] dialog, the events are automatically saved into a data storage or file server.

Example) When [Number of logs to be stored in 1 logging file] is set to 30

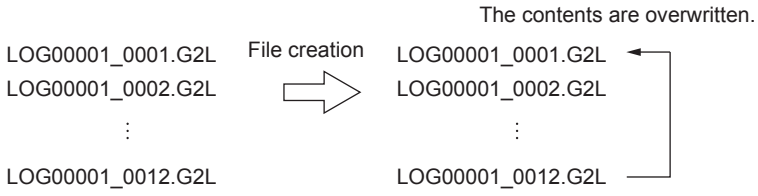


Step 1 When the buffering area becomes full, the logging data in the buffering area is automatically saved into a data storage or file server.

Step 2 The data is saved to a temporary file (file number: 0000).

Step 3 When the number of events in the temporary file reaches the value specified for [Number of logs to be stored in 1 logging file], the event data is saved to a logging file (file number: 0001 to 9999).

After the number of logging files reaches the value specified for [Maximum number of files to store logs], file number 0001 is assigned to a new logging file.
In this case, the existing logging file numbered 0001 is overwritten.
When [Maximum number of files to store logs] is set to 12



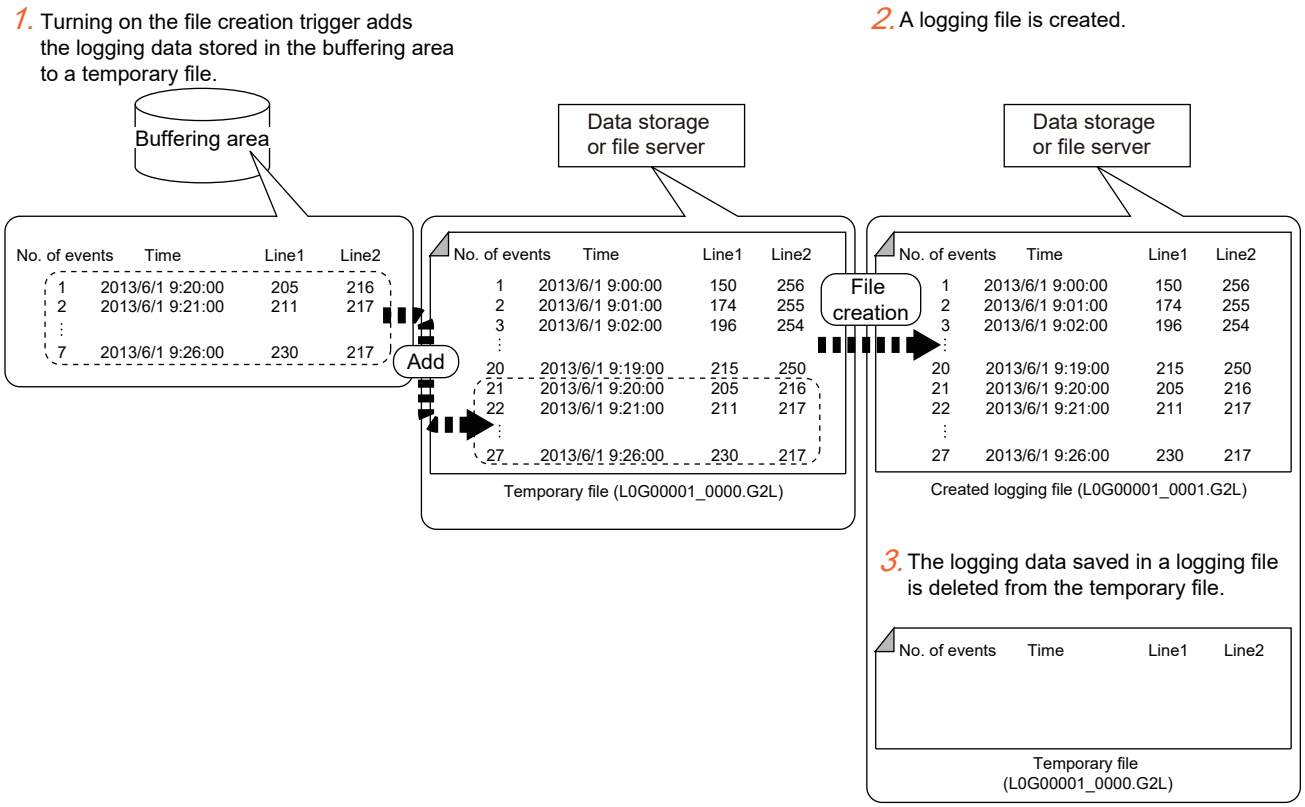
To avoid overwriting an existing logging file in the data storage or file server, back up the file to another location.

Step 4 After the logging file is saved, the logging data in the temporary file is automatically deleted and the logging resumes.

(b) Saving logging data by using the file creation trigger

To save logging data to a file at an intended timing regardless of the number of events in the buffering area, use the file creation trigger.

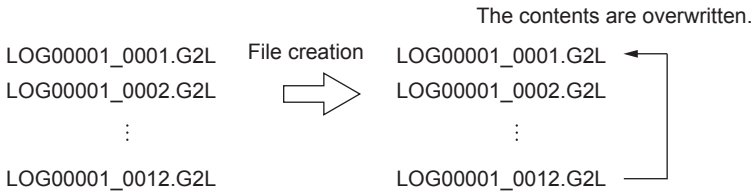
To specify the file creation trigger, set [Create a logging file at any desired time] in the [Logging] dialog.
Example) When [Number of logs to be stored in 1 logging file] is set to 30



Step 1 Turn on the file creation trigger to add the logging data stored in the buffering area to a temporary file.

Step 2 The logging data in the temporary file (file number: 0000) is saved to a logging file (file number: 0001 to 9999).

(The data is saved regardless of the number of logs.)
After the number of logging files reaches the value specified for [Maximum number of files to store logs], file number 0001 is assigned to a new logging file.
In this case, the existing logging file numbered 0001 is overwritten.
When [Maximum number of files to store logs] is set to 12



To avoid overwriting an existing logging file in the data storage or file server, back up the file to another location.

Step 3 After the logging file is saved, the logging data in the temporary file is automatically deleted and the logging resumes.

■5 Buffer historical mode

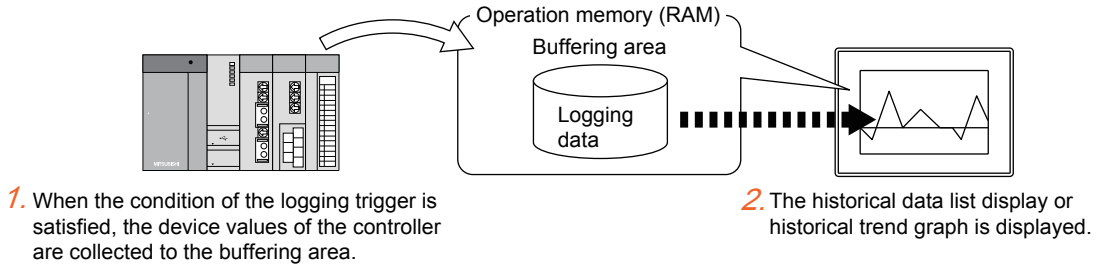
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the buffer historical mode, the logging data in the buffering area is displayed quickly on a historical trend graph or historical data list display.

Use the buffer historical mode in the following cases.

• To execute the historical trend graph or historical data list display at high speed and to execute logging at high speed

• When saving a large amount of logging data is not required



Step 1 When the condition of the logging trigger is satisfied, the device values of the controller are collected and temporarily saved in the buffering area.

Step 2 The logging data that is temporarily saved in the buffering area is displayed by the historical trend graph or historical data list display.

(1) Saving data

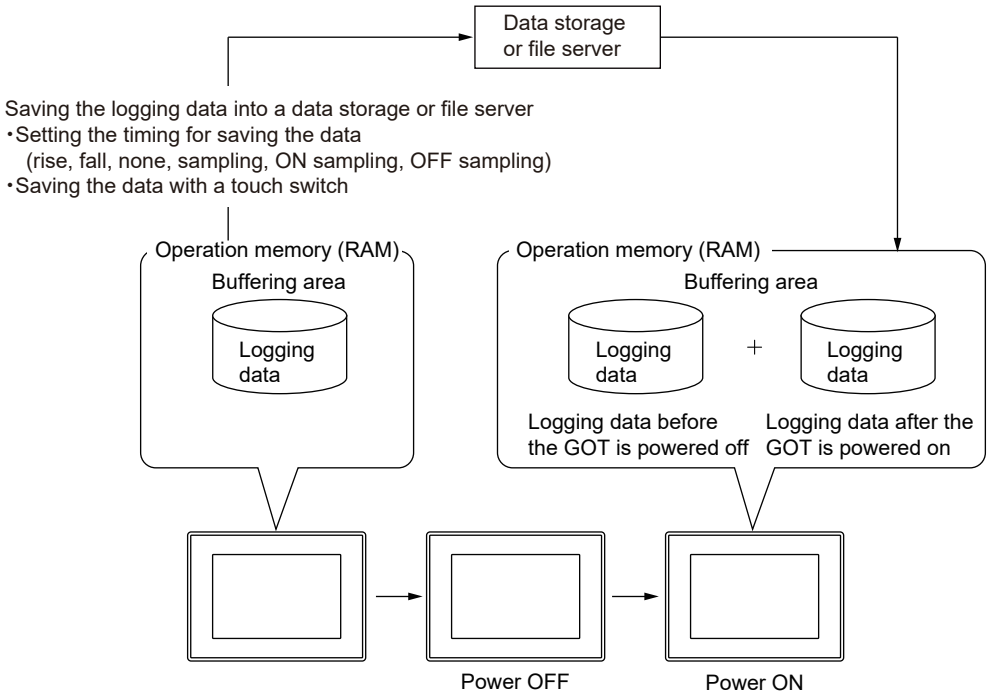
In the buffer historical mode, the logging data in the buffering area is saved into a data storage or file server when [Buffer Save] is enabled.

The logging data can be automatically restored from the data storage or file server upon turn-on of the GOT.

The following shows the uses of this setting.

• To retain logging data in the event of an accident, such as a power failure

• To save logging data into a data storage or file server when the buffering area becomes full



(a) Restoring logging data from a data storage or file server

Connect a data storage or file server, and then turn on the GOT.

Do not perform the above operations in reverse order, or logging data cannot be restored from the data storage or file server upon turn-on of the GOT.

The wrong procedure will also cause the logging data in the data storage or file server to be overwritten with new data after the GOT is turned on.

(b) **Restoring logging data when the power-failure backup is used**

GT21 and GS21 do not support the SRAM power-failure backup function.

If logging data is saved into both the SRAM user area and a data storage or file server, the logging data is restored from the SRAM user area upon turn-on of the GOT.

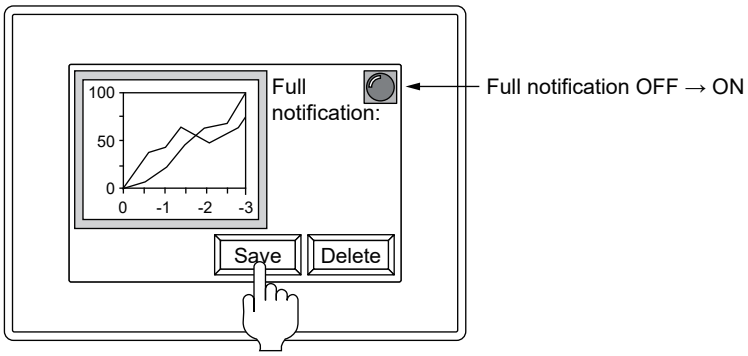
If the SRAM user area is unusable due to the undervoltage battery or other causes, the logging data is restored from the data storage or file server.

(c) **When the reserved portion of the buffering area becomes full**

To notify that the number of events in the buffering area reaches the value specified for [Log Storage Number], set [Full Notification Signal Device].

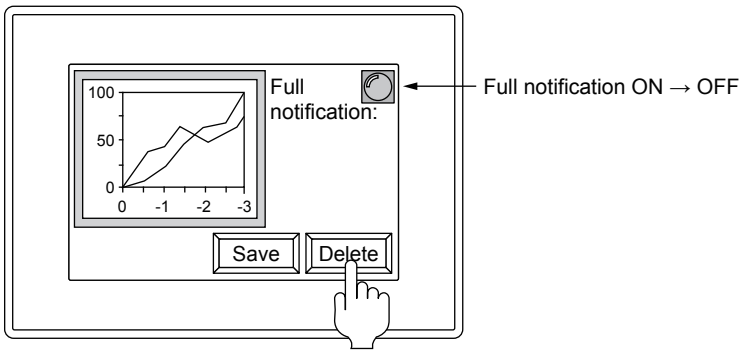
With additional setting, the following usages are available.

- Notifying the full status before the buffering area is actually full by setting [Buffer Full Alert Capacity]
- Providing options for the full status using [Action When Buffer is Full]



Upon turn-on of the full notification device, the logging data in the buffering area is saved into a data storage or file server.

- Deleting the logging data in the buffering area without saving using [Buffer Historical Data Clear]



The logging data in the buffering area is deleted.

[Full Notification Signal Device] and [Buffer Full Alert Capacity] are settable in the [Logging] dialog (traditional display) only.

➟9.2.7 [Logging] dialog (traditional display)

■6 Display and operation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

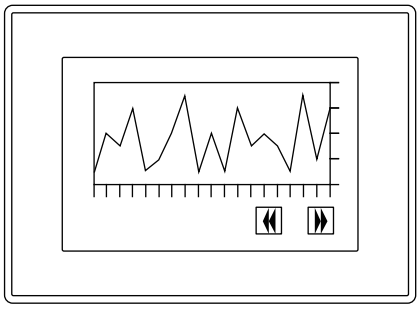
The following shows how to display and operate logging data collected through the GOT or personal computer.

(1) Display by the historical trend graph or historical data list display

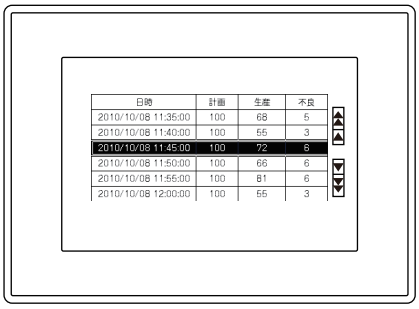
Collected logging data can be displayed by the historical trend graph or historical data list display.
Specify the data to be displayed by logging ID.

➟8.10 Placing a Historical Data List Display
8.21 Placing a Historical Trend Graph

Historical trend graph

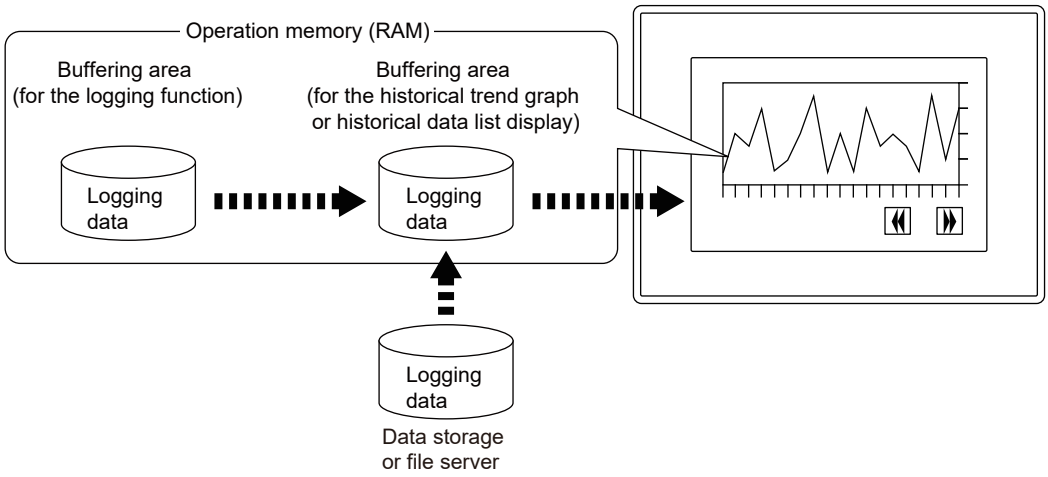


Historical data list display



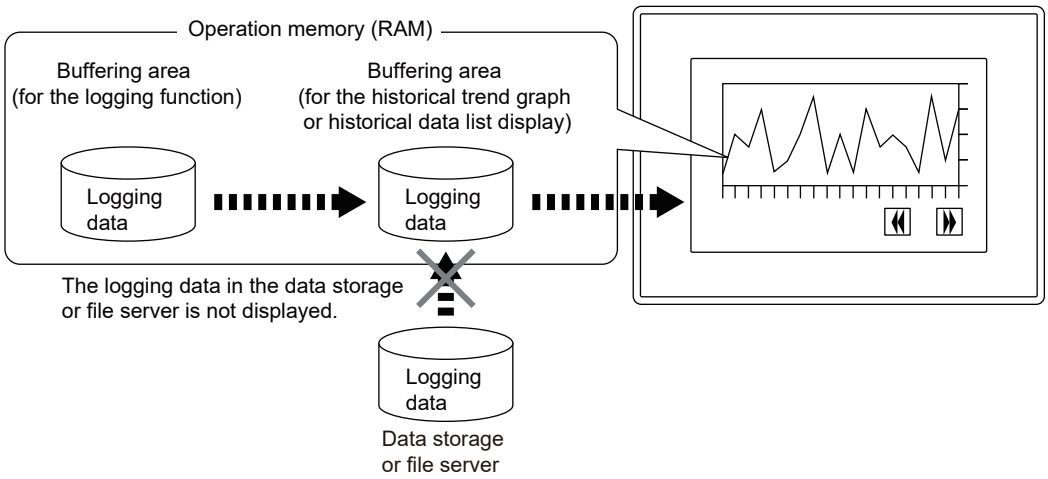
(a) Display target in the file save mode

The logging data in the buffering area, data storage, or file server is displayable.



(b) Display target in the buffer historical mode

The logging data in the buffering area is displayable.
The logging data in a data storage or file server is not displayable.
To display old logging data, use the file save mode.



(2) Operations with the utility

The following operations can be performed with the utility.

You can manage logging files on the GOT without a personal computer.

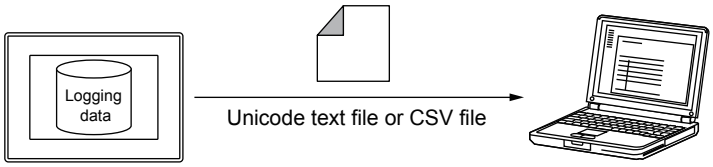
➟GOT2000 Series User's Manual (Utility)

Item	Description
Creating a folder	Not available to GT21 and GS21. Creates a folder where logging files are stored. Folders can be created for each line and production item to manage logging files. Create a folder for each line or production item.
Deleting a folder	Not available to GT21 and GS21. Deletes a folder where logging files are stored.
Copying a file	Copies a logging file. Perform this operation to back up a logging file.
Deleting a file	Deletes a logging file.
Renaming a file	Not available to GT21 and GS21. Renames a logging file.
Moving a file	Not available to GT21 and GS21. Moves a logging file to another folder. Perform this operation to back up a logging file.
Converting a binary file (*.G2L) into a Unicode text file or CSV file	Not available to GT21 and GS21. Converts the binary file (*.G2L) into a Unicode text file or CSV file.

(3) Saving logging data in Unicode text file format or CSV file format and displaying it with a personal computer

Collected logging data is saved in a binary file (*.G2L).
With this binary file, a Unicode text file or CSV file can be created to display the data on a personal computer.

➟9.2.3 ■7 Creating a Unicode text file or CSV file



(a) When displaying logging data in the multiple-language input environment

When displaying logging data in the multiple-language input environment, use Unicode text files.
The characters of multiple languages can be displayed normally by using Unicode text files.

(b) Display example and detail of logging data

The following shows the display format of logging data in the binary file (*.G2L) that has been output to a Unicode text file or CSV file.

	A	B	C	D	E	F
1	:GT2K_LOG	0				
2	:LOGGING_ID	1				
3	:LOGGING_NAME	Logging_1				
4	:SERIAL_ID	0				
5	:DEVICE_NUM	5				
6	:RECORD_NUM	10				
7	:DATE_ORDER	YYYY/MM/DD hh:mm:ss				
8	:LOCAL_TIME	GMT+09:00				
9	:TIME_INF_ORDER	L				
10	:DEV_COMMENT	CNT1	LINEA	LINEB	TARGET	FLG1
11	:DEV_TYPE	BIN16	BIN16	BIN32	REAL	BIT
12	:DISP_TYPE	DEC	DEC	DEC	REAL_FLOAT	BIN
13	:DEV_SIZE	1	1	2	2	1
14	2000/01/05 6:45	200	100	200	1.40E-43	0
15	2000/01/05 6:45	150	300	150	4.20E-43	0
16	2000/01/05 6:45	350	50	350	7.01E-44	0
17	2000/01/05 6:45	100	200	100	2.80E-43	0
18	2000/01/05 6:45	75	150	75	2.10E-43	0
19	2000/01/05 6:45	75	150	75	2.10E-43	0
20	2000/01/05 6:45	200	100	200	1.40E-43	0
21	2000/01/05 6:45	100	200	100	2.80E-43	0
22	2000/01/05 6:45	350	50	350	7.01E-44	0
23	2000/01/05 6:45	350	50	350	7.01E-44	0

1) 2) 3) 4) 5) 6) 7) 8) 9) 10) 11) 12) 13) 14)

1) **Logging ID**
Displays the logging ID.

2) **Logging name**
Displays the logging name.

3) **Serial number**
Displays a number 0001 to 9999 attached to the end of the file name.

4) **Number of set devices**
Displays the number of set devices.

5) **Number of logs**
Displays the number of logs.

6) **Order of dates**
Displays the order of dates.

7) **Time zone**
Displays the difference between the Greenwich Mean Time and "Occurred"/"Restored"/"Checked".

8) **Time information**
Displays the information on the time data.
- L: Local time

9) **Device comment**
Displays device comments.

10) **Device type**
Displays device types.
- [BIT]: Bit
- [BIN8]: Signed 8-bit binary

- [BIN8_Unsigned]: Unsigned 8-bit binary
- [BIN16]: Signed 16-bit binary
- [BIN16_Unsigned]: Unsigned 16-bit binary
- [BIN32]: Signed 32-bit binary
- [BIN32_Unsigned]: Unsigned 32-bit binary
- [BIN64]: Signed 64-bit binary
- [BIN64_Unsigned]: Unsigned 64-bit binary
- [BCD16]: 16-bit binary-coded decimal
- [BCD32]: 32-bit binary-coded decimal
- [BCD64]: 64-bit binary-coded decimal
- [REAL]: Real numbers (32 bits)
- [REAL64]: Real numbers (64 bits)
- [STRING]: Character string

11) **Display format**

Displays the display formats.

- [BIT]: Bit
- [DEC]: Signed decimal
- [UNSIGNED_DEC]: Unsigned decimal
- [REAL_FLOAT]: Real number (exponential expression)
- [REAL_FIX]: Real number (fixed-point number)
- [ASC]: ASCII code
- [UNI]: Unicode
- [SJIS]: Shift JIS code
- [KS]: KS (Korean)
- [GB]: GB (Simplified Chinese)
- [BIG5]: BIG5 (Traditional Chinese)
- [BIN]: Binary number
- [OCT]: Octal number
- [HEX]: Hexadecimal number

12) **Device size**

Displays the device size. (Unit: byte)

- 1: Bit device or word device (16 bits)
- 2: Word device (32 bits)
- 4: Word device (64 bits)
- 1 to 250: Character string

13) **Time data**

Displays the time when the device value is collected.

14) **Logging data**

Displays the collected device values.

If a communication timeout occurs or the values are outside the device range, nothing is displayed.

If the device values cannot be collected when the logging trigger condition is satisfied, the display depends on whether the missing logging data detection function is enabled or disabled.

- Disabled: Previously collected values
- Enabled: [-]s (hyphens)

For the missing information, refer to the following.

➟9.2.3 ■9 Missing logging data detection function

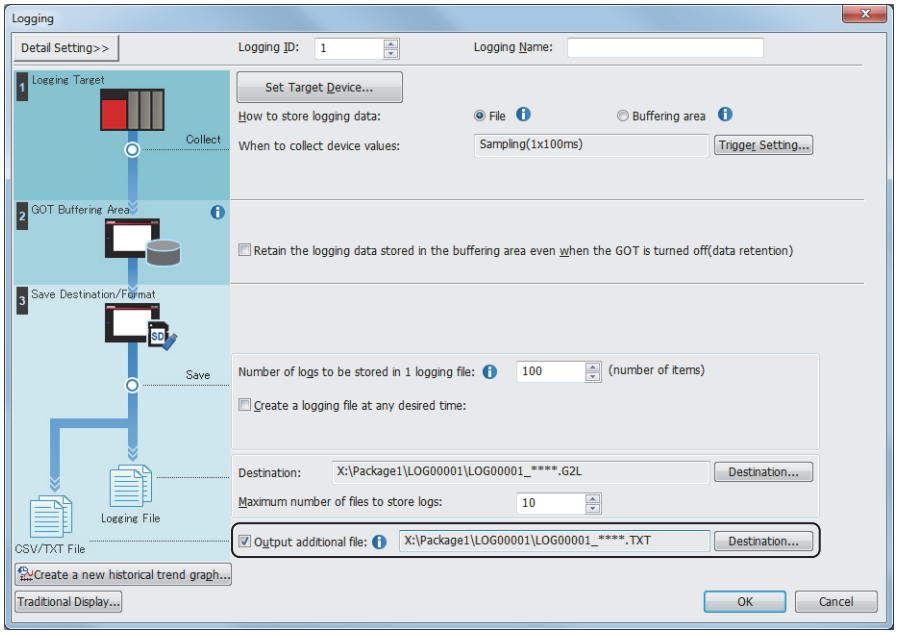
■7 Creating a Unicode text file or CSV file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Creating a Unicode text file or CSV file when saving logging data into a data storage or file server

When logging data is saved into a data storage or file server, a Unicode text file or CSV file can be automatically created to save the data.

Step 1 Select [Output additional file] and configure the setting in the [Logging] dialog.



Step 2 When a binary file is saved, a Unicode text file or CSV file is also automatically created.

A Unicode text file or CSV file is not created at the timing of when a temporary file is created.

➟9.2.3 ■4 File save mode

While the file is being created, the logging is stopped.

To shorten the interruption time, clear [Output additional file], and convert the binary file (*.G2L) to a Unicode text file or CSV file with GT Designer3 or the utility.

GT21 and GS21 do not support the conversion with the utility.

(2) Creating a Unicode text file or CSV file with GT Designer3

On GT Designer3, a binary file (*.G2L) in the data storage or file server can be converted into a Unicode text file or CSV file.

Since the file is converted with GT Designer3, converting is processed without any load on the GOT.

For the details of the [Logging File Conversion] dialog, refer to the following.

➟9.2.8 [Logging File Conversion] dialog

(3) Creating a Unicode text file or a CSV file with the utility

Not available to GT21 and GS21.

In the GOT utility, a binary file (*.G2L) in the data storage or file server can be converted into a Unicode text file or CSV file.

GT Designer3 is not required for the conversion.

Step 1 Select a G2L file in [Logging Information] of the utility and touch the [G2L → CSV] button or the [G2L → TXT] button to convert the file.

For the operations of the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

Step 2 Store the created Unicode text file or CSV file into a personal computer by either of the following methods.

Set the following items and convert a binary file into a Unicode text file or a CSV file.

- Transferring with GT Designer3

  Select [Communication] → [Read from GOT...] from the menu to transfer a file to the personal computer.

- Saving the file into a data storage or file server

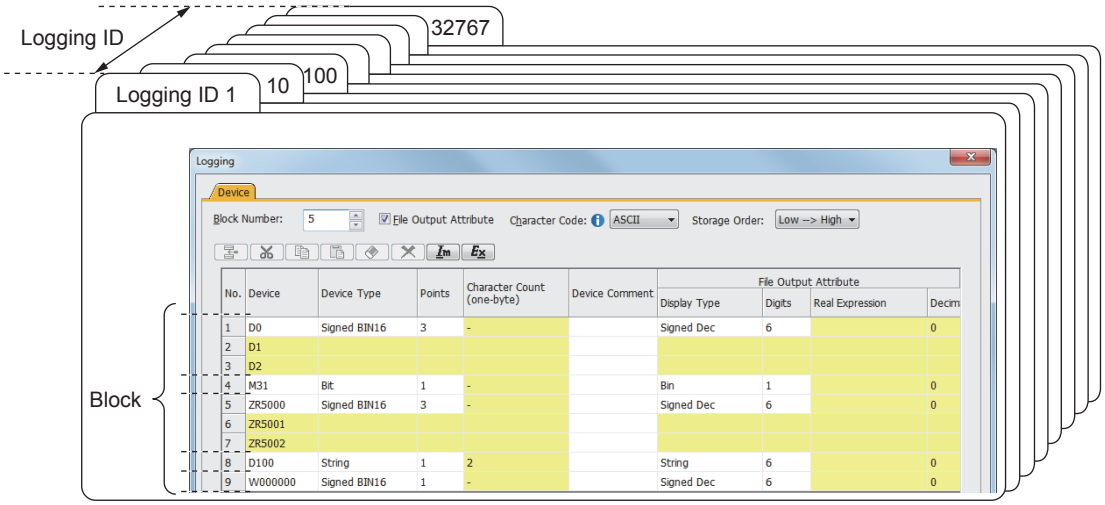
  Save the file into a data storage or file server, and then read the file into the personal computer.

■8 Management of logging setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Multiple logging can be managed with one recipe setting by setting the following items.

- Logging ID
- Number of blocks



(1) Logging ID

The logging ID is for distinguishing the logging settings.

The logging ID is used to select data to be displayed by the historical trend graph or historical data list display.

➟8.10 Placing a Historical Data List Display
8.21 Placing a Historical Trend Graph

(a) Setting method

Set the logging ID in the [Logging] dialog.

➟9.2.6 [Logging] dialog

(b) Setting range

The setting range of the logging ID is 1 to 32767.

However, up to 60 logging settings are settable.

(For GT21 and GS21, up to four logging settings are settable.)

(2) Block

Blocks are units for setting device numbers randomly and different device types.

By setting device numbers and device types in block units, the following settings can be made.

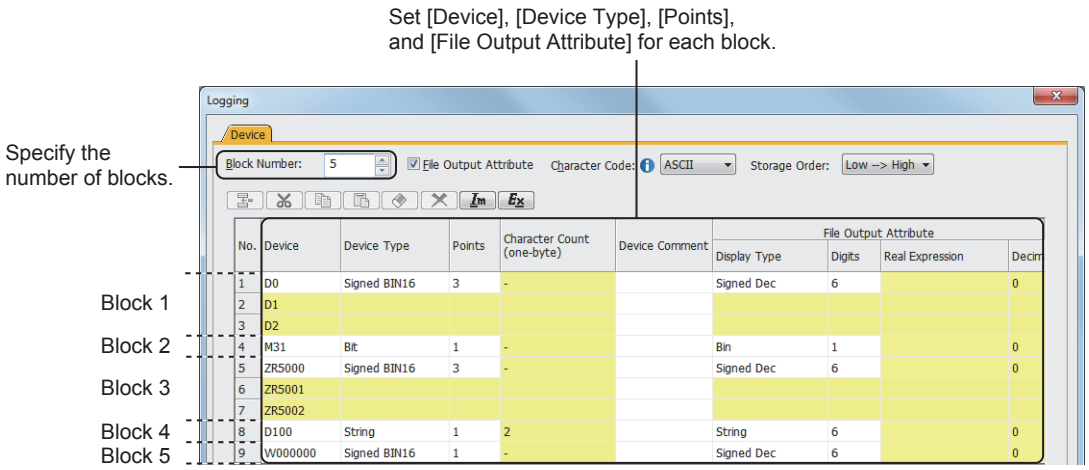
- Mixing multiple device types (including bits and words)
- Mixing the consecutive setting and the random setting of device numbers

(a) Setting method

Set the number of blocks in the [Device] tab of the [Logging] dialog.

➟9.2.7 ■2 [Device] tab

The following shows a logging setting example in which bit devices, word devices (signed 16-bit binary and signed 32-bit binary data), and character strings are mixed.



(b) Setting range

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  Up to 250 blocks can be set for one logging setting.
- For GT21 and GS21

  Up to 20 blocks can be set for one logging setting.

(3) Device

(a) Number of devices that can be set

The number of devices that can be set is 250 per logging setting.

One device is calculated as one device regardless of the device type (word/bit).

However, a device that has 32-bit data is counted as two devices.

When multiple blocks exist, the number of devices that can be set is the total number of devices in all blocks. Example)

Block 1: 30 devices, Block 2: 70 devices, Block 3: 120 devices

The number of devices that can be set is 30 + 70 + 120 = 220 devices.

(b) When setting device numbers at random

A single device number can be set for a single block.

To set device numbers randomly, divide the block.

(c) When the device type is bit

Only one device can be set for one block (fixed).

■9 Missing logging data detection function

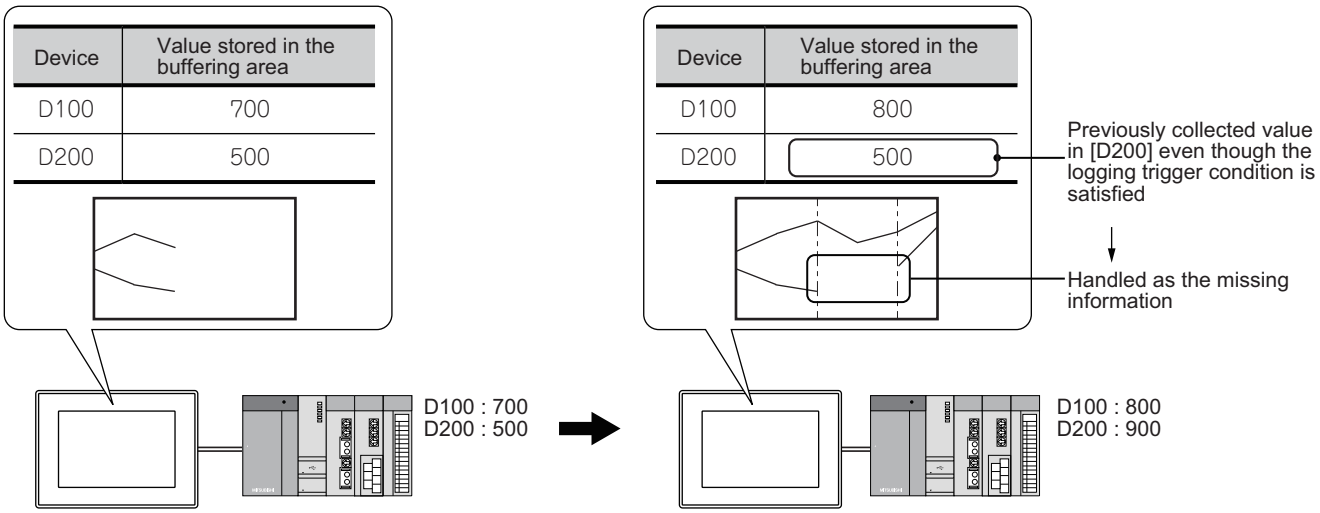
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

After data logging, if the communication process between the controller and the GOT is not complete before the next data logging, the device values may not be collected even when the logging trigger condition is satisfied.
In this case, the previously collected device values are stored in the buffering area and output to a logging file.
When the missing logging data detection function is enabled, the uncollected device values are handled as the missing information and output as [-]s (hyphens) to a logging file.
The missing information is not displayed on the historical trend graph.

(Example) When [500] is the previously collected value in device D200, and the device value cannot be collected when the logging trigger condition is satisfied

Missing logging data detection function	Device value stored in the buffering area		Value output to a logging file
	Previously collected	Uncollected when the logging trigger condition is satisfied	
Disabled	500	500 (Previously collected value)	500 (Previously collected value)
Enabled	500	500 (Previously collected value)	- (Hyphen)

The following shows an example of when the missing logging data detection function is enabled.



For the countermeasures against failure to collect device values when the logging trigger condition is satisfied, refer to the following.

➟9.2.4 ■2 (3) Causes and countermeasures when device values cannot be collected as set

You can set whether to enable or disable the missing logging data detection function for each logging setting.
This setting is available in the [Logging] dialog (traditional display) only.
For the setting procedure, refer to the following.

➟9.2.7 ■1 [Basic] tab

If a communication timeout occurs or the values are outside the device range, the device values are not recorded regardless of whether the missing logging data detection function is enabled or disabled.

9.2.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for using the logging function.

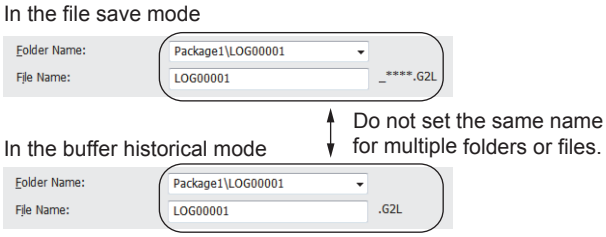
■1 Precautions for drawing

(1) Setting of [Log Storage Number] in the file save mode

To collect device values in short intervals, set a larger number in [Log Storage Number].

(2) Mixing the file save mode and buffer historical mode

Do not set the same name for multiple folders or files. If the same name is used for multiple folders or files, logging is not executed normally.



In the file save mode, LOG00001.G2L is saved as a management file together with LOG00001_****.G2L (* indicates a number).
The file name is duplicated with the file name in the buffer historical mode LOG00001.G2L, and thus logging is not executed normally.

To check the duplication, select [Tools] → [Data Check] from the menu.

(3) Setting value of logging setting

The set size of an object cannot exceed the user area of the GOT.
Depending on the combination of the settings, not all the setting values (such as the number of devices) can be set to their maximum values.
Set the setting values within the capacity of the available user area for the GOT.

(4) Relation between device comments and their setting sizes

Device comments affect the setting size of the logging and its file size. If device comments are set for each device, their setting sizes and the file size are large.

(5) When setting a string-type label or tag for the logging device

Set [Device Type] to [String].

(6) Character code when a string-type label or tag is set for the device whose [Device Type] is set to [String]

If you set a string-type label or tag for the device whose [Device Type] is set to [String], set the character code according to the type of the label or tag.

- System label Ver.1: ASCII code or Shift JIS code
- System label Ver.2 and global label: ASCII code, Unicode, or Shift JIS code
- OMRON NJ/NX tag: Unicode
- AB native tag: ASCII code
- OPC UA tag: Unicode

(7) When multiple GOTs use the network drive

If the logging files of the GOTs are saved into a single folder, logging cannot be executed normally due to data loss or file corruption.
When the GOTs have the same file save destination, select [Separate destinations for each GOT] in the [Logging] dialog.

➟5.3.15 ■4 Creating a folder for each GOT
9.2.6 [Logging] dialog

■2 Precautions for use

(1) Saving a file

A data storage or file server is required to save files.
The data storage or file server must have enough space to save logging files.

➟12.11.2 Size of the resource data file

If no data storage or file server is connected, files fail to be saved and the Writing Error Notification device is turned on.
Device values are not collected until the files are successfully saved.
To resume saving files and collecting device values, connect a data storage or a file server.

(2) To maintain file access performance

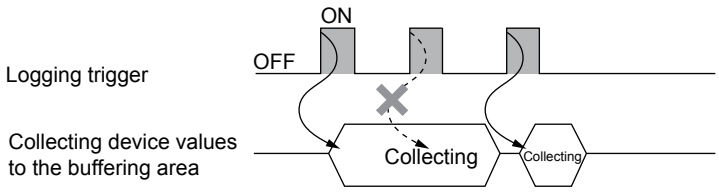
You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

(3) Causes and countermeasures when device values cannot be collected as set

In the following cases, device values may not be collected in set intervals or when the trigger device is turned on.

- The communication between the GOT and controllers takes a long time because a large number of devices to be collected is set.
- After data logging, the communication process is not complete before the next data logging due to short intervals set for the logging trigger. (The trigger condition is satisfied while device values are being collected.)

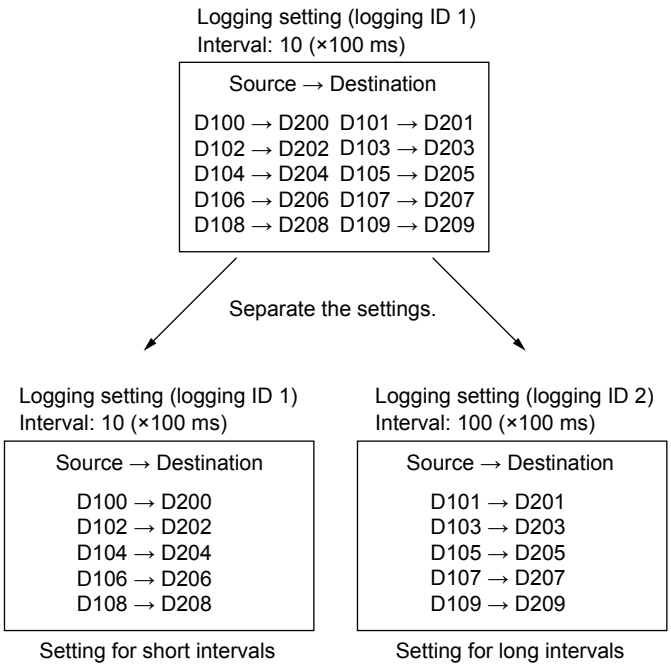
Example) When the interval for the logging trigger is short



Take one of the following countermeasures.

- Split the logging setting to reduce the number of devices per setting.
- If the trigger type is [Sampling], set a longer interval.

Example) Splitting a logging setting into one for data logging in short intervals and one for long intervals



- While the Logging Notification device is off, satisfy the trigger condition.

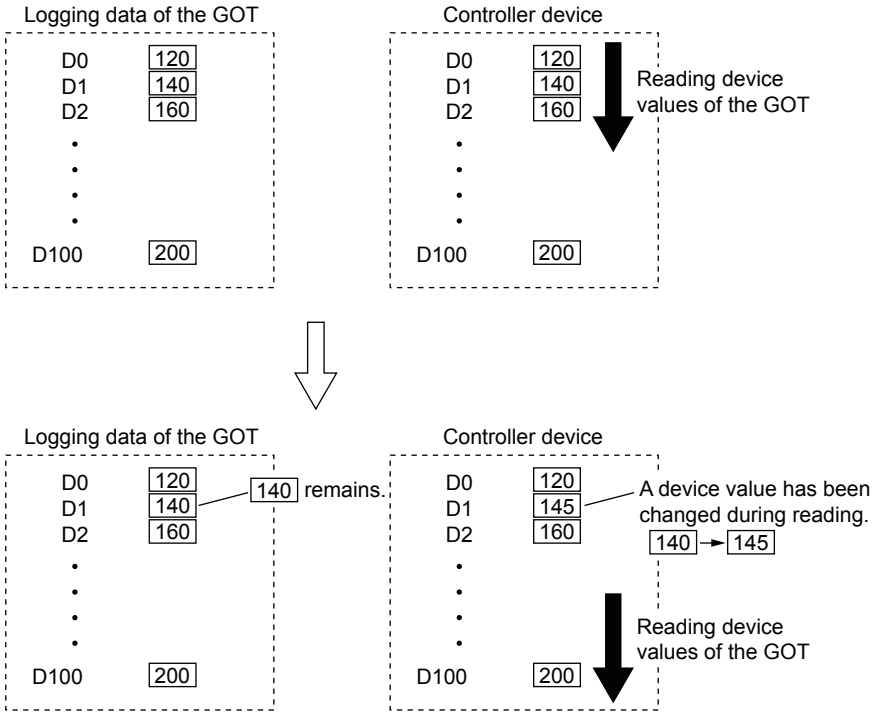
➟9.2.6 [Logging] dialog

• If the baud rate can be changed, increase the baud rate with communication detail settings.

If no device value can be collected, it is collected when the trigger device is turned on next time. The device values when the trigger device is turned on next time are to be collected.

(4) Consistency between the device values in the controller and the collected device values

If the number of target devices of logging is large, the device values in the controller may be inconsistent with the collected device values.



In this case, set an interlock to prevent the device values in the controller from being changed until logging by the GOT is completed.

The logging status can be check by [Logging Notification Device].

➟9.2.6 [Logging] dialog

(5) Collecting device values when a file server is used

When a file server is specified to save logging data, saving logging data to a file takes a longer time than when a data storage is specified.

Namely, when a file server is specified, device values are uncollected for a longer time than when a data storage is specified because device values cannot be collected while logging data is being saved.

For details on when device values cannot be collected, refer to the following.

➟(7) Timing at which processing is stopped or on hold

Specify a data storage to save logging data, and transfer the saved data to a file server to shorten the time during which device values cannot be collected.

➟10.18.5 [File Transfer Setting] dialog

(6) Duration of logging interruption when logging data is saved

If logging data is saved also in a Unicode text file or CSV file, the duration of logging interruption will be longer than when the data is saved only in a binary file (*.G2L).

To shorten the duration of logging interruption, save data only in a binary file (*.G2L) and convert the file to a Unicode text file or CSV file in GT Designer3 or in the utility.

GT21 does not support conversion of binary files (*.G2L) to Unicode text files or CSV files in the utility.

(7) Timing at which processing is stopped or on hold

During processing, if a logging file receives another processing request, the latter processing may be stopped or on hold.

(a) Timing at which collecting device values is stopped or pauses

In the following cases, no device value is collected if the trigger condition is satisfied because collecting device values stops.
Depending on the data collection intervals, device values may not be collected correctly.

Timing	Measures
When saving logging data to a data storage or file server	Take one of the following measures. • Change the setting of [Log Storage Number] For the details, refer to the following. ➟9.2.2 ■3 Number of logging events and saving them to a file • Use [Logging Notification Device] to prevent the trigger condition from being satisfied during writing. • Set a longer time interval for collecting device values.
When clearing the logging data in the buffering area	Make sure that the trigger condition is satisfied after the Buffer Historical Data Cleared device is turned on.
When logging data is accessed by the historical trend graph or historical data list display	Reduce the number of devices monitored by the historical trend graph or historical data list display.
When switching between screens (GT21 and GS21)	Make sure that the trigger condition is satisfied after the screen switching is complete.

(b) Timing at which saving files or clearing the buffering area data is on hold

In the following case, saving files or clearing the buffering area data is on hold.

Timing	Measures
When logging data is accessed by the historical trend graph or historical data list display	Reduce the number of devices monitored by the historical trend graph or historical data list display.

(8) Updating the display of a historical trend graph or historical data list

In the following cases, updating the display of a historical trend graph or historical data list is on hold.

- When saving logging data to a data storage or file server
- When clearing the logging data in the buffering area

(9) Files that must not be deleted (only in the file save mode)

In the file save mode, a number is added to the set file name.
Do not delete the following control data and temporary file.
If either of the following is deleted, logging is not executed normally.

- Control data

  Files that do not have numbers in their name
- Temporary file

  File that has number 0000 in its name

(10) When powering off, restarting, or resetting the GOT

The logging data in the buffering area is deleted.
Save the logging data beforehand by using the file creation trigger or the storage trigger as necessary.

(11) When the GOT is powered off before the storage trigger conditions are satisfied

In such a case, even though you have configured the setting to save data into a data storage or file server, the logging data in the buffering area will be lost and will not be saved into the data storage or file server for restoration.
On GT27, GT25, GT23, or GS25, use the SRAM power-failure backup function in combination so that the logging data in the buffering area can be saved into the SRAM user area before the storage trigger conditions are satisfied.

➟9.2.3 ■3 SRAM power-failure backup function

(12) Precautions for removing an SD card

When you open the SD card cover or turn off the SD card access switch, the files are saved automatically.
Before removing the SD card, make sure that the file saving is complete by checking one of the following conditions.

- The Drive Status Notification signal (system signal 2-2.b0, b1) is turned off.
- The SD card access LED is turned off.

➟9.2.6 [Logging] dialog

The save process may take a few minutes to complete.

(13)Logging file conversion by the utility

The logging data in the buffering area is deleted.
Save the logging data beforehand by using the file creation trigger or the storage trigger as necessary.

(14)Character code and conversion destination file

If a device comment or logging name contains any character other than ASCII and Shift JIS characters, convert the relevant file as shown below.

- Convert the file to Unicode text format.
- Turn on the Character Code for CSV Conversion signal (GS522.b2), and convert the file to CSV format.

(15)Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

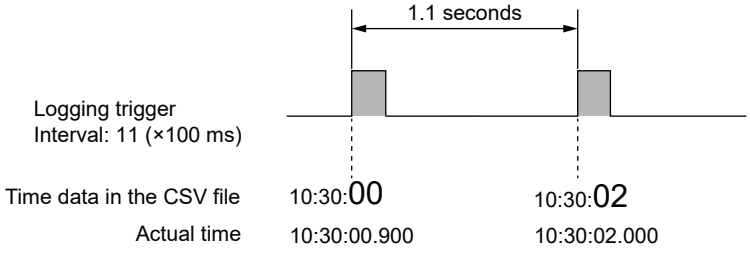
➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(16)Opening a CSV file by Microsoft Excel

When a Unicode text file or CSV file that has been created through the logging function is opened by Microsoft Excel, the standard style of Microsoft Excel is applied. Depending on the setting, data of logging date and others may be displayed in a style different from the actual setting. To check whether the display is different from the actual style or not, open the Unicode text file and the CSV file by a text editor. The style that the GOT has output can be checked.

(17)Time data in a CSV file and the interval for a logging trigger

After a logging file (*.G2L) is converted to CSV format, the time data will be stored with an accuracy of 1 second.
If the interval for the logging trigger is not set to an integral multiple of 10 (×100 ms), a time lag may exist between the interval and the time data in the CSV file.
Example) When the interval for the logging trigger is set to 11 (×100 ms)



(18)Logging data at a communication timeout

- Whether or not the missing logging data detection function is used, device values are not recorded at a communication timeout.

  This also applies to the case where one logging setting (one logging ID) is used for logging the device values of multiple controllers connected.

  Device values of the controllers communicating with the GOT are recorded. When a communication timeout (timeout error) occurs, device values of the relevant controller are not recorded.
- When a logging file (*.G2L) is converted to a CSV file, the unrecorded values are left blank.

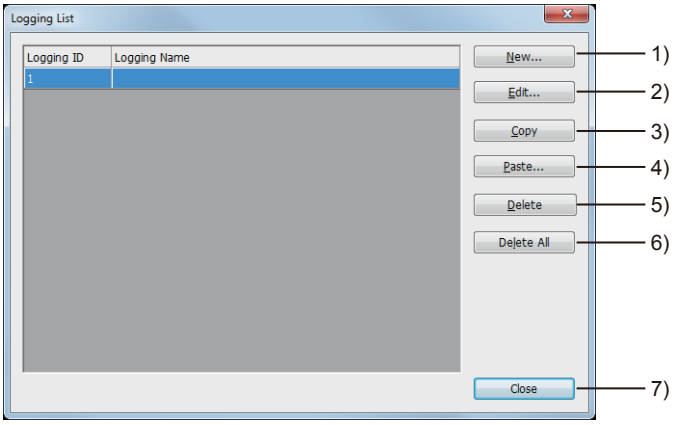
9.2.5 [Logging List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays the list of the logging settings and manages the settings.

Step 1 Select [Common] → [Logging] from the menu.

Step 2 The [Logging List] dialog appears.



1) **[New] button**
Sets logging newly.
Clicking this button displays the [Logging] dialog.

2) **[Edit] button**
Changes a selected logging setting.
Clicking this button displays the [Logging] dialog.

3) **[Copy] button**
Copies a selected logging setting.

4) **[Paste] button**
After clicking this button, set [Destination ID] of the copied logging setting. The copied data is pasted as the logging setting of the set logging ID in the logging list.

5) **[Delete] button**
Deletes a selected logging setting.

6) **[Delete All]] button**
Deletes all the logging settings.

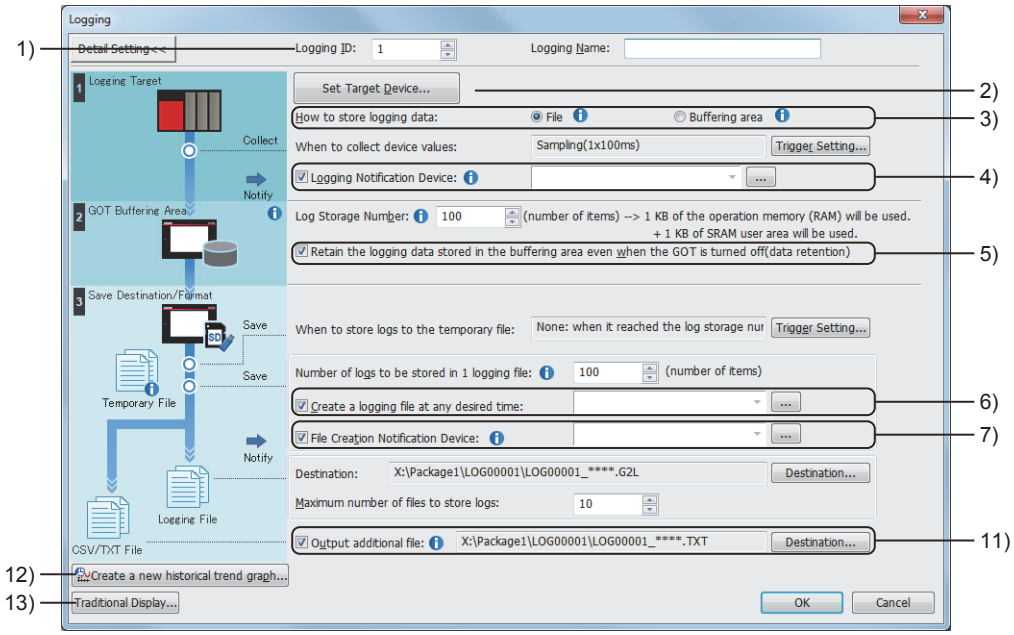
7) **[Close] button**
Closes the [Logging List] dialog.

9.2.6 [Logging] dialog

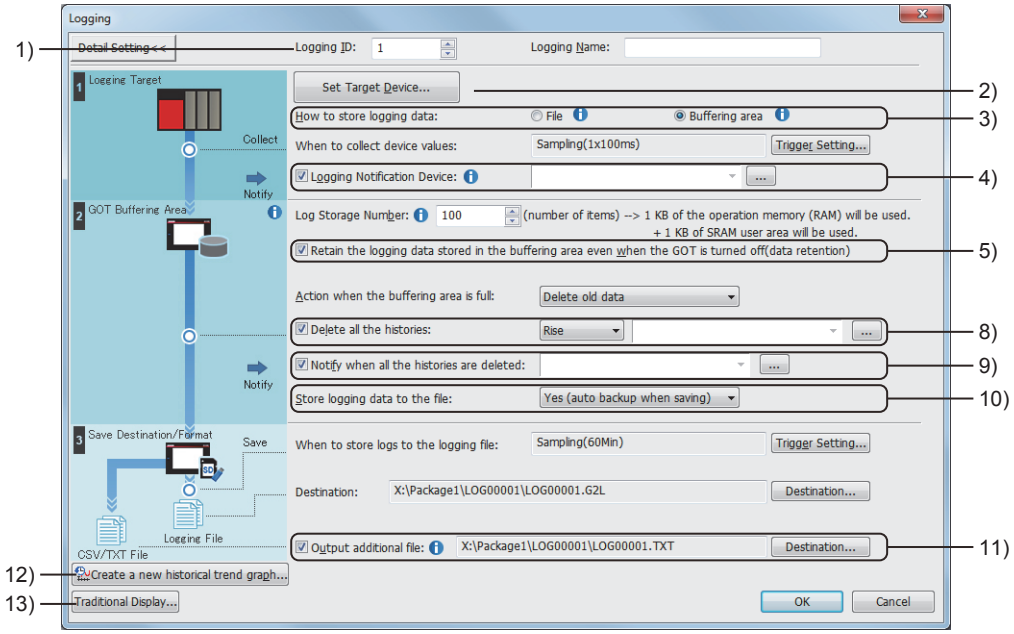
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Destination] dialog (for saving a logging file)
■2 [Destination] dialog (for saving a CSV or TXT file)
■3 [Screen Selection] dialog

• When [How to store logging data] is set to [File]



• When [How to store logging data] is set to [Buffering area]



The following shows the reference section related to each setting item.

1) **[Logging ID]**

➟(1) Logging ID

2) **[Set Target Device] button**

➟(3) Device

3) **[How to store logging data]**

➟9.2.3 ■1 Logging mode

• [File]

➟9.2.3 ■4 File save mode

• [Buffering area]

➟9.2.3 ■5 Buffer historical mode

4) **[Logging Notification Device]**

➟(1) Logging Notification device

5) **[Retain the logging data stored in the buffering area even when the GOT is turned off(data retention)]**

Not available to GT21 and GS21.

➟9.2.3 ■3 SRAM power-failure backup function

6) **[Create a logging file at any desired time]**

➟(1) Saving data

7) **[File Creation Notification Device]**

➟(7) Notify File Creation device (File Terminal Notification device)

8) **[Delete all the histories]**

➟(3) Buffer Historical Data Cleared device

9) **[Notify when all the histories are deleted]**

➟(3) Buffer Historical Data Cleared device

10) **[Store logging data to the file]**

➟(1) Saving data

11) **[Output additional file]**

➟(3) Saving logging data in Unicode text file format or CSV file format and displaying it with a personal computer

12) **[Create a new historical trend graph] button**

➟(1) Display by the historical trend graph or historical data list display

13) **[Traditional Display] button**

➟9.2.7 [Logging] dialog (traditional display)

The following setting items are not available in the standard display.
To set these items, switch the [Logging] dialog to the traditional display.

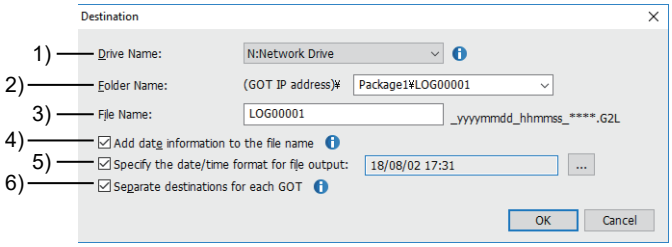
• [Full Notification Signal Device]
• [Buffer Full Alert Capacity]
• [Logging Count Device]
• [Use missing logging data detection function] (Not available to GT21 and GS21)
• [Writing Notification Device]
• [Writing Error Notification Device]

The set contents are held even after the display is switched.

■1 [Destination] dialog (for saving a logging file)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the location to which a binary file (*.G2L) is saved.



1) **[Drive Name]**

Select a destination drive.

The following shows selectable items.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [N:Network Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

2) **[Folder Name]**

Set the name of the folder where files are stored.

In the default setting, [Package Folder Name] selected from [Common] → [GOT Type Setting] is set as the folder name.

➟12.7 Restrictions for Folder Names and File Names used in GOT

3) **[File Name]**

Set the name of the files to be saved.

In the default setting, LOG□ is set for the file name. (□ indicates the logging ID.)

➟12.7 Restrictions for Folder Names and File Names used in GOT

4) **[Add date information to the file name]**

Adds the date (year, month, and day) and time (hour, minute, and second) to the file name when the file is saved.

The date and time information of the first event in the logging file is used.

5) **[Specify the date/time format for file output]**

Set the format of the date and time displayed in a Unicode text file or CSV file.

Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog.

➟6.3.2 Date/time format settings

6) **[Specify the date/time format for file output]**

Available to GT27, GT25, and GS25.

This item appears when [Drive Name] is set to [N:Network Drive].

Automatically creates a folder for each GOT to save logging files.

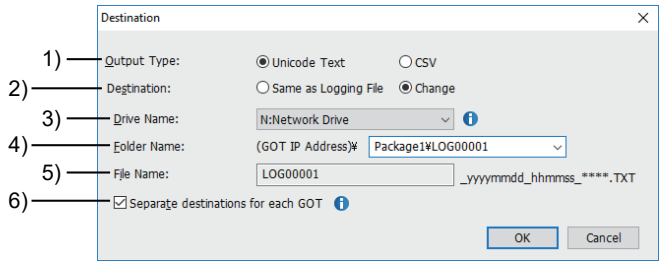
Each folder is named as the IP address of each GOT.

➟5.3.15 ■4 Creating a folder for each GOT

■2 [Destination] dialog (for saving a CSV or TXT file)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the location to which a Unicode text file or CSV file is saved.



1) **[Output Type]**
Select the file format to be additionally output.
The following shows selectable items.
- [Unicode Text]: Saves a binary file (*.G2L) and a Unicode text file.
- [CSV]: Saves a binary file (*.G2L) and a CSV file.

2) **[Destination]**
Select the save destination folder for the additionally output file.
The following shows selectable items.
- [Same as Logging File]
  Saves the output file to the location to which the logging file is saved.
- [Change]
  Saves the output file to a location different from the location to which the logging file is saved.
  Set [Drive Name] and [Folder Name].

3) **[Drive Name]**
Select a destination drive.
The following shows selectable items.
- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [N:Network Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.
➟1.2.8 Drive configuration of the target GOT for data transfer

4) **[Folder Name]**
Set the name of the folder where files are stored.
In the default setting, [Package Folder Name] selected from [Common] → [GOT Type Setting] is set as the folder name.
➟12.7 Restrictions for Folder Names and File Names used in GOT

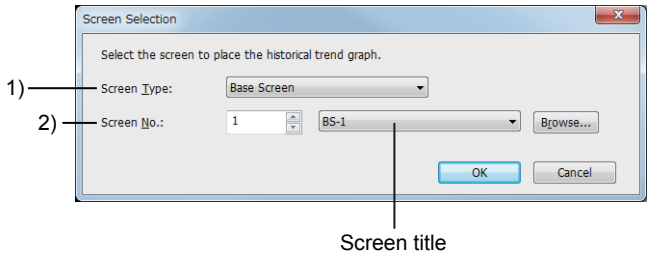
5) **[File Name]**
Displays the name of the logging file.

6) **[Specify the date/time format for file output]**
Available to GT27, GT25, and GS25.
This item appears when [Drive Name] is set to [N:Network Drive].
Automatically creates a folder for each GOT to save files.
Each folder is named as the IP address of each GOT.
➟5.3.15 ■4 Creating a folder for each GOT

■3 [Screen Selection] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select the screen in which a historical trend graph is placed.



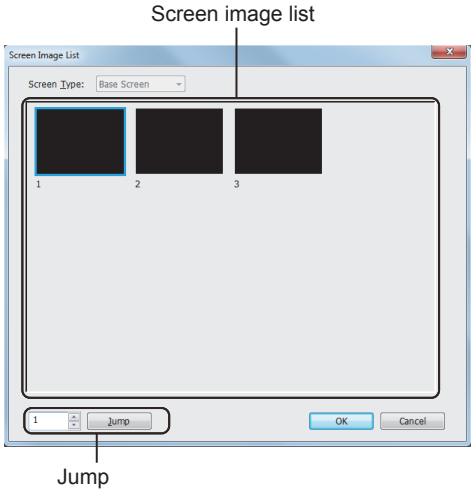
1) **[Screen Type]**

Select the type of the screen in which a historical trend graph is placed.
The following shows selectable items.

- [Base Screen]
- [Window Screen]
- [Mobile Screen] (GT27, GT25, and GS25)

2) **[Screen No.]**

Set the number of the screen in which a historical trend graph is placed.
The setting range is [0] to [32767].
A target screen is selectable from among screen titles as well.
To place a historical trend graph on a new screen, select [A new screen will be created.] for the screen title.
Click the [Browse] button to select a screen in thumbnail view in the [Screen Image List] dialog.



- **[Screen Type]**
  Select the type of a screen to be opened.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

9.2.7 [Logging] dialog (traditional display)

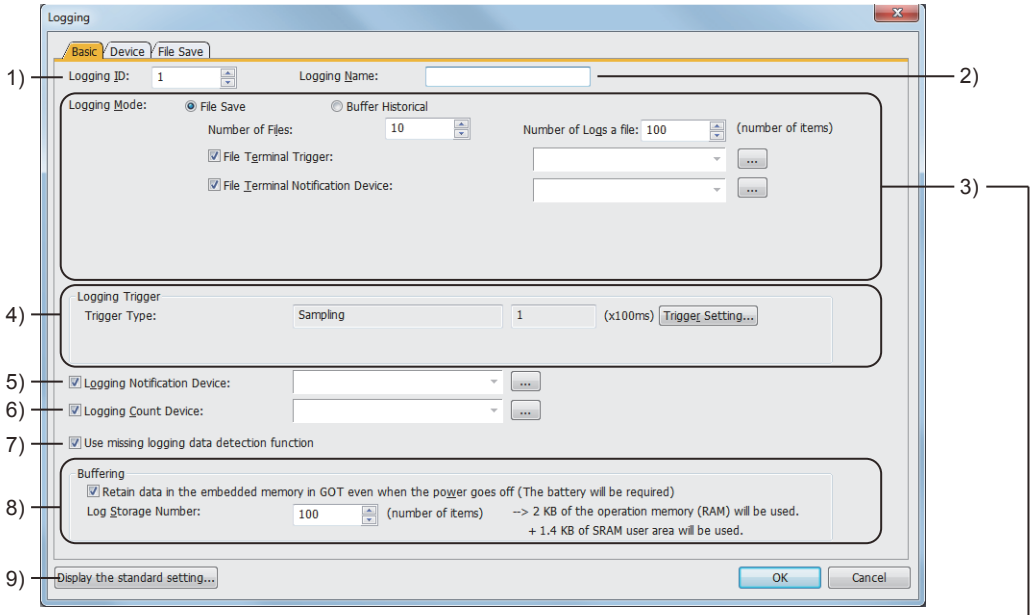
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 [Basic] tab
■2 [Device] tab
■3 [File Save] tab

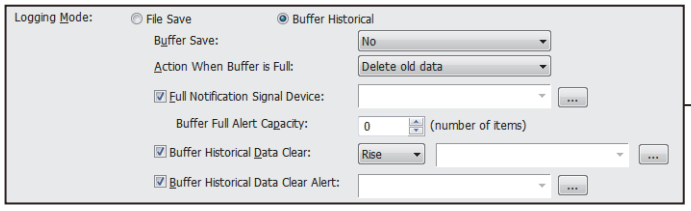
■1 [Basic] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the logging mode, logging trigger, and buffering area.



When [Logging Mode] is [File Save]



When [Logging Mode] is [Buffer Historical]

1) **[Logging ID]**
Set a logging ID for using the logging function.
The setting range is [1] to [32767].

➟9.2.3 ■8 Management of logging setting

2) **[Logging Name]**
Set a logging name.
Up to 32 characters can be set. A set logging name is displayed in a Unicode text file and CSV file.

3) **[Logging Mode]**

Select the logging mode.

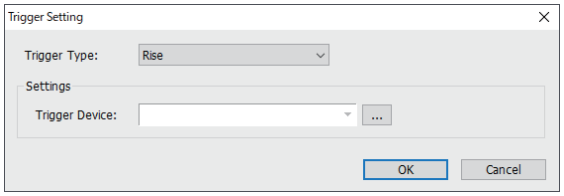
For the details of the logging mode, refer to the following.

➟9.2.3 ■1 Logging mode

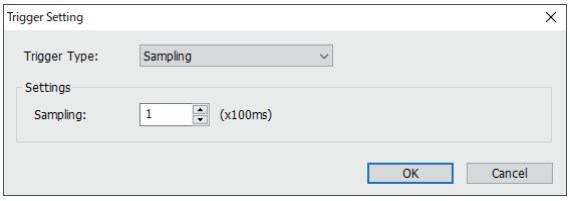
Item	Description
[File Save]	• [Number of Files]: Specify the number of files to be saved into a data storage or file server. The setting range is [1] to [9999]. When more logging files than the specified number of logging files are saved, the old logging files are overwritten. ➟9.2.3 ■4 File save mode • [Number of Logs a file (number of items)]: Set the number of events to be saved to a logging file. The setting range is [1] to [65500]. Specify a value equal to or larger than the value set for [Log Storage Number]. • [File Terminal Trigger]: Set the file creation trigger to start saving logging data to a file at an intended timing. ➟6.1.2 How to set devices • [File Terminal Notification Device]: Set the Notify File Creation device to notify that logging data is being saved upon turning on [File Terminal Trigger] (file creation trigger). This item is available only when [File Terminal Trigger] is enabled. ➟6.1.2 How to set devices
[Buffer Historical]	• [Buffer Save]: Set whether to save the logging data in the buffering area into a data storage or file server. To not to save the logging data into a data storage or file server, select [No]. The data is not saved to a file, and the logging does not pause. Select [No] for the high-speed logging. To save the logging data into a data storage or file server, select [Yes]. The logging data can be restored from the data storage or file server upon turn-on of the GOT. To save a backup of the logging file to be overwritten, select [Yes (auto backup when saving)]. If the logging data is corrupted, the data in the backup file is read. • [Action When Buffer is Full] Select an action when the number of logging data points stored in the buffering area reaches [Log Storage Number]. When [Delete old data] is selected, the oldest data is deleted and new logging data is added. When [Add no item] is selected, no device value is collected even though another trigger condition is satisfied. • [Full Notification Signal Device] Set a device for notifying that the available space of the buffering area for saving logging data falls below the setting of [Buffer Full Alert Capacity]. ➟9.2.3 ■5 Buffer historical mode • In [Buffer Full Alert Capacity], set the timing (the number of currently available logging data points that can be saved: 0 to 255) to notify that the available space of the buffering area is small. If the number of currently available logging data points falls below this setting, [Full Notification Signal Device] is turned on. • [Buffer Historical Data Clear]: Set a device for deleting the logging data temporarily saved in the buffering area. ➟9.2.3 ■5 Buffer historical mode • [Buffer Historical Data Clear Alert]: Set a device for notifying that clearing the buffering area is completed using [Buffer Historical Data Clear].

4) **[Logging Trigger]**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog and set the conditions to collect device values.

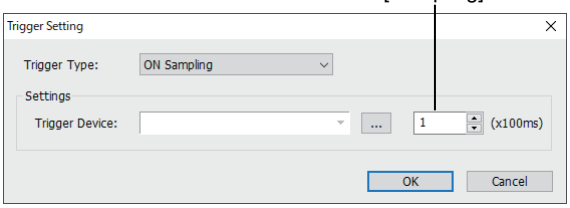


When [Trigger Type] is set to [Rise]



When [Trigger Type] is set to [Sampling]

[Sampling]



When [Trigger Type] is set to [ON Sampling]

- **[Trigger Type]**

  Select a trigger type for logging.
  The following shows selectable items.
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
- **[Trigger Device]**

  When selecting [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling] for [Trigger Type], set a device as the trigger condition for logging.
- **[Sampling]**

  When selecting [Sampling], [ON Sampling], or [OFF Sampling] for [Trigger Type], set the cycle for logging.
  The setting range depends on the GOT model.
  - GT27, GT25, GT23, GT SoftGOT2000, and GS25: [1] to [36000]
  - GT21 and GS21: [5] to [36000]

5) **[Logging Notification Device]**

Set a device for notifying that the device values of a controller are being collected to the buffering area.

➟9.2.3 ■2 Device

6) **[Logging Count Device]**

Set a device for notifying the number of collection times of device values after the GOT is started.

➟9.2.3 ■2 Device

7) **[Use missing logging data detection function]**

Not available to GT21 and GS21.

Enables the missing logging data detection function.

➟9.2.3 ■9 Missing logging data detection function

8) **[Buffering]**

Item	Description
[Retain data in the embedded memory in GOT even when the power goes off (The battery will be required)]	Not available to GT21 and GS21. Select this item to save the logging data in the buffering area to the SRAM user area. Up to 20 logging settings can be configured with the SRAM power-failure backup function enabled. ➟9.2.3 ■3 SRAM power-failure backup function
[Log Storage Number]	Set the number of logging data points temporarily saved in the buffering area. The setting range is [1] to [32767].

9) **[Display the standard setting] button**

Switches the [Logging] dialog to the standard display.

The set contents are held even after the display is switched.

➟9.2.6 [Logging] dialog

■2 [Device] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the target device for collection.

Point

Selecting Unicode for the character code of the target device for collection

Available to GT27, GT25, GT23, GT SoftGOT2000, and GS25.

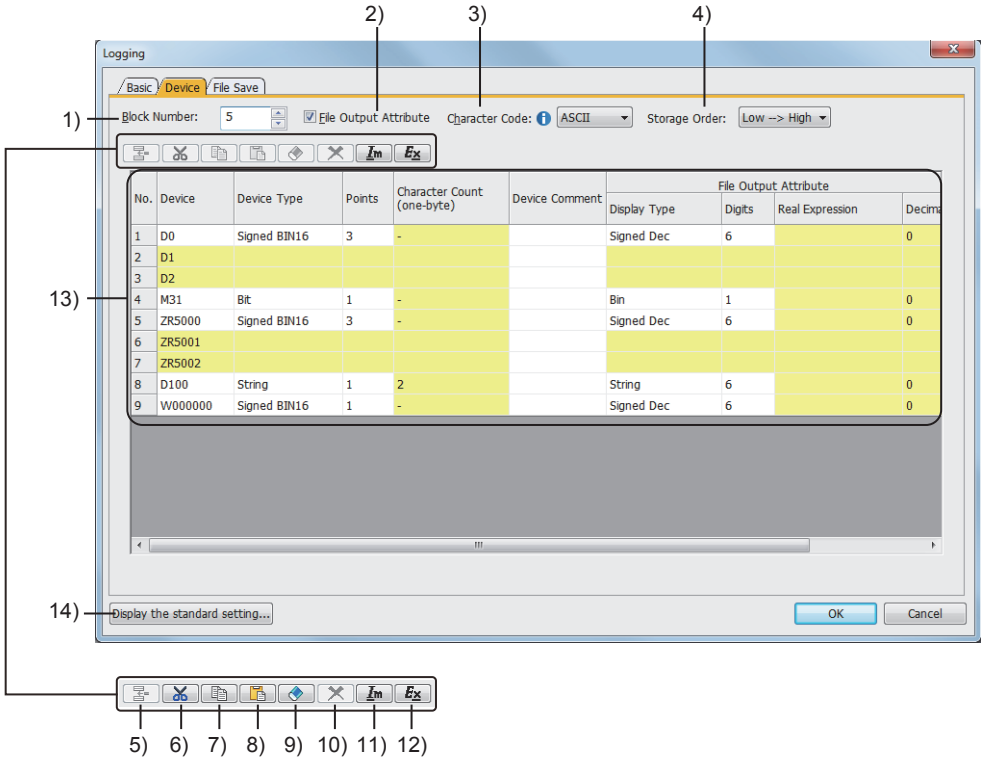
When [Character Code] is set to [Unicode] for a target device, if you specify the device for a text display, text input, or text print object, configure the settings in the object setting dialog as shown below.

(1) **When [Storage Order] is set to [Low-->High] in the [Logging] dialog**

- Select [Unicode] for [Character Code] in the [Device/Style] tab or in the [Text Print] dialog.
- Select [Display in order of High -> Low] in the [Extended] tab or in the [Text Print] dialog.

(2) **When [Storage Order] is set to [High-->Low] in the [Logging] dialog**

- Select [Unicode] for [Character Code] in the [Device/Style] tab or in the [Text Print] dialog.
- Deselect [Display in order of High -> Low] in the [Extended] tab or in the [Text Print] dialog.



1) **[Block Number]**

Set the number of blocks of the logging setting.

➟9.2.3 ■8 Management of logging setting

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  The setting range is [1] to [250].
- For GT21 and GS21
  The setting range is [1] to [20].

2) **[File Output Attribute]**

Select this item to change the style of the device value that is to be output to a Unicode text file or CSV file.

After selecting this item, set [File Output Attribute] on the right side of [Device Comment].

This setting is available only when [File Save] is selected for [Logging Mode].

3) **[Character Code]**

Select a character code.

The following shows selectable items.

- [ASCII]

- [Unicode]
- [S-JIS]
- [GB]
- [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25)
- [Big5]

4) **[Storage Order]**
Select the order in which character codes are stored.
The following shows selectable items.
- [Low-->High]
- [High-->Low]

5) **[Insert Block] button**
Inserts a block.
Select a column when inserting a block.

6) **[Cut] button**
Cuts a selected item.
This operation can also be performed from the right-click menu.

7) **[Copy] button**
Copies a selected item.
This operation can also be performed from the right-click menu.

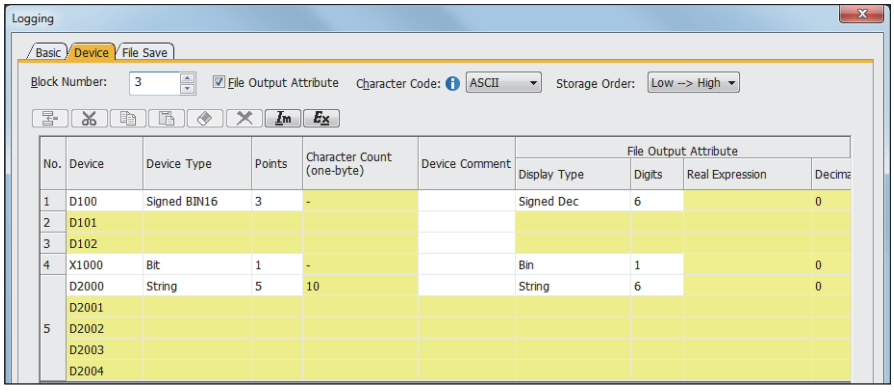
8) **[Paste] button**
Pastes a selected item.
This operation can also be performed from the right-click menu.

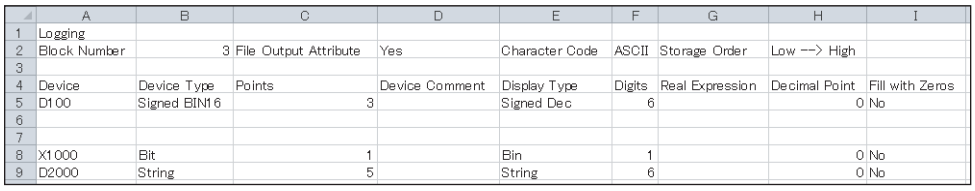
9) **[Clear] button**
Clears the device comment when [Device Comment] is being selected.
Returns the number of displayed digits to the initial value when [Digits] is being selected.

10) **[Delete] button**
Deletes a selected line setting.

11) **[Import] button**
Imports the setting edited in a Unicode text file or CSV file to GT Designer3.

12) **[Export] button**
Saves the setting in the [Device] tab with a Unicode text or CSV file.
You can edit the exported file in spreadsheet software and others.
The edited file can be imported with GT Designer3.
The following shows the file format of the exported file.



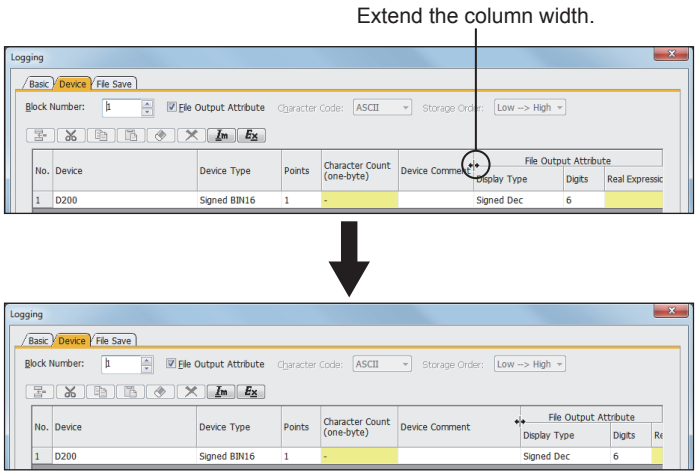


	A	B	C	D	E	F	G	H	I
1	Logging								
2	Block Number	3	File Output Attribute	Yes	Character Code	ASCII	Storage Order	Low --> High	
3									
4	Device	Device Type	Points	Device Comment	Display Type	Digits	Real Expression	Decimal Point	Fill with Zeros
5	D100	Signed BIN16	3		Signed Dec	6		0	No
6									
7									
8	X1000	Bit	1		Bin	1		0	No
9	D2000	String	5		String	6		0	No

When importing or exporting files in the multiple-language input environment, use Unicode text files.
The characters of multiple languages can be imported or exported normally by using Unicode text files.

13) **Device list**

Lists the device values to be collected.

Item	Description
[Device]	Set devices that are targets of the logging function. ➡6.1.2 How to set devices
[Device Type]	Select the data type of the device to be set. The following shows selectable items. • [Bit] • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] • [String]
[Points]	Set the number of devices to be collected in block units. Devices starting from the start device are set sequentially for the set number. The maximum number of devices that can be set depends on the setting of [Device Type]. • [Bit]: [1] • [Signed BIN16], [Unsigned BIN16], [Signed BIN8], [Unsigned BIN8] [BCD16], or [String]: [1] to [250] • [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)]: [1] to [125] • [Signed BIN64], [Unsigned BIN64], [BCD64], or [Real(64bit)]: [1] to [62]
[Character Count (one-byte)] ([Character Count] when [Unicode] is selected for [Character Code])	Maximum number of characters to be collected. This item is displayed when [String] is selected for [Device Type]. The settings of [Points] and [Character Code] determine the setting value. • When [Unicode] is selected for [Character Code] The maximum number of characters equals the value in [Points]. • When an item other than [Unicode] is selected The maximum number of characters equals the value in [Points] multiplied by 2. A two-byte character is counted as two characters.
[Device Comment]	Set a device comment. Up to 32 characters can be set. A set device comment is displayed in a Unicode text file and CSV file. The column width can be adjusted to display the whole set device comment. 

Item	Description
[File Output Attribute]	Set the style of the device value that is to be output to a Unicode text file or CSV file. Select [File Output Attribute] on the right side of [Block Number] to set the style. • [Display Type]: Select the data display type. The setting range depends on the setting of [Device Type]. ➟(1) Relationship between the settings of [Device Type], [Display Type], and [Digits] • [Digits]: Set the number of the digits displayed. The setting range depends on the setting of [Display Type]. If the number of the digits of a collected value exceeds the number of set digits, the value is output intact. When [Display Type] is set to [String], if a collected character string contains a null character in the range of the set number of digits, the characters preceding the null character are displayed. When the number of characters collected is less than that of the set digits, spaces are added. ➟(1) Relationship between the settings of [Device Type], [Display Type], and [Digits] • [Real Expression]: Select the expression type of the real number. Set this item when [Real] is selected for [Display Type]. The following shows selectable items. • · [Exponential Expression] • · [Fixed Decimal] Example) When the device stores 123.4567 and [Decimal Point] is set to 3 • · Display using [Exponential Expression]: 1.235E+002 (The value in the exponential expression is rounded off to the third decimal place.) • · Display using [Fixed Decimal]: 123.457 (The value is rounded off to the third decimal place.) When [Device Type] is set to an item other than [Real], [Real Expression] is fixed to [Fixed Decimal]. The value set for [Decimal Point] is handled as the number of decimal places. Example) When the device stores 12345 and [Decimal Point] is set to 2 Device value output to a file: 123.45 (The last two digits of the value are handled as the decimal places.) • [Decimal Point]: Set the number of digits of decimal numbers. Set this item when [Real] is selected for [Display Type]. The setting range is [0] digits to [30] digits. • [Fill with 0]: Select this item to display 0 before the device value. When the collected device value is 125 and [Digits] is 6, 000125 is displayed with this item selected.

14) **[Display the standard setting] button**

Switches the [Logging] dialog to the standard display.

The set contents are held even after the display is switched.

➟9.2.6 [Logging] dialog

(1) Relationship between the settings of [Device Type], [Display Type], and [Digits]

The selectable items for [Display Type] vary depending on the setting of [Device Type].

The setting range of [Digits] also varies depending on the setting of [Display Type].

[Device Type]	[Display Type]	Setting range of [Digits]*1
[Bit]	[Bin]	[1]
	[Bit]	[3]
[Signed BIN16]	[Signed Dec]	[1] to [21]
	[Hex]	[4]
	[Octal]	[6]
	[Bin]	[16]
	[Real]	[1] to [32]
[Unsigned BIN16]	[Unsigned Dec]	[1] to [21]
	[Hex]	[4]
	[Octal]	[6]
	[Bin]	[16]
	[Real]	[1] to [32]

[Device Type]	[Display Type]	Setting range of [Digits]*1
[Signed BIN32]	[Signed Dec]	[1] to [21]
	[Hex]	[8]
	[Octal]	[11]
	[Bin]	[32]
	[Real]	[1] to [32]
[Unsigned BIN32]	[Unsigned Dec]	[1] to [21]
	[Hex]	[8]
	[Octal]	[11]
	[Bin]	[32]
	[Real]	[1] to [32]
[Signed BIN64]	[Signed Dec]	[1] to [21]
	[Hex]	[16]
	[Real]	[1] to [32]
[Unsigned BIN64]	[Unsigned Dec]	[1] to [21]
	[Hex]	[16]
	[Real]	[1] to [32]
[Signed BIN8]	[Signed Dec]	[1] to [21]
	[Hex]	[2]
	[Octal]	[3]
	[Bin]	[8]
	[Real]	[1] to [32]
[Unsigned BIN8]	[Unsigned Dec]	[1] to [21]
	[Hex]	[2]
	[Octal]	[3]
	[Bin]	[8]
	[Real]	[1] to [32]
[BCD16]	[Unsigned Dec]	[1] to [21]
	[Real]	[1] to [32]
[BCD32]	[Unsigned Dec]	[1] to [21]
	[Real]	[1] to [32]
[BCD64]	[Unsigned Dec]	[1] to [21]
	[Real]	[1] to [32]
[Real(32bit)]	[Real]	[1] to [32]
[Real(64bit)]	[Real]	[1] to [32]
[String]	[String]	[1] to [500]

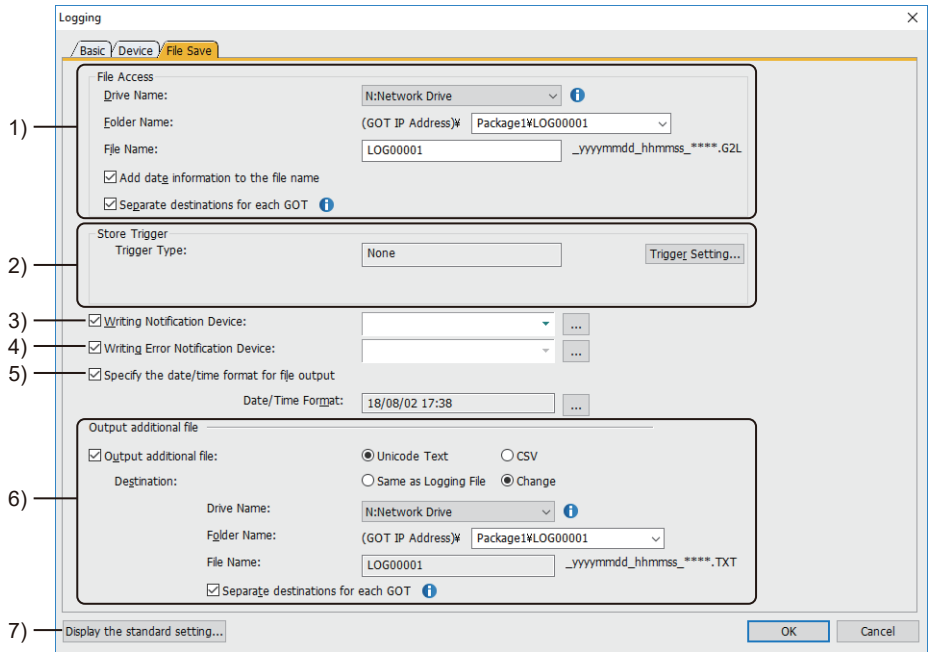
*1 When [Real Expression] is set to [Fixed Decimal], the value set for [Digits] is handled as the number of digits of the integer portion.
The sum of the values set for [Digits] and [Decimal Point] must be 30 or less.

■3 [File Save] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the settings to save the logging data in the buffering area into a data storage or file server.
This tab appears in the following cases.

- When the file save mode is selected
- When [Buffer Save] is enabled for the buffer historical mode



1) [File Access]

Set the file that stores logging data.

Item	Description
[Drive Name]	Select a destination drive. The following shows selectable items. • [A:Standard SD Card] • [B:USB Drive] • [E:USB Drive] • [F:USB Drive] • [G:USB Drive] • [N:Network Drive] • [X:Current Drive] For the available drives by GOT model, refer to the following. ⇒1.2.8 Drive configuration of the target GOT for data transfer
[Folder Name]	Set the name of the folder where files are stored. In the default setting, [Package Folder Name] selected from [Common] → [GOT Type Setting] is set as the folder name. ⇒12.7 Restrictions for Folder Names and File Names used in GOT
[File Name]	Set the name of the files to be saved. In the default setting, LOG□ is set for the file name. (□ indicates the logging ID.) ⇒12.7 Restrictions for Folder Names and File Names used in GOT
[Add date information to the file name]	Adds the date (year, month, and day) and time (hour, minute, and second) to the file name when the file is saved. The date and time information of the first event in the logging file is used.
[Separate destinations to the file name]	Available to GT27, GT25, and GS25. This item appears when [Drive Name] is set to [N:Network Drive]. Automatically creates a folder for each GOT to save logging files. Each folder is named as the IP address of each GOT. ⇒5.3.15 ■4 Creating a folder for each GOT

2) **[Store Trigger]**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog and set the conditions to save data in the buffering area to a logging file.

➟6.2.2 Setting Trigger Types

3) **[Writing Notification Device]**

Set a device for notifying that the logging data is being saved.

➟9.2.3 ■2 Device

4) **[Writing Error Notification Device]**

Set a device for notifying an error when saving the logging data has failed.

➟9.2.3 ■2 Device

5) **[Specify the date/time format for file output]**

Set the format of the date and time displayed in a Unicode text file or CSV file.

Click the [...] button, and set the date/time formats in the [Date/Time Setting] dialog.

➟6.3.2 Date/time format settings

6) **[Output additional file]**

Set these items to save a Unicode text file or CSV file when the logging data is saved.

➟12.9 Precautions for Using Unicode Text File

Item	Description
[Output additional file]	Select the file format to be additionally output. • [Unicode Text]: Saves a binary file (*.G2L) and a Unicode text file. • [CSV]: Saves a binary file (*.G2L) and a CSV file. When an additional file is output, the duration of logging interruption may be longer.
[Save Destination]	Select the save destination folder for the additionally output file. • [Same as Logging File]: Saves the output file to the location to which the logging file is saved. • [Change]: Saves the output file to a location different from the location to which the logging file is saved. Set [Drive Name], [Folder Name], and [Separate destinations for each GOT]. The setting method is the same as the one for [File Access] to store a logging file. [File Name] displays the name of the logging file.

7) **[Display the standard setting] button**

Switches the [Logging] dialog to the standard display.

The set contents are held even after the display is switched.

➟9.2.6 [Logging] dialog

9.2.8 [Logging File Conversion] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

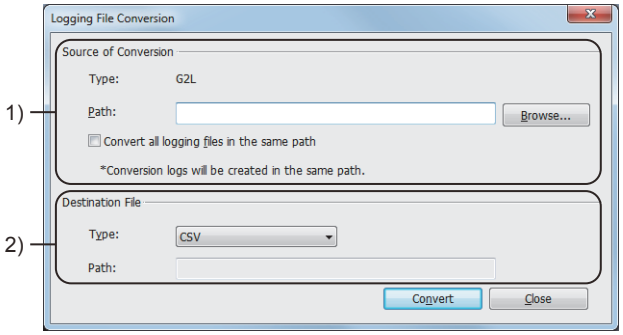
A binary file (*.G2L) stored in the data storage with GT Designer3 can be converted into a Unicode text file or CSV file. Since the file is converted with GT Designer3, converting is processed without any load on the GOT.

Step 1 Store the binary file by either of the following methods.

- Transferring with GT Designer3
  Select [Communication] → [Read from GOT...] from the menu to transfer a file to the personal computer.
- Storing by using the data storage
  Save logging data to the data storage and read the data in the data storage using the personal computer.

Step 2 Select [Tools] → [Resource Data Conversion] → [Logging File] from the menu in GT Designer3 to display the [Logging File Conversion] dialog.

Set the following items and convert a binary file into a Unicode text file or a CSV file.



1) [Source of Conversion]

Item	Description
[Type]	Displays the file type of the conversion source file.
[Path]	Specify a path of the conversion source file.
[Convert all logging files in the same path]	Check this item to convert all files (G2L files only) that have the same path. When the conversion is executed after this item is checked, a conversion log is automatically created to the specified path. You can check the full path of the converted files, the conversion results (OK, NG), or the creation date of files in the conversion log.

2) [Destination File]

Item	Description
[Type]	Select a file type of a file to be created after the conversion. The following shows selectable items. • [CSV] • [Unicode Text]
[Path]	Displays the path of a file to be saved at the destination, which is the same path as the one of the conversion source file.

9.2.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the logging function as required. The following shows the functions that are available by the relevant settings.

■1 GOT internal device

➡1.2.7 ■1 (1) GOT internal devices (GB, GD, and GS)

Function	Setting item
Saving the data in the buffering area to data storage (Buffering And File Access Control: Forcefully Save Buffered Data signal)*1	GS520.b0
Changing the character code to Unicode when a binary file is converted to CSV format (Read device)	GS522.b2

*1 If the setting for saving the logging data in the buffering area to the data storage is not configured (if [Buffer Save] in the logging setting is set to [No]), the data cannot be saved to the data storage.

9.3 Executing the Batch Write or Batch Read on Multiple Devices ([Recipe])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

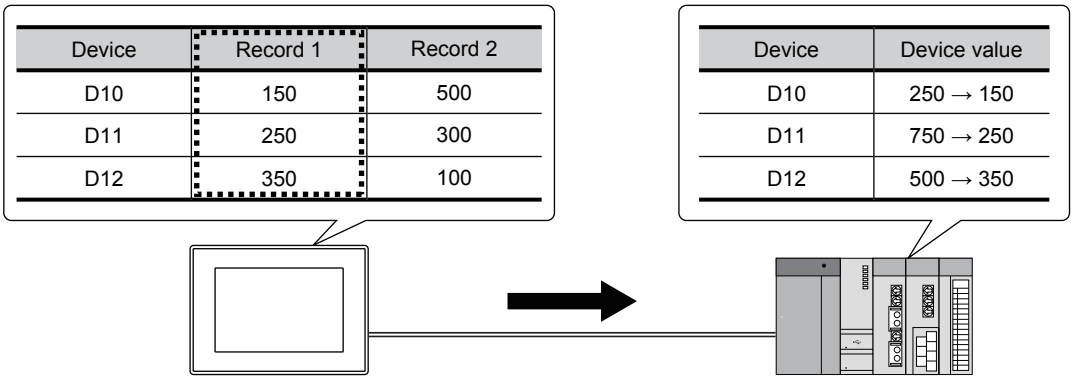
9.3.1 Overview of the recipe function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The recipe function collectively writes or reads values to or from multiple devices.

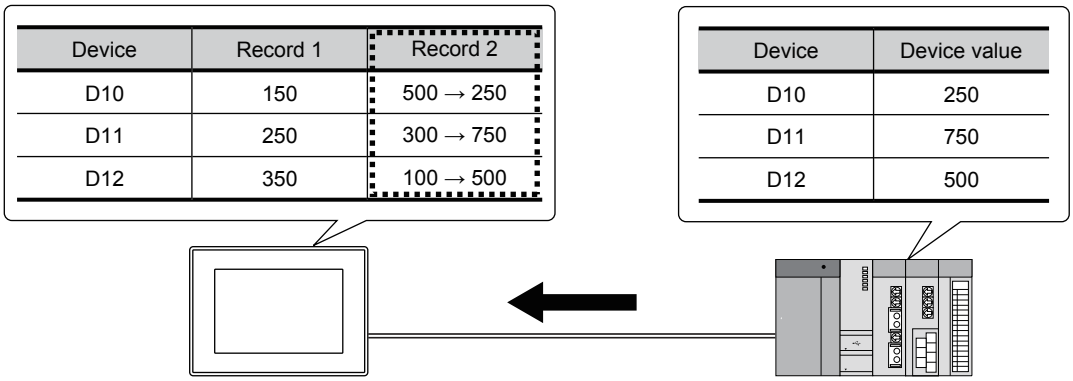
■1 Writing device values

Preset values are written to multiple devices.
You can set multiple combinations of device values (records) to be written.
Example) Writing the values of record 1



■2 Reading device values

Values are read from multiple devices.
The read values are saved as the values of a record in a data storage or the SRAM user area.
Example) Saving the read device values in record 2



9.3.2 Specifications of the recipe

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Contents of a recipe setting
■2 Types of writing and reading methods
■3 Recipe data
■4 Specifications of the recipe file

■1 Contents of a recipe setting

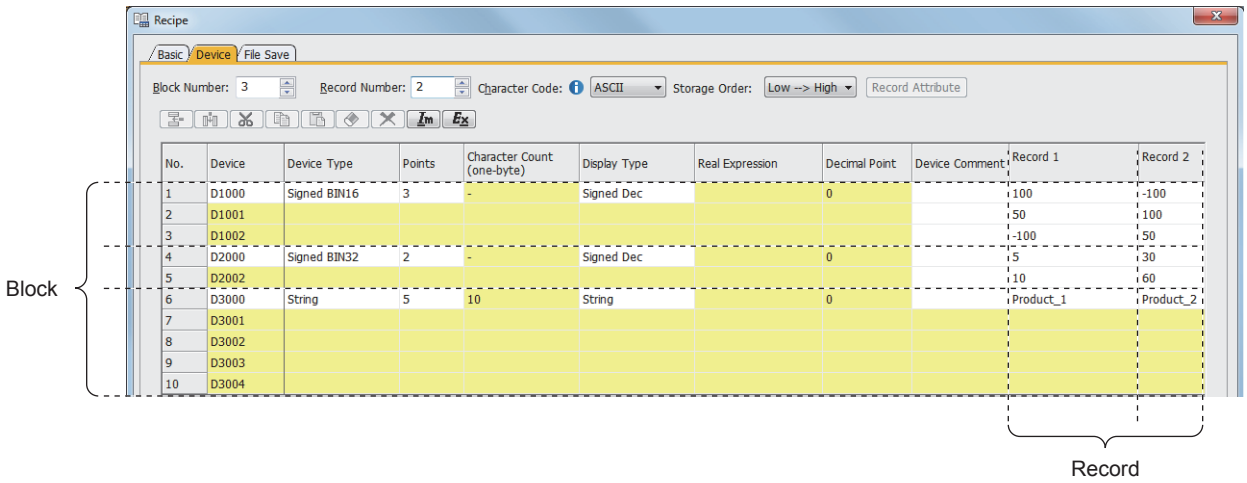
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A recipe setting consists of target devices, combinations of values to be written (records), trigger devices, and other fields.
Device values are read or written in units of recipe settings.
Each recipe setting has a recipe number used to specify the recipe data to be written or read.
The maximum number of recipe settings depends on the GOT model.

GOT	Number of recipe settings per project	Setting range of recipe No.
GT27, GT25, GT23, GT SoftGOT2000, GS25	Up to 2500 settings	1 to 32767
GT21, GS21	Up to 256 settings	

Set recipe settings in the [Recipe] dialog.

➟9.3.7 [Recipe] dialog

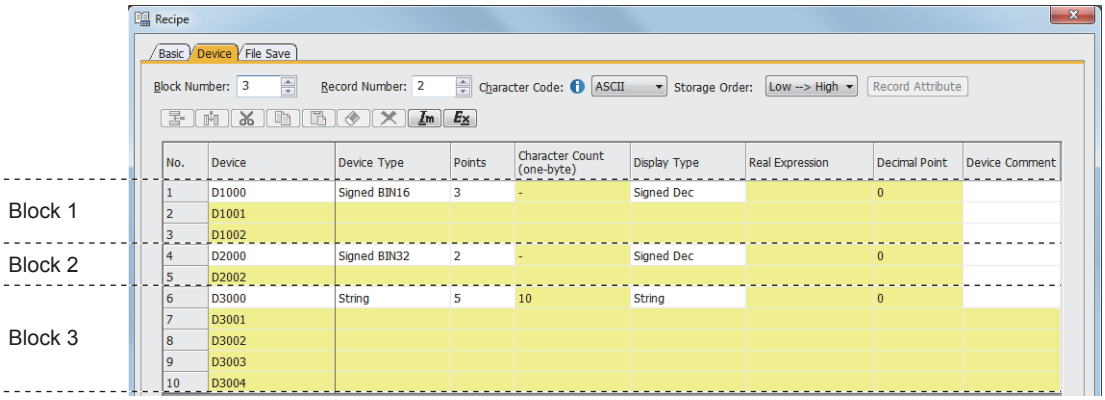


For the details of blocks, devices, and records, refer to the following.

➟(1) Block
(2) Device
(3) Record

(1) Block

Target devices are set in units of blocks.
Up to 2048 blocks can be set in one recipe setting.
Set target devices, device types, and number of devices by block.
To set different types of devices in one recipe setting, arrange the devices by block according to their type.
To set consecutive devices as target devices in one block, set the number of devices.
Example) Setting example of blocks



Block	[Device]	[Device Type]	[Points]
Block 1	[D1000] Three consecutive devices (D1000 to D1002) are set as target devices.	[Signed BIN16]	3
Block 2	[D2000] Two 32-bit-equivalent consecutive devices (D2000 to D2003) are set as target devices.	[Signed BIN32]	2
Block 3	[D3000] Five consecutive devices (D3000 to D3004) are set as target devices.	[String]	5

(2) Device

Multiple devices to which values are written, or from which values are read.
The following shows the maximum number of target devices that can be set.

(a) Number of devices per recipe setting

The number of devices that can be set per recipe setting (the total of all blocks) depends on the number of records to be set.

- 256 records or less: 65536 devices
- 257 records or more: 8192 devices

(b) Number of devices per block

The number of devices that can be set per block depends on the number of records to be set.
However, when [Device Type] is [String], up to 2048 devices can be set regardless of the number of records.

- 256 records or less: 32768 devices
- 257 records or more: 8192 devices

(c) Maximum number of devices per project

When recipe files are saved in drive C or D of GT21 or GS21, the numbers of devices and records are restricted as follows.

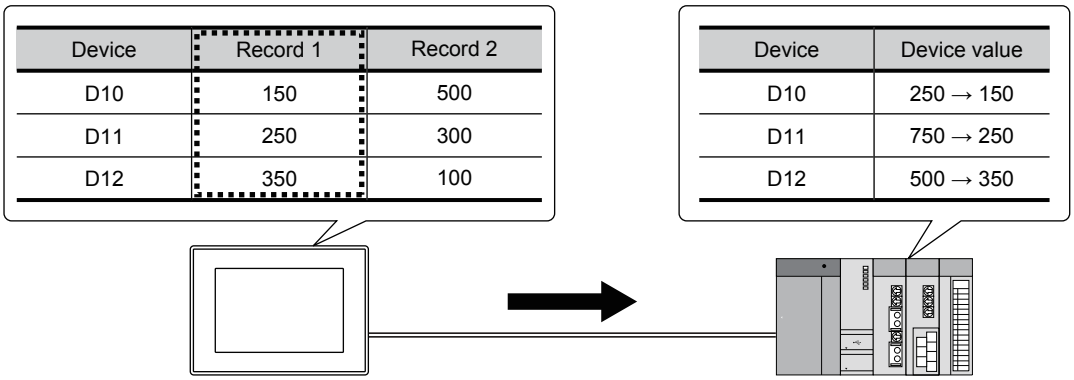
- The number of devices per recipe setting is calculated by using the expression "the number of devices × the number of records". The total number of devices in all recipe settings must be 8000 or less.

(3) Record

Values of target devices are managed in units of records.
Up to 2000 records can be set in one recipe setting.

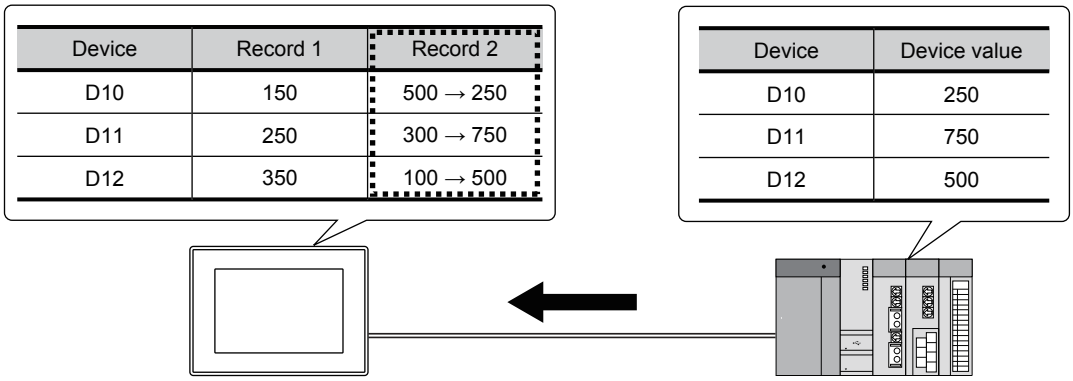
(a) When writing device values

Specify values to be written to devices in units of records.
One record can be specified for one write.
Example) Writing the values of record 1



(b) When reading device values

The values read from devices are saved as one record.
One record can be specified for one read.
Example) Saving the read device values in record 2



■2 Types of writing and reading methods

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Writing methods

The following writing methods are available when the GOT writes the values of a record into the target devices of a controller.

(a) Trigger device per project

Specify a recipe number and a record number with applicable devices to write the values of the record into the target devices of a controller.
The trigger device is shared among all the recipe settings in one project.
The trigger condition is satisfied only by turning on the trigger device.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■1 (1) Writing device values using a trigger device per project

(b) Trigger device per recipe setting

Specify a record number with an applicable device to write the values of the record into the target devices of a controller. (When the recipe setting has only one record, the record number does not need to be specified.)
Up to two trigger devices can be set. The following setting can be configured: Device values are written only when both of the trigger conditions are satisfied.
Each trigger condition is satisfied by turning on or off a trigger device.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■1 (2) Writing device values using a trigger device per recipe setting

(c) **Recipe operation window**

Specify a recipe file in the recipe operation window to write the values of the record into the target devices of a controller.
To write device values in the recipe operation window, recipe files are necessary.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■1 (3) Writing device values in the recipe operation window

(d) **Recipe display (record list)**

Use a key code switch to write a record selected on the recipe display (record list).
This method requires the applicable key code switch.
For the setting and operating procedures, refer to the following.

➟8.14 Placing a Recipe Display (Record List)
8.2.11 [Key Code Switch] dialog

(2) Reading methods

The following reading methods are available when the GOT reads values from the target devices of a controller into a record.

(a) **Trigger device per project**

Specify a recipe number and a record number with applicable devices to read values from the target devices of a controller into the record.
The trigger device is shared among all the recipe settings in one project.
The trigger condition is satisfied only by turning on the trigger device.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■2 (1) Reading device values using a trigger device per project

(b) **Trigger device per recipe setting**

Specify a record number with an applicable device to read values from the target devices of a controller into the record. (When the recipe setting has only one record, the record number does not need to be specified.)
Up to two trigger devices can be set. The following setting can be configured: Device values are read only when both of the trigger conditions are satisfied.
Each trigger condition is satisfied by turning on or off a trigger device.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■2 (2) Reading device values using a trigger device per recipe setting

(c) **Recipe operation window**

Specify a recipe file in the recipe operation window to read values from the target devices of a controller into the record.
To read device values, recipe files are necessary.
For the setting and operating procedures, refer to the following.

➟9.3.3 ■2 (3) Reading device values in the recipe operation window

(d) **Recipe display (record list)**

Use a key code switch to read a record selected on the recipe display (record list).
This method requires the applicable key code switch.
For the setting and operating procedures, refer to the following.

➟8.14 Placing a Recipe Display (Record List)
8.2.11 [Key Code Switch] dialog

■3 Recipe data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The recipe data includes the target devices, records, and device comments based on a recipe setting.
The records in the recipe data are subjected to reading and writing.
You can save the recipe data into a data storage or the SRAM user area.
Set the save destination in the [Recipe] dialog ([Basic] tab).

➟9.3.7 ■1 [Basic] tab

The recipe data is handled differently depending on the save destination setting.

- When [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]

➟(1) Saving the data into a data storage

- When [Recipe Data Save Location] is set to [Embedded Memory in GOT (read and write)]

➟(2) Saving the data into the SRAM user area

• When [Recipe Data Save Location] is set to [Not save (record value write only)]

➡(3) Not saving the data

(1) Saving the data into a data storage

The recipe data is saved to a recipe file in the specified drive (data storage) of the GOT.
The records in the recipe file are subjected to reading and writing.
To edit the recipe data, transfer the recipe file to a personal computer.
The following shows the available drives of the GOT.

- Drive A
- Drive B
- Drive C
- Drive D
- Drive E
- Drive F
- Drive G
- Drive X (current drive)

For the available drives by GOT model, refer to the following.

➡1.2.8 Drive configuration of the target GOT for data transfer

Some GT21 and GS21 models have drive C or D.
No data storage is required to use drive C or D.

(2) Saving the data into the SRAM user area

Not available to GT21 and GS21.
The recipe data is saved into the SRAM user area of the GOT.
No recipe file is created.
The records of the recipe data in the SRAM user area are subjected to reading and writing.
In this case, the following operations are not available.

- Operations in the recipe operation window

The SRAM user area space is limited.
Only the following fields are saved accordingly. For the other fields, the recipe settings in the project are used.

- Record name
- Record attribute
- Values of the record

To use device comments or other fields, or large amounts of recipe data, save the recipe data to a recipe file in the data storage.

For the details of the SRAM user area, refer to the following.

➡9.3.3 ■10 Saving recipe data into the SRAM user area

(3) Not saving the data

The recipe data is not saved.
No recipe file is created.
The records in a recipe setting in the project are subjected to writing.
In this case, the following operations are not available.

- Writing device values in the recipe operation window
- Reading device values

Select not to save the recipe data for write operations only.

■4 Specifications of the recipe file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡(1) Recipe file
(2) Recipe file format
(3) Configuration of the recipe file

(1) Recipe file

A recipe file contains recipe data.
The records in the recipe file are subjected to reading and writing, and the contents of the file are editable.
Set whether to use the recipe file per recipe setting.
To use a recipe file, set [Recipe Data Save Location] to [Data Storage (Recipe File)(read and write)] in the [Recipe] dialog ([Basic] tab).

➟9.3.7 ■1 [Basic] tab

A recipe file is automatically created when all of the following conditions are satisfied at writing or reading.

- [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)] in the [Recipe] dialog.
- The writing or reading method is using a trigger device per project or per recipe setting.
- No recipe file exists.

For the behavior when a recipe file is used, refer to the following.

➟9.3.2 ■3 (1) Saving the data into a data storage

(2) Recipe file format

The following file formats are available for recipe files.

(a) Binary format (*.G2P)

A recipe file is created in binary format (*.G2P).
One file is created for one recipe setting.
To edit such a recipe file on a personal computer, convert it to CSV or Unicode text format.
In this case, unlike a recipe file originally in CSV or Unicode text format, the file still contains multiple records after its format is converted.

(b) CSV format (*.CSV)

A recipe file created in CSV format (*.CSV) is used intact.
To edit such a file on a personal computer, the file format conversion is not required.
One recipe file contains one record only. Recipe files are created for each record.
The record number is added to the end of the file name.
Example) Recipe file with record number 3: ARP00001_0003.CSV

(c) Unicode text format (*.TXT)

A recipe file in Unicode text format (*.TXT) is used intact.
To edit such a file on a personal computer, the file format conversion is not required.
One recipe file contains one record only. Recipe files are created for each record.
The record number is added to the end of the file name.
Example) Recipe file with record number 3: ARP00001_0003.TXT
For how to set the file format, refer to the following.

➟9.3.7 ■1 [Basic] tab

Point

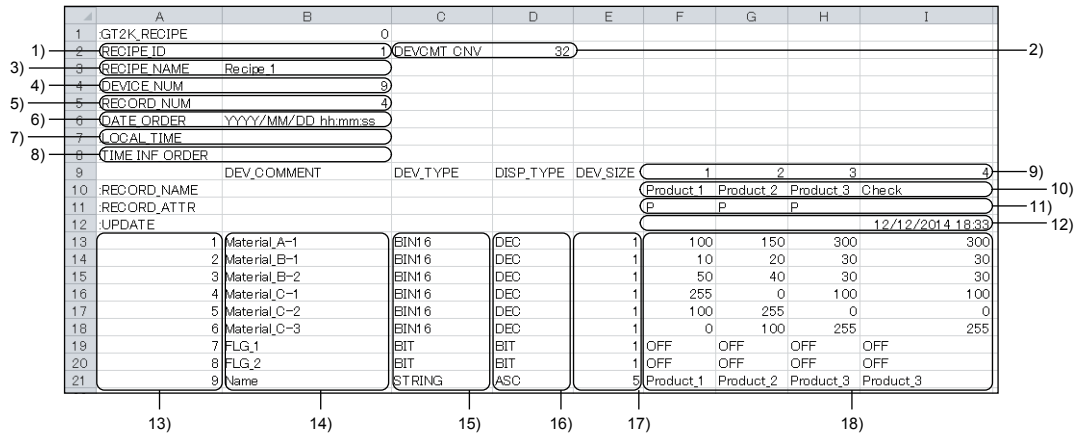
For the precautions for editing a CSV file or Unicode text file on a personal computer, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(3) Configuration of the recipe file

The following shows the configuration of a recipe file in CSV or Unicode text format.
To edit a recipe file in binary format (*.G2P) on a personal computer, convert it to CSV or Unicode text format.
Only the following items can be edited.

- Record name
- Record attribute
- Record
- Device comment (when edit is allowed in the recipe setting)



	A	B	C	D	E	F	G	H	I
1	:GT2K_RECIPE	0							
2	RECIPE_ID	1	DEVCMT_CNV	32					
3	RECIPE_NAME	Recipe 1							
4	DEVICE_NUM	9							
5	RECORD_NUM	4							
6	DATE_ORDER	YYYY/MM/DD hh:mm:ss							
7	LOCAL_TIME								
8	TIME_INF_ORDER								
9		DEV_COMMENT	DEV_TYPE	DISP_TYPE	DEV_SIZE	1	2	3	4
10	:RECORD_NAME					Product_1	Product_2	Product_3	Check
11	:RECORD_ATTR					P	P	P	
12	:UPDATE								12/12/2014 18:33
13	1	Material_A-1	BIN16	DEC	1	100	150	300	300
14	2	Material_B-1	BIN16	DEC	1	10	20	30	30
15	3	Material_B-2	BIN16	DEC	1	50	40	30	30
16	4	Material_C-1	BIN16	DEC	1	255	0	100	100
17	5	Material_C-2	BIN16	DEC	1	100	255	0	0
18	6	Material_C-3	BIN16	DEC	1	0	100	255	255
19	7	FLG_1	BIT	BIT	1	OFF	OFF	OFF	OFF
20	8	FLG_2	BIT	BIT	1	OFF	OFF	OFF	OFF
21	9	Name	STRING	ASC	5	Product_1	Product_2	Product_3	Product_3

1) **Recipe No.**
Recipe number of a source recipe setting

2) **Number of characters in the device comment to be converted**
Number of characters in a target device comment when the recipe file is converted from CSV or Unicode text format to binary format (*.G2P).
This item is output when [Include device comments in conversion target] is selected in the [Basic] tab in the [Recipe] dialog.

3) **Recipe name**
Name of a source recipe setting

4) **Total number of devices**
Total number of devices in a source recipe setting

5) **Number of records**
Number of records in a source recipe setting

6) **Order of date and time**
Order of date and time output when the records are updated

7) **Time zone**
Difference between Greenwich Mean Time and local time

8) **Time information**
Information on time data
- L: Local time

9) **Record No.**
Record number of each record

10) **Record name**
Each record name
Up to 32 characters can be set.

11) **Record attribute**
Record attribute of each record.
The following shows the items to be selected.
- Blank column: Device values can be changed.
- P: Device values cannot be changed.
- N: No device value

12) **Record update time**
Time at which the device values of a record are updated to the read ones

13) **Line number**
Line number of each line

14) **Device comment**
Comment for the device in each line.
Up to 32 characters can be set.
Set the number of characters applied at the conversion in [Maximum number of characters] in the [Basic] tab of the [Recipe] dialog.

15) **Device type**
Type of the device in each line
- [BIT]: Bit
- [BIN8]: Signed 8-bit binary

- [BIN8_Unsigned]: Unsigned 8-bit binary
- [BIN16]: Signed 16-bit binary
- [BIN16_Unsigned]: Unsigned 16-bit binary
- [BIN32]: Signed 32-bit binary
- [BIN32_Unsigned]: Unsigned 32-bit binary
- [BIN64]: Signed 64-bit binary
- [BIN64_Unsigned]: Unsigned 64-bit binary
- [BCD16]: 16-bit binary-coded decimal
- [BCD32]: 32-bit binary-coded decimal
- [BCD64]: 64-bit binary-coded decimal
- [REAL]: Real numbers (32 bits)
- [REAL64]: Real numbers (64 bits)
- [STRING]: Character string

16) **Display format**

Display format of the device in each line

- [BIT]: Bit
- [DEC]: Signed decimal
- [UNSIGNED_DEC]: Unsigned decimal
- [REAL_FLOAT]: Real number (exponential expression)
- [REAL_FIX]: Real number (fixed-point number)
- [ASC]: ASCII code
- [UNI]: Unicode
- [SJIS]: Shift JIS code
- [KS]: KS (Korean)
- [GB]: GB (Simplified Chinese)
- [BIG5]: BIG5 (Traditional Chinese)
- [BIN]: Binary number
- [OCT]: Octal number
- [HEX]: Hexadecimal number

17) **Number of devices**

Number of devices in each line

18) **Record**

Device values of each record.

Edit the value according to the device type.

Multiple records are managed in a recipe file, which is converted from binary format (*.G2P).

Only one record is managed in a recipe file, which is originally created in CSV or Unicode text format.

9.3.3 How to use the recipe

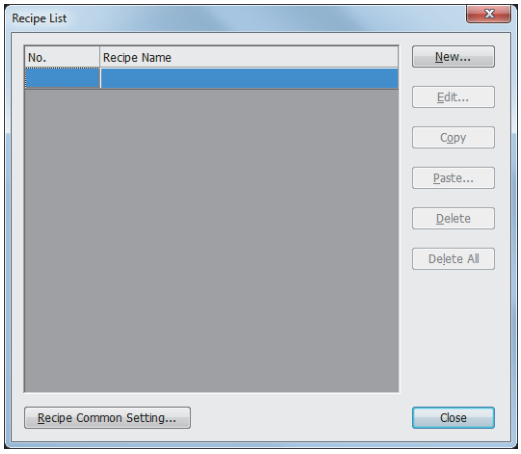
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Writing device values
■2 Reading device values
■3 Transferring recipe files to edit
■4 Converting a recipe file
■5 Operations with the recipe display (record list)
■6 Operations in the recipe operation window and utility
■7 Using a GOT1000 advanced recipe file (*.G1P)
■8 Operations with GOT special registers (GS) (Recipe special control)
■9 Link with the recipe display (record list) by using GOT special registers
■10 Saving recipe data into the SRAM user area

The following shows how to set a recipe setting.

Step 1 Click [Common] → [Recipe] → [Recipe] from the menu to display the [Recipe List] dialog.

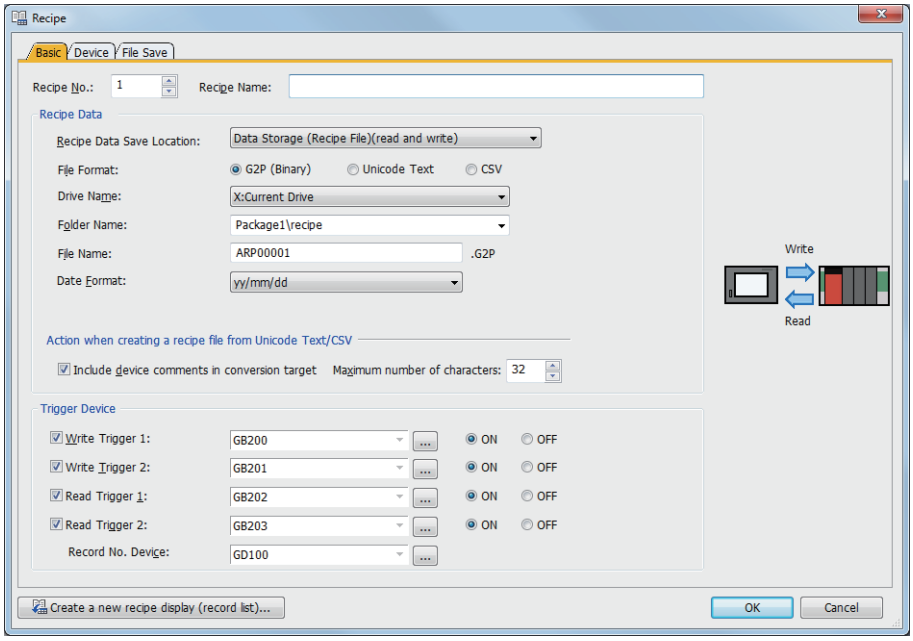
➟9.3.6 [Recipe List] dialog



Step 2 Perform one of the following operations to display the [Recipe] dialog.

• Click the [New] button.
• Select a recipe setting and click the [Edit] button.

➟9.3.7 [Recipe] dialog



Step 3 Set necessary items in each tab in the [Recipe] dialog, and click the [OK] button to complete the recipe setting.

• [Basic] tab

Set the recipe number and the trigger device for writing or reading values per recipe setting.

• [Device] tab

Set the target device and record.

• [File Save] tab

Set the desired file format and save destination when converting a binary recipe file (*.G2P) by using a trigger device.

➟9.3.7 ■1 [Basic] tab
9.3.7 ■2 [Device] tab
9.3.7 ■3 [File Save] tab

■1 Writing device values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Writing device values using a trigger device per project
(2) Writing device values using a trigger device per recipe setting
(3) Writing device values in the recipe operation window
(4) Writing device values using the recipe display (record list)

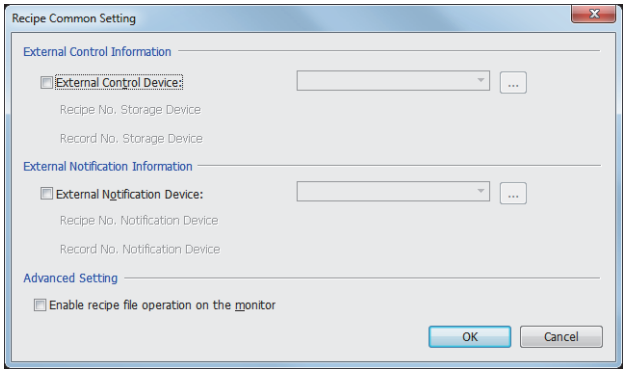
(1) Writing device values using a trigger device per project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Setting in GT Designer3

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog



Step 2 Select [External Control Device], set a device, and click the [OK] button.

Consecutive devices, starting from the device set in [External Control Device], are automatically set in [Recipe No. Storage Device] and [Record No. Storage Device].

Bit 0 of the device set in [External Control Device] is set as the write trigger device (per project).

➟9.3.5 ■1 [External Control Device]

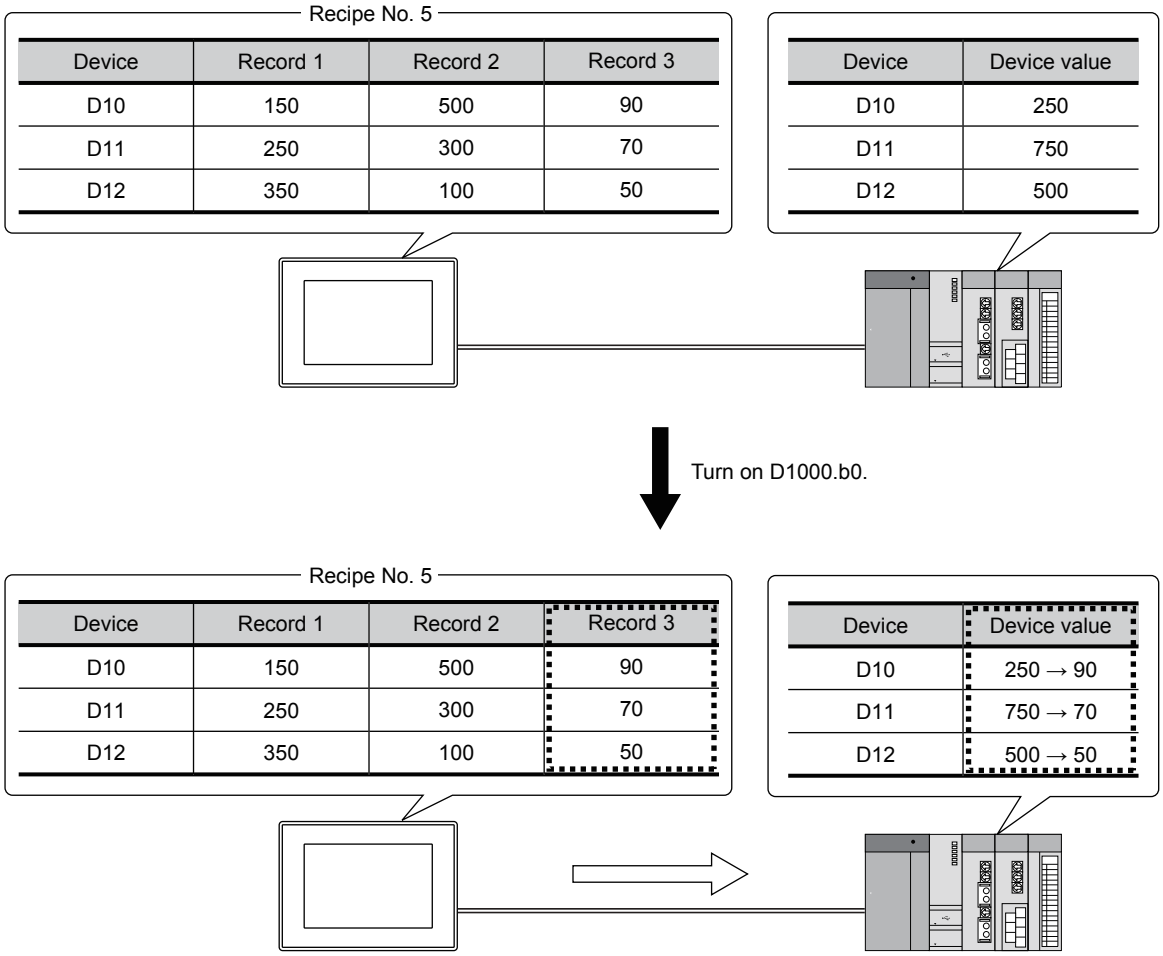
(b) Operation on the GOT

Input values into the Recipe No. Storage device and the Record No. Storage device respectively, and then satisfy the condition of the write trigger.

The values of the specified record will be written into the target devices.

Example) Writing record 3 in recipe No. 5

- [External Control Device]: D1000
- [Recipe No. Storage Device]: D1001 = 5
- [Record No. Storage Device]: D1002 = 3


Recipe No. 5
Device
Record 1
Record 2
Record 3
D10
150
500
90
D11
250
300
70
D12
350
100
50
Device
Device value
D10
250
D11
750
D12
500
Turn on D1000.b0.
Recipe No. 5
Device
Record 1
Record 2
Record 3
D10
150
500
90
D11
250
300
70
D12
350
100
50
Device
Device value
D10
250 → 90
D11
750 → 70
D12
500 → 50

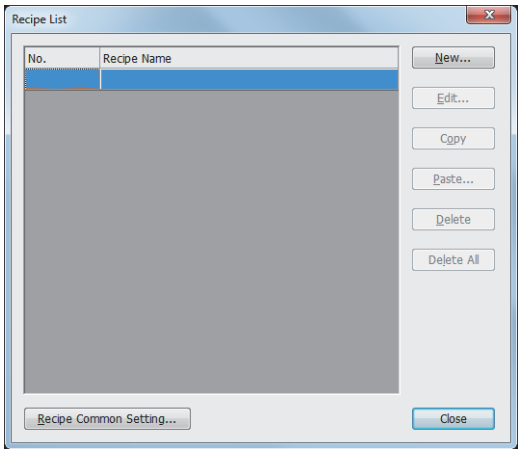
(2) Writing device values using a trigger device per recipe setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Setting in GT Designer3

Step 1 Select [Common] → [Recipe] → [Recipe] from the menu to display the [Recipe List] dialog.

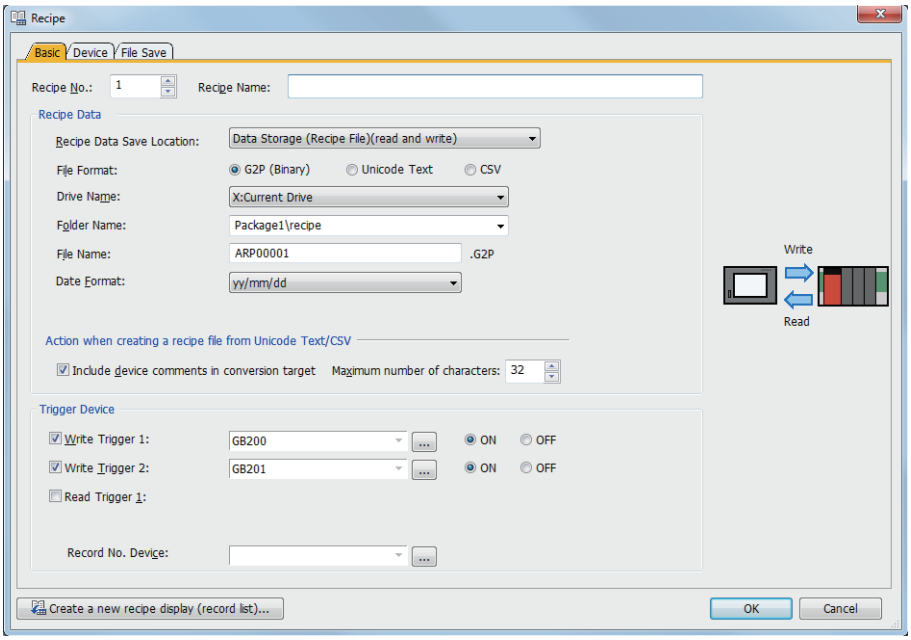
➟9.3.6 [Recipe List] dialog



Step 2 Perform one of the following operations to display the [Recipe] dialog.

- Click the [New] button.
- Select a recipe setting and click the [Edit] button.

➟9.3.7 [Recipe] dialog



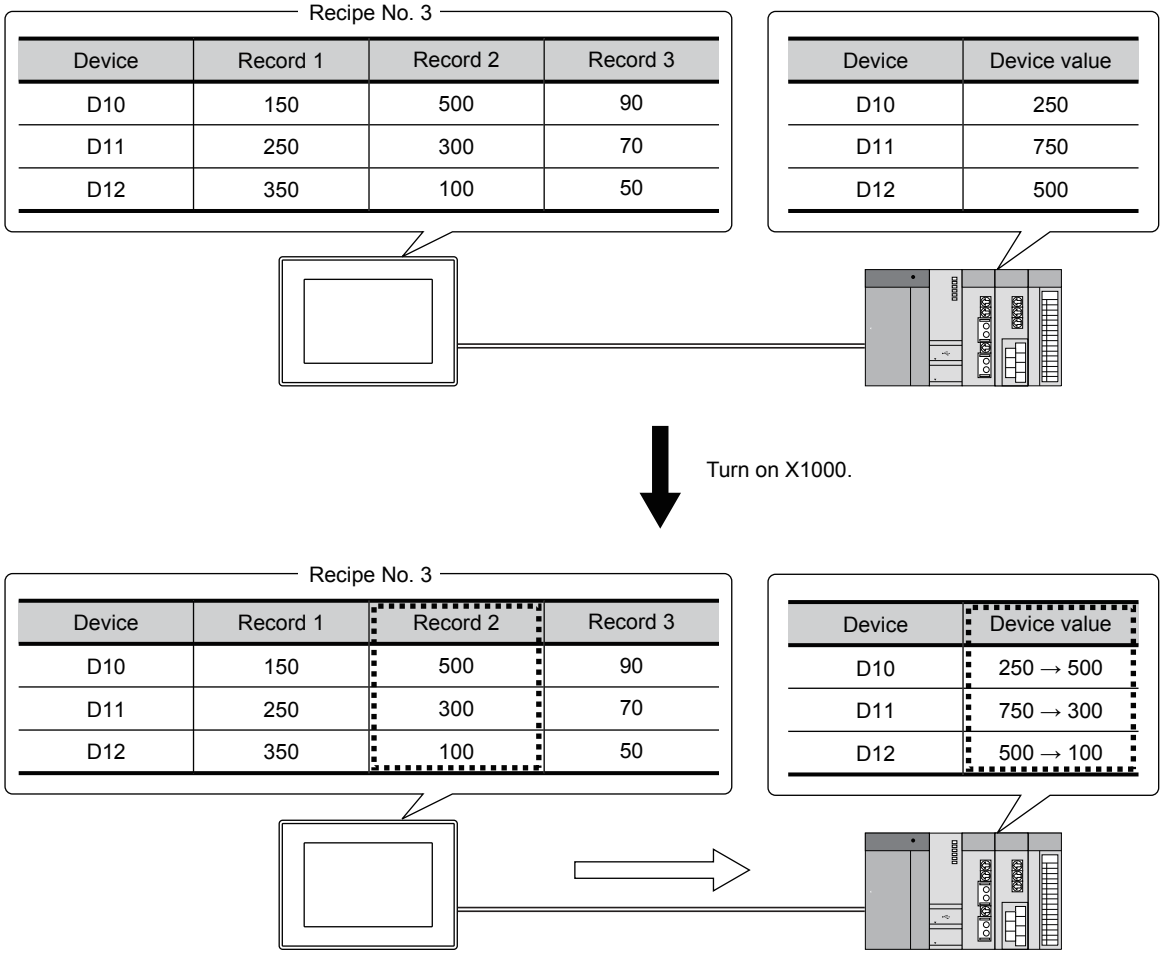
Step 3 Set the following items in the [Basic] tab, and click the [OK] button.

- [Recipe Data Save Location]
  Set the save destination of the recipe data.
- [Write Trigger 1]
  Select this item to set a device and its trigger condition (ON or OFF).
- [Write Trigger 2]
  Set this item as required.
- [Record No. Device]
  Set a device.
  When the number of records is one, record 1 is always specified, and thus no setting is required.

(b) **Operation on the GOT**

Input a value into the Record No. device, and then satisfy the condition of the write trigger.
The values of the specified record will be written into the target devices.
Example) Writing record 2 in recipe No. 3

- [Write Trigger 1] of recipe No. 3: X1000 (Trigger condition: ON)
- [Record No. Device] of recipe No. 3: D1100 = 2



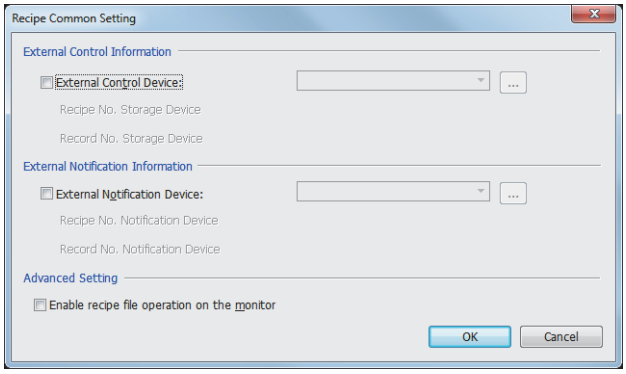
(3) Writing device values in the recipe operation window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Setting in GT Designer3

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog



Step 2 Select [Enable recipe file operation on the monitor], and click the [OK] button.

Step 3 To display the recipe operation window on the monitor screen, use a special function switch ([Switch Action]: [Recipe Information]).

For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

(b) Procedure on the GOT

Perform one of the following operations to display the recipe operation window.

- Touch a special function switch ([Switch Action]: [Recipe Information]).
- Touch the [Oper.] button on the [Recipe information] screen in the utility.

For the recipe operation window and the operations in the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(4) Writing device values using the recipe display (record list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the setting and operating procedures for the recipe display (record list), refer to the following.

➟8.14.2 How to use the recipe display (record list)

■2 Reading device values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Reading device values using a trigger device per project
(2) Reading device values using a trigger device per recipe setting
(3) Reading device values in the recipe operation window
(4) Reading device values using the recipe display (record list)

(1) Reading device values using a trigger device per project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Setting in GT Designer3

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog

Step 2 Select [External Control Device], set a device, and click the [OK] button.

Consecutive devices, starting from the device set in [External Control Device], are automatically set in [Recipe No. Storage Device] and [Record No. Storage Device].

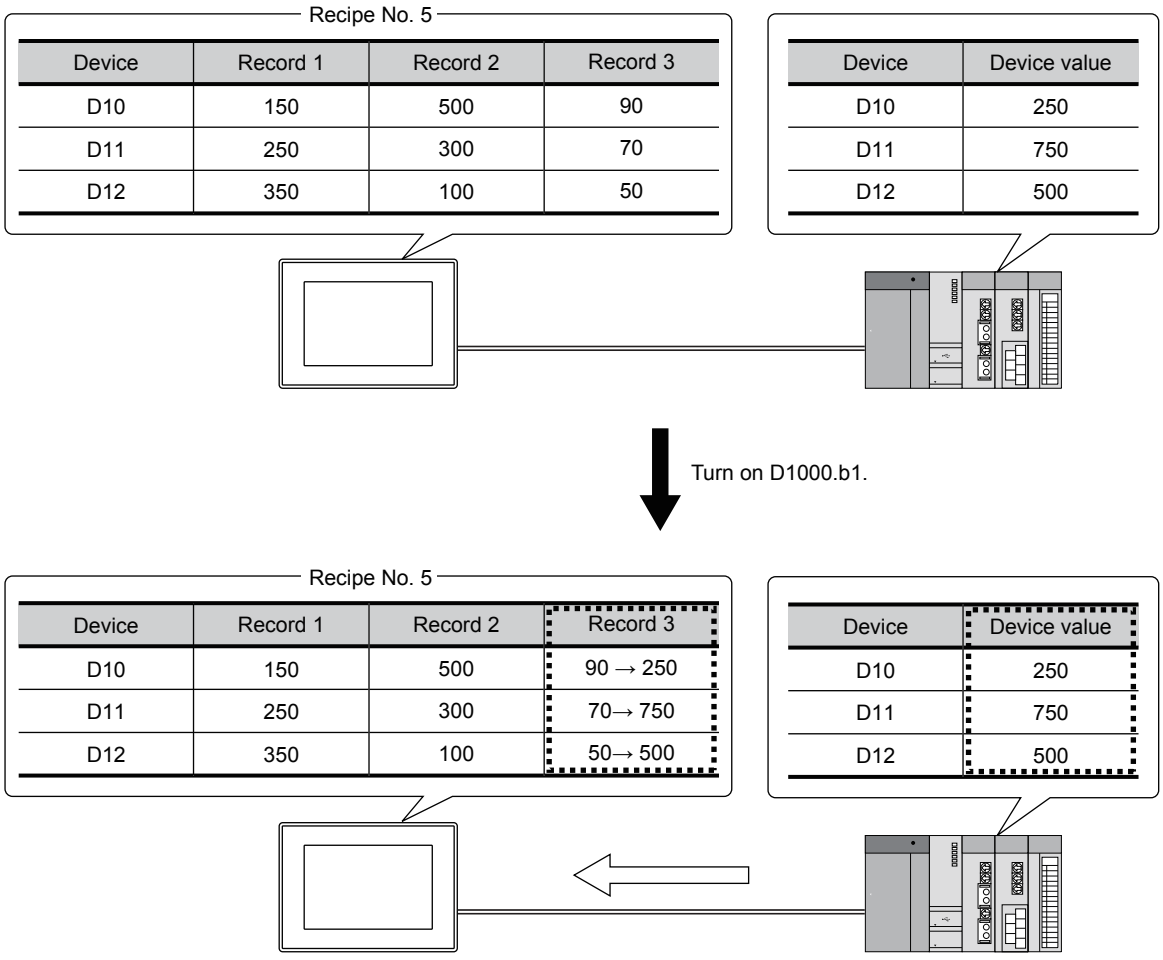
Bit 1 of the device set in [External Control Device] is set as the read trigger device (per project).

➟9.3.5 ■1 [External Control Device]

(b) **Operation on the GOT**

Input values into the Recipe No. Storage device and the Recipe No. Storage device respectively.
Then, satisfy the condition of the read trigger.
The values of the specified record will be overwritten with the values read from the target devices.
Example) Reading device values and overwriting record 3 in recipe No. 5

- [External Control Device]: D1000
- [Recipe No. Storage Device]: D1001 = 5
- [Record No. Storage Device]: D1002 = 3



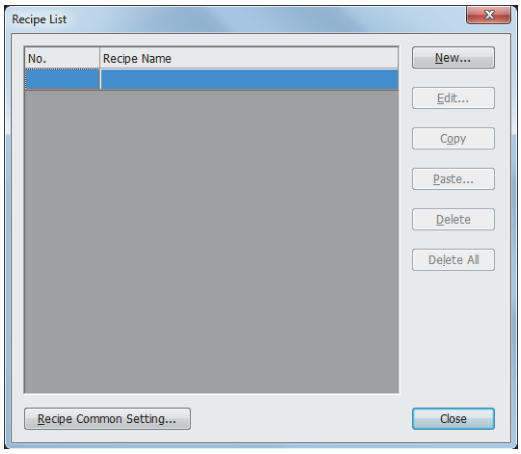
(2) Reading device values using a trigger device per recipe setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Setting in GT Designer3

Step 1 Click [Common] → [Recipe] → [Recipe] from the menu to display the [Recipe List] dialog.

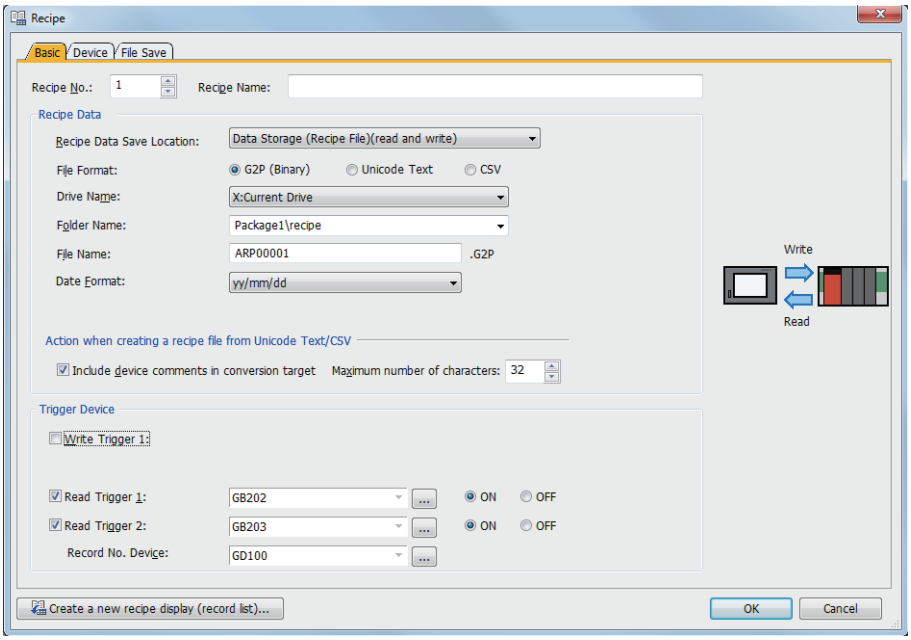
➟9.3.6 [Recipe List] dialog



Step 2 Perform one of the following operations to display the [Recipe] dialog.

- Click the [New] button.
- Select a recipe setting and click the [Edit] button.

➟9.3.7 [Recipe] dialog



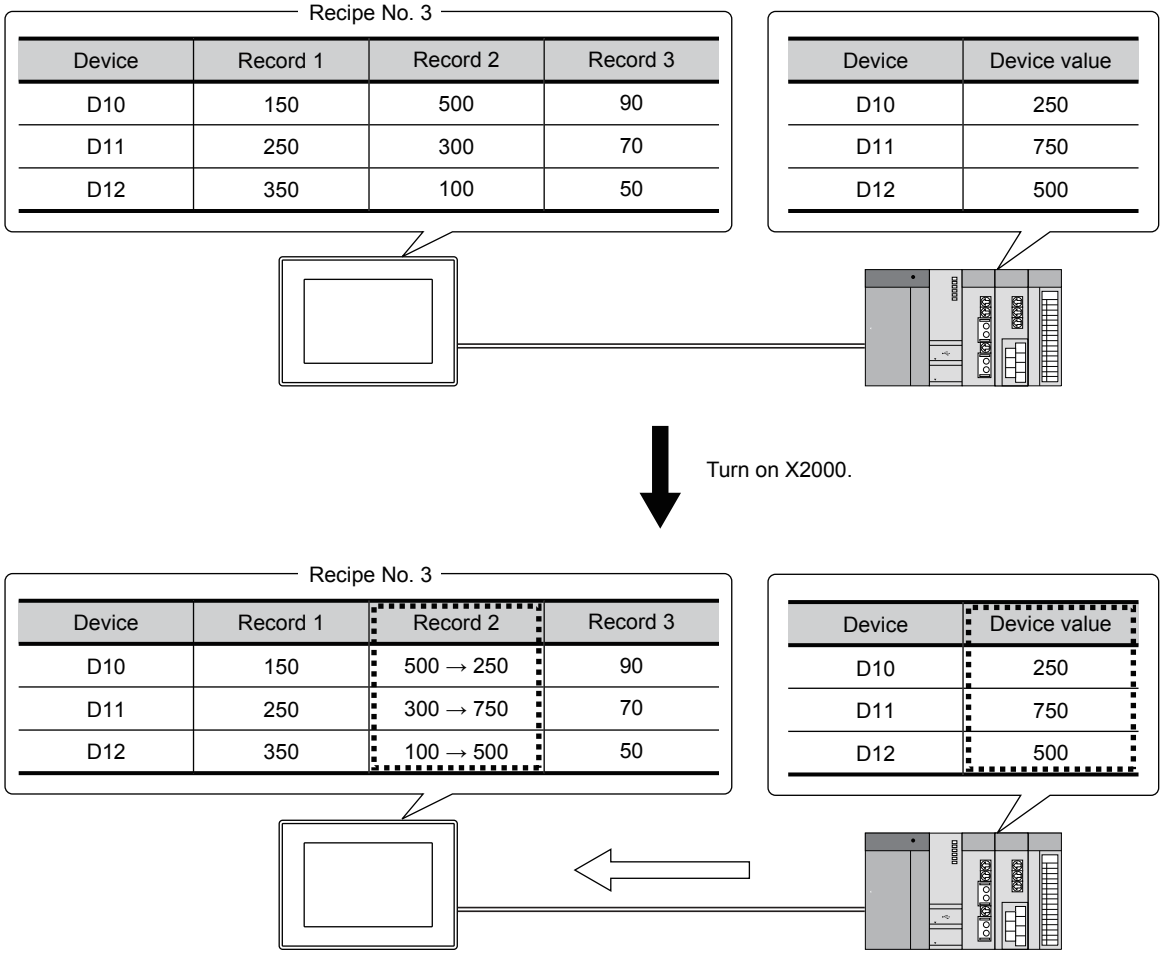
Step 3 Set the following items in the [Basic] tab, and click the [OK] button.

- [Recipe Data Save Location]
  Set the save destination of the recipe data.
- [Read Trigger 1]
  Select this item to set a device and its trigger condition (ON or OFF).
- [Read Trigger 2]
  Set this item as required.
- [Record No. Device]
  Set a device.
  When the number of records is one, record 1 is always specified, and thus no setting is required.

(b) **Operation on the GOT**

Input a value into the Record No. device.
Then, satisfy the condition of the read trigger.
The values of the specified record will be overwritten with the values read from the target devices.
Example) Reading device values and overwriting record 2 in recipe No. 3

- [Read Trigger 1] of recipe No. 3: X2000 (Trigger condition: ON)
- [Record No. Device] of recipe No. 3: D1100 = 2



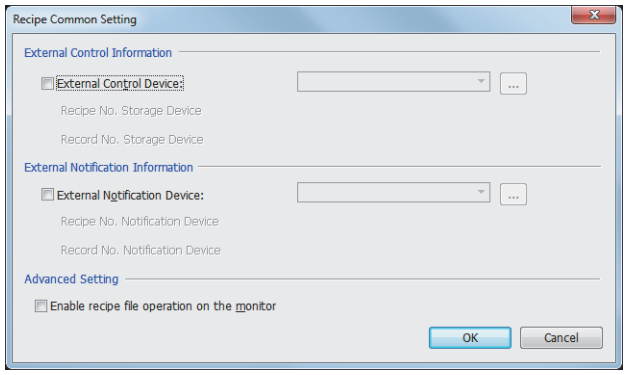
(3) Reading device values in the recipe operation window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) **Setting in GT Designer3**

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog



Step 2 Select [Enable recipe file operation on the monitor], and click the [OK] button.

Step 3 To display the recipe operation window on the monitor screen, use a special function switch ([Switch Action]: [Recipe Information]).

For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

(b) **Procedure on the GOT**

Perform one of the following operations to display the recipe operation window.

- Touch a special function switch ([Switch Action]: [Recipe Information]).
- Touch the [Oper.] button on the [Recipe information] screen in the utility.

For the recipe operation window and the operations in the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(4) Reading device values using the recipe display (record list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the setting and operating procedures for the recipe display (record list), refer to the following.

➟8.14.2 How to use the recipe display (record list)

■3 Transferring recipe files to edit

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Transferring a recipe file using a data storage
(2) Transferring a recipe file directly between a personal computer and the GOT
(3) Importing a recipe file by using a special function switch (Recipe data operation)
(4) Exporting a recipe file by using a special function switch (Recipe data operation)

You can transfer recipe files to a personal computer to edit, and then transfer them back to the GOT to use.
The following shows how to transfer a recipe file between the GOT and a personal computer.
For a recipe file in CSV or Unicode text format, edit the file on a personal computer directly.
For a recipe file in binary format (*.G2P), convert the file to CSV or Unicode text format, and then edit it on a personal computer.
After editing a recipe file, convert the file back to binary format (*.G2P) and then use it on the GOT.
For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

If the save destination of the recipe data is set to the SRAM user area, no recipe file will be created.
To edit the recipe data stored in the SRAM user area on a personal computer, export the data to a recipe file.

➟9.3.3 ■4 Converting a recipe file

For GT SoftGOT2000, you can manipulate the recipe files stored in virtual drives by using Windows Explorer or others.
For the structure of virtual drives of a GT SoftGOT2000, refer to the following.

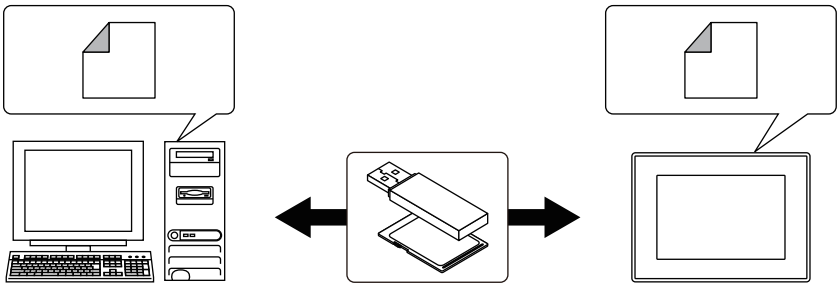
➟GT SoftGOT2000 Version1 Operating Manual

The following shows how to transfer a recipe file between the GOT and a personal computer.

(1) Transferring a recipe file using a data storage

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

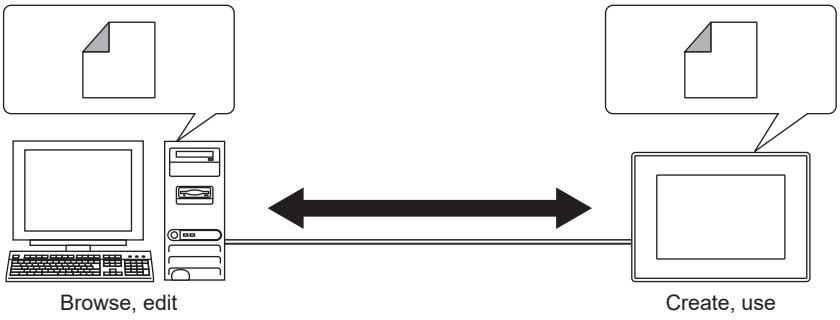
Install a data storage that contains a recipe file to a personal computer, and read the file.
Then, install the data storage that contains the edited recipe file to the GOT to use the file.



(2) Transferring a recipe file directly between a personal computer and the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Connect a personal computer and the GOT to transfer recipe files between them.



For how to connect a personal computer and the GOT, refer to the following.

➟4.3.1 Connecting the personal computer to the GOT

For the settings of resource data writing or reading, refer to the following.

➟4.3.2 ■1 (2) Writing the resource data
4.3.2 ■3 (2) Reading the resource data

(3) Importing a recipe file by using a special function switch (Recipe data operation)

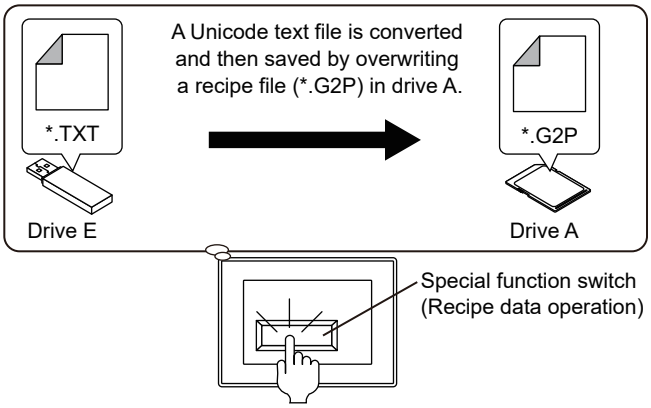
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The behavior of the special function switch (Recipe data operation) varies depending on the recipe data save destination setting.

(a) When the save destination is set to the data storage (recipe file)

This operation is available for a recipe file in the binary format (*.G2P) only.
When you touch a special function switch ([Switch Action]: [Recipe Data Operation]), the recipe file (*.G2P) having the specified recipe number is overwritten with the data from the import source file.
The import source file must be in the binary format (*.G2P), CSV format (*.CSV), or Unicode text format (*.TXT).
When you use an import source file in the CSV format (*.CSV) or Unicode text format (*.TXT), the file is converted to the binary format and then saved on the GOT.
(The conversion source file is not deleted.)
When you use an import source file in the binary format (*.G2P), the file is saved without conversion.

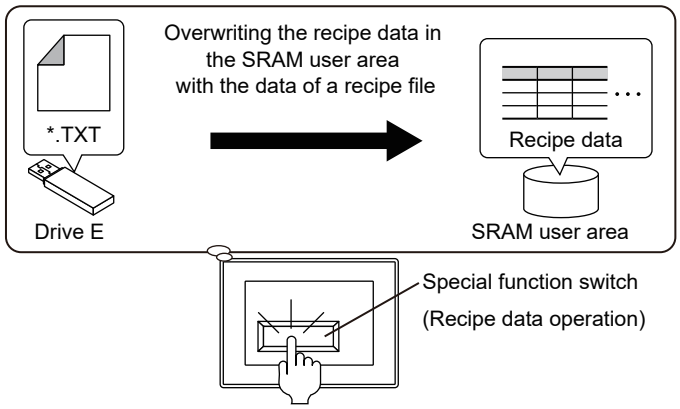
Example) When importing a Unicode text file in drive E to a recipe file (*.G2P) in drive A



(b) When the save destination is set to the SRAM user area

When you touch a special function switch ([Switch Action]: [Recipe Data Operation]), the recipe data in the SRAM user area is overwritten with the data from the import source file.
The import source file must be in the binary format (*.G2P), CSV format (*.CSV), or Unicode text format (*.TXT).

Example) When importing data from a Unicode text file in drive E into the recipe data in the SRAM user area



(c) When not saving the recipe data

The data of a recipe file cannot be imported.

(4) Exporting a recipe file by using a special function switch (Recipe data operation)

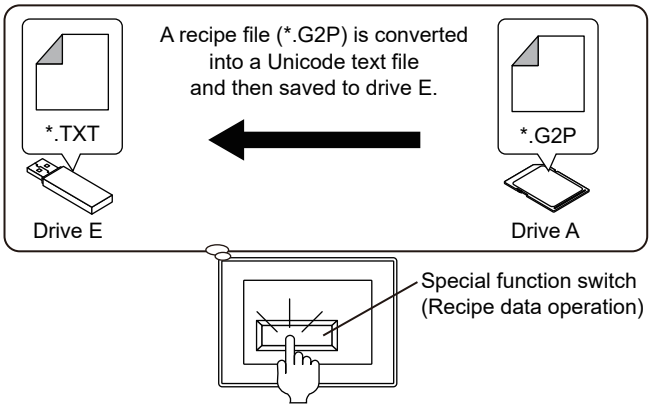
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The behavior of the special function switch (Recipe data operation) varies depending on the recipe data save destination setting.

(a) When the save destination is set to the data storage (recipe file)

This operation is available for a recipe file in the binary format (*.G2P) only.
When you touch a special function switch ([Switch Action]: [Recipe Data Operation]), the recipe data having a specified recipe number is saved to a specified folder as a recipe file.
The export destination file must be in the binary format (*.G2P), CSV format (*.CSV), or Unicode text format (*.TXT).
When you specify the CSV format (*.CSV) or Unicode text format (*.TXT) for the export destination file, the export source file is converted to a specified file format and then saved on the GOT.
When you specify the binary format (*.G2P), the file is saved without conversion.

Example) When exporting a recipe file (*.G2P) in drive A to drive E

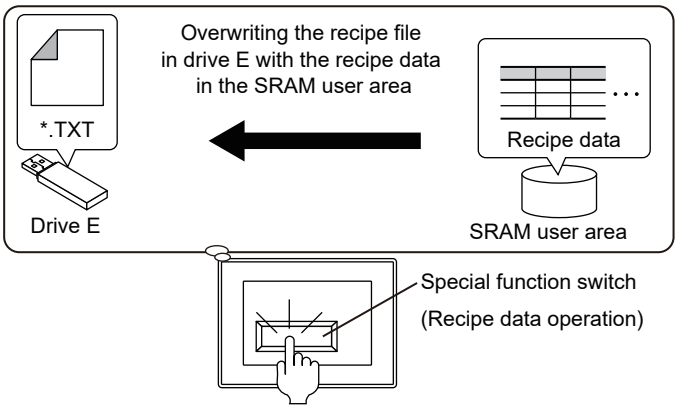


(b) When the save destination is set to the SRAM user area

When you touch a special function switch ([Switch Action]: [Recipe Data Operation]), the recipe data in the SRAM user area is saved to a recipe file in a specified folder.

The export destination file must be in the binary format (*.G2P), CSV format (*.CSV), or Unicode text format (*.TXT).

Example) When exporting the recipe data from the SRAM user area into the recipe file (*.TXT) in drive E



(c) When not saving the recipe data

The recipe data cannot be exported.

■4 Converting a recipe file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Converting a recipe file using a trigger device per project
(2) Converting a recipe file in the recipe operation window
(3) Converting a recipe file in the utility
(4) Converting a recipe file with GT Designer3

The following shows how to convert the format of a recipe file.

(1) Converting a recipe file using a trigger device per project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Use a trigger device to convert a recipe file on the GOT.

Convert files one by one.

The behavior when the trigger condition is satisfied varies depending on the recipe data save destination setting.

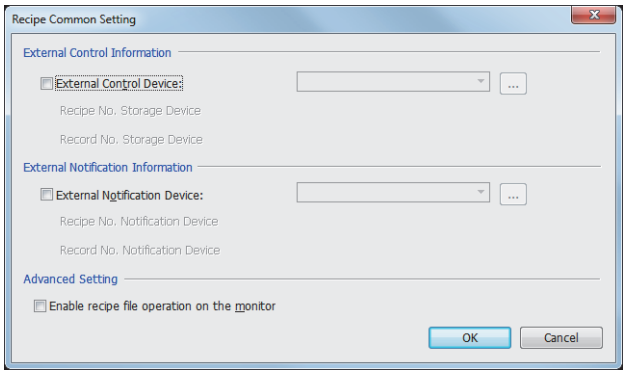
(a) **Setting in GT Designer3**

Set a trigger device used for conversion in the common setting.

Set the file format and save destination of conversion destination files for each recipe setting.

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog



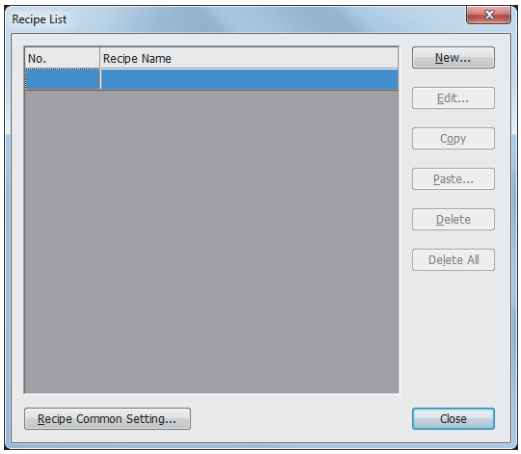
Step 2 Select [External Control Device], set a device, and click the [OK] button.

Consecutive devices, starting from the device set in [External Control Device], are automatically set in [Recipe No. Storage Device] and [Record No. Storage Device].
Bit 8 of the device set in [External Control Device] is set as the Convert Recipe File signal, and bit 9 is set as the Reverse-convert Recipe File signal.

➟9.3.5 ■2 [External Notification Device]

Step 3 Select [Common] → [Recipe] → [Recipe] from the menu to display the [Recipe List] dialog.

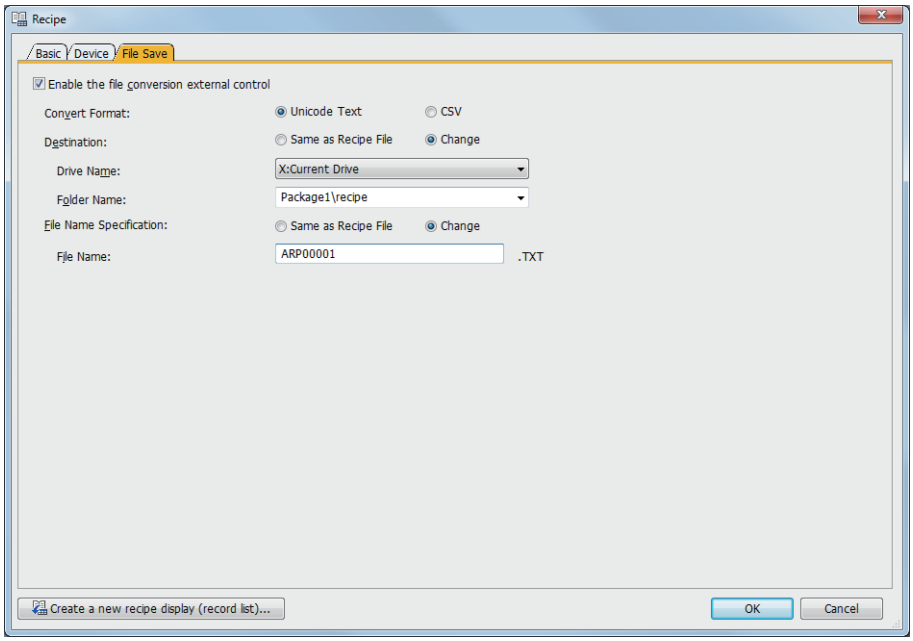
➟9.3.6 [Recipe List] dialog



Step 4 Perform one of the following operations to display the [Recipe] dialog.

- Click the [New] button.
- Select a recipe setting and click the [Edit] button.

➟9.3.7 [Recipe] dialog



Step 5 Set the following items in the [File Save] tab, and click the [OK] button.

- [Enable the file conversion external control]
  Select this item.
- [Convert Format]
  Select the file format to which a recipe file is converted.
- [Destination]
  Set this item as required.
- [File Name Specification]
  Set this item as required.

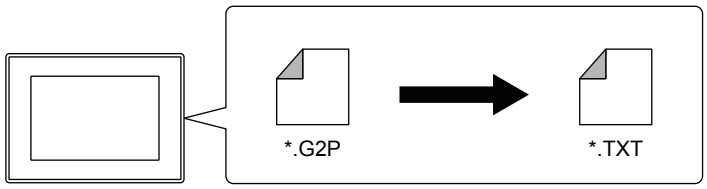
(b) Conversion operation (Recipe data save destination: data storage (recipe file))

Specify the recipe number of a target recipe file with an applicable device, and satisfy the condition of the conversion trigger.
The file format of the recipe file will be converted.
The conversion source file remains intact.
The trigger depends on the file format to which a recipe file is converted.

- To convert a recipe file from binary format (*.G2P) to the set format
  Turn on the Convert Recipe File signal (bit 8 of the external control device).
- To convert a recipe file from the set format to binary format (*.G2P)
  Turn on the Reverse-convert Recipe File signal (bit 9 of the external control device).

Example) Converting the recipe file (*.G2P) of recipe No. 5 to Unicode text format (*.TXT)

- [External Control Device]: D1000
- [Recipe No. Storage Device]: D1001 = 5



Turn on the Convert Recipe File signal (D1000.b8).

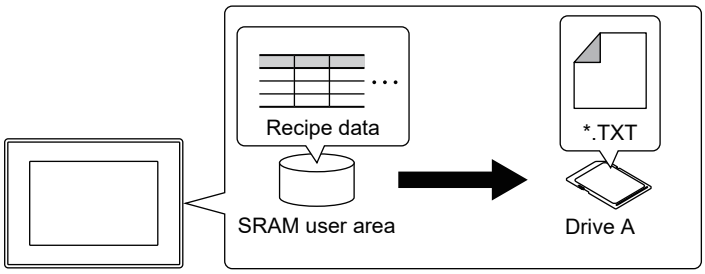
(c) Conversion operation (Recipe data save destination: SRAM user area)

Input the recipe number of the import or export source file into the Recipe No. Storage device.
Then, satisfy the condition of the conversion trigger.
The recipe data will be imported from a recipe file into the SRAM user area, or exported from the SRAM user area into a recipe file.
After an export operation, the source data will remain in the SRAM user area.
Use the following trigger devices.

• To export the recipe data from the SRAM user area into a recipe file
Turn on the Convert Recipe File signal (bit 8 of the external control device).
• To import the recipe data from a recipe file into the SRAM user area
Turn on the Reverse-convert Recipe File signal (bit 9 of the external control device).

Example) Exporting the data of recipe No. 5 from the SRAM user area to a Unicode text file (*.TXT)

• [External Control Device]: D1000
• [Recipe No. Storage Device]: D1001 = 5



Turn on the Convert Recipe File signal (D1000.b8).

(2) Converting a recipe file in the recipe operation window

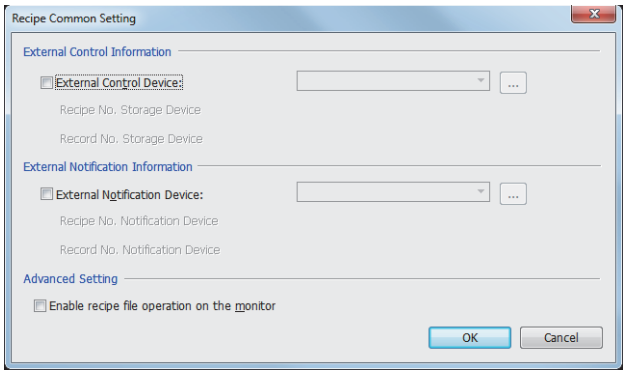
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Convert a recipe file in the recipe operation window on the GOT.
Convert files one by one.
In this window, the conversion operation cannot be performed to the recipe data stored in the SRAM user area.

(a) Setting in GT Designer3

Step 1 Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the [Recipe Common Setting] dialog.

➟9.3.5 [Recipe Common Setting] dialog



Step 2 Select [Enable recipe file operation on the monitor], and click the [OK] button.

Step 3 To display the recipe operation window on the monitor screen, use a special function switch ([Switch Action]: [Recipe Information]).

For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

(b) Conversion operation

Perform one of the following operations to display the recipe operation window.

• Touch a special function switch ([Switch Action]: [Recipe Information]).
• Touch the [Oper.] button on the [Recipe information] screen in the utility.

For the recipe operation window and the operations in the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(3) Converting a recipe file in the utility

Convert a recipe file on the [Recipe information] screen on the GOT.
Convert files one by one.
In this window, the conversion operation cannot be performed to the recipe data stored in the SRAM user area.

➟GOT2000 Series User's Manual (Utility)

(4) Converting a recipe file with GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Convert a recipe file on a personal computer.
Multiple files can be converted at a time.
Since the file is converted with GT Designer3, no processing load is put on the GOT.

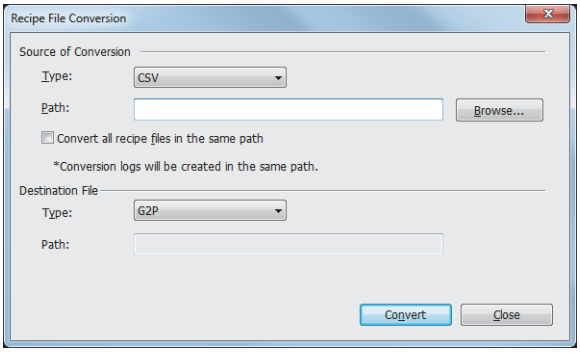
Step 1 Transfer a recipe file to a personal computer from the GOT with one of the following methods.

- Transfer a recipe file with a data storage.
- Transfer a recipe file by connecting the personal computer with the GOT.

➟4.3 Transferring the Data between the Personal Computer and the GOT

Step 2 Click [Tools] → [Resource Data Conversion] → [Recipe File] from the menu to display the [Recipe File Conversion] dialog.

➟9.3.8 [Recipe File Conversion] dialog



Step 3 Set the following items, and click the [Convert] button. The converted recipe file is stored in the destination set in [Path] of [Destination File].

The conversion source file remains intact.

- [Type] in [Source of Conversion]
  Select the file format of the conversion source file.
- [Path] in [Source of Conversion]
  Set the storage location of the conversion source file.
- [Type] in [Destination File]
  Select the file format of the conversion destination file.
- [Path] in [Destination File]
  Set the storage location of the conversion destination file.

■5 Operations with the recipe display (record list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The recipe display (record list) object lists the records of a recipe on the GOT.
The following operations are available on the object by using applicable key code switches.

Operation	Description
Change record name	Rename a record.
Read record	Read a record from the PLC.
Write record	Write a record to the PLC.
Verify record	Verify the device values of a record against those of the PLC.
Delete record	Delete a record.

For operating the recipe display (record list), refer to the following.

➟8.14 Placing a Recipe Display (Record List)

■6 Operations in the recipe operation window and utility

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The recipe operation window is not available on GT21 and GS21.
The following operations are available in the recipe operation window in the utility.

Operation		Description
Recipe operations *1	Write	Writes the values of a specified record to the devices of a controller. ➟9.3.3 ■1 (3) Writing device values in the recipe operation window
	Read	Reads device values from a controller, and overwrites the values of a specified record in a recipe file with the read values. ➟9.3.3 ■2 (3) Reading device values in the recipe operation window
	Verify	Verifies that the values of a record in a recipe file match the device values of a controller. Used to check if the read values are applied to the recipe file.
	Save as	Reads device values from a controller, and creates a recipe file to save the read values.
Copy		Copies a recipe file.
New folder		Creates a folder.
New recipe		Creates a recipe file.
Convert		Converts the file format of a recipe file. ➟9.3.3 ■4 (2) Converting a recipe file in the recipe operation window
Rename		Renames a recipe file.
Delete		Deletes a recipe file.
Move		Moves a recipe file.

*1 The recipe data stored in the SRAM user area cannot be manipulated.

For the recipe operation window and the operations in the utility, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■7 Using a GOT1000 advanced recipe file (*.G1P)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

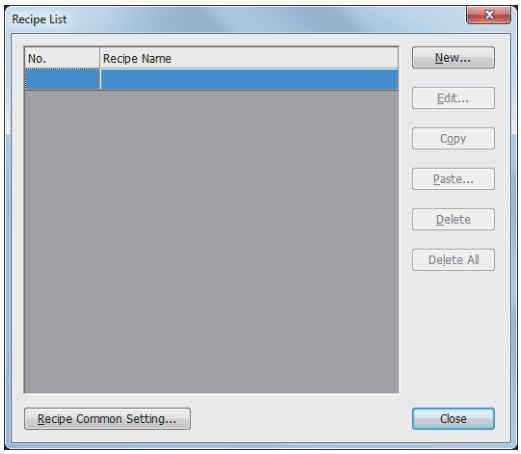
You can use a GOT1000 advanced recipe file (*.G1P) to create a GOT2000 recipe file (*.G2P).

(1) Setting in GT Designer3

Set the following with GT Designer3 (GOT2000) according to the advanced recipe file (*.G1P) used.

Step 1 Select [Common] → [Recipe] → [Recipe] from the menu to display the [Recipe List] dialog.

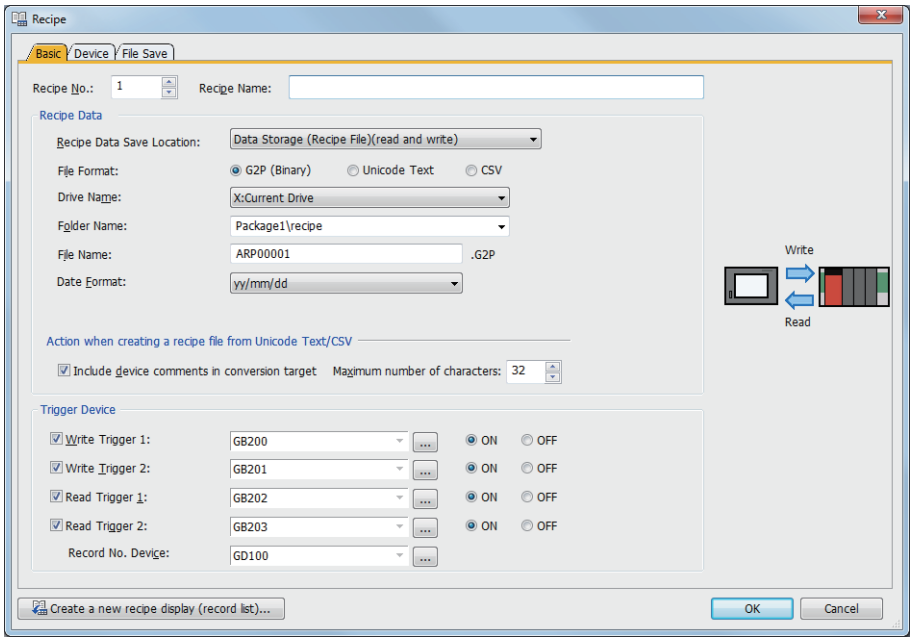
➟9.3.6 [Recipe List] dialog



Step 2 Perform one of the following operations to display the [Recipe] dialog.

- Click the [New] button.
- Select a recipe setting and click the [Edit] button.

➟9.3.7 [Recipe] dialog



Step 3 Set the following items in the [Basic] tab.

- [Recipe Data Save Location]
  Select [Data Storage (Recipe File)(read and write)].
- [File Name]
  Enter the same file name as the advanced recipe file (*.G1P) used.

Step 4 Set the following items in the [Device] tab according to the advanced recipe file (*.G1P) used, and click the [OK] button.

- [Block Number]
- [Record Number]
- [Device Type] of each block
- [Points] of each block

(2) Preparation on a personal computer

Store the advanced recipe file (*.G1P) in the location, which is set in [Folder Name] in the [Basic] tab of the [Recipe] dialog.
Do not store a recipe file (*.G2P) in the same location.
If a recipe file (*.G2P) has already exist, another recipe file (*.G2P) is not created.

(3) Procedure on the GOT

To use an advanced recipe file (*.G1P) to create a GOT2000 recipe file (*.G2P), write or read device values by using a trigger device per project or per recipe setting.
The advanced recipe file (*.G1P) remains intact.
The following settings of the advanced recipe file (*.G1P) are applied to the created recipe file (*.G2P).

- Number of blocks
- Number of records
- Device type
- Points
- Device comment
- Record name
- Record update time (to which the GOT2000 time zone is applied, by using the source time zone as GMT 00:00)
- Record attribute
- Device values of records

(4) Precautions for using an advanced recipe file (*.G1P)

(a) When the settings of an advanced recipe file (*.G1P) are not applied

In the following cases, a recipe file (*.G2P) is created by using a recipe setting of GT Designer3 (GOT2000) instead of an advanced recipe file (*.G1P).

- The advanced recipe file (*.G1P) to be used is not stored in the location, which is set in [Folder Name] in the [Basic] tab of the [Recipe] dialog.

- The recipe settings in GT Designer3 (GOT2000) are inconsistent with those of the advanced recipe file (*.G1P) to be used.
- The advanced recipe file to be used is damaged.

(b) **Applying the recipe file (*.G2P) created based on an advanced recipe file (*.G1P)**

The recipe file (*.G2P) cannot be used as a GOT1000 advanced recipe file (*.G1P).

(c) **Saving an advanced recipe file (*.G1P) into the SRAM user area**

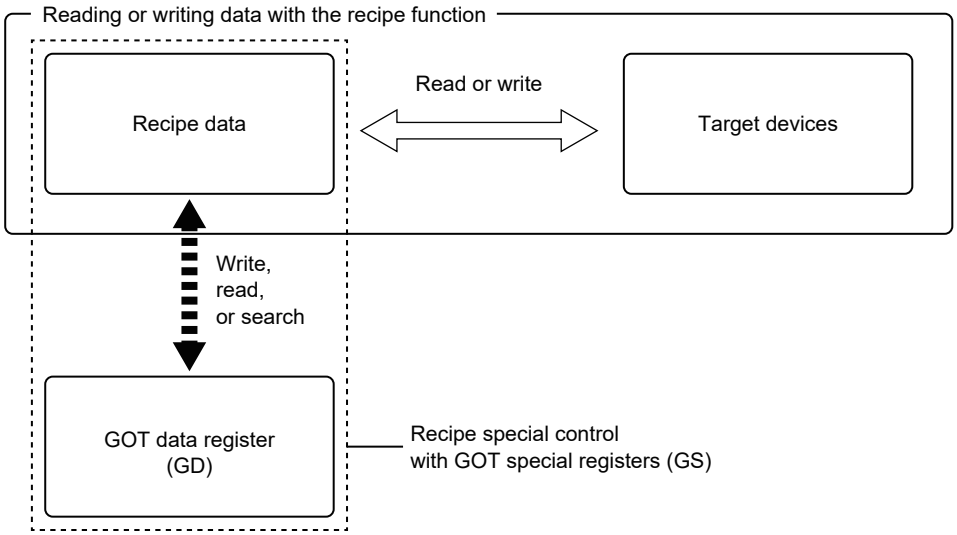
You cannot save an advanced recipe file (*.G1P) directly into the SRAM user area.
Create a recipe file (*.G2P) based on an advanced recipe file (*.G1P), and then import data from the created file to the SRAM user area.
For information on how to import data from a recipe file (*.G2P) to the SRAM user area, refer to the following.

➟9.3.3 ■4 Converting a recipe file

■8 Operations with GOT special registers (GS) (Recipe special control)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With the specific GOT special registers (GS), you can read a record from recipe data into GOT data registers (GD) or overwrite the values of a record with those of GDs.
This recipe special control also enables you to check or edit the recipe data.



The following lists the actions of the recipe special control.

Action		Description	Reference
Resetting notification devices		Reset the Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) to 0.	➟(2) Resetting notification devices
Reading	Reading a record (in whole)	Read a record from the recipe data by specifying a record number. The read record will be stored into the specified GOT data registers (GD).	➟(3) Reading a record (in whole)
	Reading a record (in part)	Read part of the data in a record from the recipe data by specifying a record number and row. The read record will be stored into the specified GOT data registers (GD).	➟(4) Reading a record (in part)
	Reading device comments	This action is available when the save destination of the recipe data is set to the data storage (recipe file). Read the device comments from the recipe data. The read device comments will be stored into the specified GOT data registers (GD).	➟(5) Reading device comments
Writing	Writing a record (in whole)	Overwrite a record in the recipe data with the values of GOT data registers (GD) by specifying a record number.	➟(6) Writing a record (in whole)
	Writing a record (in part)	Overwrite a record in the recipe data with the values of GOT data registers (GD) by specifying a record number and target rows.	➟(7) Writing a record (in part)
	Writing device comments	This action is available when the save destination of the recipe data is set to the data storage (recipe file). Overwrite the device comments in the recipe data with the values of GOT data registers (GD).	➟(8) Writing device comments

Action		Description	Reference
Outputting recipe information		Output the following recipe information of a specified recipe setting: recipe No., recipe file format, recipe name, numbers of records, blocks, and rows, and total number of devices.	➟(9) Outputting recipe information
Searching	Performing a search by record name	Search recipe data for a record by record name. The record number of the matching record is stored in the Recipe Special Control No. device (GS1012).	➟(10) Performing a search by record name

Point

(1) **Recipe data targeted for the recipe special control**

The recipe special control is usable only for the recipe data saved in a data storage or the SRAM user area. To use the recipe special control, set [Recipe Data Save Location] to [Data Storage (Recipe File)(read and write)] or [Embedded Memory in GOT (read and write)] in the [Recipe] dialog ([Basic] tab).

(2) **Execution timing of the recipe special control**

Execute the recipe special control when no recipe process is performed by the recipe function.

(3) **Precautions when using a text display or text input object**

In the recipe special control, a recipe name, record name, or device comment is stored in Unicode, starting from the least significant bit.

When a device storing the above data is used in a text display or text input object, configure the following settings in the setting dialog of the object.

- Select [Unicode] for [Character Code] in the [Device/Style] tab.
- Select [Display in order of High -> Low] in the [Extended] tab.

(1) GOT special registers (GS) used for the recipe special control

You can use the Recipe Special Control Action device (GS1801) to specify the control action, and turn on the Execute Special Control signal (GS1800.b2) to execute the control.

For some actions, you must preset values in GS1802 to GS1808 and the GOT data registers (GD).

The following lists the GOT special registers (GS) used for the recipe special control.

- Read device list

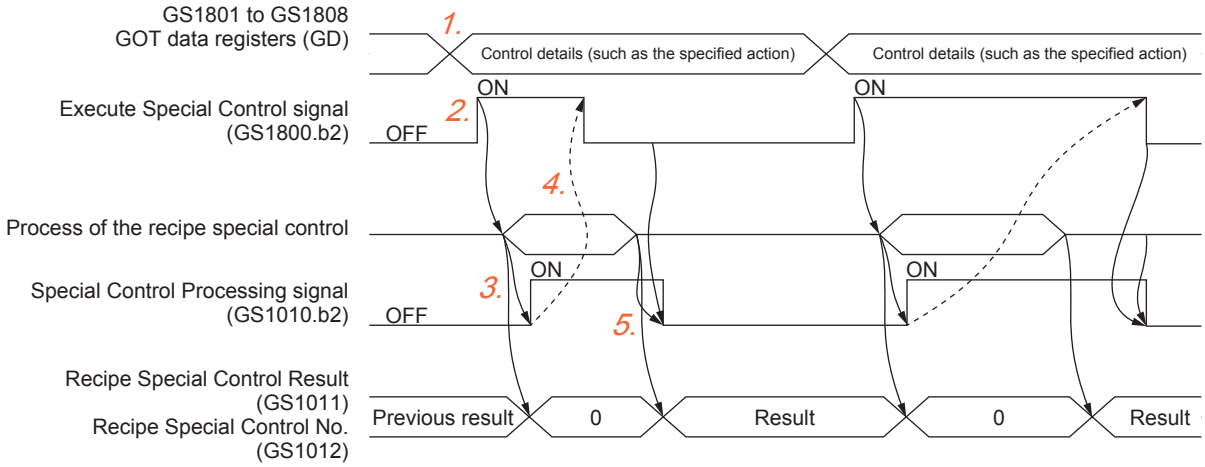
Device		Name	Function
GS1800	b0 to b1	Use prohibited	-
	b2	Execute Special Control Trigger signal	When this signal is turned on, the recipe special control is executed. Set the control details with GS1801 to GS1808. Execute the recipe special control when no recipe process is performed by the recipe function.
	b3 to b13	Use prohibited	-
	b14	Clear Touch Switch Operation Status Information signal	Not used
	b15	Use prohibited	-
GS1801		Recipe Special Control Action	Specify the control action. The action varies with the stored value. • 0: Resets the Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) to 0. • 1: Reads a record from the target recipe data into GOT data registers (GD). • 2: Overwrites the values of a record in the target recipe data with the values of GOT data registers (GD). • 4: Outputs recipe information to GOT data registers (GD). • 5: Searches the target recipe data based on the values of GOT data registers (GD).
GS1802	b0	Control Record Information signal	When this signal is turned on, record information (record No., record attribute, and record name) is set as the control target.
	b1	Control Date of Update signal	When this signal is turned on, the update date and time of a record is set as the control target.
	b2	Control Record Data signal	When this signal is turned on, the device values of a record are set as the control target.
	b3	Control Device Comment signal	When this signal is turned on, device comments are set as the control target.
	b4 to b15	Use prohibited	-
GS1803		Recipe Special Control Start GD Device No.	Specify the start device number of the GOT internal devices (GD) to be used. The data type must be unsigned 16-bit binary.
GS1805		Recipe Special Control Recipe No.	Specify the recipe number of a target recipe setting.

Device	Name	Function
GS1806	Recipe Special Control Record No.	Specify the record number of a target record.
GS1807	Recipe Special Control Row No.	Specify the start row of a record as necessary. Subtract 1 from a target row number, and then set the result as the value of GS1807. Example 1) To specify row No. 1, set GS1807 to 0. Example 2) To specify row No. 65536, set GS1807 to 65535.
GS1808	Recipe Special Control Points	Specify the number of target rows of a record as necessary. Starting from the row specified with GS1807, the specified number of rows are targeted for the recipe special control.

• Write device list

Device		Name	Function
GS1010	b0	Import-in-progress signal	Not used
	b1	Export-in-progress signal	Not used
	b2	Special Control Processing signal	Turns on when the recipe special control is executed. Turns off after the control is complete and the Execute Special Control signal (GS1800.b2) is turned off.
	b3 to b13	Use prohibited	-
	b14	Touch Switch Operation Completed signal	Not used
	b15	Touch Switch Operation Error signal	Not used
GS1011		Recipe Special Control Result	Stores the result of the recipe special control. • 0: Normal completion • Value other than 0: Error For the details of errors, refer to the following. ➟(12) Error code list This device is reset to 0 upon turn-on of the Execute Special Control signal (GS1800.b2).
GS1012		Recipe Special Control No.	Stores a record number as the search result. This device is reset to 0 upon turn-on of the Execute Special Control signal (GS1800.b2).

To notify the completion of the recipe special control, check that the Special Control Processing signal (GS1010.b2) is on, and then turn off the Execute Special Control signal (GS1800.b2) to turn off GS1010.b2.



Step 1 Preset values in GS1801 to GS1808 and the GOT data registers (GD) as necessary.

Step 2 Turn on the Execute Special Control signal (GS1800.b2).

Step 3 The recipe special control starts, and the Special Control Processing signal (GS1010.b2) turns on.

The Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) are reset to 0.

Step 4 Check that GS1010.b2 is on, and then turn off GS1800.b2 by using trigger actions or other methods.

Step 5 Upon completion of the recipe special control, GS1010.b2 turns off.

GS1011 stores the result of the control.

If you execute the recipe special control to search for a record, GS1012 stores the search result.

(2) Resetting notification devices

You can reset the Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) to 0.

Set the Recipe Special Control Action device (GS1801) to 0, and then turn on the Execute Special Control signal (GS1800.b2).

(3) Reading a record (in whole)

You can read record information, date of update, and all the device values of a target record.

Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		1	The device value must be set as shown on the left to specify this action.
GS1802	b0	0 or 1	When this bit is turned on, record information (record No., record attribute, and record name) is set to be read. (The record attribute refers to the settings of [Not to set the device value] and [Not to overwrite the device value in a recipe file].) Set this bit as necessary. You can set this bit together with GS1802.b1 and GS1802.b2.
	b1	0 or 1	When this bit is turned on, the update date and time of a target record is set to be read. Set this bit as necessary. You can set this bit together with GS1802.b0 and GS1802.b2.
	b2	0 or 1	When this bit is turned on, the device values of a target record are set to be read. Set this bit as necessary. You can set this bit together with GS1802.b0 and GS1802.b1.
	b3	0	The device value must be set as shown on the left.
GS1803		0 to 65535	Specify the start device number of the GOT internal devices (GD) that store the read data. Reserve the GOT internal devices (GD) according to the size of data to be read. • Record information: 34 word devices required • Date of update: 4 word devices required • Device values of a record: The required number of word devices varies with the device types and number of devices that are targeted for the control. For the specifications of storing data and each data size, refer to the following. ➟(a) Record information, date of update, and device values of a record
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0	The device value must be set as shown on the left.
GS1808		0	The device value must be set as shown on the left. When this device stores 0, all the device values of a target record are read to the GOT data registers (GD).

When the save destination of the recipe data is set to the data storage (recipe file), the operation is as follows: if no recipe file exists in the data storage, a recipe file will be created automatically and the special recipe control will start.

If the recipe file format is set to [CSV] or [Unicode Text], the created file contains the specified record only.

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.

If an error occurs, GS1011 stores a value other than 0.

For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(4) Reading a record (in part)

You can read record information, date of update, and the device values in the specified rows of a target record.
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		1	The device value must be set as shown on the left to specify this action.
GS1802	b0	0 or 1	When this bit is turned on, record information (record No., record attribute, and record name) is set to be read. (The record attribute refers to the settings of [Not to set the device value] and [Not to overwrite the device value in a recipe file].) Set this bit as necessary. You can set this bit together with GS1802.b1 and GS1802.b2.
	b1	0 or 1	When this bit is turned on, the update date and time of a target record is set to be read. Set this bit as necessary. You can set this bit together with GS1802.b0 and GS1802.b2.
	b2	1	The device value must be set as shown on the left. When this bit is turned on, the device values of a target record are set to be read. You can set this bit together with GS1802.b0 and GS1802.b1.
	b3	0	The device value must be set as shown on the left.
GS1803		0 to 65535	Specify the start device number of the GOT internal devices (GD) that store the read data. Reserve the GOT internal devices (GD) according to the size of data to be read. • Record information: 34 word devices required • Date of update: 4 word devices required • Device values of a record: The required number of word devices varies with the device types and number of devices that are targeted for the control. For the specifications of storing data and each data size, refer to the following. ➟(a) Record information, date of update, and device values of a record
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0 to 65535	Specify the start row to be read. Subtract 1 from a target row number, and then set the result as the value of GS1807.
GS1808		1 to 65535	Set the number of rows to be read.

When the save destination of the recipe data is set to the data storage (recipe file), the operation is as follows: if no recipe file exists in the data storage, a recipe file will be created automatically and the special recipe control will start.
If the recipe file format is set to [CSV] or [Unicode Text], the created file contains the specified record only.

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(5) Reading device comments

You can read device comments.
This operation is available when the save destination of the recipe data is set to the data storage (recipe file).
Note that device comments must be read independently of the other data (such as record information).

If the target recipe file is in the binary format (*.G2P), the device comments are read from the file.
If the target recipe file is in the CSV or Unicode text format (*.CSV or *.TXT), the device comments are read from the corresponding recipe setting in the project.

Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		1	The device value must be set as shown on the left to specify this action.
GS1802	b0	0	The device value must be set as shown on the left.
	b1	0	The device value must be set as shown on the left.
	b2	0	The device value must be set as shown on the left.
	b3	1	When this bit is turned on, device comments are set to be read. You cannot set this bit together with GS1802.b0, GS1802.b1, and GS1802.b2.
GS1803		0 to 65535	Specify the start device number of the GOT internal devices (GD) that store the read data. Reserve the GOT internal devices (GD) according to the size of data to be read. • Device comment: 32 word devices × Specified number of rows For the specifications of storing data and each data size, refer to the following. ➟(b) Device comment
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0 to 65535	Specify the start row to be read. Subtract 1 from a target row number, and then set the result as the value of GS1807.
GS1808		1 to 65535	Set the number of rows to be read.

If you execute the recipe special control for a recipe setting without the corresponding recipe file, a recipe file is created automatically and then the control starts. (Only when the recipe file format is set to [G2P (Binary)])

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(6) Writing a record (in whole)

You can overwrite record information (record name only) and all the device values of a target record.
Store the write source data in GOT data registers (GD).
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		2	The device value must be set as shown on the left to specify this action.
GS1802	b0	0 or 1	When this bit is turned on, record information (record name only) is set to be overwritten. Set this bit as necessary. You can set this bit together with GS1802.b1 and GS1802.b2.
	b1	0 or 1	This bit is disabled because the date of update cannot be overwritten.
	b2	0 or 1	When this bit is turned on, the device values of a target record are set to be overwritten. Set this bit as necessary. You can set this bit together with GS1802.b0 and GS1802.b1.
	b3	0	The device value must be set as shown on the left.
GS1803		0 to 65535	Specify the start device number of the GOT data registers (GD) that store the write source data. Store the write source data in the GOT data registers (GD) according to the specifications of storing data. • Record information: 34 word devices required • Date of update: 4 word devices required • Device values of a record: The required number of word devices varies with the device types and number of devices that are targeted for the control. For the specifications of storing data and each data size, refer to the following. ➟(a) Record information, date of update, and device values of a record
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0	The device value must be set as shown on the left.
GS1808		0	The device value must be set as shown on the left. When this device stores 0, all the device values of a target record are overwritten.

When the save destination of the recipe data is set to the data storage (recipe file), the operation is as follows: if no recipe file exists in the data storage, a recipe file will be created automatically and the special recipe control will start.
If the recipe file format is set to [CSV] or [Unicode Text], the created file contains the specified record only.

The date and time at which the device values of a record are overwritten is stored as the update date and time of the record.
If [Not to overwrite the device value in a recipe file] is selected in the record attribute setting, overwriting the device values results in an error. (If both record information and device values are set to be overwritten, record information is also not overwritten.)

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(7) Writing a record (in part)

You can overwrite record information (record name only) and the device values in the specified rows of a target record.
Store the write source data in GOT data registers (GD).
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		2	The device value must be set as shown on the left to specify this action.
GS1802	b0	0 or 1	When this bit is turned on, record information (record name only) is set to be overwritten. Set this bit as necessary. You can set this bit together with GS1802.b1 and GS1802.b2.
	b1	0 or 1	This bit is disabled because the date of update cannot be overwritten.
	b2	1	The device value must be set as shown on the left. When this bit is turned on, the device values of a target record are set to be overwritten. You can set this bit together with GS1802.b0 and GS1802.b1.
	b3	0	The device value must be set as shown on the left.
GS1803		0 to 65535	Specify the start device number of the GOT data registers (GD) that store the write source data. Store the write source data in the GOT data registers (GD) according to the specifications of storing data. • Record information: 34 word devices required • Date of update: 4 word devices required • Device values of a record: The required number of word devices varies with the device types and number of devices that are targeted for the control. For the specifications of storing data and each data size, refer to the following. ➟(a) Record information, date of update, and device values of a record
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0 to 65535	Specify the start row to be written. Subtract 1 from a target row number, and then set the result as the value of GS1807.
GS1808		1 to 65535	Set the number of rows to be written.

When the save destination of the recipe data is set to the data storage (recipe file), the operation is as follows: if no recipe file exists in the data storage, a recipe file will be created automatically and the special recipe control will start.
If the recipe file format is set to [CSV] or [Unicode Text], the created file contains the specified record only.

The date and time at which the device values of a record are overwritten is stored as the update date and time of the record.
If [Not to set the device value] is selected in the record attribute setting, the device values in the unspecified rows are overwritten with 0.
If [Not to overwrite the device value in a recipe file] is selected in the record attribute setting, overwriting the device values results in an error. (If both record information and device values are set to be overwritten, record information is also not overwritten.)

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(8) Writing device comments

You can overwrite device comments.
This operation is available when the save destination of the recipe data is set to the data storage (recipe file).
Note that device comments must be overwritten independently of the other data (such as record information).
To overwrite device comments, satisfy all the following conditions.

- A binary recipe file (*.G2P) is used.
- [Include device comments in conversion target] is selected when a recipe file in the CSV or Unicode text format is

converted back to the binary format.

Store the write source data in GOT data registers (GD).
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		2	The device value must be set as shown on the left to specify this action.
GS1802	b0	0	The device value must be set as shown on the left.
	b1	0	The device value must be set as shown on the left.
	b2	0	The device value must be set as shown on the left.
	b3	1	When this bit is turned on, device comments are set to be overwritten. You cannot set this bit together with GS1802.b0, GS1802.b1, and GS1802.b2.
GS1803		0 to 65535	Specify the start device number of the GOT data registers (GD) that store the write source data. Store the write source data in the GOT data registers (GD) according to the specifications of storing data. • Device comment: 32 word devices × Specified number of rows For the specifications of storing data and each data size, refer to the following. ➟(b) Device comment
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		1 to 2000	Specify the record number of a target record.
GS1807		0 to 65535	Specify the start row to be written. Subtract 1 from a target row number, and then set the result as the value of GS1807.
GS1808		1 to 65535	Set the number of rows to be written.

If you execute the recipe special control for a recipe setting without the corresponding recipe file, a recipe file is created automatically and then the control starts. (Only when the recipe file format is set to [G2P (Binary)])

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(9) Outputting recipe information

You can output information on the specified recipe setting.
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device	Set value	Function
GS1801	4	The device value must be set as shown on the left to specify this action.
GS1803	0 to 65535	Specify the start device number of the GOT internal devices (GD) that store the read data. Reserve the GOT internal devices (GD) according to the size of data to be read. • Record information: 40 word devices required For the specifications of storing data and each data size, refer to the following. ➟(c) Recipe information
GS1805	1 to 32767	Specify the recipe number of a target recipe setting.
GS1806	0	The device value must be set as shown on the left.
GS1807	0	The device value must be set as shown on the left.
GS1808	0	The device value must be set as shown on the left.

After the control is complete, the Recipe Special Control Result device (GS1011) stores 0.
If an error occurs, GS1011 stores a value other than 0.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

(10)Performing a search by record name

You can search for a record that has the specified record name.
When the target recipe files are in the CSV or Unicode text format (*.CSV or *.TXT), each file contains one record only.
Each time the recipe file corresponding to a record is not found, the specified recipe setting in the project data is searched.
Set GS1801 to GS1808 as shown below, and then turn on the Execute Special Control signal (GS1800.b2).

Device		Set value	Function
GS1801		5	The device value must be set as shown on the left to specify this action.
GS1802	b0	1	When this bit is turned on, a record having the specified record name is searched for.
	b1	0	The device value must be set as shown on the left.
	b2	0	The device value must be set as shown on the left.
	b3	0	The device value must be set as shown on the left.
GS1803		0 to 65535	Specify the start device number of the GOT data registers (GD) that store the record name for search. Store the name in the GOT data registers (GD) according to the specifications of storing data. • Record name for search: 32 word devices required For the specifications of storing data and each data size, refer to the following. ➟(d) Record name for search
GS1805		1 to 32767	Specify the recipe number of a target recipe setting.
GS1806		0 to 2000	Specify the record number of a record from which a search starts. The search is performed in ascending order of the record numbers. When this device stores 0, the search starts from record No.1.
GS1807		0	The device value must be set as shown on the left.
GS1808		0	The device value must be set as shown on the left.

When the save destination of the recipe data is set to the data storage (recipe file), the operation is as follows: if no recipe file exists in the data storage, a recipe file will be created automatically and the special recipe control will start.
(Only when the recipe file format is set to [G2P (Binary)])

Upon completion of the control, the Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) store a value according to the search result.

- If the matching record is found, GS1011 stores 1, and GS1012 stores the record number.
- If no matching record is found, GS1011 and GS1012 each store 0.

If an error occurs, GS1011 stores a value other than 0 and 1.
For the error codes and corrective actions, refer to the following.

➟(12) Error code list

If a recipe file in the CSV or Unicode text format (*.CSV or *.TXT) causes an error during a search, the Recipe Special Control No. device (GS1012) stores the record number of the recipe file.
If the error has been caused by any other reason, GS1012 stores 0.

(11)Specifications of storing data in GOT data registers (GD)

When you execute the recipe special control to read data, the GOT data registers (GD) store the read data as shown below.

Store the write source data to the GOT data registers (GD) in the same manner.

(a) Record information, date of update, and device values of a record

• Record information

To store record information, reserve 34 word devices.

Example) Start device: GD1000

GD1000	Record No.
GD1001	Record attribute
GD1002	Record name
⋮	
GD1033	

34 word devices

Order	Stored data	Details
Start device	Record No.	This device is disabled and skipped at the time of writing data.
2nd device	Record attribute	• b0: With or without initial device values (0: With, 1:Without) • b1: Writable or write-protect (0: Writable, 1: Write-protect) • b2 to b15: Use prohibited This device is disabled and skipped at the time of writing data.
3rd device to the 33rd device	Record name	The data is stored in Unicode. If a record name has less than 32 characters, the name is stored with a termination character (0) appended. If a record name has 32 characters, the name is stored with no termination character appended.

• Date of update

To store the date of update, reserve four word devices.

Example) Start device: GD1000

GD1000	Month and year
GD1001	Date and hour
GD1002	Minute and second
GD1003	Day of the week

4 word devices

Order	Stored data	Details
Start device	Month and year	• b8 to b15: Year (Data type: BCD) • b0 to b7: Month (Data type: BCD) This device is disabled and skipped at the time of writing data.
2nd device	Date and hour	• b8 to b15: Date (Data type: BCD) • b0 to b7: Hour (Data type: BCD) This device is disabled and skipped at the time of writing data.
3rd device	Minute and second	• b8 to b15: Minute (Data type: BCD) • b0 to b7: Second (Data type: BCD) This device is disabled and skipped at the time of writing data.
4th device	Day of the week	• b8 to b15: Use prohibited • b0 to b7: Day of the week (0: Sunday, 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday) This device is disabled and skipped at the time of writing data.

• Device values of a record

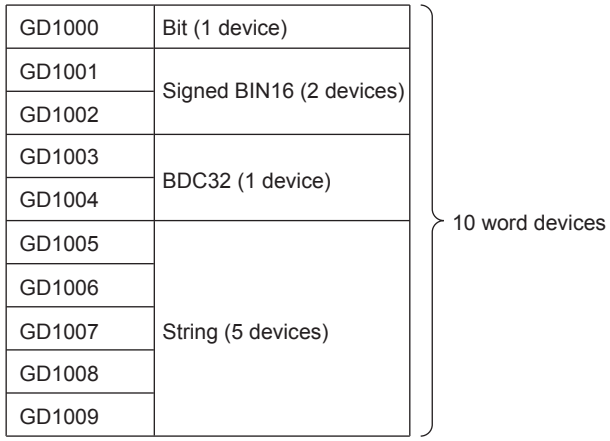
For storing the device values of a record, the required number of word devices varies with the device types and number of devices in the record.

The device values of a record are stored in the order specified in the recipe setting.

Example)

Start device: GD1000

Target devices of a record: Bit (1 device), Signed BIN16 (2 devices), BCD32 (1 device), and String (5 devices)



Device type	Required number of word devices	Details
Bit	1	Only the value of bit 0 is applied.
Signed BIN8	1	-
Unsigned BIN8	1	-
Signed BIN16	1	-
Unsigned BIN16	1	-
Signed BIN32	2	-
Unsigned BIN32	2	-
Signed BIN64	4	-
Unsigned BIN64	4	-
BCD16	1	-
BCD32	2	-
BCD64	4	-
Real(32bit)	2	-
Real(64bit)	4	-
String	Specified number of devices	The specified number of word devices are used. Data is stored in the specified character code.

- Reading record information, date of update, and devices values of a target record simultaneously

  The record information, date of update, and device values are stored in that order.

  Example)

  Start device: GD1000

  Data of a record to be read: record information, date of update, and device values

Record information	GD1000	Record No.	34 word devices
	GD1001	Record attribute	
	GD1002	Record name	
	⋮		
	GD1033		
Date of update	GD1034	Month and year	4 word devices
	GD1035	Date and hour	
	GD1036	Minute and second	
	GD1037	Day of the week	
Device values of a record	GD1038	Bit (1 device)	10 word devices
	GD1039	Signed BIN16 (2 devices)	
	GD1040		
	GD1041	BDC32 (1 device)	
	GD1042		
	GD1043	String (5 devices)	
	GD1044		
	GD1045		
	GD1046		
	GD1047		

(b) **Device comment**

To store one device comment, reserve 32 word devices. For two or more device comments, multiply 32 word devices by the specified number of rows.

Example)

Start device: GD1000

Specified number of rows: 5

GD1000	Device comment (1st row)	160 word devices
⋮		
GD1031		
⋮	⋮	
GD1128	Device comment (5th row)	
⋮		
GD1159		

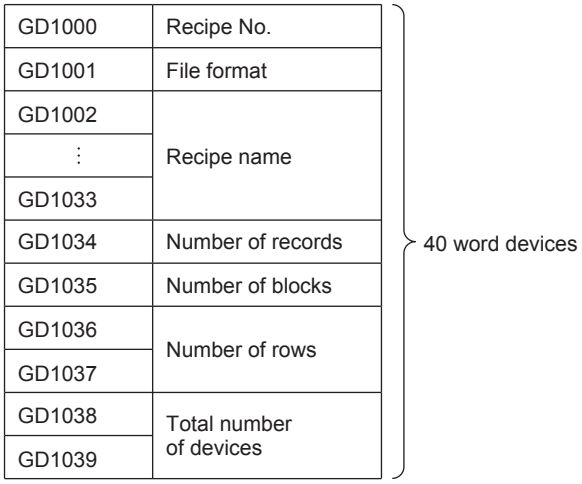
Order	Stored data	Details
Start device to the 32nd device	Device comment	Storing one device comment requires 32 word devices.

The data is stored in Unicode.

(c) **Recipe information**

To store recipe information, reserve 40 word devices.

Example) Start device: GD1000

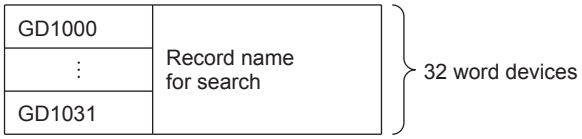


Order	Stored data	Details
Start device	Recipe No.	-
2nd device	File format	Recipe file format • 0: Does not use a recipe file. • 1: Binary format (*.G2P) • 2: CSV format (*.CSV) • 3: Unicode text format (*.TXT)
3rd device to the 34th device	Recipe name	The data is stored in Unicode. If a record name has less than 32 characters, the name is stored with a termination character (0) appended. If a record name has 32 characters, the name is stored with no termination character appended.
35th device	Number of records	-
36th device	Number of blocks	-
37th and 38th devices	Number of rows	Number of rows of the recipe setting
39th and 40th devices	Total number of devices	Total number of devices of the recipe setting

(d) **Record name for search**

To store a record name for search, reserve 32 word devices.

Example) Start device: GD1000



Order	Stored data	Details
Start device to the 32nd device	Record name for search	The data is stored in Unicode. The stored record name (including the termination character (0)) is used as the search criterion.

(12)Error code list

The following lists the error codes that are stored in the Recipe Special Control Result device (GS1011) and the corrective actions.

Error code	Cause and corrective action
-1	Any of the set values in GS1801 to GS1808 is incorrect. Correct the set values.
322	The specified device number is outside the device range for GOT data registers (GD). Specify a device number within the device range.
345	A binary-to-BCD conversion error occurred. Make sure that the data types of the target device values are the same as the device types set in the recipe setting.
575	Device comments cannot be overwritten because the recipe file is not in the binary format (*.G2P) or [Include device comments in conversion target] is not selected in the [Recipe] dialog ([Basic] tab). Select [Include device comments in conversion target] in the recipe setting in the project.
576	The specified row number is nonexistent. Specify an existent row number.
581	An invalid recipe file exists. Delete the invalid recipe file.
582	Creating a recipe file has failed. Check that the following conditions are satisfied, and then execute the recipe special control again. • A data storage is installed on the GOT. • The SD card cover is closed. • The SD card access switch is turned on. • The installed data storage has enough free space.
583	Writing data to the target recipe file has failed. Check that the following conditions are satisfied, and then execute the recipe special control again. • The data storage is not write-protected. • The recipe file is not write-protected.
584	Writing data to the target recipe file has failed. Do not remove the data storage during the recipe special control. For saving data to the SRAM user area, consult your local sales office.
585	Reading data from the target recipe file has failed. Do not remove the data storage during the recipe special control. For saving data to the SRAM user area, consult your local sales office.
586	The specified recipe number is nonexistent. Specify an existent recipe number.
587	The specified record number is nonexistent. Specify an existent record number.
588	The target record cannot be overwritten because the record is write-protected. Disable the write protection for the target record in the recipe setting in the project, or specify another writable record.
589	The recipe special control cannot be executed because the target recipe setting is set not to use a recipe file. Execute the recipe special control for a recipe setting that is set to use a recipe file.
591	The contents of the target recipe file do not match the source recipe setting. Correct the recipe setting in the project, and then write the data to the GOT again.

■9 Link with the recipe display (record list) by using GOT special registers

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following GOT special registers store information of the recipe display (record list).

- GS1013: Stores the recipe number for the records displayed on the recipe display (record list).
- GS1014: Stores the record number selected on the recipe display (record list).

With GS1013 and GS1014, you can specify a recipe number and a record number on the recipe display (record list), and perform operations such as the following.

- Write the values of GS1013 and GS1014 to the PLC CPU devices (Recipe No. Storage device and Record No. Storage device specified in the recipe common setting), and run a sequence program to turn on the trigger device of the target recipe process.
- Write the values of GS1013 and GS1014 to the GOT special registers (GS1805 and GS1806), and turn on the trigger device of the recipe special control.

For the recipe common setting, refer to the following.

➟9.3.5 [Recipe Common Setting] dialog

For the recipe special control, refer to the following.

➟9.3.3 ■8 Operations with GOT special registers (GS) (Recipe special control)

(1) Application example

Example) Checking the device values of a record selected on the recipe display (record list) and writing the values to target devices

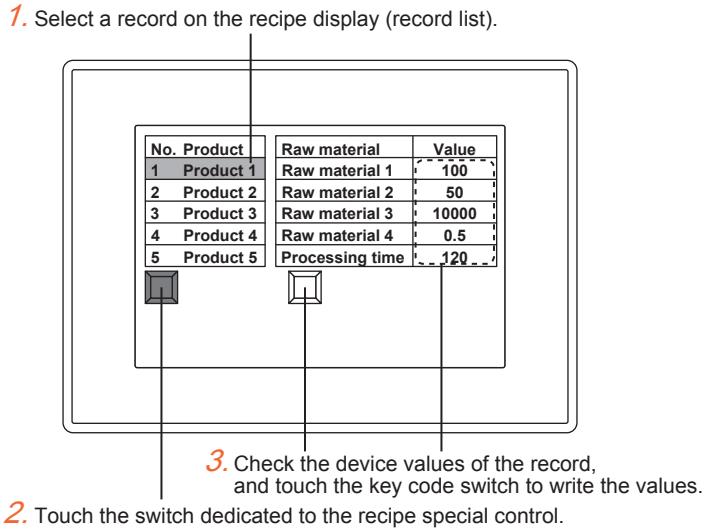
Execute the recipe special control to read the device values of the record selected on the recipe display (record list), and display the read values on numerical display objects.

Check the values on numerical display objects, and write the values to target devices.

Configure the following settings on GT Designer3.

Object	Description
Switch	Inputs data to the GOT special registers (GS1801 to GS1803, GS1807, and GS1808), and executes the recipe special control. Set the following actions to run in top-to-bottom order as shown below. • [Word Set]: Write 1 to GS1801. • [Word Set]: Write the start device number of GOT data registers (GD) to GS1803. (The start device number is user-configurable, and the GD devices store the device values of a record.) • [Word Set]: Write the value of GS1013 to GS1805. • [Word Set]: Write the value of GS1014 to GS1806. • [Word Set]: Write 0 to GS1807. • [Word Set]: Write 0 to GS1808. • [Bit Set]: Turn on GS1802.b2. • [Bit Reset]: Turn off GS1802.b0. • [Bit Reset]: Turn off GS1802.b1. • [Bit Reset]: Turn off GS1802.b3. • [Bit Momentary]: Turn on GS1800.b2 while the switch is being touched.
Key Code Switch	Writes the device values of a record to target devices. Use the applicable key code switch that is placed automatically upon placement of the recipe display (record list). When placing the applicable key code switch manually, configure the following settings. • Select [Recipe Display (Record List)] for [Key Code Type]. • Select [Load record] for [Action].
Numerical Display	Displays a device value of the record that has been read by the recipe special control. Place numerical displays corresponding to the number of target devices. Set the numerical displays according to the types of devices in the record.
Recipe Display (Record List)	On this object, select a recipe number and a record number that are targeted for the recipe special control. In [Recipe No.], specify a target recipe number.

Perform the following operations on the GOT.



Step 1 On the recipe display (record list), select a record to write its device values to target devices.

Step 2 Touch the switch dedicated to the recipe special control to display the device values of the selected record on the numerical displays.

Step 3 Check the displayed values, and touch the applicable key code switch to write the values to target devices.

■10 Saving recipe data into the SRAM user area

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You can save recipe data into the SRAM user area.
Values are readable from the target devices of a controller into the SRAM user area instead of a data storage.
The SRAM user area space is limited and used for the other functions as well.
Before saving the recipe data, make sure that the SRAM user area has enough free space.

(1) Specifications of the SRAM user area

For the specifications of the SRAM user area, refer to the following.

➟12.12 Specifications of the SRAM user area

(2) Deleting and backing up the data in the SRAM user area

The data saved in the SRAM user area is deleted under the following conditions.

- Project data and system applications are written to the GOT when [Initialize SRAM user area when writing project data/OS] is selected in the [Communicate with GOT] dialog.
- The SRAM user area is initialized by using [SRAM management] in the utility.
- The clear trigger device set in [Buffering] of the user alarm observation setting or the system alarm observation setting turns on.
- The SRAM user area is set to be initialized when GT SoftGOT2000 starts the first monitoring.

To retain the data saved in the SRAM user area, execute the backup/restoration function in the utility.
For the details of the backup/restoration function, refer to the following.

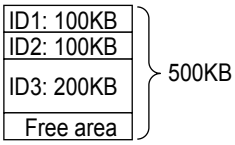
➟GOT2000 Series User's Manual (Utility)

(3) Precautions for using the SRAM user area

Data may not be saved into the SRAM user area due to some reasons, including the setting change of an applicable function and physical memory corruption.

(a) Normal conditions

The data collected by each applicable function is saved to the SRAM user area.



(b) **Setting change**

If the size of data to be collected by the user alarm observation, system alarm observation, or logging function is changed, the data of the function saved in the SRAM user area will be deleted.

- When the size is reduced:

  The data is saved to the initialized area. The remaining area is reserved as a free area.

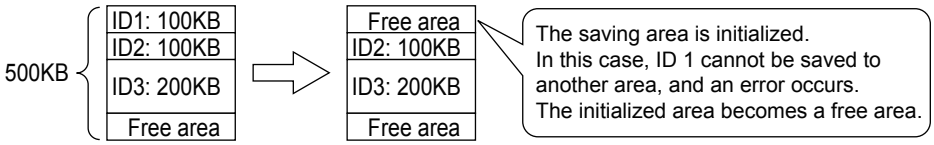
- When the size is increased:

  The area used is initialized and the data is saved to another area.

  If the area required for saving the data is insufficient, an error occurs.

  If an error occurs, initialize the SRAM user area, reduce the data size to 500 KB or less, and save the data again.

  Example) When the size for ID 1 is increased from 100 KB to 200 KB



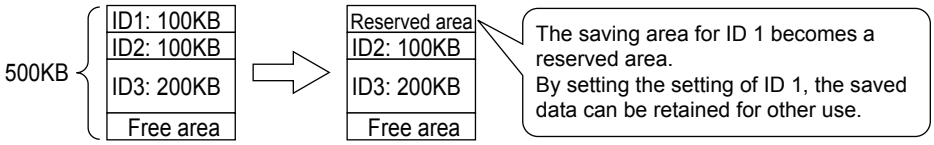
(c) **Setting deletion**

When the setting of each function is deleted, the SRAM user area used for saving the data is reserved as an unused area. Initialize the unused area to use it.

For the initialization of the SRAM user area, refer to the following.

➟GOT2000 Series User's Manual (Utility)

Example) When the setting of ID 1 is deleted



(d) **Others**

If the data saved in the SRAM user area is not restored at the GOT startup, a system alarm occurs.

In such a case, check the battery status.

- When the battery status is normal:

  A part of the SRAM user area may be damaged.

  Initialize the SRAM user area.

  ➟GOT2000 Series User's Manual (Utility)

- When the voltage is low:

  Replace the battery.

  If the data is still not restored after the battery is replaced, initialize the SRAM user area.

  For information on how to replace the battery, refer to the following.

  ➟GOT2000 Series User's Manual (Hardware)

  For the initialization of the SRAM user area, refer to the following.

  ➟GOT2000 Series User's Manual (Utility)

9.3.4 Precautions

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This section explains the precautions for using the recipe function.

➟■1 Precautions for drawing
■2 Precautions for editing recipe files
■3 Precautions for use
■4 Precautions for using the Character Code for CSV Conversion signal (GS522.b2)
■5 Precautions for using the SRAM user area

■1 Precautions for drawing

(1) Number of blocks and maximum number of target devices

To specify the number of target devices more than the number of blocks, set consecutive devices in blocks.
Depending on the number of blocks and the setting of [Points], specifying the number of target devices up to its upper limit may be unavailable.
Example) When 2048 is set in [Block Number] and 1 is set in [Points] of all the blocks
According to the upper limit of the number of blocks, up to 2048 devices can be set.

(2) Number of blocks and processing time

When a large number of blocks are set in a recipe setting, processing time for writing and reading may increase.
To shorten the processing time, reduce the number of blocks.

(3) Influence by recipe file size

A large recipe file requires more space in a data storage, takes a long writing or reading time, and influences others.
The following shows methods to reduce the size of a recipe file.

- Reduce the number of characters in device comments.
- Reduce the number of digits of the record initial values.
- Exclude device comments from the conversion target.

(4) Project size and recipe setting

The project size (ROM or RAM) must be equal to or smaller than the capacities of the GOT storage memory (ROM) and operation memory (RAM).
Depending on the recipe setting (including the number of records, number of target devices, and record initial values) and other function settings, setting items may not be set up to each upper limit due to the project size.

(5) Save destination of recipe files

Do not specify the same save destination on the GOT for recipe files and for files of other functions (such as the alarm function).
Only recipe files can be displayed or operated on the [Recipe information] screen in the utility.
When a recipe file and a file of other functions are stored in the same folder, the folder cannot be deleted on the [Recipe information] screen.

(6) Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(7) Reflecting the device values of a record to the project data

The project data holds the initial device values of records in a recipe setting.
Even if you change a device value of a record on the GOT, the change is not automatically reflected to the project data.
To reflect the change made on the GOT to the project data, use GT Designer3 to import the recipe file from the GOT to the project data.

➟4.3 ■3 Reading the data from the GOT
9.3 ■2 [Device] tab

(8) When setting a string-type label or tag for the recipe target device

Set [Device Type] to [String].

(9) Character code when a string-type label or tag is set for the device whose [Device Type] is set to [String]

If you set a string-type label or tag for the device whose [Device Type] is set to [String], set the character code according to the type of the label or tag.

- System label Ver.1: ASCII code or Shift JIS code
- System label Ver.2 and global label: ASCII code, Unicode, or Shift JIS code
- OMRON NJ/NX tag: Unicode
- AB native tag: ASCII code
- OPC UA tag: Unicode

■2 Precautions for editing recipe files

(1) Character code and conversion destination file

If a device comment or record name contains any character other than ASCII and Shift JIS characters, convert the relevant file as shown below.

- Convert the file to Unicode text format.
- Turn on the Character Code for CSV Conversion signal (GS522.b2), and convert the file to CSV format.

(2) Editing a recipe file having more than 251 records

If a recipe file in binary format (*.G2P) has more than 251 records, use a text editor or Microsoft Excel 2007 or later to open the file.

(3) Editing a device comment

Set a device comment within the maximum number of characters.
Characters exceeding the maximum number of characters cannot be applied to a reverse-converted recipe file.
Set the maximum number of characters used for a device comment in [Maximum number of characters] in the [Basic] tab of the [Recipe] dialog.

(4) Editing a CSV file or Unicode text file

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

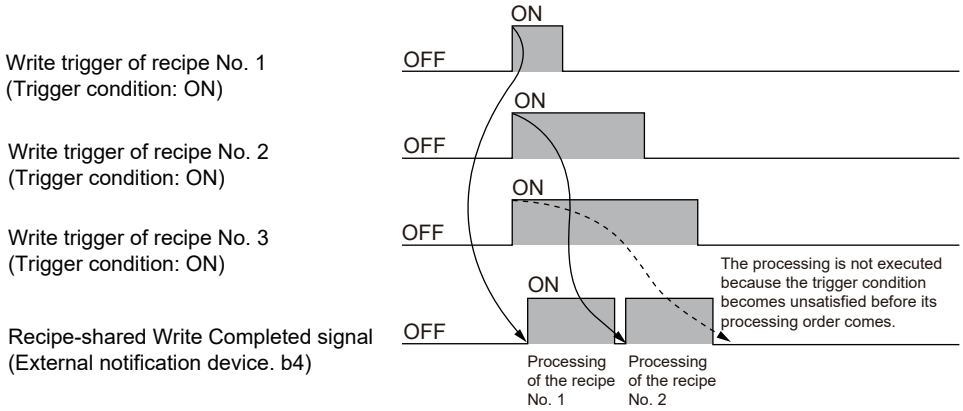
■3 Precautions for use

(1) Priority when multiple trigger conditions are satisfied simultaneously

When trigger conditions for writing, reading, and file conversion are satisfied simultaneously, the processes are executed in the following order.

<table>
<tr><th>Priority</th><th colspan="3">Trigger device</th></tr>
<tr><td rowspan="6">High
↕
Low</td><td rowspan="5">Trigger device per recipe setting</td><td rowspan="2">Recipe No. 1</td><td>Read trigger device</td></tr>
<tr><td>Write trigger device</td></tr>
<tr><td>:</td><td>:</td></tr>
<tr><td rowspan="2">Recipe No. 32767</td><td>Read trigger device</td></tr>
<tr><td>Write trigger device</td></tr>
<tr><td rowspan="3">Trigger device per project</td><td colspan="2">Read trigger device</td></tr>
<tr><td colspan="2">Write trigger device</td></tr>
<tr><td colspan="2">Trigger File Conversion device</td></tr>
</table>

If a satisfied trigger condition becomes unsatisfied before the processing order comes, the process is not executed.
Example) When the trigger condition becomes unsatisfied before the writing process of recipe No. 3 is executed



To make sure that the processing for the simultaneously-satisfied triggers are executed, set the trigger devices for each recipe setting as follows.

Multiple recipes can be processed sequentially by turning on and off one device.

• Set the conditions to satisfy the trigger devices to "OFF". (A trigger condition is satisfied when a device turns off.)

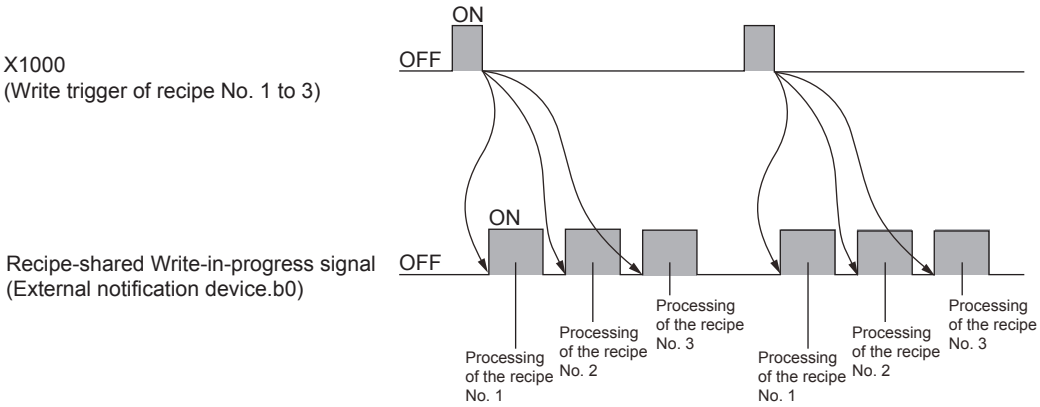
• Set the same device as the trigger devices of multiple recipe settings.

➟9.3.7 ■1 [Basic] tab

Example) Executing the writing processes of recipe No. 1 to 3 sequentially

• [Write Trigger 1] of recipe No. 1 to 3: X1000

• Trigger condition of [Write Trigger 1] of recipe No. 1 to 3: [OFF]

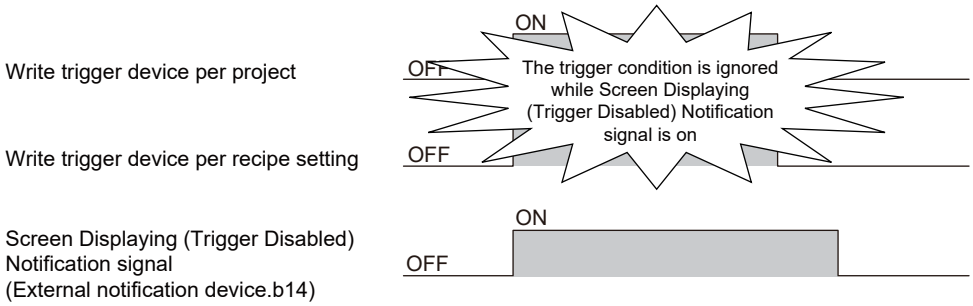


(2) When a trigger condition is satisfied while the recipe operation window or the [Recipe information] screen is being displayed

The trigger devices for writing, reading, and file conversion are ignored while the recipe operation window or the [Recipe information] screen is being displayed.

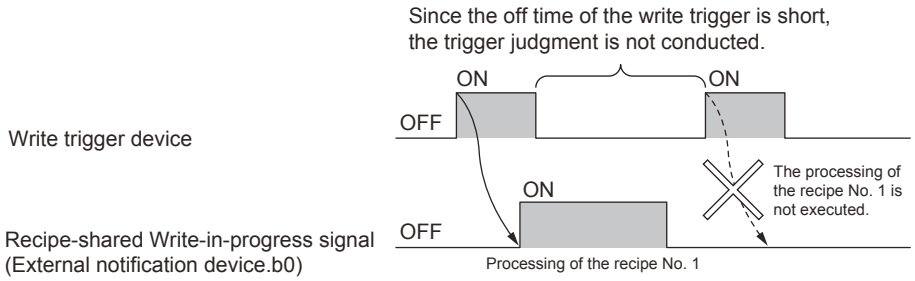
You can check the display status of the recipe operation window or the [Recipe information] screen with Screen Displaying (Trigger Disabled) Notification signal (External notification device.b14).

➟9.3.5 ■2 [External Notification Device]



(3) Trigger judgment when the same trigger condition is repeatedly satisfied

A trigger judgment is conducted each and every time a trigger condition is satisfied.
When the state of a trigger condition changes from satisfied to unsatisfied to satisfied, a trigger judgment is conducted again.
When the time while the trigger condition is not satisfied is too short, the trigger cannot be detected as its condition is not satisfied. Therefore, the recipe may not be processed.



(4) Timing to change the writing or reading target after a trigger condition is satisfied

Before changing the writing or reading target (such as the recipe number and the record number), confirm that the writing or reading process are complete with the following signals.

- For the writing process: Recipe-shared Write Completed signal (External notification device.b4)
- For the reading process: Recipe-shared Read Completed signal (External notification device.b5)

If you change the target before the corresponding signal turns on, a next writing or reading process may not be executed properly.

(5) When the writing or reading process cannot be executed

In the save destination, if a recipe file with the same name is already created for another recipe setting, writing or reading device values cannot be executed.
Remove the recipe file from the save destination, and then write or read device values.

(6) Changing the recipe setting after its recipe file is created

When a recipe file is used, device values are written to or read from the recipe file.
In the save destination, if another recipe file already exists, changes made in GT Designer3 are not applied to the recipe file and the writing or reading of device values.
Remove the recipe file from the save destination, and then write or read device values.

(7) Recipe file created when a recipe process error occurs

Even if a recipe process error occurs, a recipe file may still be created.
Change the setting in GT Designer3 to remove error causes, and then create a recipe file again.

(8) Changing the save destination or file name of a recipe file

If you directly change the save destination or name of a recipe file used, also change its save destination or name in the corresponding recipe setting.

(9) To maintain file access performance

You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

■4 Precautions for using the Character Code for CSV Conversion signal (GS522.b2)

(1) When using a CSV file as a recipe file

When using a CSV file as a recipe file, observe the following rules.

- If a CSV file has been created while GS522.b2 is on, make sure that GS522.b2 is on when the file is used.
- If a CSV file has been created while GS522.b2 is off, make sure that GS522.b2 is off when the file is used.

Failure to observe the rules renders the relevant file unreadable.

(2) When converting a CSV file to binary format

When converting a CSV file to binary format, observe the following rules.

- If a binary file has been converted to a CSV file while GS522.b2 is on, make sure that GS522.b2 is on when the CSV file is converted to a binary file.

• If a binary file has been converted to a CSV file while GS522.b2 is off, make sure that GS522.b2 is off when the CSV file is converted to a binary file.

Failure to observe the rules cannot convert the relevant file.

■5 Precautions for using the SRAM user area

(1) Fields to be imported

If you import a recipe file into the SRAM user area by using a special function switch (Recipe data operation) or external control device, only the following fields are imported.

- Record name
- Record attribute
- Values of the record

To use device comments or other fields, save the recipe data to a recipe file in the data storage.

(2) Backing up the recipe data stored in the SRAM user area

If you delete the recipe data from the SRAM user area because the data is invalid (system alarm 581 or other errors), back up the data before deletion.

Back up the recipe data and the rest of the data in the SRAM user area by using [SRAM management] in the utility.

➟GOT2000 Series User's Manual (Utility)

9.3.5 [Recipe Common Setting] dialog

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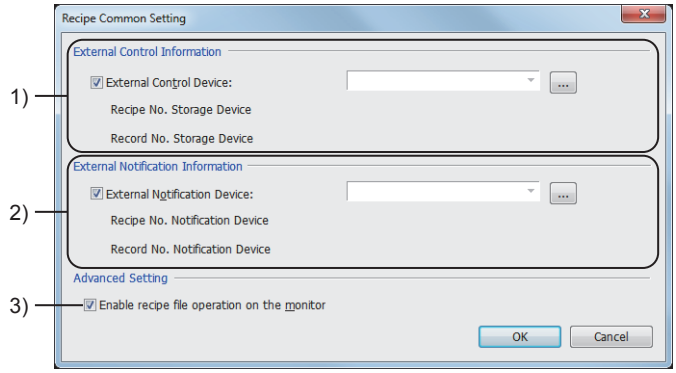
Set devices for controlling the recipe function.
Select [Common] → [Recipe] → [Recipe Common Setting] from the menu to display the following dialog.



1) [External Control Information]

Enable the device setting to control the writing and reading processes. This setting is common to all the recipe settings in a project.

Item	Description
[External Control Device]	Controls the writing and reading of device values, and the file format conversion. The device set in [External Notification Device] cannot be set here. ➟■1 [External Control Device]
[Recipe No. Storage Device]	Specifies the target recipe number when the device set in [External Control Device] controls the writing and reading of device values and the file conversion. One of the consecutive devices starting from the device set in [External Control Device] is set automatically.
[Record No. Storage Device]	Specifies the target record number when the device set in [External Control Device] controls the writing and reading of device values and the file conversion. One of the consecutive devices starting from the device set in [External Control Device] is set automatically.

2) [External Notification Information]

Enable the device setting to output the execution status of a recipe, including a recipe process error.

Item	Description
[External Notification Device]	Notifies the execution status of writing or reading device values. The device set in [External Control Device] cannot be set here. ➟■2 [External Notification Device]
[Recipe No. Notification Device]	Stores the recipe number of a recipe being processed by the trigger device. One of the consecutive devices starting from the device set in [External Notification Device] is set automatically.
[Record No. Notification Device]	Stores the record number of a recipe being processed by the trigger device. One of the consecutive devices starting from the device set in [External Notification Device] is set automatically.

3) [Advanced Setting]

Item	Description
[Enable recipe file operation on the monitor]	Not available to GT21 and GS21. Incorporates a system application (extended function), which is required for using the recipe operation window, into package data. To display the recipe operation window on the monitor screen, set a special function switch ([Switch Action]: [Recipe Information]). ➟8.2.9 [Special Function Switch] dialog For the operations of the recipe operation window, refer to the following. ➟GOT2000 Series User's Manual (Utility)

■1 [External Control Device]

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The following table lists the functions of each bit of the device set in [External Control Device].
For the functions of the external notification device, refer to the following.

➟■2 [External Notification Device]

Bit number	Signal name	Function
b0	Recipe-shared Trigger Write signal	When this signal turns on, values are written to the target devices by using the recipe setting and record specified with [Recipe No. Storage Device] and [Record No. Storage Device].
b1	Recipe-shared Trigger Read signal	When this signal turns on, values are read from the target devices by using the recipe setting and record specified with [Recipe No. Storage Device] and [Record No. Storage Device].
b2 to b7	Use prohibited	-
b8	Convert Recipe File signal	The operation varies depending on the recipe data save destination setting. • For the data storage (recipe file) When this bit turns on, the recipe file (*.G2P) corresponding to the recipe data specified with [Recipe No. Storage Device] is converted to CSV or Unicode text format. Set the file format of the conversion destination file in the [File Save] tab in the [Recipe] dialog. If a recipe file having the same name exists, the recipe file is overwritten. • For the SRAM user area When this bit turns on, the recipe data specified with [Recipe No. Storage Device] is exported to a recipe file. Set the file format of the export destination file in the [File Save] tab in the [Recipe] dialog. If a recipe file having the same name exists, the recipe file is overwritten.
b9	Reverse-convert Recipe File signal	The operation varies depending on the recipe data save destination setting. • For the data storage (recipe file) When this bit turns on, the recipe file corresponding to the recipe data specified with [Recipe No. Storage Device] is converted from CSV or Unicode text format to binary format (*.G2P). Set the file format of the conversion source file in the [File Save] tab in the [Recipe] dialog. If a recipe file having the same name exists, the recipe file is overwritten. • For the SRAM user area When this bit turns on, the recipe data specified with [Recipe No. Storage Device] is imported from the relevant recipe file to the SRAM user area. Set the import source file in the [File Save] tab in the [Recipe] dialog.
b10 to b14	Use prohibited	-
b15	Clear Recipe Processing Error signal	When this signal turns on, the Recipe Processing Error Notification signal (External notification device.b15) turns off.

■2 [External Notification Device]

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The following table lists the functions of each bit of the device set in [External Notification Device].
For the functions of the external control device, refer to the following.

➟■1 [External Control Device]

Bit number	Signal name	Function
b0	Recipe-shared Write-in-progress signal	Turns on while the Recipe-shared Trigger Write signal (External control device.b0) is on or values are being written with the write trigger device of each recipe setting. Turns off when all of the following conditions are satisfied. • The writing process is complete. • The Recipe-shared Trigger Write signal (External control device.b0) is off, or the write trigger condition of each recipe setting is not satisfied.
b1	Recipe-shared Read-in-progress signal	Turns on when the Recipe-shared Trigger Read signal (External control device.b1) is on or values are being read with the read trigger device of each recipe setting. Turns off when all of the following conditions are satisfied. • The reading processing is complete. • The Recipe-shared Trigger Read signal (External control device.b1) is off, or the read trigger condition of each recipe setting is not satisfied.
b2 to b3	Use prohibited	-

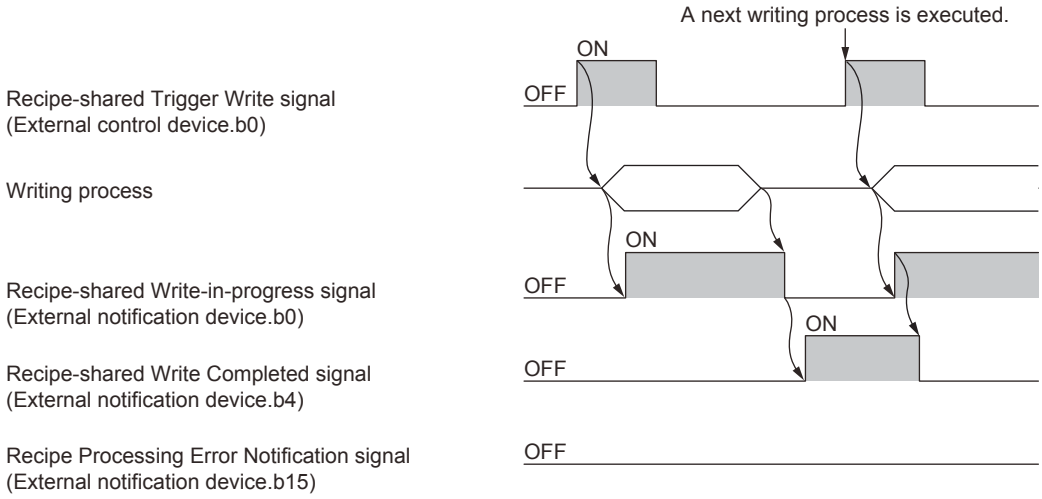
Bit number	Signal name	Function
b4	Recipe-shared Write Completed signal	Turns on when the Recipe-shared Trigger Write signal (External control device.b0) is on, or the writing process with the write trigger device of each recipe setting is complete. Turns off when a next writing or reading process starts.
b5	Recipe-shared Read Completed signal	Turns on when the Recipe-shared Trigger Read signal (External control device.b1) is on, or the reading process with the read trigger device of each recipe setting is complete. Turns off when a next writing or reading process starts.
b6 to b7	Use prohibited	-
b8	Recipe File Converting Notification signal	Turns on when the file conversion is started by the Convert Recipe File signal (External control device.b8). Turns off when all of the following conditions are satisfied. • The file conversion is complete. • The Convert Recipe File signal (External control device.b8) is off.
b9	Recipe File Reverse-converting Notification signal	Turns on when the file conversion is started by the Reverse-convert Recipe File signal (External control device.b9). Turns off when all of the following conditions are satisfied. • The file reverse conversion is complete. • The Reverse-convert Recipe File signal (External control device.b9) is off.
b10	Recipe File Conversion Error Notification signal	Turns on at the end of the file conversion started by the Convert Recipe File signal (External control device.b8), if an error occurs during the conversion and the target file is not converted properly. Turns off when a next conversion of a recipe file starts.
b11	Recipe File Reverse-conversion Error Notification signal	Turns on at the end of the file conversion started by the Reverse-convert Recipe File signal (External control device.b9), if an error occurs during the conversion and the target file is not converted properly. Turns off when a next reverse conversion of a recipe file starts.
b12	Recipe Processing (Trigger Disabled) Notification signal	Turns on during either of the following processing and notifies that the operations (including file conversion) from external control devices cannot be performed. • Recipe processing (including reading of recipe information for display) from the recipe display (record list) • Import/export of a recipe file using a special function switch Turns off when the above processing is completed.
b13	Recipe File Reverse-conversion Warning Error Notification signal	Turns on at the end of the file conversion started by the Reverse-convert Recipe File signal (External control device.b9), if any of the following mismatches is found between the recipe setting and the target recipe file at the conversion. • Recipe setting [Include device comments in conversion target] is not selected in the [Basic] tab in the [Recipe] dialog. ⇒9.3.7 ■1 [Basic] tab • Recipe file [DEVCMT_CNV] (number of characters in the device comment to be converted) is input in the edited recipe file. ⇒9.3.2 ■4 (3) Configuration of the recipe file Turns off when a next reverse conversion of a recipe file starts.
b14	Screen Displaying (Trigger Disabled) Notification signal	Turns on while either of the following window is displayed and notifies that the operations (including file conversion) from external control devices cannot be performed. • Recipe operation window • [Recipe Information] window Turns off when the above screen disappears.
b15	Recipe Processing Error Notification signal	Turns on if an error occurs during the recipe process (such as writing or reading) started by an external control device and the process is performed improperly. A system alarm occurs when this signal turns on. Check the message and remove error causes. After the error causes are removed, even if this signal is on, the recipe process (such as writing or reading) can be performed. One of the following operations turns off this signal. • Turn on the Clear Recipe Processing Error signal (External control device.b15). • Start another process with the external control device.

(1) Operation of the external control device and external notification device

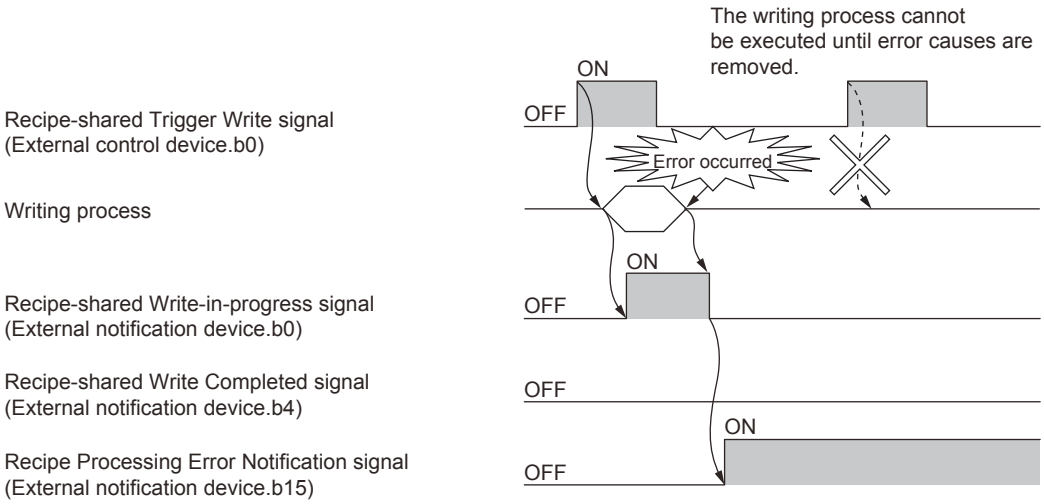
The following shows the ON/OFF timing of each signal.

Example) Behavior of the signal at writing

• When the process ends successfully



• When the process ends abnormally

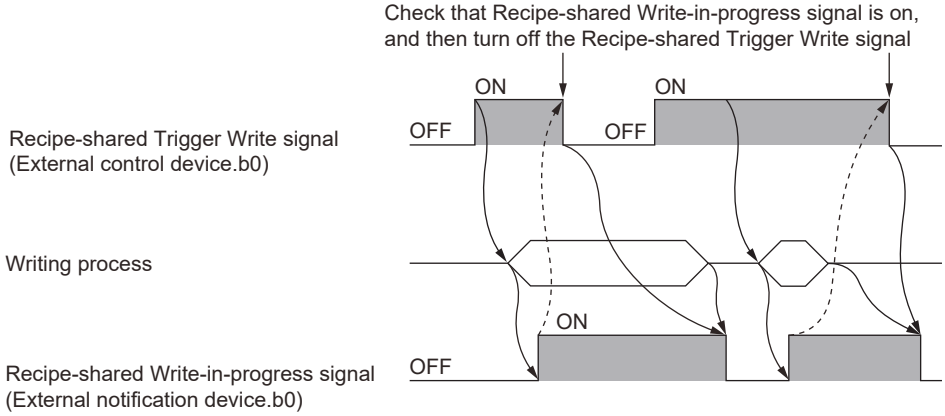


(2) Handshake by the notification signal

To ensure that a process is performed, use the notification signal to establish a handshake.

Example) Handshake established by the Recipe-shared Write-in-progress signal (External notification device.b0)

Confirm that the Recipe-shared Write-in-progress signal (External notification device.b0) is on. Then, turn off the Recipe-shared Trigger Write signal (External control device.b0) to ensure that the writing process is performed.



9.3.6 [Recipe List] dialog

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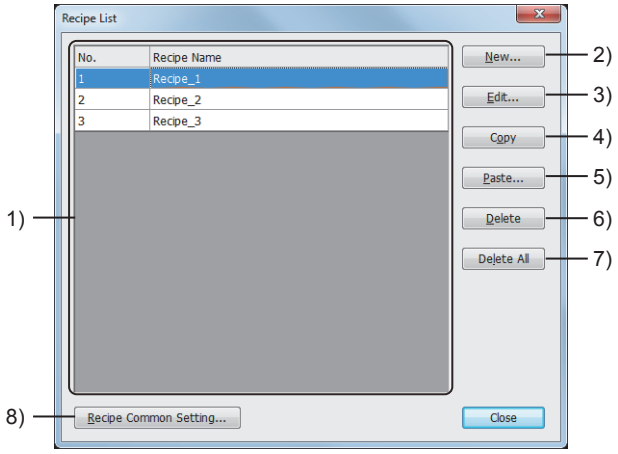
Displays the list of the recipe settings and manages the settings.
Select [Common] → [Recipe] → [Recipe] from the menu to display the following dialog.



1) **Recipe setting list**
List of recipe settings in a project

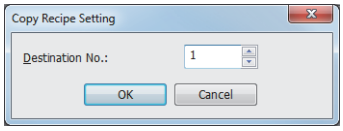
Item	Description
[No.]	Recipe number of each recipe setting
[Recipe Name]	Recipe name of each recipe setting

2) **[New] button**
Displays the [Recipe] dialog to create a recipe setting.
➟9.3.7 [Recipe] dialog

3) **[Edit] button**
Displays the [Recipe] dialog to edit a recipe setting selected in the recipe setting list.
➟9.3.7 [Recipe] dialog

4) **[Copy] button**
Copies a recipe setting selected in the recipe setting list.

5) **[Paste] button**
Displays the [Copy Recipe Setting] dialog to create a recipe setting by using a copied recipe setting.



• **[Destination No.]**
Set the recipe number of a recipe setting, which is created by using a copied recipe setting.
The setting range is [1] to [32767].

6) **[Delete] button**
Deletes a recipe setting selected in the recipe setting list.

7) **[Delete All] button**
Deletes all the recipe settings.

8) **[Recipe Common Setting] button**
Displays the [Recipe Common Setting] dialog.

9.3.7 [Recipe] dialog

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➟■1 [Basic] tab
■2 [Device] tab
■3 [File Save] tab

■1 [Basic] tab

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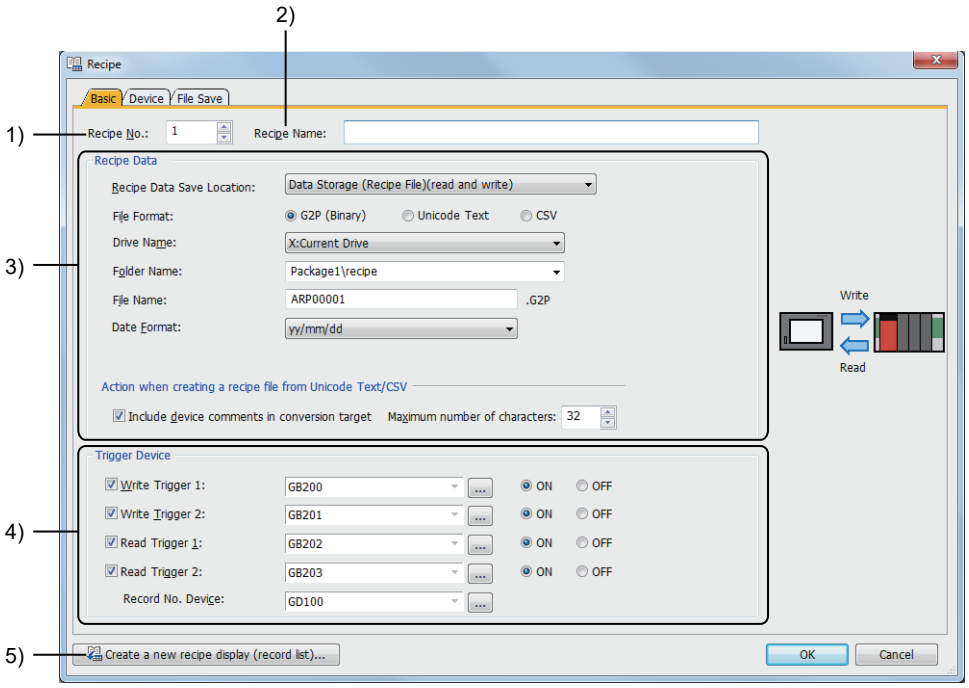
Configure the recipe file setting, and set the write and read trigger devices per recipe setting.



1) **[Recipe No.]**
Set the recipe number of a recipe setting.
The setting range is [1] to [32767].

➟9.3.2 ■1 Contents of a recipe setting

2) **[Recipe Name]**
Set the name of a recipe setting.
Up to 32 characters can be set.

3) **[Recipe Data]**
Configure the settings to save recipe data.

➟9.3.2 ■4 Specifications of the recipe file

Item	Description
[Recipe Data Save Location]	Set the destination to save recipe data. The following shows selectable items. • [Data Storage (Recipe File)(read and write)] Saves recipe data to a recipe file in the data storage. • [Embedded Memory in GOT (read and write)] Not available to GT21 and GS21. Saves recipe data to the SRAM user area. No recipe file is created. • [Not save (record value write only)] Does not save recipe data. No recipe file is created. The recipe data is handled differently depending on the save destination setting. For the details, refer to the following. ➟9.3.2 ■3 Recipe data
[File Format]	Set this item when [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]. Select a file format of the recipe file. ➟9.3.2 ■4 (2) Recipe file format The following shows the items to be selected. • [G2P (Binary)] A recipe file is created in binary format (*.G2P). • [Unicode Text] A recipe file is created in Unicode text format (*.TXT). • [CSV] A recipe file is created in CSV format (*.CSV).
[Drive Name]	Set this item when [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]. Select a drive at which a recipe file is located on the GOT.
[Folder Name]	Set this item when [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]. Specify a folder to which a recipe file is saved on the GOT. For the restrictions on the folder name used with the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT When [File Format] is set to [Unicode Text] or [CSV], recipe files are created for each record. You are recommended to specify different folders to save each recipe file. When [Drive Name] is set to [C:Built-in Flash Memory] or [D:Built-in SRAM], "\recipe" specified with [Package Folder Name] in the [Type Setting] dialog is applied as the folder name.
[File Name]	Set this item when [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]. Set the name of a recipe file. For the restrictions of the file name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT
[Date Format]	Set this item when [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)] or [Embedded Memory in GOT (read and write)]. Select a date format in which the record update date is displayed. The following shows selectable items. • [yy/mm/dd] • [mm/dd/yy] • [dd/mm/yy]
[Include device comments in conversion target]	Set this item when [File Format] is set to [G2P (Binary)]. Enables device comments to be edited when a recipe file is converted from binary format (*.G2P) to Unicode text or CSV format. Includes device comments in the conversion target when a recipe file is converted back to binary format (*.G2P).
[Maximum number of characters]	Set this item when [Include device comments in conversion target] is selected. Set the number of characters in a device comment to be converted when a recipe file is converted back to binary format (*.G2P). The setting range is [1] to [32].

4) **[Trigger device]**

Set the write and read trigger devices.

➟6.1.2 How to set devices

Item	Description
[Write Trigger 1], [Write Trigger 2]	Set a device to be written and a trigger condition (ON, OFF). Set [Write Trigger 2] to execute the writing when two conditions are satisfied. In that case, device values are written only when the trigger conditions of both the trigger device 1 and 2 are satisfied.
[Read Trigger 1], [Read Trigger 2]	Set a device to be read and a trigger condition (ON, OFF). Set [Read Trigger 2] to execute the reading when two conditions are satisfied. In that case, device values are read only when the trigger conditions of both the trigger device 1 and 2 are satisfied.
[Record No. Device]	Set a device that specifies the target record number when the trigger device of each recipe setting starts the writing or reading process. When the number of records is one, record 1 is always specified, and thus no setting is required.

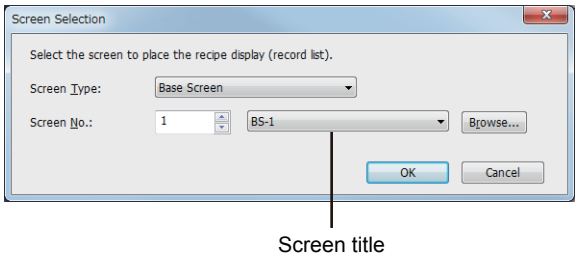
5) [Create a new recipe display (record list)] button

Not available to GT21 and GS21.

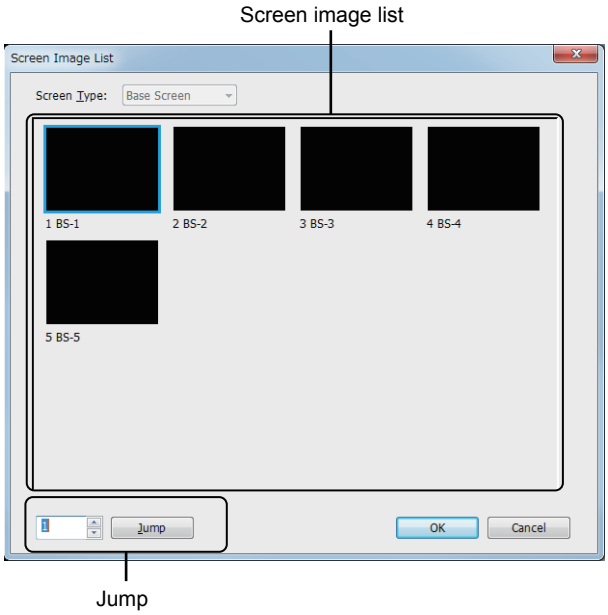
This item is not displayed when the [Recipe] dialog is called up from the [Recipe Display (Record List)] dialog.

Displays the [Screen Selection] dialog.

Select a screen to place a recipe display (record list).



- **[Screen Type]**
  Select the type of a screen to place a recipe display (record list).
  The following shows the items to be selected.
  [Base Screen]
  [Window Screen]
- **[Screen No.]**
  Select the screen number of a screen to place a recipe display (record list).
  The setting range is [0] to [32767].
  A target screen is selectable from among screen titles as well.
  To place a recipe display (record list) on a new screen, select [A new screen will be created.] for the screen title.
  Click the [Browse] button to select a screen in thumbnail view in the [Screen Image List] dialog.



- **[Screen Type]**
  Select the type of a screen to be opened.
- **Screen image list**
  Displays screen images.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

■2 [Device] tab

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Set the target devices and the initial values of records.

Point

Selecting Unicode for the character code of the target device for a recipe display

Available to GT27, GT25, GT23, GT SoftGOT2000, and GS25.

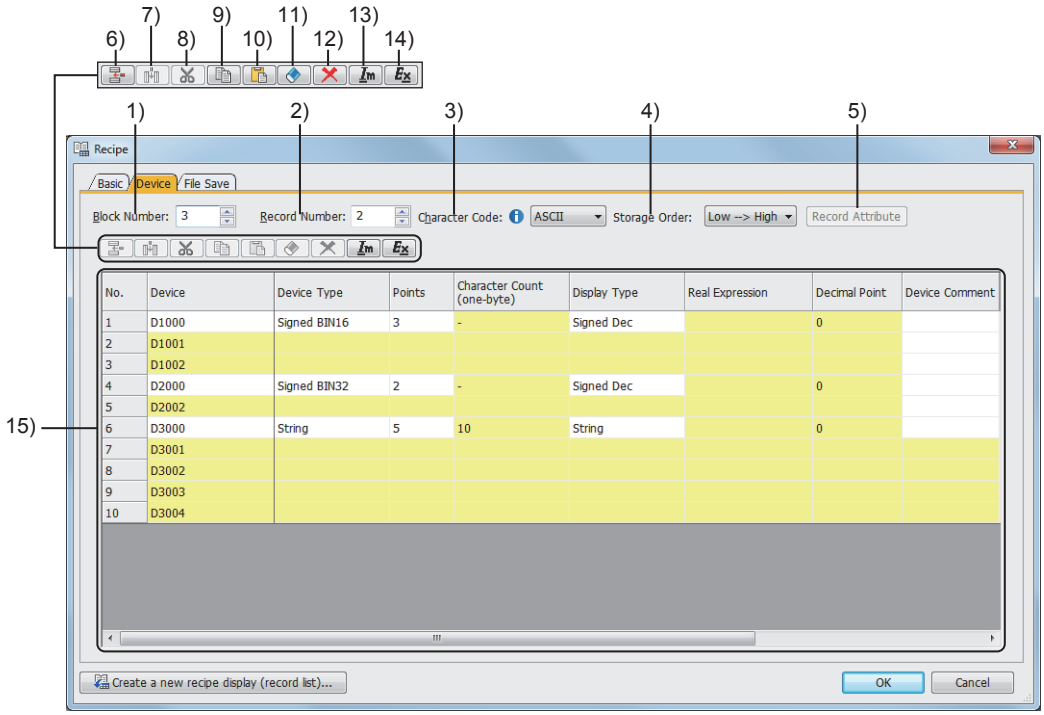
When [Character Code] is set to [Unicode] for a target device, if you specify the device for a text display, text input, or text print object, configure the settings in the object setting dialog as shown below.

(1) **When [Storage Order] is set to [Low-->High] in the [Recipe] dialog**

- Select [Unicode] for [Character Code] in the [Device/Style] tab or in the [Text Print] dialog.
- Select [Display in order of High -> Low] in the [Extended] tab or in the [Text Print] dialog.

(2) **When [Storage Order] is set to [High-->Low] in the [Recipe] dialog**

- Select [Unicode] for [Character Code] in the [Device/Style] tab or in the [Text Print] dialog.
- Deselect [Display in order of High -> Low] in the [Extended] tab or in the [Text Print] dialog.



1) **[Block Number]**

Set the number of blocks of the recipe setting.

The setting range is [1] to [2048].

➟9.3.2 ■1 (1) Block

2) **[Record Number]**

Set the number of records of the recipe setting.

The setting range is [1] to [2000].

➟9.3.2 ■1 (3) Record

3) **[Character Code]**

Set this item when [String] is selected for [Device Type] in a block.

Select the character code to be applied to the value of devices whose [Device Type] is set to [String].

The following shows the items to be selected.

- [ASCII]
- [Unicode]
- [S-JIS]
- [GB]
- [KS] (for GT27, GT25, GT23, GT SoftGOT2000, and GS25)

• [Big5]

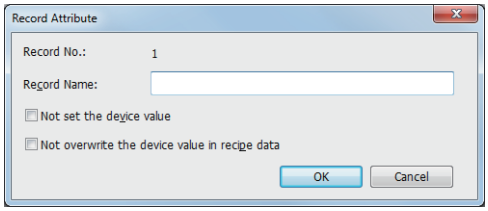
4) **[Storage Order]**

Set this item when [String] is selected for [Device Type] in a block.
Select an order in which data is stored to the devices whose [Device Type] is set to [String].
The following shows the items to be selected.

• [Low-->High]
• [High-->Low]

5) **[Record Attribute] button**

Displays the [Record Attribute] dialog to set the attribute of a record selected in the target device list.
You can select multiple records by drugging on the record title column.



• **[Record No.]**
Record number of a selected record
This item is not displayed when multiple record are selected.
• **[Record Name]**
Set the record name.
Up to 32 characters can be set.
• **[Not set the device value]**
Set no initial value for a record.
A record without values cannot be used for writing.
Set a value by reading device values or editing the recipe file.
• **[Not overwrite the device value in recipe data]**
Protects the record from being overwritten.
Device values cannot be written to a record, which is protected from being overwritten.

6) **[Insert Block] button**

Inserts a block above the block selected in the target device list.

7) **[Insert Record] button**

Inserts a record in the left of the record selected in the target device list.

8) **[Cut] button**

Cuts an editable cell selected in the target device list.

9) **[Copy] button**

Copies an editable cell selected in the target device list.

10) **[Paste]**

Pastes the cut or copied data in the selected cell.

11) **[Clear]**

Clears data of a cell or record selected in the target device list.

12) **[Delete]**

Deletes a block or record selected in the target device list.

13) **[Import]**

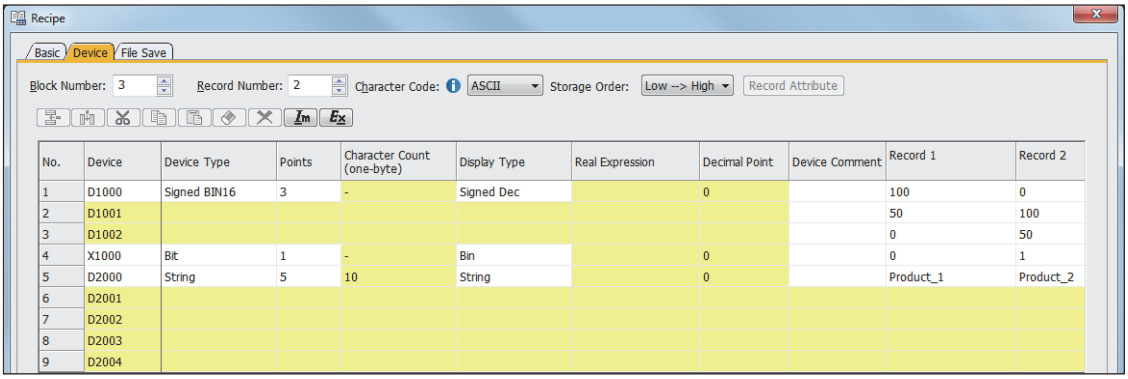
Imports a recipe setting file which is exported with GT Designer3, and overwrites the existing setting in the [Device] tab.
Files of recipe settings or advanced recipe settings exported with the following software can also be imported.

• GT Designer3 Version1 (GOT1000)
• GT Designer2 Version2

Recipe files created on the GOT cannot be imported.

14) **[Export]**

Saves the setting in the [Device] tab with a Unicode text or CSV file.
You can edit the exported file in spreadsheet software and others.
The edited file can be imported with GT Designer3.
The following shows the file format of the exported file.



No.	Device	Device Type	Points	Character Count (one-byte)	Display Type	Real Expression	Decimal Point	Device Comment	Record 1	Record 2
1	D1000	Signed BIN16	3	-	Signed Dec		0		100	0
2	D1001								50	100
3	D1002								0	50
4	X1000	Bit	1	-	Bin		0		0	1
5	D2000	String	5	10	String		0		Product_1	Product_2
6	D2001									
7	D2002									
8	D2003									
9	D2004									

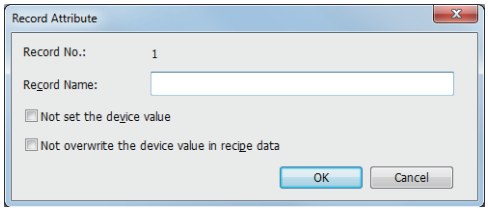
	A	B	C	D	E	F	G	H	I
1	Recipe with record attribute								
2	Block Number	3	Record Number	2	Character Code	ASCII	Storage Order	Low --> High	
3									
4	Device	Device Type	Points	Display Type	Real Expression	Decimal Point	Comment	Record Value	
5								1	2
6									
7									
8	D1000	Signed BIN16	3	Signed Dec		0		100	0
9								50	100
10								0	50
11	X1000	Bit	1	Bin		0		0	0
12	D2000	String	5	String		0		Product_1	Product_2

When importing or exporting files in the multiple-language input environment, use Unicode text files.
The characters of multiple languages can be imported or exported normally by using Unicode text files.

15) **Target device list**

Lists the target devices and records set in blocks

Item	Description
[Device]	Set the devices from which values are read or to which values are written. ➟6.1.2 How to set devices
[Device Type]	Select the data type of devices in each block. The following shows the items to be selected. • [Bit] • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] • [String]
[Points]	Set the number of target devices set in each block. Devices starting from the start device are set sequentially for the set number. The maximum number of devices that can be set depends on the setting of [Device Type]. • When [Bit] is selected: [1] device • When [Signed BIN16], [Unsigned BIN16], [Signed BIN8], [Unsigned BIN8], or [BCD16] is selected: 256 records or less: [1] to [32768] devices 257 records or more: [1] to [8192] devices • When [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)] is selected: 256 records or less: [1] to [16384] devices 257 records or more: [1] to [4096] devices • When [Signed BIN64], [Unsigned BIN64], [BCD64], or [Real(64bit)] is selected: 256 records or less: [1] to [8192] 257 records or more: [1] to [2048] • When [Text] is selected: [1] to [2048] devices

Item	Description
[Character Count (one-byte)] ([Character Count] when [Unicode] is selected for [Character Code])	Maximum number of characters to be collected. This item is displayed when [String] is selected for [Device Type] The settings of [Points] and [Character Code] determine the setting value. • When [Unicode] is selected for [Character Code] The maximum number of characters equals the value in [Points]. • When an item other than [Unicode] is selected The maximum number of characters equals the value in [Points] multiplied by 2. A two-byte character is counted as two characters.
[Display Type]	Select the display type of a device when its data is output into a CSV or Unicode text file. The setting range depends on the setting of [Device Type]. ➟(1) Relationship between the record setting range and [Device Type] and [Display Type]
[Real Expression]	Select the expression type of the real number. Set this item when [Real] is selected for [Display Type]. The following shows the items to be selected. • [Exponential Expression] • [Fixed Decimal] Example) When 12345 is set as the record value and 3 is set in [Decimal Point] • Display in [Exponential Expression]: 1.235E+004 • Display in [Fixed Decimal]: 12345.000
[Decimal Point]	Set the number of digits of decimal numbers. Set this item when [Real] is selected for [Display Type]. The setting range is [0] to [32] digits.
[Device Comment]	Set the comment for a target device. Up to 32 characters can be set.
Record	Combinations of device values specified at writing or reading The device values displayed in the records are adjusted according to the settings of [Display Type], [Real Expression], and [Decimal Point]. The values may differ when the settings in the [Device] tab are exported. Set values are the initial values of a record. Record columns are created corresponding to the setting of [Record Number]. ➟9.3.2 ■1 (3) Record The setting range of the record initial value depends on [Device Type] and [Display Type]. ➟(1) Relationship between the record setting range and [Device Type] and [Display Type] Click a column header of the table to display the [Edit] button on the header. Click the [Edit] button to display the [Record Attribute] dialog, and set the attributes of the relevant record.  • **[Record No.]** Record number of a selected record. This item is not displayed when multiple record are selected. • **[Record Name]** Set the record name. Up to 32 characters can be set. • **[Not set the device value]** Set no initial value for a record. A record without values cannot be used for writing. Set a value by reading device values or editing the recipe file. • **[Not overwrite the device value in recipe data]** Protects the record from being overwritten. Device values cannot be written to a record, which is protected from being overwritten.

(1) Relationship between the record setting range and [Device Type] and [Display Type]

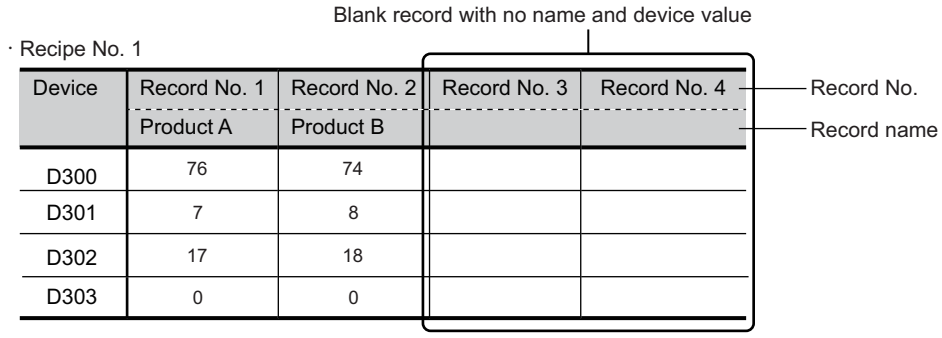
The setting items of [Display Type] depend on the setting of [Device Type].
The device value range that can be set for records depends on the setting of [Display Type].

[Device Type]	[Display Type]	Range of device values
[Bit]	[Bin]	0, 1
	[Bit]	
[Signed BIN16]	[Signed Dec]	-32768 to 32767
	[Hex]	0000 to FFFF
	[Octal]	000000 to 177777
	[Bin]	0000000000000000 to 1111111111111111
	[Real]	-32768 to 32767
[Unsigned BIN16]	[Unsigned Dec]	0 to 65535
	[Hex]	0000 to FFFF
	[Octal]	000000 to 177777
	[Bin]	0 to 1111111111111111
	[Real]	0 to 65535
[Signed BIN32]	[Signed Dec]	-2147483648 to 2147483647
	[Hex]	00000000 to FFFFFFFF
	[Octal]	00000000000 to 377777777777
	[Bin]	00000000000000000000000000000000 to 11111111111111111111111111111111
	[Real]	-2147483648 to 2147483647
[Unsigned BIN32]	[Unsigned Dec]	0 to 4294967295
	[Hex]	00000000 to FFFFFFFF
	[Octal]	00000000000 to 37777777777
	[Bin]	0 to 11111111111111111111111111111111
	[Real]	0 to 4294967295
[Signed BIN64]	[Signed Dec]	-9223372036854775808 to 9223372036854775807
	[Hex]	0000000000000000 to FFFFFFFFFFFFFFFF
	[Real]	-9223372036854775808 to 9223372036854775807
[Unsigned BIN64]	[Unsigned Dec]	0 to 18446744073709551615
	[Hex]	0000000000000000 to FFFFFFFFFFFFFFFF
	[Real]	0 to 18446744073709551615
[Signed BIN8]	[Signed Dec]	-128 to 127
	[Hex]	00 to FF
	[Octal]	000 to 377
	[Bin]	00000000 to 11111111
	[Real]	-128 to 127
[Unsigned BIN8]	[Unsigned Dec]	0 to 255
	[Hex]	00 to FF
	[Octal]	000 to 377
	[Bin]	00000000 to 11111111
	[Real]	0 to 255
[BCD16]	[Unsigned Dec]	0 to 9999
	[Real]	
[BCD32]	[Unsigned Dec]	0 to 99999999
	[Real]	

[Device Type]	[Display Type]	Range of device values
[BCD64]	[Unsigned Dec]	0 to 9999999999999999
	[Real]	
[Real(32bit)]	[Real]	0, ±(1.175494e-038 to 3.402823e+038)
[Real(64bit)]	[Real]	0, ±(2.2250738585073e-308 to 1.7976931348623e+308)
[String]	[String]	The settings of [Points] and [Character Code] determine the setting value. • When [Unicode] is selected for [Character Code] The maximum number of characters equals the value in [Points]. • When an item other than [Unicode] is selected The maximum number of characters equals the value in [Points] multiplied by 2. A two-byte character is counted as two characters.

(2) Changing the number of records

The number of records in a recipe is not changeable on the GOT.
If you perform record reading, preset several blank records that have no name and device value.
Doing so enables you to add new records on the GOT by overwriting the blank records.



■3 [File Save] tab

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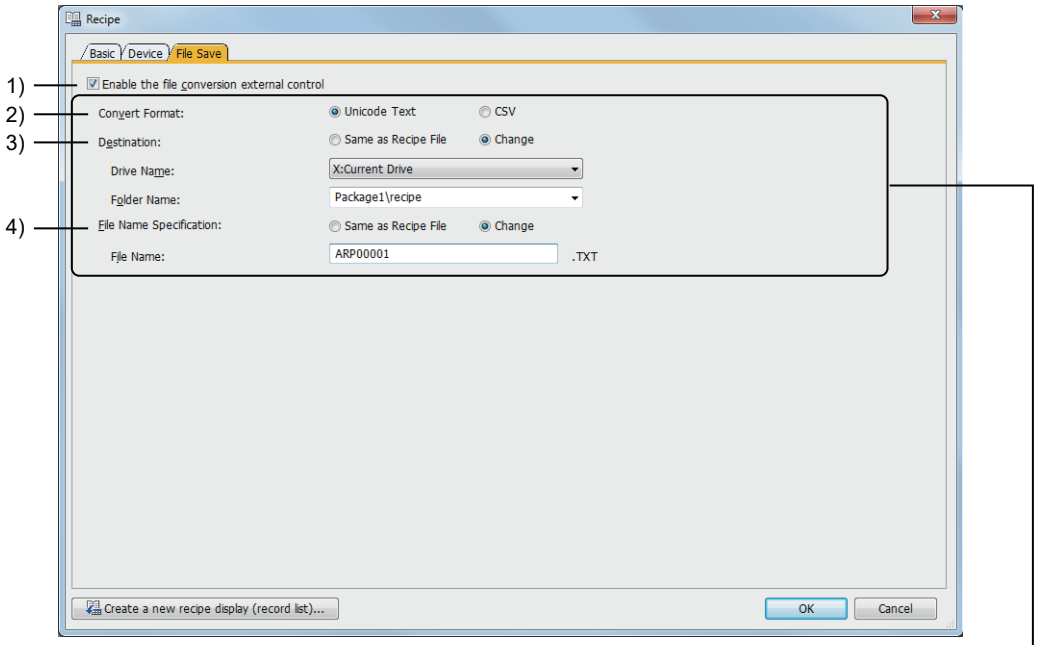
Configure the settings to convert a recipe file (*.G2P) to a different format, and import/export recipe data to/from the SRAM user area.
For the details, refer to the following.

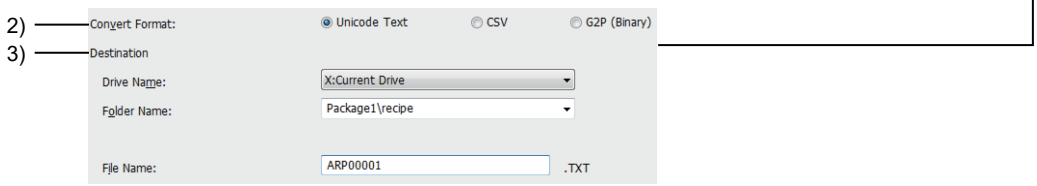
➟9.3.3 ■4 Converting a recipe file

The [File Save] tab does not appear when the following settings are made in the [Basic] tab.

- [Recipe Data Save Location] is set to [Not save (record value write only)].
- [File Format] is set to [Unicode Text] or [CSV].



When [Recipe Data Save Location] is set to [Data Storage (Recipe File)(read and write)]



When [Recipe Data Save Location] is set to [Embedded Memory in GOT (read and write)]

1) **[Enable the file conversion external control]**
Allows the file conversion to be controlled by an external control device.
➟9.3.5 ■1 [External Control Device]

2) **[Convert Format]**
Select the file format after the conversion.
The following shows the items to be selected.
- [Unicode Text]
- [CSV]
- [G2P (Binary)] (only for saving recipe data to the SRAM user area)

3) **[Destination]**
If the save destination of recipe data is set to the data storage (recipe file), set the destination path of the conversion destination file.
To change the destination from the one where a recipe file is saved, select [Change] and set [Drive Name] and [Folder Name].
If the save destination of recipe data is set to the SRAM user area, set the destination path of the export destination file or import source file.
Set [Drive Name], [Folder Name], and [File Name].

4) **[File Name Specification]**
If the save destination of recipe data is set to the data storage (recipe file), set the name of the conversion destination file.
Set a file name of the converted file.
To change the file name from the one of the recipe file, select [Change] and set [File Name].

9.3.8 [Recipe File Conversion] dialog

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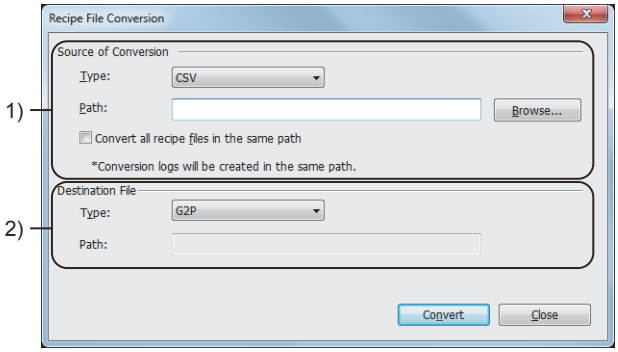
Convert the file format of a recipe file.
Select [Tools] → [Resource Data Conversion] → [Recipe File] from the menu to display the following dialog.



1) [Source of Conversion]

Item	Description
[Type]	Select a file type of the conversion source file. The following shows the items to be selected. • [CSV] • [Unicode Text] • [G2P]
[Path]	Specify a path of the conversion source file.
[Convert all recipe files in the same path]	Converts the recipe files, which are in a format selected for [Type], in a specified path. A conversion log is created in the specified path. The full path of the conversion destination files, the conversion results (OK or NG), and the creation date of files are output to the conversion log. C:\recipe\ARP00001.txt OK 20141105150551 C:\recipe\ARP00002.txt OK 20141105150551 C:\recipe\ARP00003.txt OK 20141105150551

2) [Destination File]

Item	Description
[Type]	Select a file type of a file to be created after the conversion. The following shows the items to be selected. • [CSV] • [Unicode Text] • [G2P]
[Path]	Displays the path of a file to be saved at the destination, which is the same path as the one of the conversion source file.

9.3.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the recipe function as required. The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings (System information)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Notifying that the recipe process (reading or writing) is being executed (Write device: System signal 2-1.b10)	[System Signal 2-1]

Point

Difference between the external notification device and system information

The following shows differences between the external notification device and system signal, both of which notify the recipe processing status.

(1) **External notification device**

Signal	Description
Recipe-shared Write-in-progress signal (External notification device.b0)	Turns on while the Recipe-shared Trigger Write signal (External control device.b0) is on or values are being written with the write trigger device of each recipe setting. Turns off when all of the following conditions are satisfied. The writing process is complete. The Recipe-shared Trigger Write signal (External control device.b0) is off, or the write trigger condition of each recipe setting is not satisfied.
Recipe-shared Read-in-progress signal (External notification device.b1)	Turns on when the Recipe-shared Trigger Read signal (External control device.b1) is on or values are being read with the read trigger device of each recipe setting. Turns off when all of the following conditions are satisfied. The reading processing is complete. The Recipe-shared Trigger Read signal (External control device.b1) is off, or the read trigger condition of each recipe setting is not satisfied.

(2) **System information**

Signal	Description
System signal 2-1.b10	Turns on during the writing or reading process started by the following signals. ·Recipe-shared Trigger Write signal (External control device.b0) ·Recipe-shared Trigger Read signal (External control device.b1) ·Write trigger device of each recipe setting ·Read trigger device of each recipe setting Turns off when the writing or reading process is complete, regardless of the status of the trigger device.

To establish a handshake, use the external notification device.

➟9.3.5 ■2 [External Notification Device]

■2 GOT Internal Device

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟12.1.3 GOT special register (GS)

Function	Setting item
Turning on when a recipe file is imported with an applicable special function switch (Write device) (Write device)	GS1010.b0
Turning on when a recipe file is exported with an applicable special function switch (Write device)	GS1010.b1
Turning on when the recipe special control is executed (Write device)	GS1010.b2
Turning on after a recipe file is successfully imported or exported with an applicable special function switch (Write device)	GS1010.b14
Turning on when a recipe file is unsuccessfully imported or exported with an applicable special function switch (Write device)	GS1010.b15
Notifying the result of the recipe special control (Write device)	GS1011
Notifying the search result of the recipe special control (Write device)	GS1012
Changing the character code to Unicode at the following timing • When a binary file is converted to CSV format • When data is written to or read from a recipe file in CSV format (Read device)	GS522.b2
Executing the recipe special control (Read device)	GS1800.b2
Turning off the Touch Switch Operation Completed signal (GS1010.b14) and the Touch Switch Operation Error signal (GS1010.b15) of the Recipe Status device (Read device)	GS1800.b14
Specifying the action of the recipe special control (Read device)	GS1801
Specifying the target of the recipe special control (Read device)	GS1802
Specifying the start device number of the GOT data registers (GD) that are used for the recipe special control (Read device)	GS1803
Specifying the target recipe setting for the recipe special control (Read device)	GS1805
Specifying the target record for the recipe special control (Read device)	GS1806
Specifying the target start row for the recipe special control (Read device)	GS1807
Specifying the number of target rows (starting from the specified start row) for the recipe special control (Read device)	GS1808

9.4 Transferring Data between Devices ([Device Data Transfer])

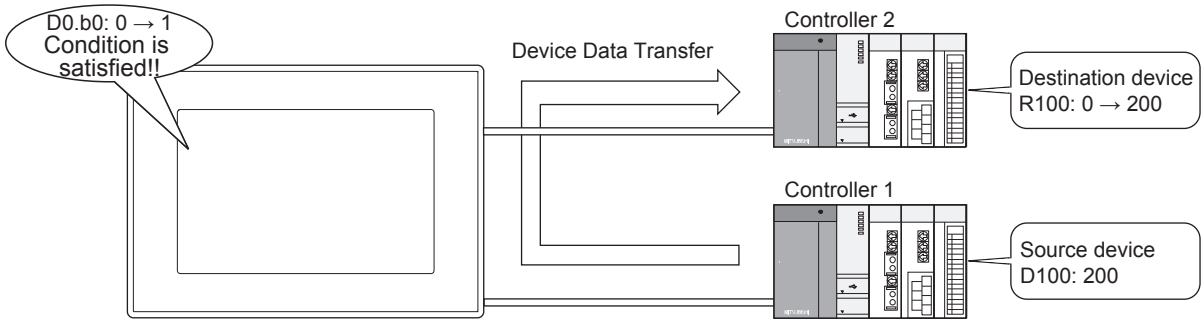
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.4.1 Overview of the device data transfer function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Values can be read from specified devices and written into other devices with a trigger or at intervals.

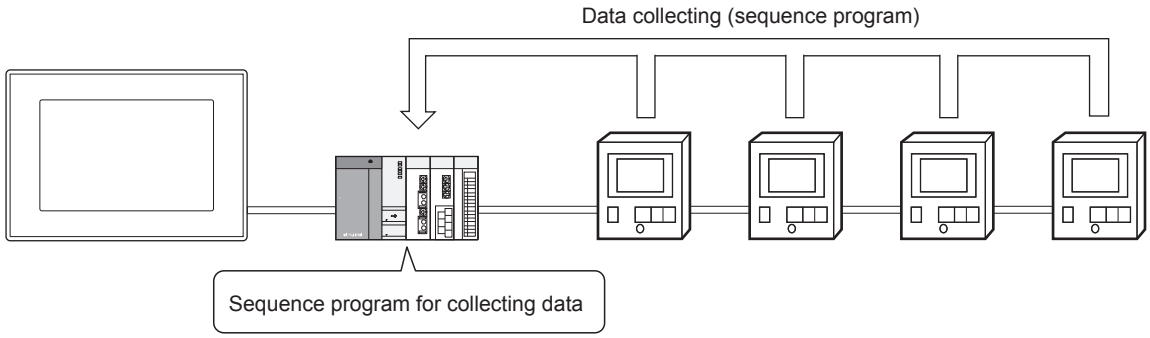
- Trigger condition : Rising edge of D0.b0
- Source device : D100 of controller 1
- Destination device: R100 of controller 2



By making device data transfers, the data of controllers can be collected without any sequence program.

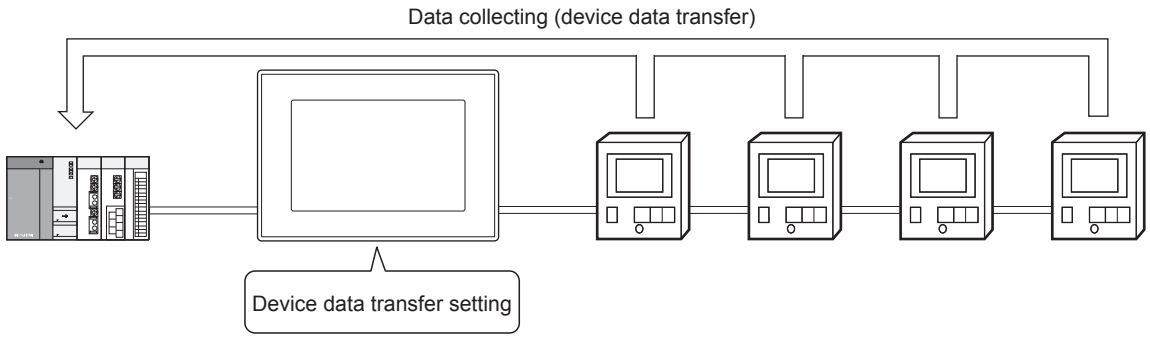
• Collecting the data of controllers without making device data transfers

A sequence program is required to collect the data of controllers. (The GOT only monitors the data.)



• Collecting the data of controllers making device data transfers

If device data transfers are set, no sequence program is required.



9.4.2 Specifications of device data transfer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the device data transfer, a system application (extended function) of [Device Data Transfer] is required.
Configuring one or more device data transfer settings incorporates the application into the package data automatically.
To use the function on GT SoftGOT2000, the application is not required.

■2 Number of settings

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 255 settings can be configured for one project.
- For GT21 and GS21
  Up to 32 settings can be configured for one project.

➟9.4.2 ■4 Data structure of device data transfer settings

■3 Trigger to make device data transfers

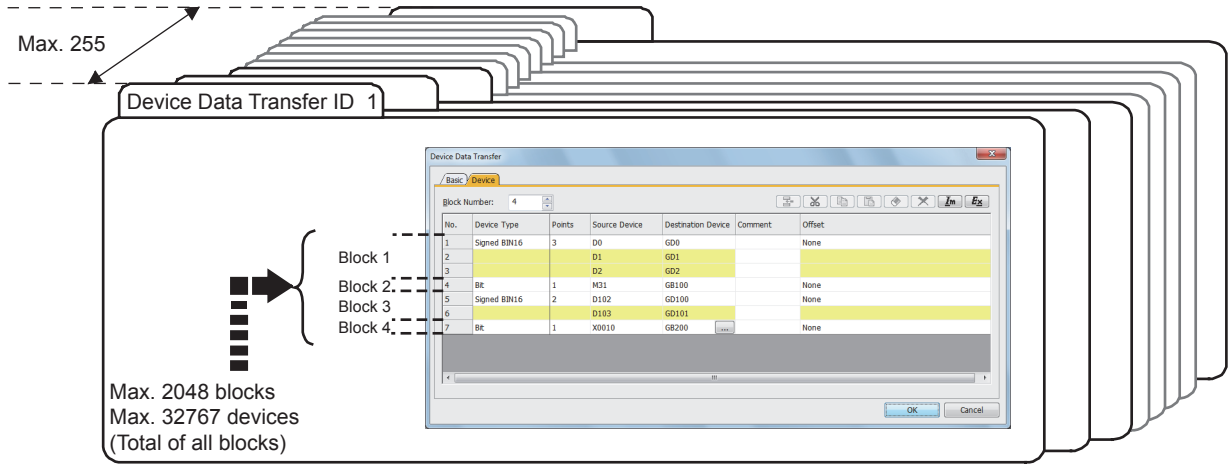
Any one of the following triggers is used as a trigger for device data transfers.

- Rising edge of the trigger device
- Falling edge of the trigger device
- Cycle

■4 Data structure of device data transfer settings

If multiple settings of the following items are made, multiple device data transfers can be set for one device data transfer setting and device data transfer settings can be set for one project.

- [Device Data Transfer ID]
- [Block Number]



(1) Device Data Transfer ID

Device data transfer ID is ID numbers for identifying each device data transfer setting.
Set the numbers in the [Basic] tab in the [Device Data Transfer] dialog.

➟9.4.6 ■1 [Basic] tab

(2) Block

Blocks are units that divide device numbers and device types into groups.
The setting range depends on the GOT model.

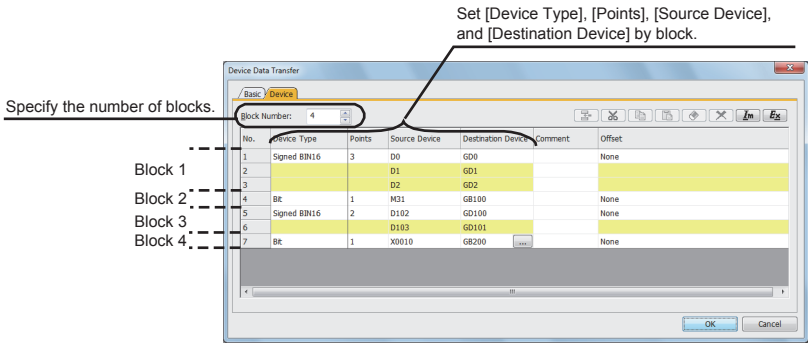
- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Up to 2048 blocks can be set for one device data transfer setting (ID).
- For GT21 and GS21
  Up to 1000 blocks can be set for one device data transfer setting (ID).

By setting transfers by block, the following settings can be made.

- A device data transfer setting that involves multiple device types (such as bit or word)

• A device data transfer setting that mixes together consecutive devices and random devices

The following shows an example of the mix of bit devices and word devices (signed 16-bit binary data and signed 32-bit binary data) set for one device data transfer setting.



Set blocks in the [Device] tab in the [Device Data Transfer] dialog.

➟9.4.6 [Device Data Transfer] dialog

(a) Relation between the number of blocks and transfer processing time

When a large number of blocks are set for a device data transfer setting, transfer processing may take a long time.

To shorten the processing time, reduce the number of blocks.

Reference value for connection to a QCPU using the direct CPU connection (serial) (device points: 32767, transmission speed: 115200 bps)

- If one block is set: Approximately 15 seconds
- If 2048 blocks are set: Approximately 130 seconds

(3) Device

(a) Number of devices that can be set

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  Regardless of the device type, up to 32767 devices can be set for one device data transfer ID.
- For GT21 and GS21

  Regardless of the device type, up to 1000 devices can be set for one device data transfer ID.

The number of devices to be used depends on the device data type.

- Bit, 8-bit, 16-bit: 1
- 32-bit: 2
- 64-bit: 4

(b) Relation to blocks

A single device number can be set for a single block.

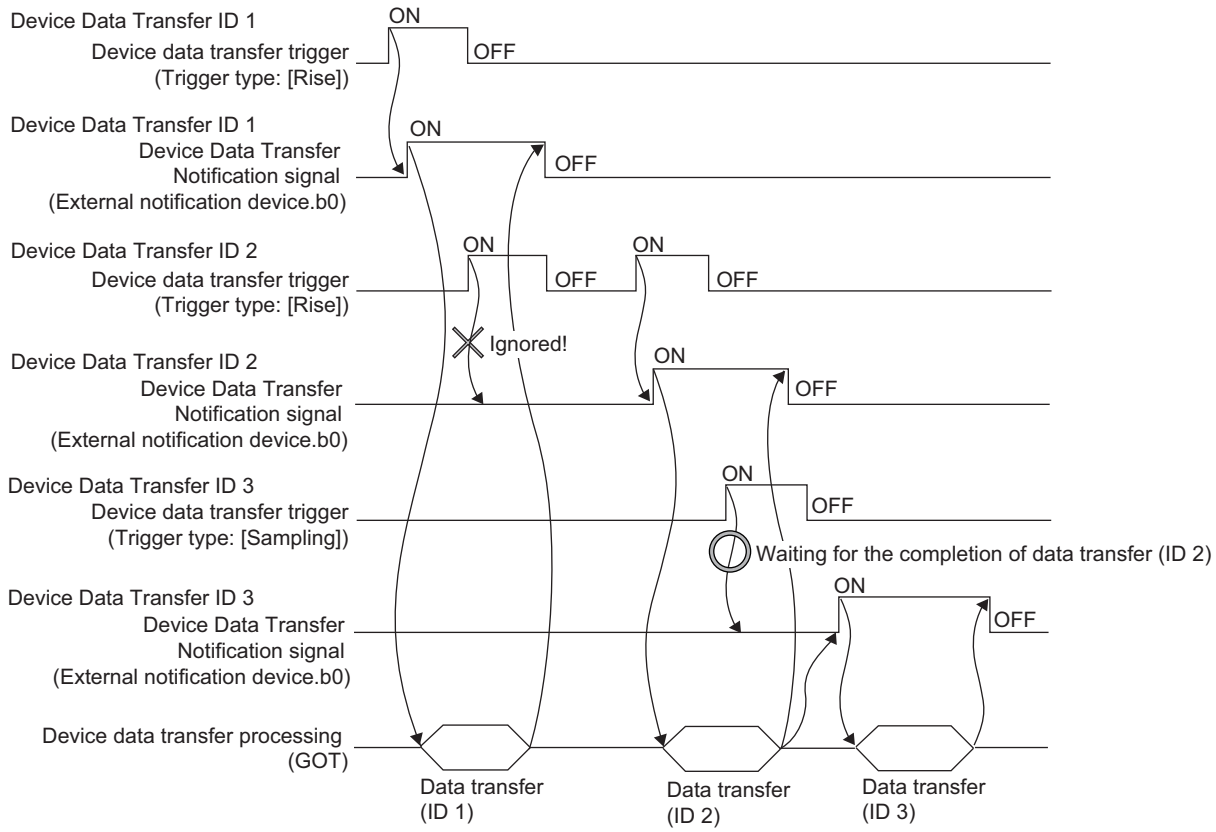
To set consecutive device numbers, set the number of the devices in the same block.

To set device numbers randomly, set the device numbers in different blocks.

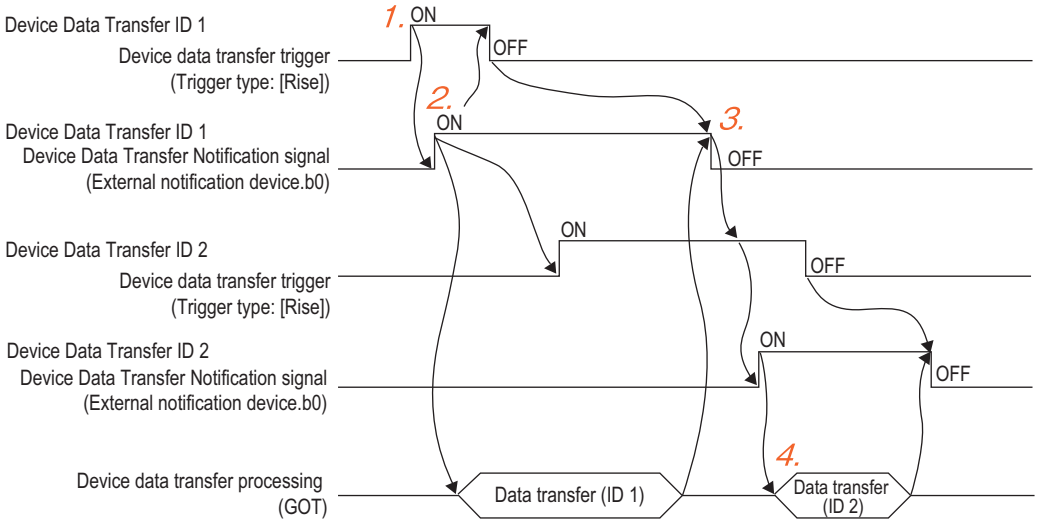
■5 Operations performed when multiple trigger conditions are satisfied simultaneously

(1) When the trigger condition for another device data transfer setting is satisfied while a device data transfer is being processed

If the trigger type is set to [Sampling], the GOT does not ignore the satisfied trigger condition, and executes the device data transfers subsequently.
If the trigger type is not set to [Sampling], the GOT ignores the satisfied trigger condition.



To execute the device data transfer without fail, select [Rise] for [Trigger Type] then time a handshake with the trigger device and Device Data Transfer Notification signal.



Step 1 The device data transfer trigger (Device Data Transfer ID; 1) turns on.

Step 2 The Device Data Transfer Notification signal (Device Data Transfer ID: 1) turns on.

The device data transfer trigger (Device Data Transfer ID: 1) turns off and the device data transfer trigger (Device Data Transfer ID: 2) turns on.

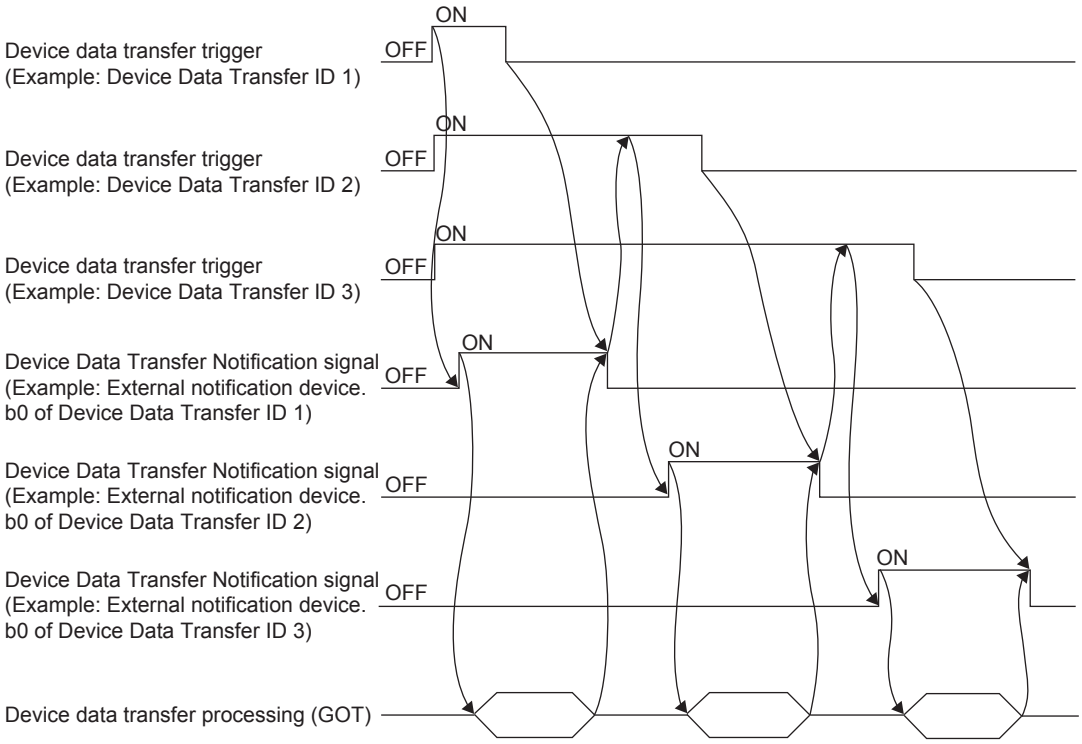
Step 3 Following the completion of the device data transfer processing and the off status of the device data transfer

trigger (Device Data Transfer ID: 1), the Device Data Transfer Notification signal (Device Data Transfer ID: 1) turns off.

Step 4 The next device data transfer is allowed to be processed and the device data trigger (Device Data Transfer ID: 2) which turned on in step 2 is enabled.

(2) When trigger conditions for different Device Data Transfer ID numbers are satisfied simultaneously

The device data transfer that has been given the smallest ID number is prioritized.



However, if trigger conditions for multiple device data transfers are satisfied by the time the device data transfer is completed, the next device data transfer to be executed is the one that has been given the ID number that is the smallest of those larger than the one that has been assigned to the transfer that was already executed.
For example, if the conditions for the device data transfer triggers (Device Data Transfer ID: 1, 3) are satisfied by the time the above device data transfer (Device Data Transfer ID: 1) is completed (device data transfer trigger: OFF → ON), the device data transfer (Device Data Transfer ID: 3) is the next one to be executed.

9.4.3 How to use device data transfer

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting procedure

The following shows the procedure for registering a device data transfer setting.

Step 1 Select [Common] → [Device Data Transfer] from the menu.

The [Device Data Transfer List] dialog appears.

➟9.4.5 [Device Data Transfer List] dialog

Step 2 Click the [New] button.

The [Device Data Transfer] dialog appears. A device data transfer setting can be registered.

➟9.4.6 [Device Data Transfer] dialog

Step 3 For the [Basic] tab in [Trigger Type], set the timing with which device data transfers are triggered.

➟9.4.6 ■1 [Basic] tab

Step 4 Set [Source Device] and [Destination Device] in the [Device] tab.

➟9.4.6 ■2 [Device] tab

Step 5 Click the [OK] button.

The [Device Data Transfer] dialog closes.

Step 6 Click the [Close] button.

The [Device Data Transfer List] dialog closes and the registration of the device data transfer setting is complete.

Point

When setting device data transfers, make sure that the data size does not exceed the available space in the user area for the GOT.

Depending on the settings, not all the set values (such as the number of devices) can be set to their maximum.

For example, if comments are set for each device, the setting size becomes larger.

For details of the capacity of the available user area for the GOT, refer to the following.

➟12.10.1 Data transferred to the GOT and capacity of the destination drive

■2 Operations of device data transfers

(1) Transferring device data

When a set trigger condition is satisfied, the values in the source device values are transferred to the destination devices.

(2) Reversing the data transfer direction (Switching the relation between the source device and destination device)

By switching the status of the transfer inverting flag device between on and off, the data transfer direction can be reversed accordingly. (The relation between the source and destination is reversed).

Therefore, data transfers in both directions (from the source to the destination and the other way around) can be made with one device data transfer setting.

The following shows the procedure for setting the transfer inverting flag device.

Step 1 Select [Common] → [Device Data Transfer] from the menu.

The [Device Data Transfer List] dialog appears.

➟9.4.5 [Device Data Transfer List] dialog

Step 2 Click the [New] button or the [Edit] button.

The [Device Data Transfer] dialog appears.

➟9.4.6 [Device Data Transfer] dialog

Step 3 Set a device for [External Control Device] in the [Basic] tab.

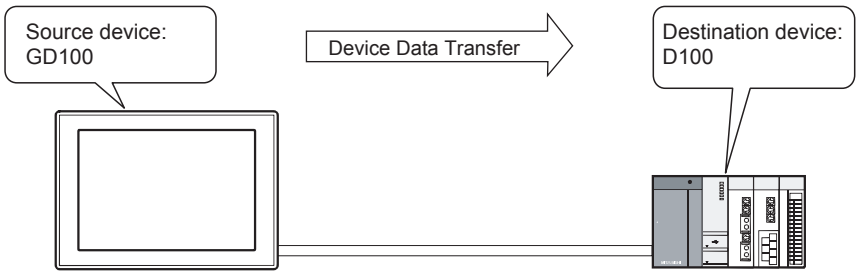
➟9.4.6 ■1 [Basic] tab
6.1.2 How to set devices

Bit 1 of the set device is assigned as the transfer inverting flag device.

The following shows the relation between the transfer inverting flag device and source/destination.

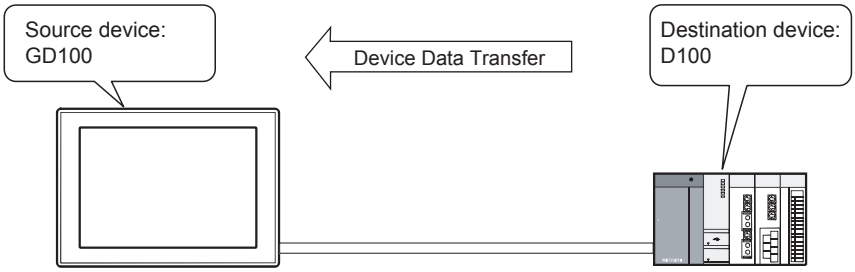
• When the transfer inverting flag device is off

Device data are transferred from the source device to the destination device.



• When the transfer inverting flag device is on

Device data are transferred from the destination device to the source device.



Turn on transfer inverting flag device before turning on the trigger device or simultaneously with the trigger device by writing a value to the word device.

Point

Using device data transfers instead of scripts

Instead of bmov, the function of scripts, device data transfers can be used.

The device data transfer communication is established only when the corresponding conditions are satisfied. On the other hand, the devices in a script require continuous communication. Hence, if device data transfers are used, the load due to the continuous communication is not imposed.

For scripts, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])

■3 Outputting the status of device data transfers to a device

When the external notification device is set, the status of device data transfers (such as the status in which a transfer is in the process of being made and presence/absence of an error) can be externally notified.

The following shows the procedure for setting the external notification device.

Step 1 Select [Common] → [Device Data Transfer] from the menu.

The [Device Data Transfer List] dialog appears.

➟9.4.5 [Device Data Transfer List] dialog

Step 2 Click the [New] button or the [Edit] button.

The [Device Data Transfer] dialog appears.

➟9.4.6 [Device Data Transfer] dialog

Step 3 Select [External Notification Device] in the [Basic] tab then set a device.

➟9.4.6 ■1 [Basic] tab
6.1.2 How to set devices

Signals are assigned as shown below.

• Bit 0: Device Data Transfer Notification signal
• Bit 14: BCD Conversion Error Notification signal
• Bit 15: Device Data Transfer Error Notification signal

(1) Device Data Transfer Notification signal (external notification device.b0)

Notifies that a device data transfer is in the process of being made.

• The device data transfer trigger condition is satisfied → the external notification device.b0 turns on.
• No device data transfer trigger condition is satisfied and the device data transfer is complete → the external notification device.b0 turns off.

Even if this signal is on, a device data transfer can be made as long as the previous device data transfer has been completed.

(2) BCD Conversion Error Notification signal (external notification device.b14)

Notifies whether an error has occurred or not during BCD conversion.

• An error occurs during BCD conversion → the external notification device.b14 turns on.

Even if an error occurs, device data are transferred.

However, the device values are not what you intend to transfer. Check the data before restarting the device data transfer.

(3) Device Data Transfer Error Notification signal (external notification device.b15)

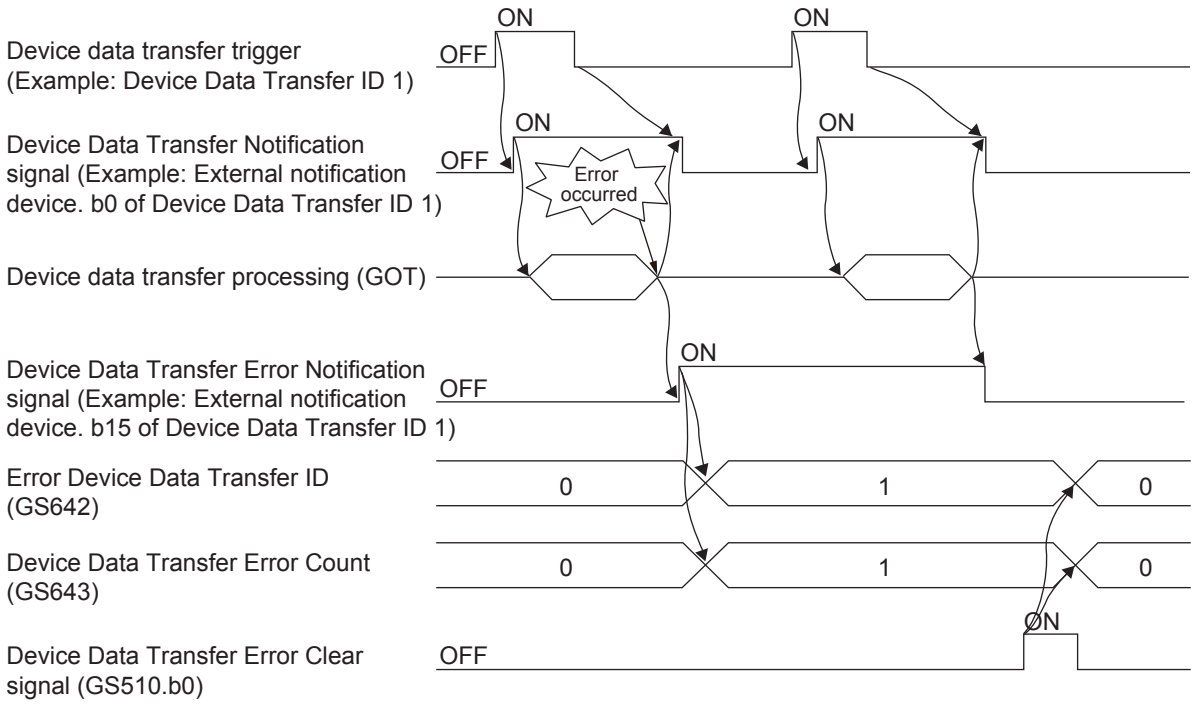
Notifies whether an error has occurred or not during a device data transfer.

• An error occurs during a device data transfer → the external notification device.b15 turns on.

• The device data transfer which was executed after an error occurred is normally completed → the external notification device.b15 turns off.

The following shows the operations performed when an error occurs and corrective actions for the error.

When an error occurs, the following operations are performed.



Step 1 The Device Data Transfer Error Notification signal (external notification device.b15) turns on.

Step 2 The ID number that has been assigned to the device data transfer that caused the error is stored in Error Device Data Transfer ID (GS642).

Step 3 The value in Device Data Transfer Error Count (GS643) is incremented by one every time an error occurs.

Step 4 A system error occurs.

After checking the message, identify the cause of the error and eliminate the error.

Step 5 The device data transfer is restarted.

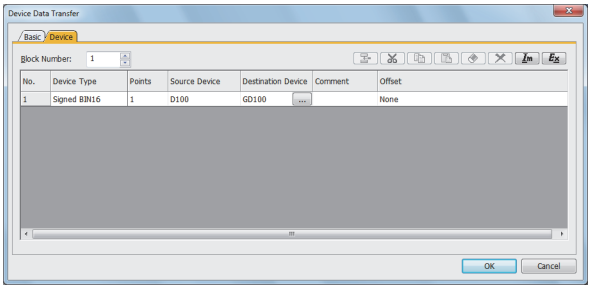
Step 6 The device data transfer is successfully made and the Device Data Transfer Error Notification signal (external notification device.b15) turns off.

To clear Error Device Data Transfer ID (GS642) and Device Data Transfer Error Count (GS643), turn on the Device Data Transfer Error Clear signal (GS510.b0).

➟12.1.3 GOT special register (GS)

■4 Importing/exporting settings

You can edit exported Unicode text files and CSV files by using spreadsheet software.
Edited Unicode text files and CSV files can be imported to GT Designer3.
Example) A CSV file



Export to a CSV file.

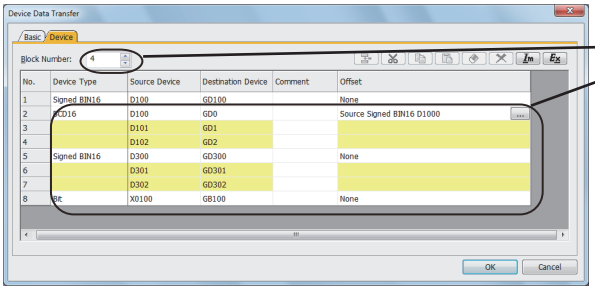
Device Data Transfer					
Block Num	4				
Device Ty	Points	Source De	Destination	Comment	Offset
Signed BIN	1	D100	GD100		None

Edit the exported file.

Device Data Transfer					
Block Num	4				
Device Ty	Points	Source De	Destination	Comment	Offset
Signed BIN	1	D100	GD100		None
BCD16	3	D0	GD0		Source Signed BIN16 D1000
Signed BIN	1	D300	GD300		None
Bit	1	X0100	GB100		None

Add the settings
by using applications
such as spreadsheet software.

Import from the CSV file to GT Designer3.



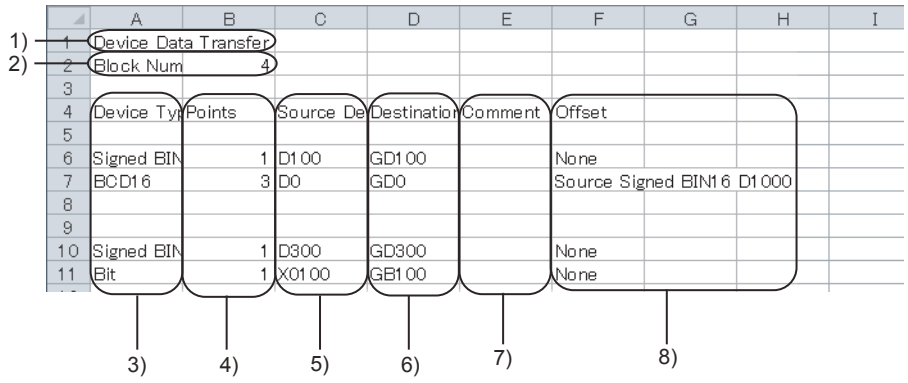
The added settings
are reflected.

(1) Format of text files for device data transfers

The format of text files for device data transfers is common to both Unicode text files and CSV files.
However, use the following delimiters for each item.

- Unicode text file: Tab (\t)
- CSV file: Comma (,)

The following shows the format.



1) **Title**

Displays "Device Data Transfer".

2) **Block Number**

Set the number of blocks for device data transfers.

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  The setting range is [1] to [2048].
- For GT21 and GS21
  The setting range is [1] to [1000].

3) **Device Type**

Set the data type of the device.

The following shows the setting range.

- Bit
- Signed BIN16
- Unsigned BIN16
- Signed BIN32
- Unsigned BIN32
- Signed BIN64
- Unsigned BIN64
- Signed BIN8
- Unsigned BIN8
- BCD16
- BCD32
- BCD64
- Real(32bit)
- Real(64bit)

4) **Points**

Set the number of the target devices for the transfer by block.

When a start device is set, consecutive devices are automatically specified according to the set number. The number of the specified devices including the start device is the same as the number set for this item.

5) **Source Device**

Set a device from which the value is read.

6) **Destination Device**

Set a device to which the value read from the source device is written.

7) **Comment**

Set a comment.

Up to 32 characters can be set.

8) **Offset**

Set the target for an offset and the offset device.

The following shows the targets that can be set.

- None
- Source
- Destination
- Both

When setting the source, destination, or both, input the offset device.

Insert a one-byte space between the offset target and the offset device.
If incorrectly input data are imported, GT Designer3 regards it as [None].

Point

(1) **Using characters of multiple languages**

When importing or exporting files in the multiple-language input environment, use Unicode text files.
The characters of multiple languages can be imported or exported normally by using Unicode text files.
For the precautions for using Unicode text files, refer to the following.

➟12.9 Precautions for Using Unicode Text File

(2) **Editing exported files**

For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

9.4.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Device data transfers and the status of the GOT

Depending on the GOT status, no device data transfer is executed.
The following lists the operations with which no device data transfer is executed.

- When writing BootOS, package data
- When restarting the GOT

If a device data transfer is interrupted by the above operations, the value in a source device cannot be synchronized with that in the destination device.
If a device data transfer is interrupted, execute the device data transfer again after the processing of the above operations has been completed.

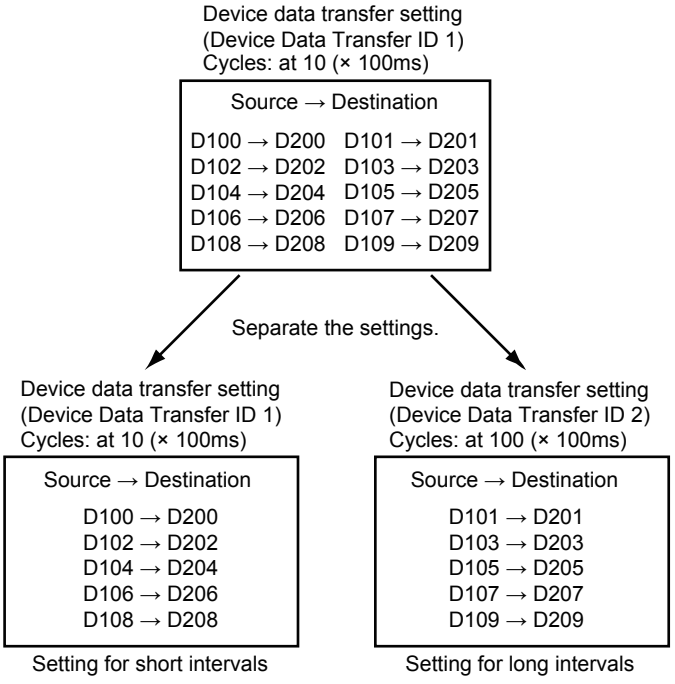
■2 If device data are not transferred as intended

In the following cases, device data may not be transferred normally.

- The communication between the GOT and controllers takes a long time because a large number of devices have been set.
- The intervals for a device data transfer trigger are short. (In a case where the trigger condition is satisfied while the device data transfer is still in the process of being made)
- Other functions (such as logging and recipe) have also been set.

Take any one of the following countermeasures against the above situations

- When selecting [Sampling] for the trigger type, reduce the number of devices per device data transfer setting of device data transfers made at short intervals (If there are device data transfers that do not require short intervals, set them for another device data transfer setting for which long intervals are set.)



- While the Device Data Transfer Notification signal is off, satisfy the trigger condition.

➟9.4.3 ■3 Outputting the status of device data transfers to a device

- If the baud rate can be changed, increase the baud rate with controller settings.

■3 verlap of source and destination devices

If source devices and destination devices overlap in the same device data transfer setting, the device data may not be transferred normally.
If the devices need overlapping, set the overlapping devices for different device data transfer settings.
The following shows an example of settings.
Example) Setting method for transferring the device values of D100, D105, D110 to D110, D115, D120 respectively (D110 overlaps.)

Device Data Transfer ID	Trigger type	Trigger device	Number of blocks	Source device	Destination device
1	Cycle	D1000.b0	1	D110	D120
2	Cycle	D1000.b0	2	D100	D110
				D105	D115

If the same trigger device (D1000.b0) is set for multiple device data transfer settings, the device data transfers of the device data transfer setting that has been given a smaller Device Data Transfer ID number are prioritized.
By transferring D110 prior to D100, the device value in D110 that has yet to be overwritten with the value in D100 can be transferred to D120.

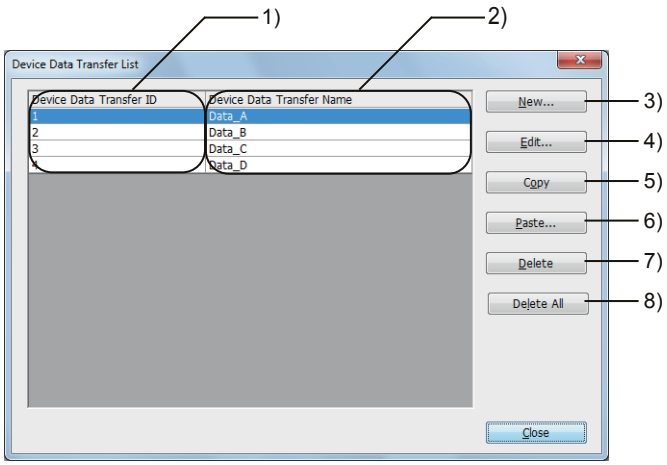
Device Data Transfer ID	Trigger type	Trigger device	Number of blocks	Source device	Destination device
1	Cycle	D1000.b0	3	D110	D120
				D100	D110
				D105	D115

If the device data transfers are set for the same device data transfer setting, the value in D100 is transferred prior to D110 and the device value in D110 is overwritten with that in D100.
Then the device value in D110 is transferred to D120, which means that the device value in D100 is transferred to D120 as a result.

9.4.5 [Device Data Transfer List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When device data transfers are made, values are read from specified devices and are written to other devices with a trigger or at intervals.
Select [Common] → [Device Data Transfer] from the menu to display the [Device Data Transfer List] dialog.
The dialog displays the settings of device data transfers in a list and manages them.



1) **[Device Data Transfer ID]**
Display the ID numbers for identifying each device data transfer setting.

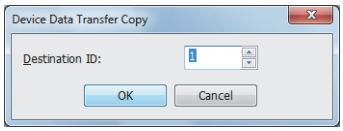
2) **[Device Data Transfer Name]**
Displays the names of device data transfer settings.

3) **[New] button**
Creates a new device data transfer setting.
➟9.4.6 [Device Data Transfer] dialog

4) **[Edit] button**
Changes the settings of a selected device data transfer setting.
➟9.4.6 [Device Data Transfer] dialog

5) **[Copy] button**
Copies a selected device data transfer setting.

6) **[Paste] button**
Pastes a copied device data transfer setting.



• **[Destination ID]**
Set a Device Data Transfer ID number.

7) **[Delete] button**
Deletes a selected device data transfer setting.

8) **[Delete All] button**
Deletes all the device data transfer settings.

9.4.6 [Device Data Transfer] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set device data transfer settings.

➟■1 [Basic] tab
■2 [Device] tab

This dialog appears when the [New] button or [Edit] button in the [Device Data Transfer List] dialog is clicked.

➟9.4.5 [Device Data Transfer List] dialog

■1 [Basic] tab

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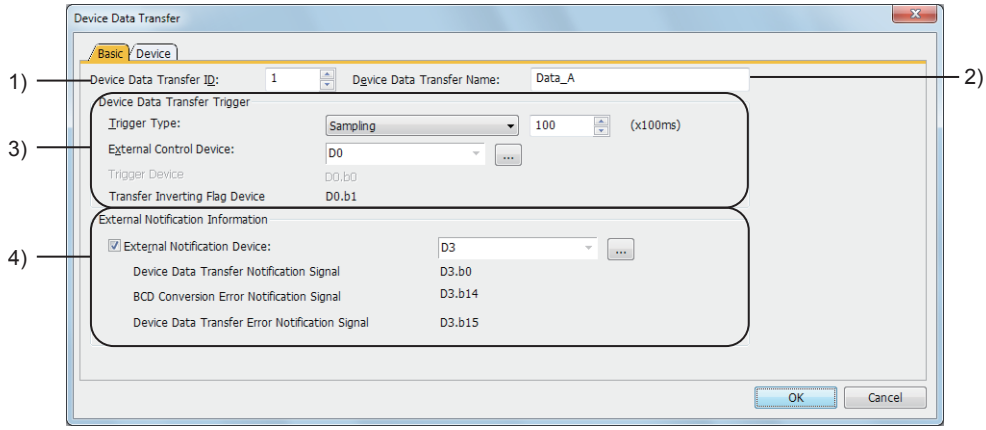
Set the device data transfer trigger and external notification information.



1) **[Device Data Transfer ID]**

Set an ID number to identify the device data transfer setting.

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  The setting range is [1] to [255].
- For GT21 and GS21

  The setting range is [1] to [32].

➟9.4.2 ■4 Data structure of device data transfer settings

2) **[Device Data Transfer Name]**

Set the name of the device data transfer setting.

Up to 32 characters can be set.

3) **[Device Data Transfer Trigger]**

Set a condition under which device values are transferred.

➟9.4.3 ■2 Operations of device data transfers

Item	Description
[Trigger Type]	Select an operating condition that triggers device value transfers. The following shows the items to be selected. • [Rise] • [Fall] • [Sampling] When selecting [Sampling], set a cycle in which transfers are executed. The setting range depends on the GOT model. • GT27, GT25, GT23, GT SoftGOT2000, and GS25: [1] to [36000] • GT21 and GS21: [5] to [36000]
[External Control Device]	Set the target device for the operating condition of [Trigger Type]. ➟6.1.2 How to set devices In the following cases, set this item. • When selecting [Rise] or [Fall] • When selecting [Sampling] and using [Transfer Inverting Flag Device].

Item	Description
[Trigger Device]	When the value in a set device satisfies a set condition, the values in source devices are transferred to destination devices. Bit 0 of the device set for [External Control Device] is specified. This item is used when [Rise] or [Fall] is selected.
[Transfer Inverting Flag Device]	When a set condition is satisfied, reverses the direction in which device values are transferred. (Device values are transferred from the destination to the source.) Bit 1 of the device set for [External Control Device] is specified.

4) **[External Notification Information]**

Set a device that notifies the status of transfers.

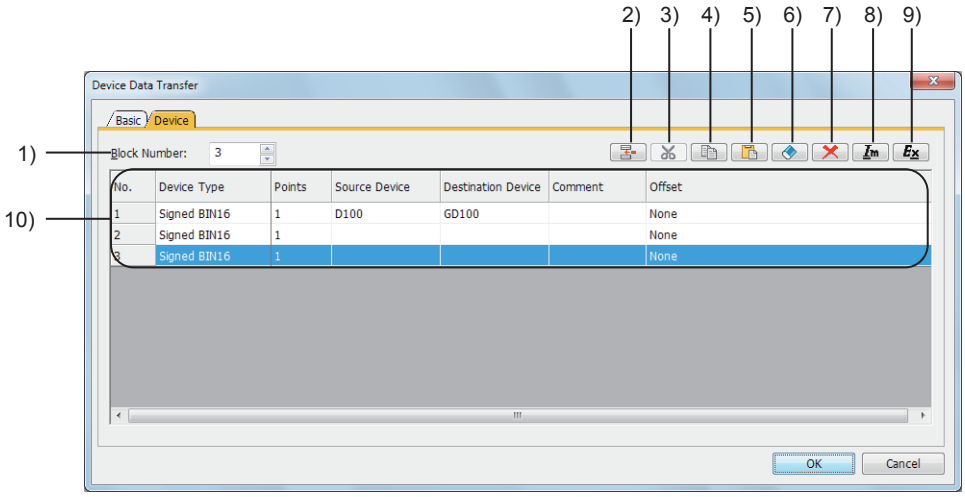
➟9.4.3 ■3 Outputting the status of device data transfers to a device

Item	Description
[External Notification Device]	Set a device that receives notifications of the status of device value transfers. ➟6.1.2 How to set devices
[Device Data Transfer Notification Signal]	Notifies that device values are in the process of being transferred. Bit 0 of the device set for [External Notification Device] is specified.
[BCD Conversion Error Notification Signal]	When an error occurs while a device value in BCD is being transferred, notifies the error. Bit 14 of the device set for [External Notification Device] is specified.
[Device Data Transfer Error Notification Signal]	When an error occurs during a device value transfer, notifies the error. Bit 15 of the device set for [External Notification Device] is specified.

■2 [Device] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays set source devices and destination devices in a list and manages them.



1) **[Block Number]**

Set the number of blocks for device data transfers.

The setting range depends on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25

  The setting range is [1] to [2048].
- For GT21 and GS21

  The setting range is [1] to [1000].

➟9.4.2 ■4 Data structure of device data transfer settings

2) **[Insert Block] button**

Inserts a block above a selected block.

3) **[Cut] button**

Cuts a selected block.

4) **[Copy] button**

Copies a selected block.

5) **[Paste] button**

Pastes a copied block.

6) **[Clear] button**
Clears a comment.

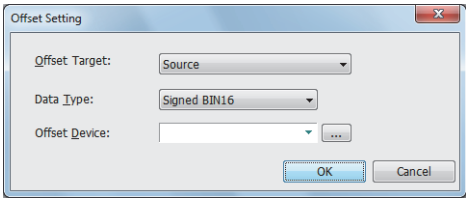
7) **[Delete] button**
Deletes a selected block.

8) **[Import] button**
Imports the settings that were edited in a Unicode text file or CSV file to GT Designer3.

9) **[Export] button**
Saves the settings made in this tab as a Unicode text file or CSV file.

10) **Device list**
Lists set devices.

Item	Description
[No.]	Displays the numbers that show the number of set devices.
[Device Type]	Select the data type of the device to be set. The following shows the items to be selected. • [Bit] • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD16] • [BCD32] • [BCD64] • [Real(32bit)] • [Real(64bit)] Set this item prior to the device setting. When the device type is changed to another one that has a different data length after a device is set, the device setting is cleared.*1*2
[Points]	Set the number of the target devices for the transfer by block. When a start device is set, consecutive devices are automatically specified according to the set number. The number of the specified devices including the start device is the same as the number set for this item.
[Source Device]	Set a device from which the value is read. ➟6.1.2 How to set devices
[Destination Device]	Set a device to which the value read from the source device is written. ➟6.1.2 How to set devices
[Comment]	Set a comment. A set comment is displayed in Unicode text file and CSV file. Up to 32 characters can be set.

Item	Description
[Offset]	Displays the target for an offset and the offset device. ➡6.1.11 Offset  • **[Offset Target]** Select an offset target. The following shows the items to be selected. • [None] • [Source] • [Destination] • [Both] • **[Data Type]** Select the data type of the device to be set. The following shows the items to be selected. • [Signed BIN16] • [Signed BIN 32] • **[Offset Device]** Set an offset device. When selecting [Destination], [Source], or [Both] for [Offset Target], set this item. When [Both] is selected for [Offset Target], a single device can be set for either [Source Device] or [Destination Device].

*1 Example 1) When changing the device type to another one that has a different data length

Before	After	Result
Signed BIN 16	Real(32bit)	Because the data length changes from 16 to 32 bits, the settings of [Source Device] and [Destination Device] are cleared.

*2 Example 2) When changing the device type to another one that has the same data length

Before	After	Result
Signed BIN 16	BCD16	Because the data lengths are the same, the settings of [Source Device] and [Destination Device] are retained.

9.4.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for device data transfers as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Clearing Error Device Data Transfer ID and Device Data Transfer Error Count when turns on (Device Data Transfer Error Clear signal)	GS510.b0
Clearing Device Data Transfer Processing Time, Device Data Transfer Min. Processing Time, and Device Data Transfer Max. Processing Time when turns on (Device Data Transfer Processing Time Clear signal)	GS510.b1
If an error occurs when a device data transfer is made, storing the Device Data Transfer ID number that has been assigned to the device data transfer that has caused the error (Error Device Data Transfer ID)	GS642
Storing the number of the errors that occurs due to device data transfers (Device Data Transfer Error Count)	GS643
Storing the processing time of a device data transfer (Device Data Transfer Processing Time)	GS644
When the processing time is stored in Device Data Transfer Processing Time, storing the Device Data Transfer ID number that has been assigned to the device data transfer that has been completed (Device Data Transfer ID)	GS645
Storing the shortest processing time ever stored in Device Data Transfer Processing Time (Device Data Transfer Min. Processing Time)	GS646
When the shortest processing time is stored in Device Data Transfer Min. Processing Time, storing the Device Data Transfer ID number that has been assigned to the device data transfer that has been completed (Device Data Transfer ID (Min. Processing Time))	GS647
Storing the longest processing time ever stored in Device Data Transfer Processing Time (Device Data Transfer Max. Processing Time)	GS648
When the longest processing time is stored in Device Data Transfer Max. Processing Time, storing the Device Data Transfer ID number that has been assigned to the device data transfer that has been completed (Device Data Transfer ID (Max. Processing Time))	GS649

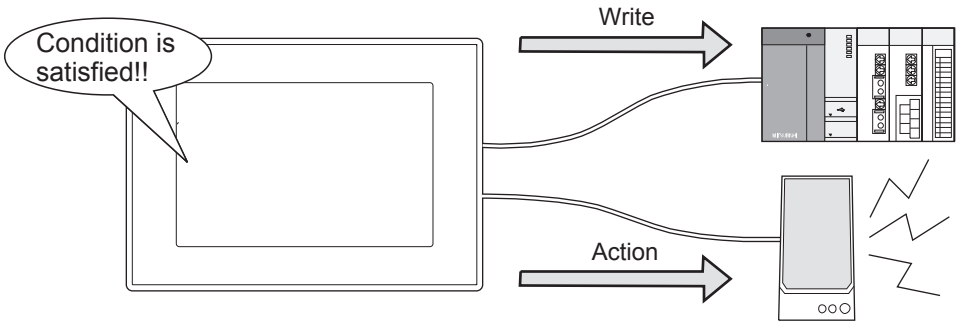
9.5 Operating a Device as a Trigger ([Trigger Action])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.5.1 Overview of the trigger action function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When set conditions are satisfied, various operations can be performed: bit devices are turned on/off, values are written into word devices, screens are switched, and sounds are output.



9.5.2 Specifications of trigger action

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Types of trigger actions

The following two types of trigger actions are provided.

(1) Trigger actions common in a project

These trigger actions are set globally in a project.
All the devices set globally in a project are monitored.

(2) Trigger actions for each screen

These trigger actions are set for each screen.
The screens for which trigger actions are settable depend on the GOT model.

- For GT27, GT25, GT23, GT SoftGOT2000, and GS25
  Base screens and window screens
- For GT21 and GS21
  Base screens only

Set devices are monitored only while the target screens are displayed by the GOT.
If the set overlay screen function calls the screen for which a trigger action is set, the trigger action will be executed on the called screen as well.(Not available to GT21 and GS21)

■2 Number of trigger actions that can be set

Up to 600 trigger actions common in a project can be set. This also applies to trigger actions for each screen.

■3 Number of conditions that can be set

Up to two conditions under which trigger actions are executed can be set.
Select the first condition from the following.

- Ordinary
- Rise
- Fall
- Rise/Fall
- ON
- OFF
- ON Sampling
- OFF Sampling

• Sampling
• Range
• Bit Trigger

Select the second condition from the following.

• ON
• OFF
• Sampling
• Bit Trigger

However, if [Ordinary] is set for the first condition, the second condition cannot be set.

■4 Actions that can be executed when set conditions are satisfied

• Making bit devices remain on while set conditions are satisfied.
• Turning on bit devices
• Turning off bit devices
• Switching the status of bit devices between on and off
• Writing values into word devices
• Switching to a specified screen
• Outputting sounds with an external speaker (GT27, GT25, GT SoftGOT2000, and GS25)

■5 Maximum number of write operations

Bit momentary, bit set, bit reset, bit alternate: 40
Data set (8 bits), data set (16 bits), data set (32 bits), data set (64 bits): 20

9.5.3 How to use trigger action

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting procedure

The following shows the procedure for setting a trigger action.

Step 1 Select [Common] → [Trigger Action] from the menu.

The [Trigger Action] dialog appears.

➟9.5.5 [Trigger Action] dialog

Step 2 When setting a trigger action common in the project, display the [Project] tab.

➟9.5.5 ■1 [Project] tab

When setting a trigger action for a screen, display the [Screen] tab and select the target screen.

➟9.5.5 ■2 [Screen] tab

Step 3 Click the [Add] button.

The [Trigger/Action] dialog appears. A trigger action can be registered.

➟9.5.6 [Trigger/Action] dialog

Step 4 In the [Trigger] tab, set a condition (trigger 1) under which the trigger action is executed.

➟9.5.6 ■1 [Trigger] tab

When executing the trigger action when two conditions are satisfied, select [Trigger2] and set one more condition.

Step 5 In the [Action] tab, set the action to be executed when the conditions are satisfied.

➟9.5.6 ■2 [Action] tab

Step 6 Click the [OK] button.

The [Trigger/Action] dialog closes.

Step 7 Click the [OK] button in the [Trigger Action] dialog.

The dialog closes and the registration of the trigger action is complete.

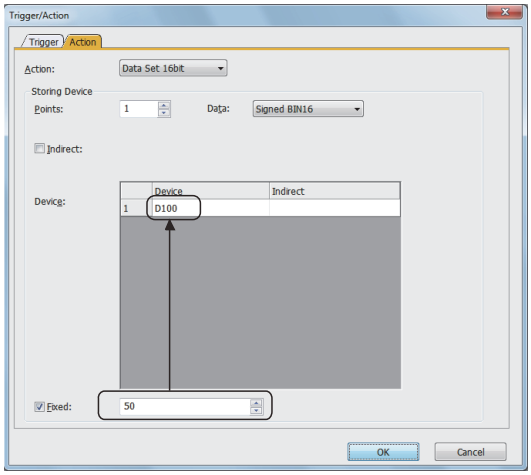
■2 Setting data sets

(1) [Fixed] and [Indirect]

If [Fixed] and [Indirect] are set, a fixed value or the value in a word device is written into the target device.
[Fixed] and [Indirect] can be set together.

(a) **[Fixed]**

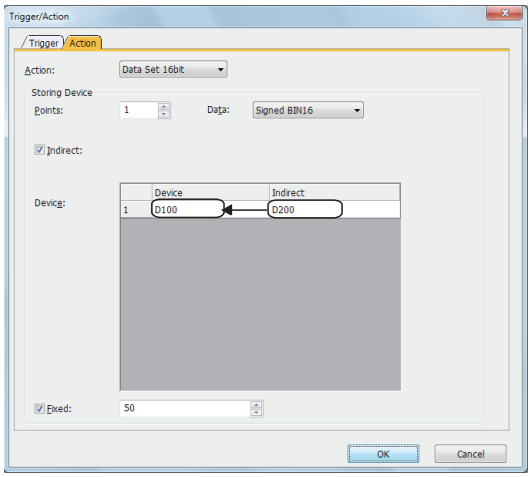
When set conditions are satisfied, the value set for [Fixed] is written into the target device.



When set conditions are satisfied,
the fixed value (50) is written into D100.

(b) **[Indirect]**

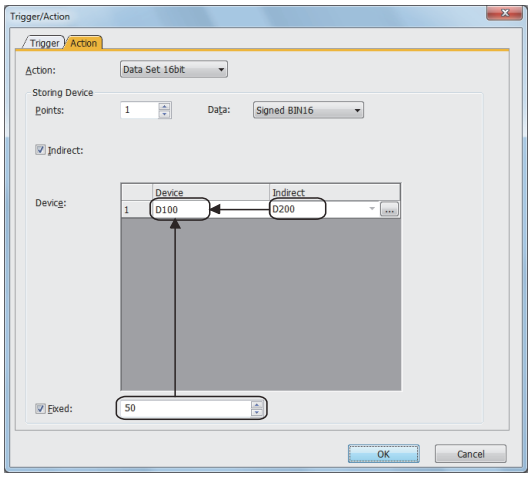
When set conditions are satisfied, the value in the indirect device set for [Indirect] is written into the target device.



When set conditions are satisfied,
the value in D200 is written into D100.

(c) **[Fixed] + [Indirect]**

When set conditions are satisfied, the total of the value in the indirect device set for [Indirect] and the value set for [Fixed] is written into the target device.



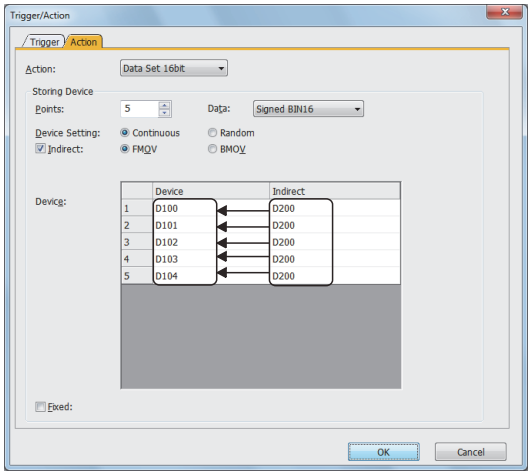
When set conditions are satisfied, the value
in D200 + the fixed value (50) is written into D100.

(2) FMOV and BMOV

When setting two or more devices and selecting [Indirect], select a write operation that writes values to the target devices.

(a) **[FMOV]**

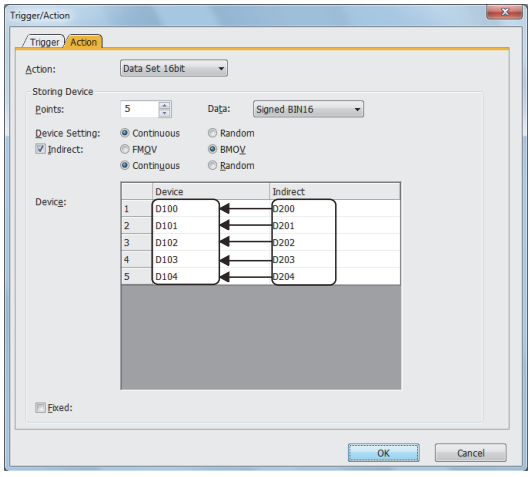
When set conditions are satisfied, the value in the word device set for [Indirect] is written into the target devices.



When set conditions are satisfied,
the value in D200 is written into D100 to D104.

(b) **[BMOV]**

When set conditions are satisfied, the current values in the word devices individually set for [Indirect] is written into the corresponding target devices.



When set conditions are satisfied, the values
in D200 to D204 are written into D100 to D104.

9.5.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting multiple trigger actions

When setting multiple trigger actions, set [Network No.] and [Station No.], setting items in the [Trigger/Action] dialog, to the same No.

➟9.5.6 [Trigger/Action] dialog

■2 Operation if an error has occurred for a trigger action.

Operation set for the trigger action is stopped when an error occurs.
The operation of all trigger actions are not executed after it is stopped.

9.5.5 [Trigger Action] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When set conditions are satisfied, trigger actions are executed then various operations can be performed: bit devices are turned on/off, values are written into word devices, screens are switched, and sounds are output.
Select [Common] → [Trigger Action] from the menu.

➟■1 [Project] tab
■2 [Screen] tab

■1 [Project] tab

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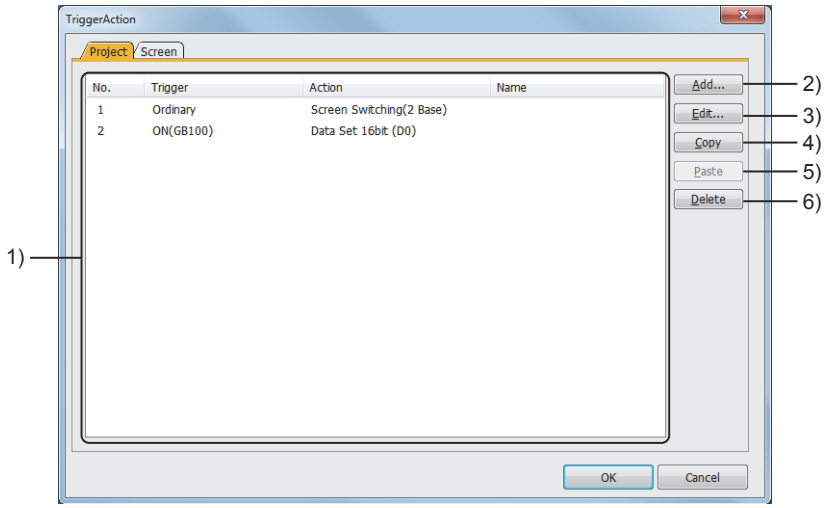
Displays set trigger actions globally set for the project in a list and manages them.



1) **Trigger action list**
Lists set trigger actions.

Item	Description
[No.]	Number of a trigger action
[Trigger]	Trigger condition to execute the corresponding action
[Action]	Action to be executed when the trigger condition is satisfied
[Name]	Name of a trigger action

2) **[Add] button**
Creates a trigger action.

➟9.5.6 [Trigger/Action] dialog

3) **[Edit] button**
Changes the settings of a selected trigger action.

➟9.5.6 [Trigger/Action] dialog

4) **[Copy] button**
Copies a selected trigger action.

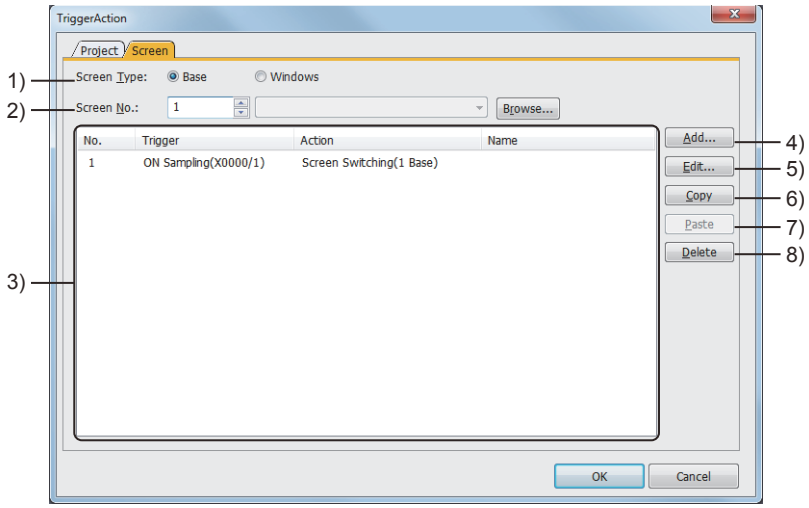
5) **[Paste] button**
Pastes a copied trigger action.

6) **[Delete] button**
Deletes a selected trigger action.

■2 [Screen] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Displays trigger actions set for each screen in a list and manages them.



1) **[Screen Type]**
Set the target screen for set trigger actions.
The following shows selectable items.
- [Base]: Uses a base screen.
- [Windows]: Uses a window screen.(Not available to GT21 and GS21)

2) **[Screen No.]**
Set the screen No. that has been assigned to the target screen for set trigger actions.
Click the [Browse] button to open the screen image.

3) **Trigger action list**
Lists set trigger actions.

Item	Description
[No.]	Number of a trigger action
[Trigger]	Trigger condition to execute the corresponding action
[Action]	Action to be executed when the trigger condition is satisfied
[Name]	Name of a trigger action

4) **[Add] button**
Creates a trigger action.

➟9.5.6 [Trigger/Action] dialog

5) **[Edit] button**
Changes the settings of a selected trigger action.

➟9.5.6 [Trigger/Action] dialog

6) **[Copy] button**
Copies a selected trigger action.

7) **[Paste] button**
Pastes a copied trigger action.

8) **[Delete] button**
Deletes a selected trigger action.

9.5.6 [Trigger/Action] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The [Trigger/Action] dialog is displayed when the [Add] button or [Edit] button in the [Trigger Action] dialog is clicked.

➟■1 [Trigger] tab
■2 [Action] tab

■1 [Trigger] tab

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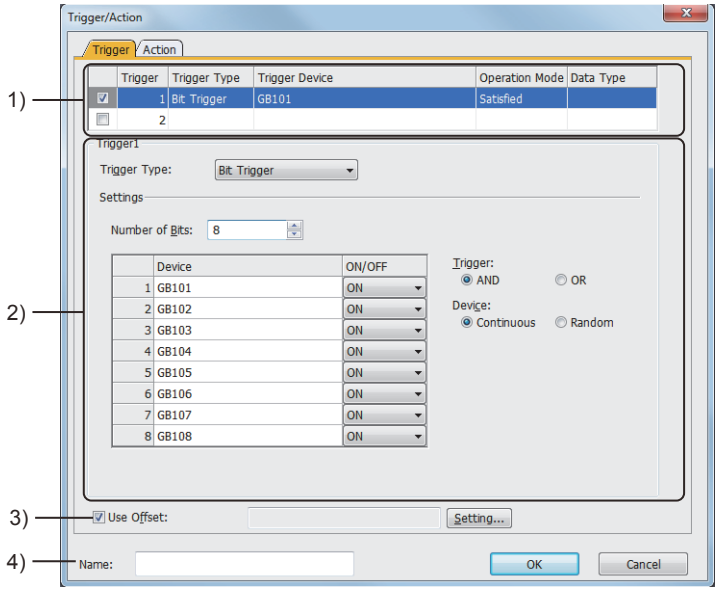
Set conditions under which set trigger actions are executed.



1) **Trigger 1 and trigger 2**
Previews set conditions.
Up to two conditions can be set.
In cases where two conditions are set, trigger actions are executed when both of the conditions are satisfied.
When selected, the conditions become valid.

2) **[Trigger1], [Trigger2]**
Set items for a selected condition.

Item	Description
[Trigger Type]	Set a condition under which trigger actions are executed. The following shows selectable items. Select the first condition from the following. • [Ordinary] • [Rise] • [Fall] • [Rise/Fall] • [ON] • [OFF] • [ON Sampling] • [OFF Sampling] • [Sampling] • [Range] • [Bit Trigger] Select the second condition from the following. • [ON] • [OFF] • [Sampling] • [Bit Trigger] However, if [Ordinary] is selected for the first condition, the second condition cannot be set.

Item	Description
[Settings]	Set necessary items according to the item set for [Trigger Type]. ➥6.2.2 Setting Trigger Types

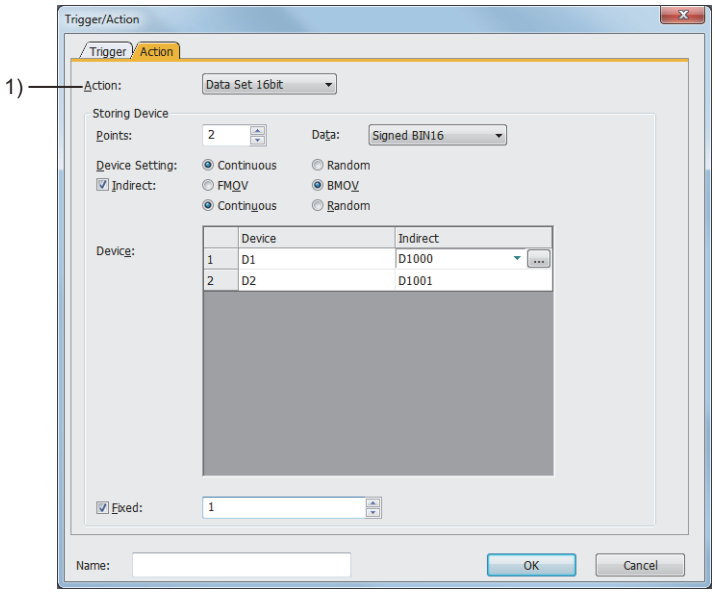
3) **[Use offset]**
Displays the target for an offset and the offset device.
This item can be set when trigger actions for each screen are set.

4) **[Name]**
Set the name of a trigger action.
Up to 100 characters can be set.

■2 [Action] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set actions executed when set conditions are satisfied.



1) **[Action]**
Set actions executed when set conditions are satisfied.
The following shows selectable items.

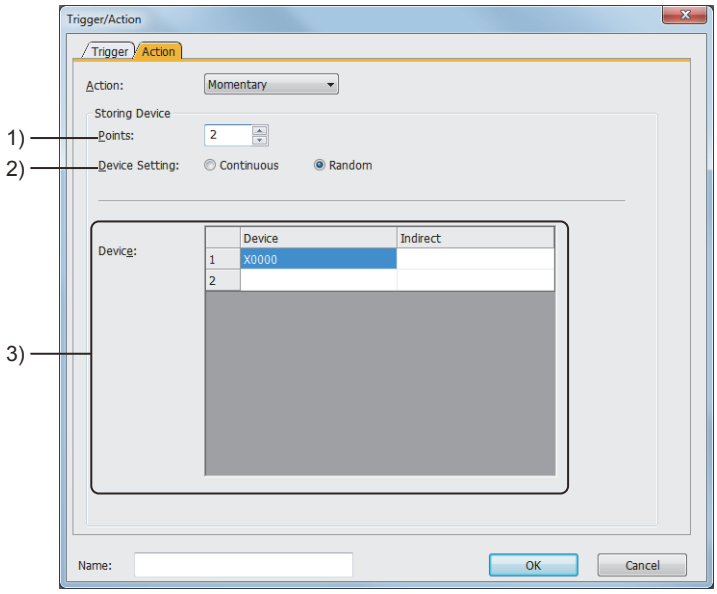
- [Momentary]: Turns on the target bit devices while the set conditions are satisfied.
  Turns off the target bit devices while the set conditions are not satisfied.
  The target bit devices cannot be turned on or off by other operations.
- [Set]: Turns on the target bit devices.
- [Reset]: Turns off the target bit devices.
- [Alternate]: Switches the status of the target bit devices between on and off.
- [Data Set 8bit]: Writes values into the target 8-bit devices.
- [Data Set 16bit]: Writes values into the target 16-bit word devices.
- [Data Set 32bit]: Writes values into the target 32-bit word devices.
- [Data Set 64bit]: Writes values into the target 64-bit word devices.
- [Screen Switching]: Switches screens
- [Sound Output]: Plays a sound, stops a playback, or mute/unmute the sound. (GT27, GT25 (excluding GT2505-V and GT25HS-V), GT SoftGOT2000, and GS25)

The setting items vary according to the selected action.
For the setting items for each action, refer to the following.

➥(1) [Momentary], [Set], [Reset], or [Alternate]
(2) [Data Set 8bit], [Data Set 16bit], [Data Set 32bit], or [Data Set 64bit]
(3) [Screen Switching]
(4) [Sound Output]

(1) [Momentary], [Set], [Reset], or [Alternate]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



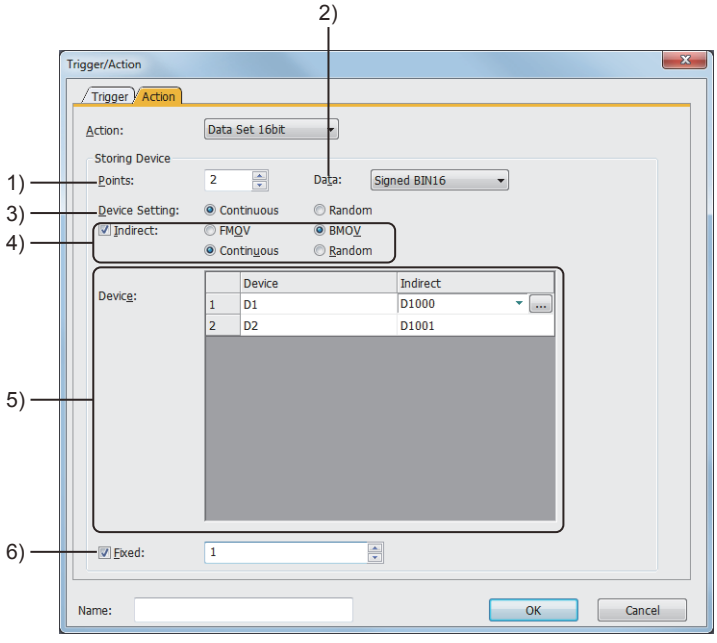
1) [Points]
Set the number of devices operated when set conditions are satisfied.
The setting range is [1] to [40].

2) [Device Setting]
When setting 2 or more for [Points], select the method of setting devices.
The following shows selectable items.
- [Continuous]: Automatically inputs consecutive devices in the table of [Device] when a start device is set.
- [Random]: Sets devices one by one.

3) [Device]
Set the devices operated when set conditions are satisfied.
In the [Device] columns in the table, set the devices operated when set conditions are satisfied.
The [Indirect] columns are not used.

(2) [Data Set 8bit], [Data Set 16bit], [Data Set 32bit], or [Data Set 64bit]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) [Points]

Set the number of devices to which values are written when set conditions are satisfied.

The setting range is [1] to [20].

2) [Data]

Select the data type of a value to be written to the target word device.

The selectable items vary according to the selection for [Action].

[Action]	Selectable item
[Data Set 8bit]	[Signed BIN8] [Unsigned BIN8]
[Data Set 16bit]	[Signed BIN16] [Unsigned BIN16] [BCD16]
[Data Set 32bit]	[Signed BIN32] [Unsigned BIN32] [BCD32] [Real(32bit)]
[Data Set 64bit]	[Signed BIN64] [Unsigned BIN64] [BCD64] [Real(64bit)]

3) **[Device Setting]**

When setting 2 or more for [Points], select the method of setting devices.

The following shows selectable items.

- [Continuous]: Sets consecutive devices starting from a set device.
- [Random]: Sets devices one by one.

4) [Indirect]

Writes the value of an indirect word device to a target word device when the set condition is satisfied.

When setting 2 or more for [Points], select the method of setting indirect devices.

The following shows selectable items.

- [FMOV]: Set one indirect device.

  ➥9.5.3 ■2 (1) [Fixed] and [Indirect]

- [BMOV]: Set indirect devices one by one.

  Select the method of setting indirect devices.

  The following shows selectable items.

  · [Continuous]: Sets consecutive devices starting from a set device.

  · [Random]: Sets devices one by one.

  ➥9.5.3 ■2 (2) FMOV and BMOV

5) [Device]

Set the devices operated when set conditions are satisfied.

In the [Device] columns in the table, set word devices into which values are written when set conditions are satisfied.

In the [Indirect] columns in the table, set indirect devices.

➥6.1.2 How to set devices

6) [Fixed]

Set this item when writing a fixed value into the target word devices when set conditions are satisfied.

The setting range depends on the setting of [Data].

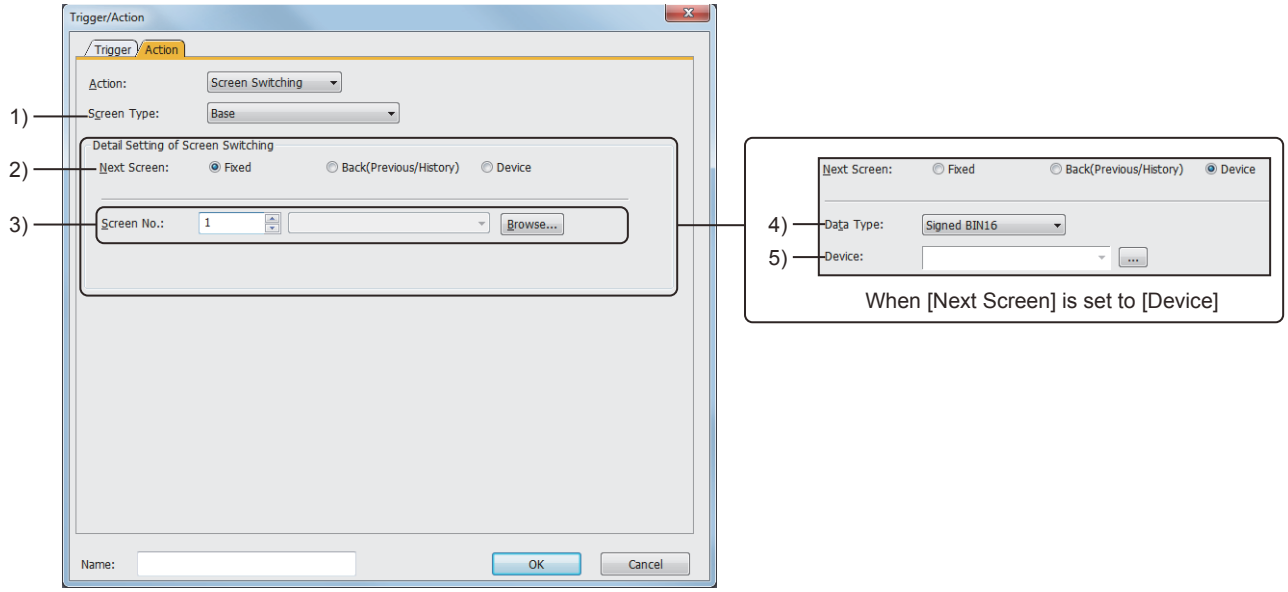
[Data]	Setting range
[Signed BIN8]	-128 to 127
[Unsigned BIN8]	0 to 255
[Signed BIN16]	-32768 to 32767
[Unsigned BIN16]	0 to 65535
[BCD16]	0 to 9999
[Signed BIN32]	-2147483648 to 2147483647
[Unsigned BIN32]	0 to 4294967295
[BCD32]	0 to 99999999
[Real(32bit)]	-999999000000.0 to 999999000000.0

[Data]	Setting range
[Signed BIN64]	-9223372036854775808 to 9223372036854775807
[Unsigned BIN64]	0 to 18446744073709551615
[BCD64]	0 to 9999999999999999
[Real(64bit)]	-99999999999990000000.0 to 99999999999990000000.0

➟9.5.3 ■2 (1) [Fixed] and [Indirect]

(3) [Screen Switching]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When [Next Screen] is set to [Fixed]

1) [Screen Type]
Set the type of the destination screen.
The following shows selectable items.
- [Base]
- [Overlap Window1]
- [Overlap Window2]
- [Overlap Window3] (GT27, GT25, GT SoftGOT2000, and GS25)
- [Overlap Window4] (GT27, GT25, GT SoftGOT2000, and GS25)
- [Overlap Window5] (GT27, GT25, GT SoftGOT2000, and GS25)
- [Superimpose Window1]
- [Superimpose Window2]
- [Dialog Window]

2) [Next Screen]
Set the destination screen for switching.
The following shows selectable items.
- [Fixed]
  Select this item when switching to the screen that has given a specified screen No.
- [Back(Previous/History)]
  Select this item when switching to the previously displayed screen.
  The hierarchy mode or history mode is settable in the [Environmental Setting] window ([Screen Switching/Window]).
  ➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])
- [Device]
  Select this item when specifying the destination screen No. with a set device value.

3) **[Screen No.]**
Set the destination screen number.

Click the [Browse] button to open the screen image.

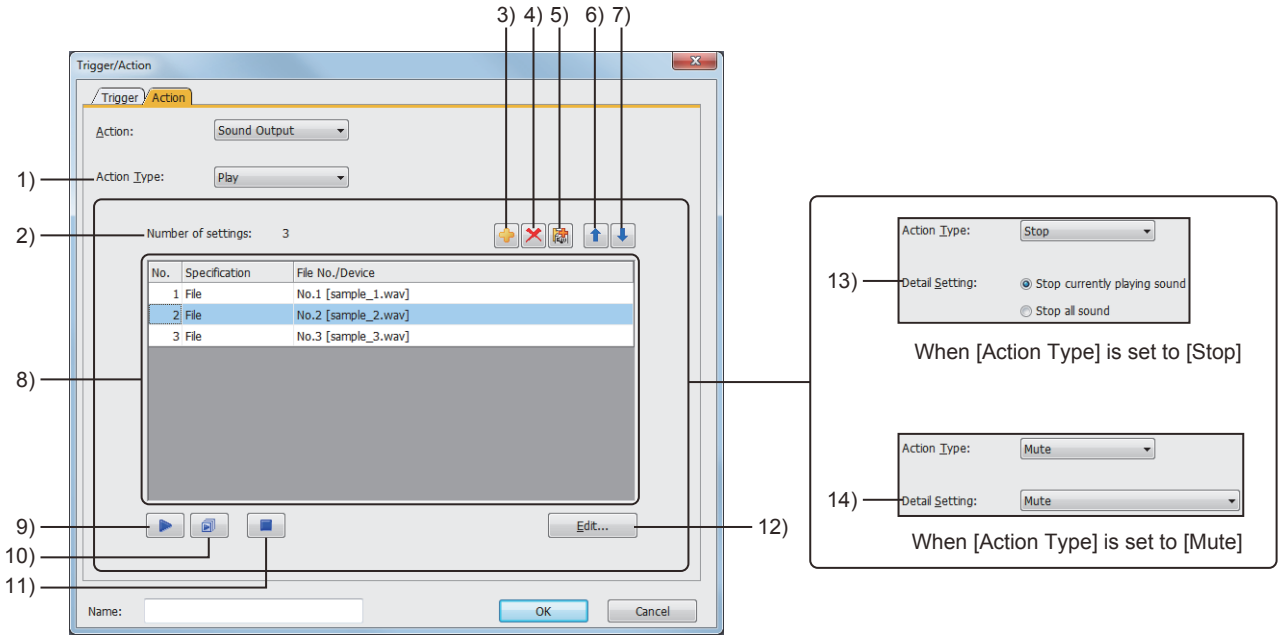
4) **[Data Type]**
Select the data type of the device value.
The following shows selectable items.
- [Signed BIN16]
- [BCD16]

5) **[Device]**
Set a device.
➟6.1.2 How to set devices

(4) [Sound Output]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.



1) [Action Type]
Select an action of the sound output.
The following shows selectable items.
- [Play]
- [Stop]
- [Mute]

2) [Number of settings]
Total number of the play settings in the playlist.

3) **[Add] button**
Adds a new play setting to the playlist.

4) **[Delete] button**
Deletes a selected play setting in the playlist.

5) **[Duplicate] button**
Copies a selected play setting in the playlist.

6) **[Up] button**
Moves the cursor up one row in the playlist.

7) **[Down] button**
Moves the cursor down one row in the playlist.

8) **Playlist**
Lists the play settings of sound files.
Up to 16 play settings can be configured.
When the trigger condition is satisfied, the sound files specified in the playlist play continuously starting from the

top of the list.

Item	Description
[No.]	Number of a play setting. The corresponding sound files play in order of increasing number.
[Specification]	Method of specifying a sound file. • [File]: Uses a file number to specify a sound file. • [Device]: Uses an indirect device to specify a sound file.
[File No./Device]	Sound file number or the device to specify a sound file.

9) **[Play] button**
Plays the sound file that corresponds to a selected play setting in the playlist.

10) **[Repeat] button**
Plays the sound files specified in the playlist continuously, starting from the top of the list.
If [Specification] is set to [Device] in a play setting, the corresponding sound file is skipped.

11) **[Stop] button**
Stops the current playback.

12) **[Edit] button**
Displays the [Sound Setting] dialog.
Edit a selected play setting in the playlist.

➟9.5.7 [Sound Setting] dialog

13) **[Detail Setting] (when [Action Type] is set to [Stop])**
Select the behavior of the target action.
- [Stop currently playing sound]
  Stops the current playback.
  The standby sound file plays subsequently.
- [Stop all sound]
  Stops the current playback and cancels all standby sound files.

14) **[Detail Setting] (when [Action Type] is set to [Mute])**
Select the behavior of the target action.
- [Mute]
- [Unmute]
- [Mute/unmute]

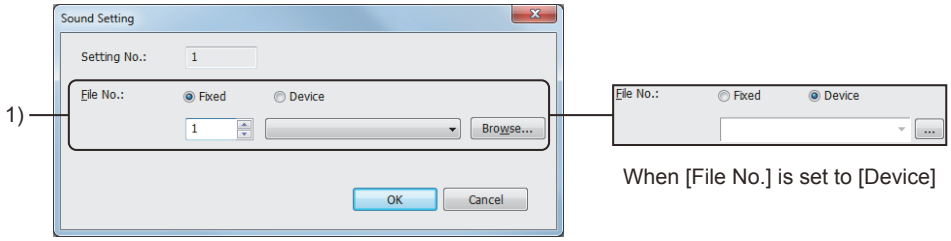
9.5.7 [Sound Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

Set a sound file to play when the trigger condition is satisfied.

To display this dialog, in the [Action] tab of the [Trigger/Action] dialog, set [Action] to [Sound Output] and [Action Type] to [Play], and then click the [Edit] button.



When [File No.] is set to [Fixed]

When [File No.] is set to [Device]

1) **[File No.]**

Select the method of specifying a sound file.

The following shows selectable items.

- [Fixed]

  Uses a sound file number to specify a sound file.

  After selecting this item, specify the file number of a registered sound file in the [Sound File List] dialog.

  The setting range is [1] to [500].

  Click the [Browse] button to display the [Sound File List] dialog.

  Register or edit a sound file.

  ➟10.12.6 [Sound File List] dialog

- [Device]

  Uses the value of a specified device to specify a sound file.

  Select this item, and set a device.

  ➟6.1.2 How to set devices

9.6 Operating the Set Time as a Trigger ([Time Action])

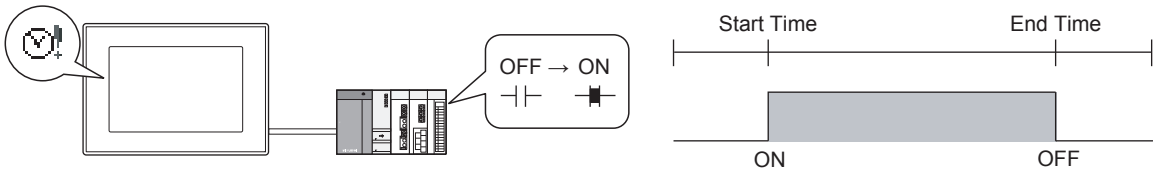
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.6.1 Overview of the time action function

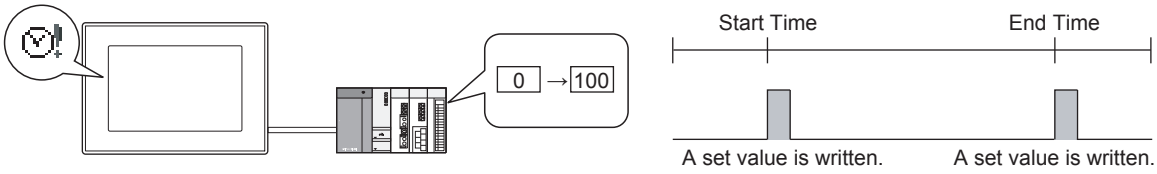
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Devices can be turned on/off and write operations on values can be performed at a specified day of the week and time. This function works based on a day of the week and time the GOT keeps.

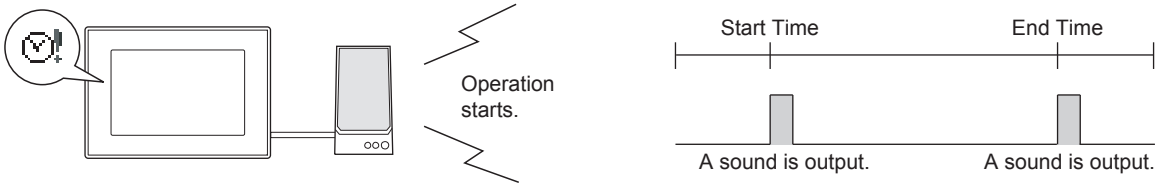
■1 Turning on and off a bit device of a controller



■2 Writing a value into a word device of a controller



■3 Outputting sounds with an external speaker (GT27, GT25, GT SoftGOT2000, and GS25)



9.6.2 Specifications of the time action

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Number of time actions that can be set

Up to 32 settings can be configured for one project.

■2 Actions that can be executed when a set condition is satisfied

- Turning on/off bit devices
- Writing values into word devices
- Outputting sounds with an external speaker (GT27, GT25, GT SoftGOT2000, and GS25)

9.6.3 How to use the time action

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting procedure

The following shows the procedure for setting a time action.

Step 1 Select [Common] → [Time Action] from the menu.

The [Time Action List] dialog appears.

➟9.6.5 [Time Action List] dialog

Step 2 Select a row in the time action list and click the [Edit] button.

The [Time Action Attribute] dialog appears.

➟9.6.6 [Time Action Attribute] dialog

Step 3 In the [Time] tab, set the day of the week and time when the time action starts.

➟9.6.6 ■1 [Time] tab

Step 4 In the [Action] tab, set the action executed at the specified day of the week and time.

➟9.6.6 ■2 [Action] tab

Step 5 Click the [OK] button.

The [Time Action Attribute] dialog is closed.

Step 6 Click the [OK] button in the [Time Action List] dialog.

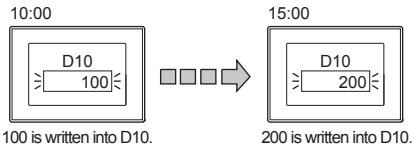
The dialog is closed and the registration of the time action is complete.

■2 Setting the start and end days of the week and time for time actions

When setting the days of the week and time when time actions start and end, select either of the following items.

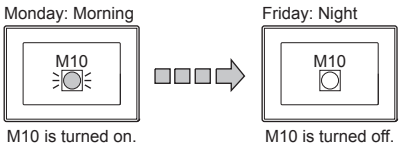
(1) [Daily]

Select this item when setting the time when time actions start by day of the week.
The same action can be executed multiple times a week.
The start time and end time are required to be set in the same day.
Example) Writing a value into a word device at a specified time every day



(2) [Through]

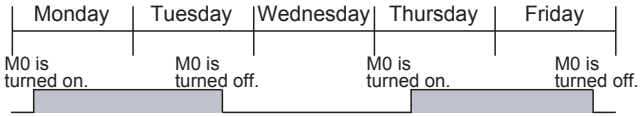
Select this item when the start and end time straddle days.
An action can be executed only once a week.
The start and end time can be set on different days of the week.
Example) Turning on a specified bit device on Monday morning and turning off on Friday morning



Point

When selecting [Through] for [Mode] and executing the same action twice or more a week, register the time action the number of times that the action is executed.
Example) Setting the same action executed twice a week

- Turing on M0 at a specified time on Monday AM, and turning off M0 at a specified time on Tuesday PM. (the setting of the first action)
- Executing no action on Wednesday
- Turing on M0 at a specified time on Thursday AM, and turning off M0 at a specified time on Friday PM. (the setting of the second action)



■3 Controlling time actions

Time actions can be controlled with devices.
The settings of time actions can be output and changed.
The following shows the procedure for setting an external control.

Step 1 Select [Common] → [Time Action] from the menu.
The [Time Action List] dialog appears.
➟9.6.5 [Time Action List] dialog

Step 2 Select [Enable External Control] and set a device.
➟6.1.2 How to set devices

Step 3 When selecting [Separate] for [Device Setting], set an external control device for each time action.
Select a row in the time action list and click the [Edit] button.
The [Time Action Attribute] dialog appears.
➟9.6.6 [Time Action Attribute] dialog

Step 4 Select [External Control Device (8 Points)] in the [Time] tab and set a device.
➟9.6.6 ■1 [Time] tab

(1) External control devices

The settings of a time action can be stored in external control devices.
The setting items assigned to the devices depend on the selection for [Device Setting] in the [Time Action List] dialog.
When [Separate] is selected, the following devices are specified as external control devices.

- Three separate devices set in [External Control] in the [Time Action List] dialog
- Eight consecutive devices set for [External Control Device (8 Points)] in the [Time Action Attribute] dialog

If the device value for the day of the week when the time action starts and ends is 0, the setting of the time action is disabled.

Item	Device		Description
	[Separate]	[Continuous]	
Setting No. device	Set device*1	Set device*1	Refer to the following. ➟(2) [Setting No. Device]
External control signal device	Set device*1	Set device + 1*1	Refer to the following. ➟(3) [External Control Signal Device]
External control status notification device	Set device*1	Set device + 2*1	Refer to the following. ➟(4) [External Control Status Notification Device]
Mode	Set device*1	Set device + 3*1	Indicates [Mode] of the time action. • b0: 0 [Daily], 1 [Through] • b2 to b15: Use prohibited

Item	Device		Description
	[Separate]	[Continuous]	
Start day of the week, end day of the week	Set device + 1*2	Set device + 4*1	Indicates the days of the week when the time action starts and ends. When selecting [Daily] for [Mode] of the time action, do not use the device for the end day of the week. Start day of the week • b0: Sunday • b1: Monday • b2: Tuesday • b3: Wednesday • b4: Thursday • b5: Friday • b6: Saturday • b7: Use prohibited End day of the week • b8: Sunday • b9: Monday • b10: Tuesday • b11: Wednesday • b12: Thursday • b13: Friday • b14: Saturday • b15: Use prohibited
Start time (hour)	Set device + 2*2	Set device + 5*1	Indicates the time when the time action starts. (Data type: BCD)
Start time (minute)	Set device + 3*2	Set device + 6*1	
Start time (second)	Set device + 4*2	Set device + 7*1	
End Time (hour)	Set device + 5*2	Set device + 8*1	Indicates the time when the time action ends. (Data type: BCD)
End Time (minute)	Set device + 6*2	Set device + 9*1	
End Time (second)	Set device + 7*2	Set device + 10*1	

*1 Devices set in [External Control] in the [Time Action List] dialog

➟9.6.5 [Time Action List] dialog

*2 Devices set for [External Control Device (8 Points)] in the [Time Action Attribute] dialog

➟9.6.6 ■1 [Time] tab

(2) [Setting No. Device]

Store the setting No. (1 to 32) assigned to the target time action for the external control.

(3) [External Control Signal Device]

Executes an external control.

Turn on the bit corresponding to the required operation.

If multiple bits are turned on, the rightmost is prioritized.

- b0: Output trigger

  Outputs the data of the time action to the external control devices.
- b1: Change trigger

  Changes the settings of the time action to those of the external control devices.
- b2: Use prohibited
- b3: Time action setting file storage trigger

  Saves the time settings of all the time actions as the time action setting file.
- b4: Time action setting file deletion trigger

  Deletes the time action setting file.
- b5 to b15: Use prohibited

Point

GOT's operations related to the time action setting file

When there is the time action setting file in the GOT at power on or reset, the GOT reads the time action settings from the time action setting file.

(4) [External Control Status Notification Device]

Notifies the result of the execution of the external control.
After the completion of output or change, this device turns off automatically when the external control signal device is turned off.

- b0: Data were successfully output.
- b1: Data were successfully changed.
- b2: Error
  A system error occurs.
- b3: The time action setting file was successfully saved.
  Turns on when the time action setting file is successfully saved.
- b4: The time action setting file was successfully deleted.
  Turns on when the time action setting file is successfully deleted.
- b5: The time action setting file was successfully read.
  Turns on when the time action setting file in the GOT is successfully read out.
- b6 to b15: Use prohibited

Point

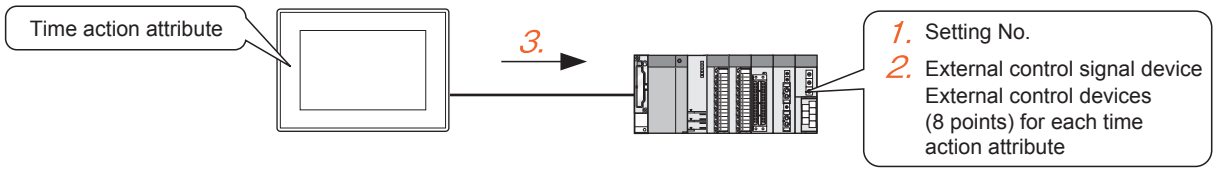
Disabling the time action setting file

To disable the read operation for reading from the time action setting file, perform either of the following operations then restart the GOT.

- Turn on b4 (time action setting file deletion trigger) of the external control device.
- Write the project in which it has become invalid to write the time action setting file to the GOT.

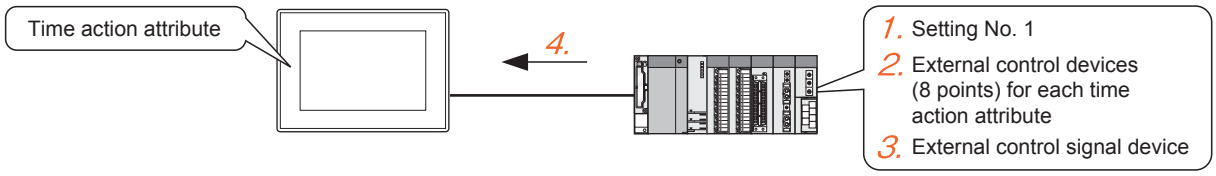
(5) Examples of operations in external control

(a) Output (outputting the settings of a time action to external devices)



Step 1 Set the setting No. assigned to the target time action for the change of settings.
Step 2 Turn on b0 of the external control signal device.
Step 3 The data of the time action are output to the external control devices.

(b) Change (changing the settings of the time action to those of the external devices)



Step 1 Set the setting No. assigned to the target time action for the change of settings.
Step 2 To the external control devices, write the values to replace with.
Step 3 Turn on b1 of the external control signal device.
Step 4 The time action is set with the values set above.

9.6.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 When using the same device for multiple time actions

When using the same device for multiple time actions, do not make the executions overlap.

■2 When using external control devices

When the following operations are performed after the settings of a time action is changed with external control devices, the settings are reset to the original ones set with GT Designer3.

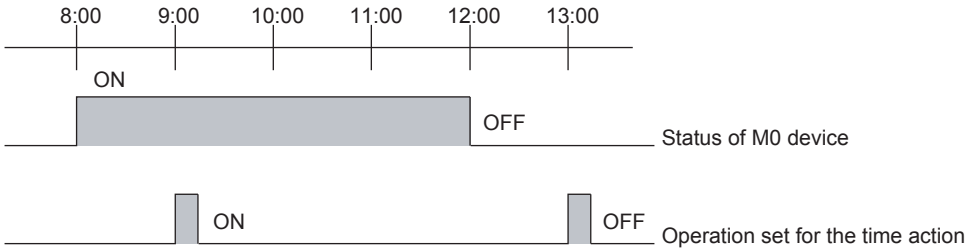
- Transferring package data
- Installing BootOS
- Powering off and restarting the GOT

■3 Operations of time actions

If the GOT's internal clock or the status of the set device is changed, the execution of time actions may be affected.
The following lists the operations that affect time actions.

(1) Turning on a set bit device before a specified time

Time actions do not start at the specified time.
Example) When the set time when M0 turns on is 9:00

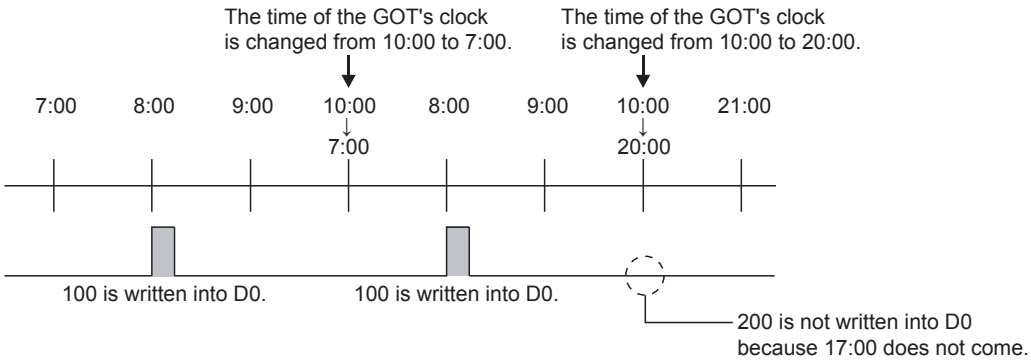


(2) When the GOT's internal clock is moved ahead/back

When the specified time when the action starts comes, the action starts.
However, if the current time, obtained after the clock has gone forward/back, is ahead of the specified time, the action does not start.
The following lists the operations that move the GOT's internal clock ahead/back.

- When moving ahead/back the GOT's internal clock with the utility [Time setting] (by the time notification)
- When the time of the controller is moved ahead/back (by the time setting)
- When the clock is moved ahead/back with the GOT internal devices (GS513 to GS516).

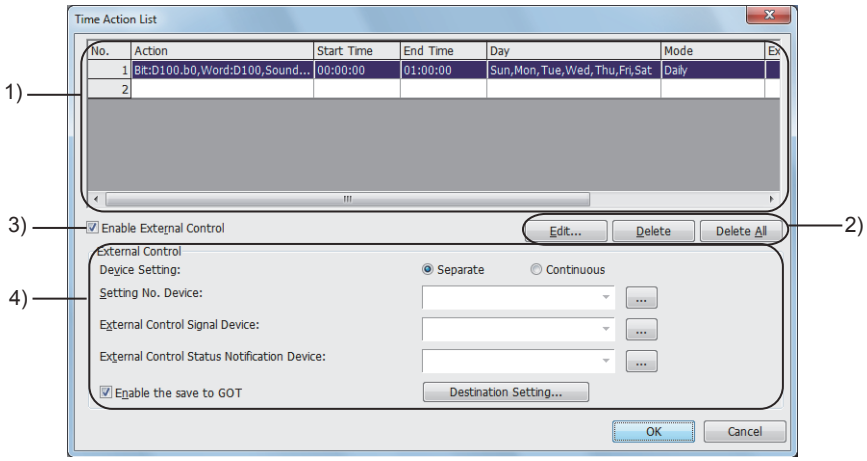
Example) To D0, 100 is written at the start time 8:00 and 200 is written at the end time 17:00.



9.6.5 [Time Action List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

By time actions, devices can be turned on/off and write operations on values can be performed at a specified day of the week and time.
Select [Common] → [Time Action] from the menu to display the [Time Action List] dialog.
Set the operations of time actions, start time, and end time.



1) **Time action list**
Lists set time actions.

➟9.6.6 [Time Action Attribute] dialog

Item	Description
[No.]	Displays the numbers that show the number of time actions.
[Action]	Displays the actions executed when a set conditions is satisfied.
[Start Time]	Displays the time when the time action starts.
[End Time]	Displays the time when the time action ends.
[Day]	Displays the day of the week when the time action is executed.
[Mode]	Displays the mode in which the day of the week and time when the time action starts are specified.
[External Control]	Displays a set external control device.

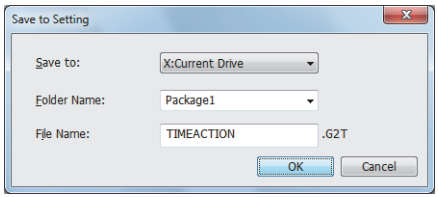
2) **[Edit] button**
Changes the settings of a selected time action.

Item	Description
[Edit] button	Changes the settings of a selected time action. ➟9.6.6 [Time Action Attribute] dialog
[Delete] button	Deletes a selected time action.
[Delete All] button	Deletes all the set time actions.

3) **[Enable External Control]**
Set this item when controlling time actions with devices.

4) **[External Control]**

Set each item of an external control.

Item	Description
[Device Setting]	Select the manner in which external control devices are set. The following shows selectable items. • [Separate]: Set external control devices by time action. Eight word devices are required per time action. • **[Setting No. Device]** Set a device that specifies the time actions to be controlled. • **[External Control Signal Device]** Set a trigger device that executes the control. ➟9.6.3 ■3 (3) [External Control Signal Device] • **[External Control Status Notification Device]** Set a device that outputs the status of the time action. ➟9.6.3 ■3 (4) [External Control Status Notification Device] • **[Continuous]:** Uses the same external control devices for all the set time actions. Eleven word devices are required. • **[Setting No. Device(11 points)]** Set a device that specifies the time actions to be controlled. Eleven consecutive devices counted from the specified device are set as external control devices.
[Enable the save to GOT]	Set this item when it is necessary to save the time action setting file in the GOT. Setting this item enables b3 to b4 of the external control signal device and b3 to b5 of the external control status notification device. Setting this item enables the following operations. • Changing the settings of time actions with external control devices • Deleting the time action setting file ➟9.6.3 ■3 (4) [External Control Status Notification Device]
[Destination Setting] button	Displays the [Destination Setting] dialog. Set items required to save the time action setting file in the GOT.  • **[Save to]** Set a destination drive. The following shows selectable items. · [A:Standard SD Card] · [B:USB Drive] · [E:USB Drive] · [F:USB Drive] · [G:USB Drive] · [X:Current Drive] For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer • **[Folder Name]** Set the folder name of the folder where the file is stored. For the restrictions on the folder name used with the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT When [C:Built-in Flash Memory] or [D:Built-in SRAM] is selected for [Save to], the name set in [Package Folder Name] in the [Type Setting] dialog is specified as the folder name. • **[File Name]** Set the name of the files to be saved. For the restrictions of the file name used in the GOT, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT When [C:Built-in Flash Memory] or [D:Built-in SRAM] is selected for [Save to], "TIMEACTION" is specified as the file name.

9.6.6 [Time Action Attribute] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Click the [Edit] button in the [Time Action List] dialog to display the [Time Action Attribute] dialog.

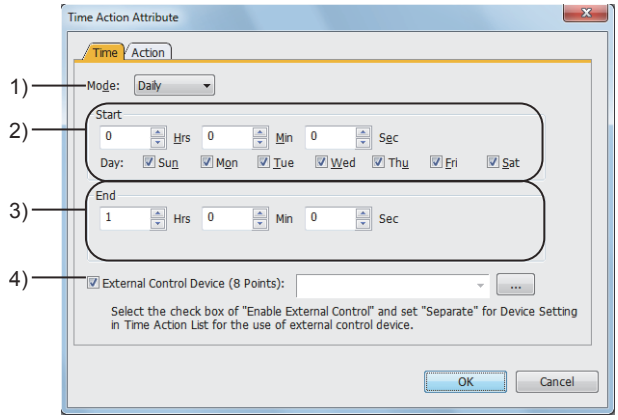
➟■1 [Time] tab

■2 [Action] tab

■1 [Time] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the day of the week and time when the time action starts.



1) **[Mode]**

Set the mode in which the day of the week and time when the time action starts are specified.
The following shows selectable items.

- [Daily]: Executes the time action on a specified day of the week.
- [Through]: Enables the time action for the period between specified days of the week.

2) **[Start]**

Set the day of the week and time when the time actions starts.

Item	Description
[Hrs], [Min], [Sec]	Set the time when the time actions starts.
[Day]	When selecting [Daily] for [Mode], set the day of the week when the time action starts. Multiple days of the week can be selected. When selecting [Through] for [Mode], set the day of the week when the time action starts.

3) **[End]**

Set the day of the week and time when the time action ends.

Item	Description
[Hrs], [Min], [Sec]	Set the time when the time action ends.
[Day]	Set the day of the week when the time action ends. Set this item when selecting [Through] for [Mode].

4) **[External Control Device (8 Points)]**

Set a device that controls the time action.

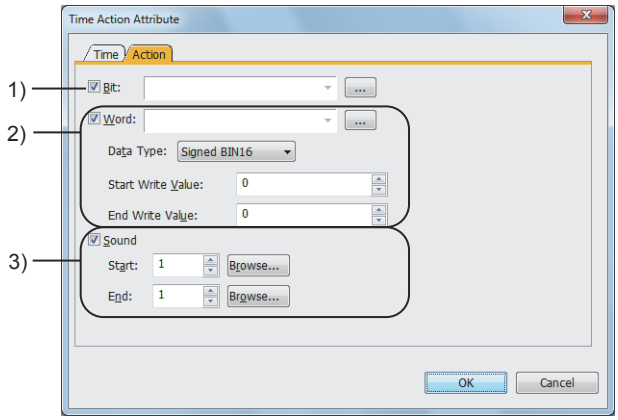
➟6.1.2 How to set devices

Eight consecutive devices counted from the specified device are set as external control devices.
Set this item when selecting [Separate] for [Device] in [Time Action List].

■2 [Action] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the action to execute.



1) **[Bit]**

Set this item to turn on a bit device at the start of the time action and to turn off at the end of the action.
Set a bit device.

➟6.1.2 How to set devices

2) **[Word]**

Set this item to write values to a word device at the start and end of the time action.
Set a word device.

➟6.1.2 How to set devices

Item	Description
[Data Type]	Set the data type of the word device. The following shows selectable items. • [Signed BIN16] • [Unsigned BIN16] • [Signed BIN32] • [Unsigned BIN32] • [Signed BIN64] • [Unsigned BIN64] • [Signed BIN8] • [Unsigned BIN8] • [BCD 16] • [BCD 32] • [BCD64] • [Real(32bit)] • [Real(64bit)]
[Start Write Value], [End Write Value]	Set values to write to the word device at the start and end of the time action. The setting range depends on the setting of [Data Type].

3) **[Sound]**

Available to GT27, GT25 (excluding GT2505-V and GT25HS-V), GT SoftGOT2000, and GS25.
Set this item to replay a sound at the start and end of the time action.

➟10.12 Outputting Sound with the GOT (Sound Output Function)

Item	Description
[Start], [End]	Set the numbers assigned to the sound files output at the start and end of the time action. The setting range is [1] to [500]. If the [Browse] button is clicked, a sound can be selected from the list. ➟10.12.6 [Sound File List] dialog

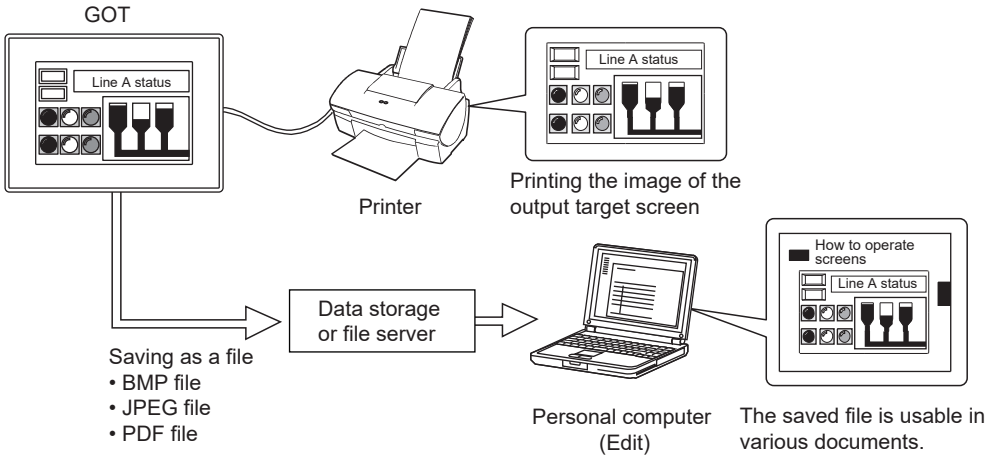
9.7 Capturing the GOT Screen and Outputting the Screen Image ([Hard Copy])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.7.1 Overview of the hard copy function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The hard copy function captures the GOT screen image, and saves the image to a data storage or file server as an image file or PDF file.
The function can also print the captured image from a printer.
The monitor screen displayed on the GOT can be captured as it is.
Capturing only a specified base screen or overlap window from the displayed screens is also possible.
Even if displayed screens overlap one another, a target screen only can be captured.
A screen not displayed on the GOT screen can also be captured.
This allows you to capture a different screen while displaying the operation screen on the GOT.



The screen image outputted by the hard copy function can be used for creating an operating instruction manual or for troubleshooting.

For a PDF file output, a function that saves multiple screen images to a single PDF file is available, eliminating the need to combine the images as a document.
However, the numbers of the output target screens must be consecutive. Design screens considering that requirement.

9.7.2 Specifications of the hard copy

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Number of hard copies that can be set

One hard copy setting is available for one project.

■2 Hard copy execution

Execute a hard copy using either of the following functions.

- Start trigger device
- Special function switch

■3 Specification of an output destination

Specify one of the following as the output destination of a captured screen image.

- File
- File + printer
- Printer

For specification of the output destination, refer to the following.

➟9.7.6 [Hard Copy] dialog

■4 Specification of an output target screen

Except for GT27, GT25, and GS25, an output target screen is fixed to the monitor screen displayed on the GOT and cannot be changed.

For GT27, GT25, and GS25, not only the monitor screen but also a base screen or overlap screen only out of the displayed screens can be specified for the output target screen.

A screen not displayed on the GOT (hereafter "hidden") can also be specified.

Specify one output target screen for each output destination (file, printer).

The following shows the selectable output target screens.

Output target screen		Resource securement*1	Explanation
Display status on the GOT	Screen type		
Displayed	Monitor screen	Not required	The screen displayed on the GOT is captured as-is.
	Base screen	Required	Only a base screen or specified overlap window out of the screens displayed on the GOT is captured.
	Overlap window 1		
	Overlap window 2		
	Overlap window 3		
	Overlap window 4		
	Overlap window 5		
Hidden	Base screen	Required	Capture the hidden base screen or window screen image by specifying the screen number. • Hard copy execution delay setting For capturing of a hidden screen image, the GOT starts monitoring of the target screen when the start trigger condition is satisfied. Therefore, a wait time (delay) during which communication and drawing will complete needs to be set. The one second of wait time set by default is insufficient for communication and drawing to complete depending on the screen design. In this case, adjust the wait time by using GS526. For details, refer to the following. ➟12.1.3 ■5 (63) Delay Hard Copy Execution (GS526)
	Window screen		

*1 The specified one overlap window is used as the resource for hard copy processing.
The specified overlap window cannot be displayed on the GOT screen and cannot be used as the target screen for hard copy.
To specify a resource overlap window, select [Take a hard copy of a screen other than the displayed monitor screen] in the [Environmental Setting] window ([Screen Switching/Window] tab).

➟5.2.1 ■5 [Screen Switching/Window]

Set an output target screen by specifying a fixed value in the [Hard Copy] dialog or using a device.
Using a device enables change of the output target screen dynamically.
For details, refer to the following.

➟9.7.6 [Hard Copy] dialog

Depending on the output target screen, the hard copy function does not support printer output.
A printer output to an unsupported printer is not executed and system alarm 366 is output.
The following shows the support statuses.
○: Supported , ×: Unsupported

Output target screen		Serial printer	USB printer (PictBridge)	Network printer (ESC/P-R, PCL5)
Display status on the GOT	Screen type			
Displayed	Monitor screen	○	○	○
	Base screen	○	○	○
	Overlap window 1 to 5	×	×	○
Hidden	Base screen	○	○	○
	Window screen	×	×	○

■5 Checking the number of outputted screen images

The number of outputted screen images can be obtained by using GS693.
When outputting multiple screen images to a single PDF file, you can use this setting for checking the output progress.
For details, refer to the following.

➟12.1.3 ■3 (20) Notify Number of Hard Copy Output Screens signal (GS693)

To check the output progress rate, calculate the rate from the value set in [Number of screens] - [Fixed] in the [Hard Copy] dialog or the value stored in the device set in [Number of screens].

■6 Specifying a file format

Specify one of the following file formats for an output to a file.

- BMP file
- JPEG file
- PDF file (GT27, GT25, GS25)

Set a file format by specifying a fixed value in the [Hard Copy] dialog or using a device.
Using a device enables change of the output file format dynamically.
For details, refer to the following.

➟9.7.6 ■1 [File] tab

■7 Specifications for image file (BMP, JPEG) save

(1) Maximum number of files to be saved

One screen image is saved to one file and up to 9999 files can be saved.

(2) File name

A file name consists of the file name specified in GT Designer3 and file number.
Example) When [File Name] is set to [SNAP], and [Style] is set to [BMP]

Order in which image files are saved	File name
1st	SNAP0001.BMP
2nd	SNAP0002.BMP
:	:
9998th	SNAP9998.BMP
9999th	SNAP9999.BMP

■8 Specifications for PDF file save

(1) Maximum number of files to be saved

Up to 9999 files can be saved.
Saving multiple captured screen images to a single PDF file is available by specifying the number of screen images to be output.

(2) File name

The specifications are the same as those of image files.

➟■7 Specifications for image file (BMP, JPEG) save

(3) System application (extended function)

To save a captured screen image as a PDF file, [Hard Copy PDF Output] in a system application (extended function) is required.

Configuring either of the following settings incorporates the application into the package data automatically.

- In the [Hard Copy] dialog ([File] tab), select [Fixed]-[PDF] for [Style].
- In the [Hard Copy] dialog ([File] tab), select [Output PDF file].

(4) Specifications of the page size and orientation

Specify the page size and orientation of the PDF file.

For details, refer to the following.

➟9.7.6 ■1 [File] tab

■9 Specifications of the printer output

On GT SoftGOT2000, the captured screen images are output to the printer connected with the personal computer.

For the specifications of the hard copy function on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(1) Usable printers

The following printers are supported.

- PictBridge-compatible printer (GT27 and GT25 (excluding GT25-W, GT2505-V, and GT25HS-V))
- Serial printer (GT27, GT25 except GT25HS-V, GT23, GT21, GS25, and GS21)
- Ethernet printer (GT27, GT25, GT23, GT21 except GT2105-Q, GS25, and GS21)

(2) System application (extended function)

The following system application (extended function) is required.

- For PictBridge-compatible printers: [Printer(PictBridge)]
- For serial printers: [Printer(Serial)]
- For Ethernet printers (ESC/P-R): [Printer(ESC/P-R)]
- For Ethernet printers (PCL5): [Printer(PCL5)]

Selecting [Printer] for [Destination] in the [Hard Copy] dialog incorporates the application into the package data automatically.

To use the function on GT21, GT SoftGOT2000, or GS21, the application is not required.

(3) Required version of BootOS

To use an Ethernet printer (ESC/P-R), install version AJ or later of BootOS on the GOT.

➟4.3.2 Transferring data

9.7.3 How to use the hard copy function (File save)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting procedure

The following shows the procedure for outputting a captured screen image to a file.

Step 1 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 2 Set [Destination] to [File] or [File + Printer].

Step 3 In the [File] tab, set necessary items and click the [OK] button.

➟9.7.6 ■1 [File] tab

When [File + Printer] is selected for [Destination], configure the setting for the printer output as well.

➟9.7.4 How to use the hard copy function (Printer output)

For the methods of starting a hard copy output, refer to the following.

➟9.7.3 ■2 Starting a hard copy output

■2 Starting a hard copy output

The following shows the procedure for starting a hard copy output.

(1) Using a start trigger device

Set the start trigger device for a file save.

Step 1 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 2 In the [File] tab, select [Start Trigger Device].

Step 3 Specify a start trigger device, and click the [OK] button.

To start a hard copy output, use a bit switch or other methods to turn on the start trigger device.
Set the ON and OFF times of the start trigger device to one second or more for each.
If you use the bit switch in which [Action] is set to [Momentary], configure the settings in the [Bit Switch] dialog ([Extended] tab) as shown below.

- Set [Delay] to [OFF].
- Set [Delay Time] to [1] second or more.

➟8.2.5 [Bit Switch] dialog

(2) Using a special function switch

Configure the settings of a special function switch as shown below.

- Set [Switch Action] to [Start Hard Copy].
- Select [Specify the destination to output hard copies].
- Set [Destination] to [File].

Setting a start trigger device is unnecessary.
To start a hard copy output, touch the set special function switch.

➟8.2.9 [Special Function Switch] dialog

9.7.4 How to use the hard copy function (Printer output)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 System configuration

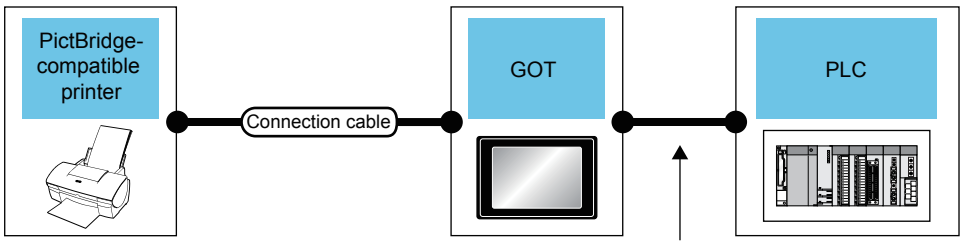
The following shows the system configuration when a printer is used.
For connecting a printer to the GOT, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

On GT SoftGOT2000, the captured screen images are output to the printer connected with the personal computer.
For the specifications of the hard copy function on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(1) PictBridge-compatible printer

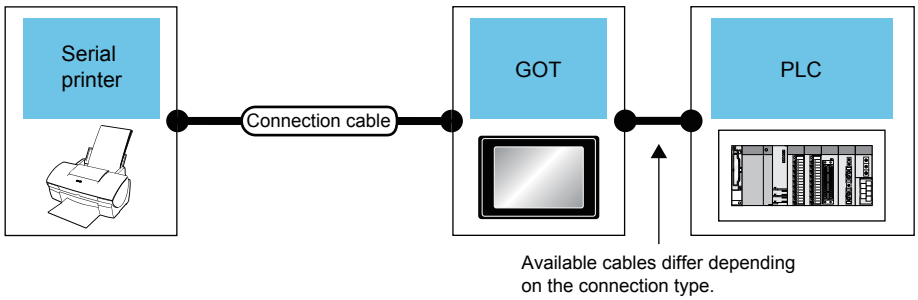


Printer	Connection cable	GOT		PLC	Number of connectable printers
Model	Model	Option	GOT model		
For the connectable printers and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT09-C30USB-5P(3m) (included in the printer unit)	GT15-PRN*1	GT27 GT25*2	For the system configuration between the GOT and the PLC, refer to each connection manual.	One printer for one GOT

*1 The unit for the communication between the GOT and the PictBridge-compatible printer.
Some PictBridge-compatible printers may not be able to print data properly. For the precautions of the printer connection, refer to the following Technical News.
➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

*2 GT25-W, GT2505-V, and GT25HS-V are excluded.

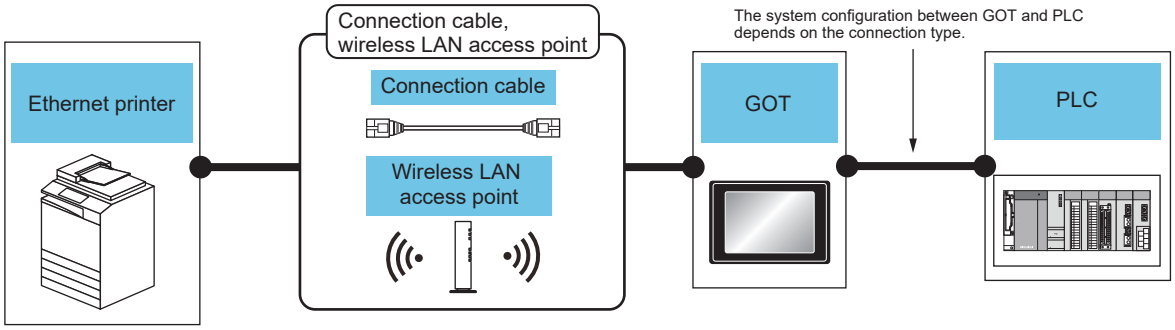
(2) Serial printer



Printer	Connection cable	GOT		PLC	Number of connectable printers
Model	Model	Option	GOT model		
For the connectable printers and system devices, refer to the following Technical News. ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	RS-232 cable *1	- (Built into GOT)	GT27 GT25 *2 GT23 GT21 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One printer for one GOT

*1 Available RS-232 cables differ according to the printer used. Prepare a RS-232 cable that is suitable for the specifications of the printer to be used.
*2 GT25HS-V is excluded.

(3) Ethernet printer



Printer	Connection cable *1*2, wireless LAN access point	Maximum segment length *3	GOT		PLC	Number of connectable personal computers
			Option	GOT model		
Select by each user ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	- (Built into GOT)	GT27 GT25 *8 GT23 GT21 *9 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One personal computer for one GOT
			GT25-J71E71-100	GT27 GT25 *6		
	-	-	GT25-WLAN	GT27 *4 GT25 *4*7 GS25 *4		
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*7 GS25 *5		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 When a hub is used, use a straight cable.
To connect the GOT and the printer directly with an Ethernet cable, use a straight or cross cable.
For the cables usable for your printer, check the printer specifications.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 personal computers for a cascade connection (500m)
• 100BASE-TX: Up to 2 personal computers for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 GT25-W, GT2505-V, and GT25HS-V are excluded.

*7 GT2505-V and GT25HS-V are excluded.

*8 For GT2505HS-V, one built-in interface is usable.
An Ethernet printer is connectable only when the GOT is connected to a controller by Ethernet.

*9 GT2105-Q is excluded.

■2 Setting procedure

The following shows the procedure for outputting captured screen image to a printer.

(1) For GT27, GT25, GT23, GT21, GS25, and GS21

The following shows the procedure for outputting a captured image to a printer.

Step 1 Connect a printer to the GOT.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

Step 2 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 3 Set [Destination] to [Printer] or [File + Printer].

Step 4 In the [Printer] tab, set necessary items and click the [OK] button.

➟9.7.6 ■2 [Printer] tab

When [File + Printer] is selected for [Destination], configure the setting for the image file output as well.

➟9.7.3 How to use the hard copy function (File save)

For the methods of starting a hard copy output, refer to the following.

➟9.7.4 ■3 Starting a hard copy output

If you start a hard copy output while the printer is powered off, a captured screen image cannot be printed.
Make sure to power on the printer.
Printing starts upon power-on of the printer.

(2) For GT SoftGOT2000

The following shows the procedure for outputting a captured image to a printer.

Step 1 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 2 Set [Destination] to [Printer] or [File + Printer].

Step 3 In the [Printer] tab, set necessary items and click the [OK] button.

➟9.7.6 ■2 [Printer] tab

When [File + Printer] is selected for [Destination], configure the setting for the image file output as well.

➟9.7.3 How to use the hard copy function (File save)

Step 4 On GT SoftGOT2000, select the [Project] menu and configure the print settings.

➟9.7.6 [Hard Copy] dialog

For the methods of starting a hard copy output, refer to the following.

➟9.7.4 ■3 Starting a hard copy output

If you start a hard copy output while the printer is powered off, a captured screen image cannot be printed.
Make sure to power on the printer.
Printing starts upon power-on of the printer.

■3 Starting a hard copy output

The following shows the procedure for starting a hard copy output.

(1) Using a start trigger device

Set the start trigger device for the printer output.

Step 1 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 2 In the [Printer] tab, select [Start Trigger Device].

Step 3 Specify a start trigger device, and click the [OK] button.

To start a hard copy output, use a bit switch or other methods to turn on the start trigger device.
Set the ON and OFF times of the start trigger device to one second or more for each.
If you use the bit switch in which [Action] is set to [Momentary], configure the settings in the [Bit Switch] dialog ([Extended] tab) as shown below.

- Set [Delay] to [OFF].
- Set [Delay Time] to [1] second or more.

➟8.2.5 [Bit Switch] dialog

(2) Using a special function switch

Configure the settings of a special function switch as shown below.

- Set [Switch Action] to [Start Hard Copy].
- Select [Specify the destination to output hard copies].
- Set [Destination] to [Printer].

Setting a start trigger device is unnecessary.
To start a hard copy output, touch the set special function switch.

➟8.2.9 [Special Function Switch] dialog

■4 Aborting a hard copy output

The following shows the procedure for aborting a hard copy output.
GT SoftGOT2000 does not support aborting a hard copy output.

(1) Using an abort trigger device

Set the abort trigger device for the printer output.

Step 1 Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.

➟9.7.6 [Hard Copy] dialog

Step 2 In the [Printer] tab, select [Abort Trigger Device].

Step 3 Specify an abort trigger device, and click the [OK] button.

To abort a hard copy output, use a bit switch or other methods to turn on the abort trigger device.
Set the ON and OFF times of the abort trigger device to one second or more for each.
If you use the bit switch in which [Action] is set to [Momentary], configure the settings in the [Bit Switch] dialog ([Extended] tab) as shown below.

- Set [Delay] to [OFF].
- Set [Delay Time] to [1] second or more.

➟8.2.5 [Bit Switch] dialog

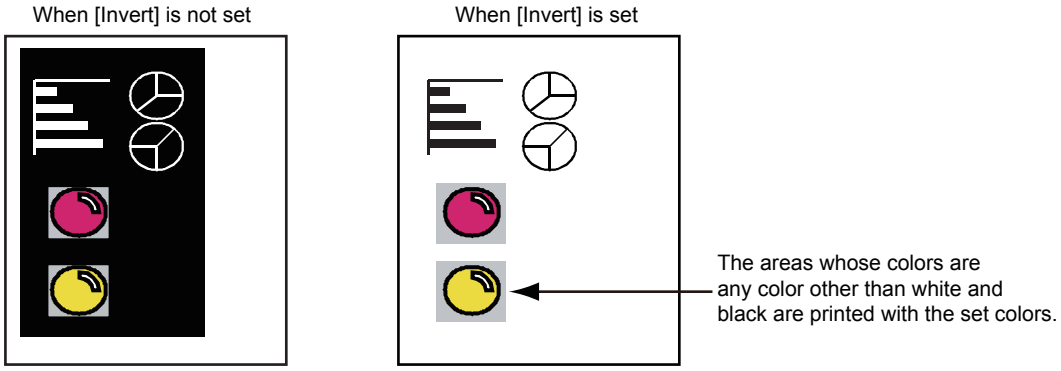
(2) Using a special function switch

In the setting of a special function switch, set [Switch Action] to [Abort Hard Copy].
Setting an abort trigger device is unnecessary.
To abort a hard copy output, touch the set special function switch.

➟8.2.9 [Special Function Switch] dialog

■5 Printing a captured image with inverted black and white colors

A captured screen image is printable with inverted black and white colors.
The black and white areas are inverted.
Any other color areas (including gray and red) are printed as-is.



The black and white inversion is useful for the following purposes.

- To use less ink of the printer when a screen image to be printed has many black areas
- To improve visibility when a screen image to be printed has many black areas

The following shows how to enable or disable the black and white inversion.

(1) Configuring the setting on GT Designer3

To enable the black and white inversion, select [Invert] in the [Hard Copy] dialog ([Printer] tab).

➟9.7.6 [Hard Copy] dialog

This setting is not applied to GT SoftGOT2000.
Configure the print settings on GT SoftGOT2000.

➟GT SoftGOT2000 Version1 Operating Manual

(2) Using the system signals

To enable the black and white inversion on the GOT, use the following system signals.
Not available to GT SoftGOT2000.

• Hard Copy Setting Validate signal (System signal 1-1.b10)
Turning on this signal enables the setting change of the hard copy function.
Turn on the signal before executing a hard copy output.
Turn on this signal before the GOT recognizes its internal processing (it takes approximately 300 ms).

• Hard Copy White/Black Reverse signal (System signal 1-1.b12)
When this signal is on, the black and white inversion is enabled.
When this signal is off, the black and white inversion is disabled.

9.7.5 Precautions

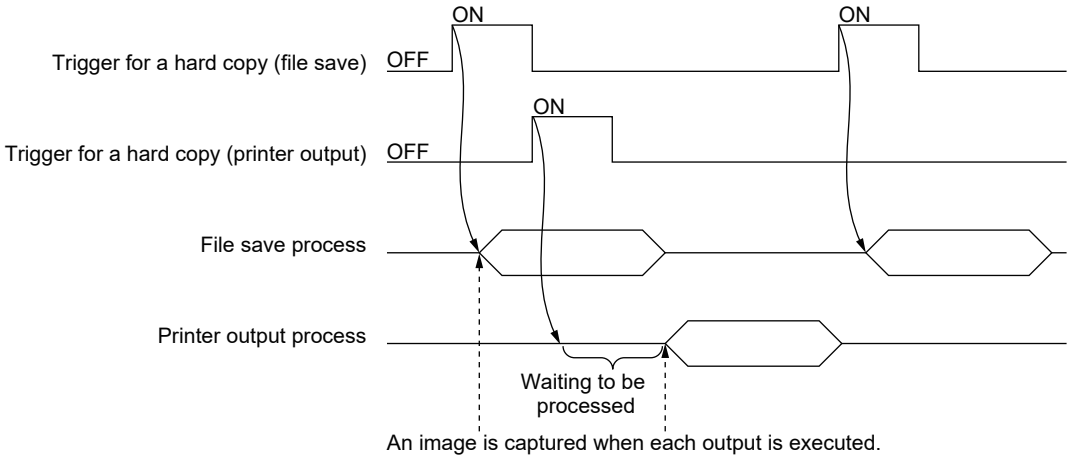
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for use

(1) When using a file save and a printer output together

If the trigger condition for a printer output is satisfied while a file save is being executed, the printer output is executed upon completion of the file save.
If the trigger condition for a file save is satisfied while a printer output is being executed, the file save is executed upon completion of the printer output.
A screen image is captured not when a trigger condition is satisfied, but when processing is executed.
If the trigger condition for a file save and that for a printer output are satisfied simultaneously, the GOT captures the image of the screen displayed when each processing is executed.
Thus, the captured screen images may be different between the outputs.

Example) When the trigger condition for a printer output is satisfied while a file save is ongoing
Upon completion of the file save, the printer output is executed.



(2) Precautions when system alarm 340 occurs

If system alarm 340 occurs while a PictBridge-compatible printer or Ethernet printer (ESC/P-R) is used, saving images to a file is stopped and may not be executed.
To restart the file save, cancel the printer output in one of the following methods.

• Eliminate the cause of printer error
• Satisfy the abort trigger conditions
• Pressing the special function switch for which the action at aborted hard copy is set
• Turning on the Print Abort signal (System signal 1-2.b15)

(3) Utilizing a GOT1000 project

If you convert a GOT1000 project to a GOT2000 project, check the printer setting of the project.
When the output destination is set to a printer in a GOT1000 project, the destination interface for the printer is set to [Not connected] automatically in the printer setting.
After the project conversion, change the destination interface for the printer.

(4) Precautions on output target screens

Depending on the output target screen, different precautions are applied.

○: Applicable , ×: Not applicable

Category	Specified output target screen					Precaution
	Displayed			Hidden		
	Monitor screen	Base screen	Overlap window 1 to 5	Base screen	Window screen	
Hard copy of an overlap window	-	-	○	-	-	When a specified overlap window is used as the system window or displayed on a different screen using the video output function, the hard copy is executed for that screen.
	-	-	○	-	-	If a specified overlap window is hidden, the hard copy is not executed and system alarm 365 is output.
	-	-	○	-	-	If a window screen is created with the maximum screen size, the hard copy output is produced with the window frame cut off. To include the window frame in the hard copy, set the screen size considering the frame area.
Hard copy of a screen other than the monitor screen	-	○	○	○	○	If [Take a hard copy of a screen other than the displayed monitor screen] in the [Environmental Setting] window ([Screen Switching/Windows] tab) is not selected, the hard copy is not executed and system alarm 366 is output.
	-	○	○	○	○	The video/RGB display object is not available for hard copy output on screens other than the monitor screen. When a hard copy output is executed, the object is not captured in the screenshot.
	-	-	-	○	-	If a superimpose window is placed on the output target screen, the window will not be captured in the screenshot when a hard copy output is executed.
Screen transition during hard copy	-	○	○	○	○	If a transition to a utility screen or extended system application screen occurs, the hard copy is not executed and system alarm 366 is output. For outputting to a printer, the system alarm (366) is not output.
	-	-	-	○	○	If a transition to a utility screen or extended system application screen occurs during hard copy of multiple screens, the hard copy is aborted and system alarm 366 is output.
	-	-	-	○	○	If the target screen is displayed due to screen switching during hard copy, the hard copy is aborted and system alarm 366 is output.
When the screen gesture function is used together	-	○	-	-	-	While the screen is zoomed or scrolled with the gesture function, the hard copy is not executed and system alarm 366 is output.
When the base screen size expansion is used together	-	○	-	○	-	When the base screen size expansion is set to the output target base screen, the hard copy is not executed and system alarm 366 is output.

Category	Specified output target screen					Precaution
	Displayed			Hidden		
	Monitor screen	Base screen	Overlap window 1 to 5	Base screen	Window screen	
Quantity limit for the objects to be displayed	-	-	-	○	○	Even when a hidden screen image is output, the quantity limit is applied to the objects on that screen. The objects cannot be displayed if the quantity limit is exceeded. The quantity limit is applied to the following objects to be displayed. • Recipe display (record list) • Document display • System alarm display When the following operations are performed, the system alarm 303 is output. • (Operation) A hard copy output is executed when an object with quantity limit is placed on both the displayed screen and the output target screen. (Result) The hard copy output is executed, but the relevant object is not captured in the screenshot. • (Operation) While a hard copy output is being executed for the screen on which an object with quantity limit is placed, another screen with the relevant object is attempted to be displayed on the monitor screen. (Result) The screen is displayed on the monitor screen, but the relevant object is not displayed.

■2 Precautions for use (only when using file save)

(1) GOT status during a hard copy

While a hard copy operation is being performed, the GOT interrupts its processing of screens being displayed.
The screen processing restarts after the completion of the hard copy.

(2) State of a new trigger while a file save is being executed

If the trigger condition for a file save is satisfied while another file save is being executed, the new trigger is invalid.

Make sure that the trigger condition for a new file save is satisfied after the ongoing file save is complete.
Check the Writing Notification device for completion of a file save.

➟9.7.6 ■1 [File] tab

(3) To maintain file access performance

You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

(4) Precautions when outputting multiple screen images to a single PDF file

If the specified number of screens is outside the range, the hard copy is not executed and system alarm 367 is output.
If the size of memory used by the GOT to generate a PDF file exceeds the user area (20 MB), the hard copy output is not executed and system alarm 369 is output even though the specified number of screens is within the range.
If system alarm 369 is output, reduce the number of output target screens or take other actions.

- Even one of sequentially numbered screens out of the specified number of screens is missing
- When the security level is insufficient
- When the screen number of the currently displayed screen is included

■3 Precautions for use (Printer output only)

(1) Some areas of the screen on the GOT cannot be copied

Depending on the printer used, some areas of the screen may not be copied properly.
If it happens, disable the trimming in the setting of the printer used. (Some printers may not have the trimming setting.)

(2) Printer's error

When an error occurs in the printer at the printing or the printer fed a blank sheet of paper but it can print the data properly when the restart button is pressed, set [A4] for [Print Image Size] of the hard copy and supply A4-size papers into the printer in the portrait direction.
An error may occur depending on the printer used when the sheet size and print image size are different.
Even though you use the printer in which an error occurs when [Print Image Size] is set for any size other than [A4], it may print the data properly with the set size.

- Set any size other than [A4] to [Print Image Size] of the hard copy.
- Supply A4-size papers into the printer in the portrait direction.
- An error (such as the printer feeds a blank sheet of paper) may occur. However, the printer may be able to print data properly when the restart button is pressed.

For the details of the operations and settings of the printer, refer to the following.

➟Manual of the printer used

(3) State of a new trigger while a printer output is being executed

Even if the trigger condition for a printer output is satisfied while another printer output is being executed, the new trigger is invalid.
Make sure that the trigger condition for a new printer output is satisfied after the ongoing printer output is complete.
Check the Hard Copy Output signal (System signal 2-1.b7) for completion of a printer output.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

■4 Precautions for using serial printers

In the following cases, a serial printer may not print data and a system alarm may not occur even if the Print Output signal (System signal 2-2.b15) is turned off.

- A printer is powered off.
- The cable of a printer is unplugged.

■5 Precautions for using Ethernet printers

(1) Precautions for printing

When a printing job is executed under the following conditions, the Printer Error Detection signal (System signal 2-1.b15) is turned on, and the job is canceled.

- A printer is disconnected.
- A printer is powered off.

For a PCL5 printer, the Printer Error Detection signal (System signal 2-1.b15) is not turned off automatically.
Fix the error and turn off the signal.

(2) Precautions when an error occurs in a printer

For a PCL5 printer, when an error occurs in a printer, the Printer Error Detection signal (System signal 2-1.b15) is not turned on.
Check the printer status and fix the error.
The printer pauses the printing and resumes the job when the error is fixed.

(3) Precautions for system alarms

For a PCL5 printer, even if the printer is powered off or the network is disconnected during printing, no system alarm may occur.

(4) Precautions when the Printer Error Detection signal (System signal 2-1.b15) is turned on

The data output to a printer when this signal is on is printed when the signal is turned off.
If the data is faulty, the data is deleted and the printing is canceled.
For a PCL5 printer, all printing jobs are canceled when this signal is on.

■6 Precautions for using Ethernet printers (GT21 and GS21)

(1) Print size

A captured screen image is resized at printing as follows.

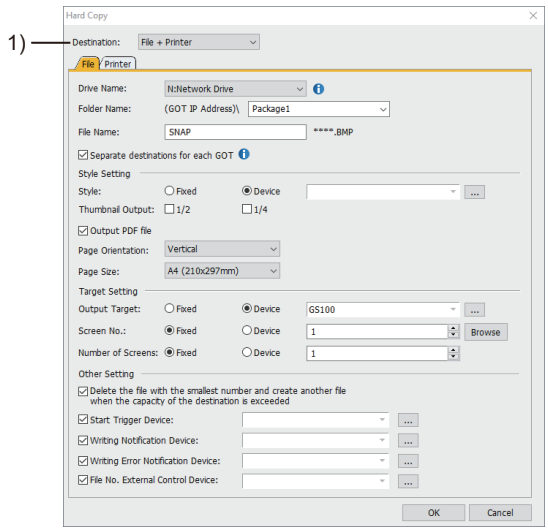
Model	Screen size (dot)	Print size
GT2107-W GS21	800 × 480	135 × 81 mm
GT2104-R	480 × 272	81 × 46 mm
GT2104-P	384 × 128	130 × 43 mm
GT2103-P	320 × 128	109 × 43 mm

9.7.6 [Hard Copy] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the hard copy settings.

Select [Common] → [Hard Copy] from the menu to display the [Hard Copy] dialog.



1) **[Destination]**

Outputs a captured screen image to a file.

The following shows selectable items.

- [File]

  Outputs a captured image to an image file.

  Displays the [File] tab.
- [Printer]

  Outputs a captured image to a printer.

  Displays the [Printer] tab.
- [File + Printer]

  Outputs a captured screen image to a file or a printer.

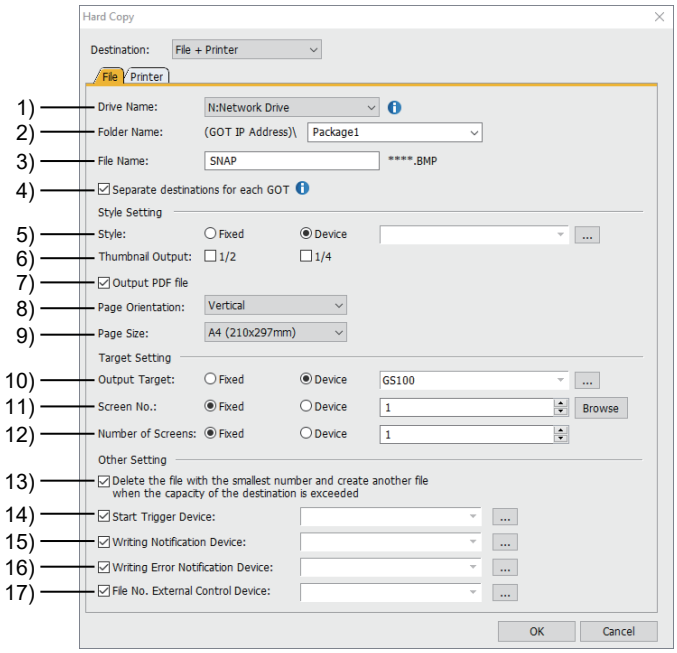
  Displays the [File] tab and the [Printer] tab.

For the setting items on each tab, refer to the following.

➟■1 [File] tab

■2 [Printer] tab

■1 [File] tab



1) **[Drive Name]**

Set the destination drive.

The following shows selectable items.

- [A:Standard SD Card]
- [B:USB Drive]
- [E:USB Drive]
- [F:USB Drive]
- [G:USB Drive]
- [N:Network Drive]
- [X:Current Drive]

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

2) **[Folder Name]**

Set the name of the folder to which an image file is saved.

Up to 65 characters can be set.

When [1/2] or [1/4] is selected for [Thumbnail Output], up to 63 characters can be set.

For the restrictions on the folder name, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

3) **[File Name]**

Set the name of the files to be saved.

Up to 67 characters can be set.

When [1/2] or [1/4] is selected for [Thumbnail Output], up to 65 characters can be set.

For the restrictions on the file name, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

4) **[Separate destinations for each GOT]**

Available to GT27, GT25, and GS25.

This item appears when [Drive Name] is set to [N:Network Drive].

Automatically creates a folder for each GOT to save files.

Each folder is named as the IP address of each GOT.

➟5.3.15 ■4 Creating a folder for each GOT

5) **[Style]**

PDF output is only available to GT27, GT25, and GS25.

Set the file format of a file to be saved.

Set this item by specifying a fixed value or using a device.

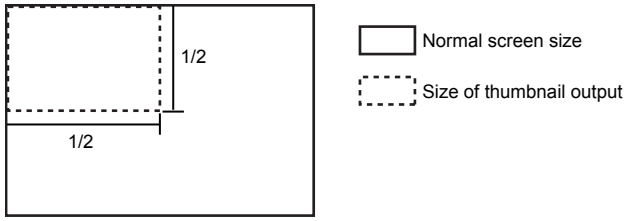
Item	Description
[Fixed]	Specify one of the following. • [BMP] • [JPEG] • [PDF]
[Device]	Available to GT27, GT25, and GS25. You can specify a word device or word-specified bit device (data type: unsigned 16-bit binary data). The following shows the setting values. • 0: BMP • 1: JPEG • 2: PDF If a value other than the above is set, the hard copy is not executed and system alarm 367 is output. To specify the PDF format, be sure to select [Output PDF file].

6) **[Thumbnail Output]**

When the output format is PDF, this item is not displayed because thumbnail output is not supported.
If the output target is as follows, this item is disabled even though it is set, and system alarm 359 is output at a file output.

- Displayed screen: Overlap windows 1 to 5
- Hidden screen: Base screen

Set this item to create a thumbnail of a captured image when the image is saved to a file.
Example) [1/2] in size



Item	Description
[1/2]	Creates a thumbnail that is half of normal screen size. The following shows the destination folder. • Folder name: Folder set with [Folder Name]\M • File name: Name set for [File Name]
[1/4]	Creates a thumbnail that is a quarter of normal screen size. The following shows the destination folder. • Folder name: Folder set with [Folder Name]\S • File name: Name set for [File Name] To use the vertically installed GT27-S or GT27-V, install the version E or later of BootOS on the GOT.

7) **[Output PDF file]**

This item is displayed when [Device] is selected for [Style].
Be sure to select this item to execute a PDF output using a device.

8) **[Page Orientation]**

Specify the PDF page orientation.
The screen is scaled to fit the page size.
Left, right, top, and bottom margins are provided on the page of the outputted PDF file.

Item	Description
[Vertical]	Images are all vertically outputted regardless of the aspect ratio of the screen.
[Horizontal]	Images are all horizontally outputted regardless of the aspect ratio of the screen.
[Automatic]	The page orientation is automatically determined considering the aspect ratio of the output target screen so that the margins will be minimized. [Vertical] is set for square and vertically oriented screens whereas [Horizontal] is set for horizontally oriented screens.

9) **[Page Size]**

Specify the PDF page size.

- [A4 (210x297mm]
- [Letter (8.5"x11")]

10) **[Output Target]**

Available to GT27, GT25, and GS25.

Except for GT27, GT25, and GS25, this item is not displayed because the setting is fixed to the monitor screen displayed on the GOT.

Specify an output target screen.

Set this item by specifying a fixed value or using a device.

To specify a screen other than the monitor screen being displayed, select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] and specify a screen not selected for [Take a hard copy of a screen other than the displayed monitor screen].

Item	Description
[Fixed]	Specify one of the following. • • [Displayed monitor screen] • • [Displayed base screen] • • [Displayed overlap window 1] • • [Displayed overlap window 2] • • [Displayed overlap window 3] • • [Displayed overlap window 4] • • [Displayed overlap window 5] • • [Hidden base screen] • • [Hidden window screen]
[Device]	You can specify a word device or word-specified bit device (data type: unsigned 16-bit binary data). The following shows the setting values. • 0: Displayed monitor screen • 1: Displayed base screen • 2: Displayed overlap window 1 • 3: Displayed overlap window 2 • 4: Displayed overlap window 3 • 5: Displayed overlap window 4 • 6: Displayed overlap window 5 • 7: Hidden base screen • 8: Hidden window screen

11) **[Screen No.]**

Set this item when the output target is a hidden screen.

Specify the number of the screen whose image is to be output.

Set this item by specifying a fixed value or using a device.

Item	Description
[Fixed]	Clicking the [Browse] button displays the [Screen Image List] dialog. Check the screen image on the dialog before setting.
[Device]	You can specify a word device or word-specified bit device (data type: unsigned 16-bit binary data). Set a value within the range from 0 to 32767.

12) **[Number of screens]**

Set this item when the output format is PDF and the output target is a hidden screen.

If the screen numbers are consecutive, specifying the number of screens enables output of multiple screen images to a PDF file.

Specify the number of screens to be output, counting from the screen number specified in [Screen No.].

Set this item by specifying a fixed value or using a device.

Item	Description
[Fixed]	Set a value within the range from 1 to 100.
[Device]	You can specify a word device or word-specified bit device (data type: unsigned 16-bit binary data). Set a value within the range from 1 to 100.

13) **[Delete the file with the smallest number and create another file when the capacity of the destination is exceeded]**

Not available to GT SoftGOT2000.

Deletes an existing file and saves a new file when the save destination drive has insufficient free space.

Operation varies depending on the amount of free space of the destination drive and the file number of each file in the

destination folder.

File number of a file in the destination folder	If the destination drive has enough free space	If the destination drive has insufficient free space
File No. 9999 nonexistent	A new file is saved with the largest file number in the destination folder.	The existing files are deleted, starting from the one with the smallest file number in the destination folder, until a new file is saved. A new file is saved with the largest file number in the destination folder.
File No. 9999 existent	All existing files in the destination folder are deleted, and a new file is saved with file No. 1.	

When the number of files in the destination folder reaches 9899, the System signal 2-1.b12 turns on.
If you deselect this item, a new file is not created when the destination drive has insufficient free space or file No. 9999 exists in the destination folder.

14) **[Start Trigger Device]**

Set the device to start a hard copy (file save).
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

15) **[Writing Notification Device]**

Not available to GT SoftGOT2000.
Set the device to notify that a captured image is being saved to a file.
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

This device is on during an image file output.

16) **[Writing Error Notification Device]**

Not available to GT SoftGOT2000.
Set the device to notify that saving a captured image to a file has failed.
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

This device turns on when an error occurs during an image file output.
The device does not turn off automatically even after error recovery.
You need to turn off the device.

17) **[File No. External Control Device]**

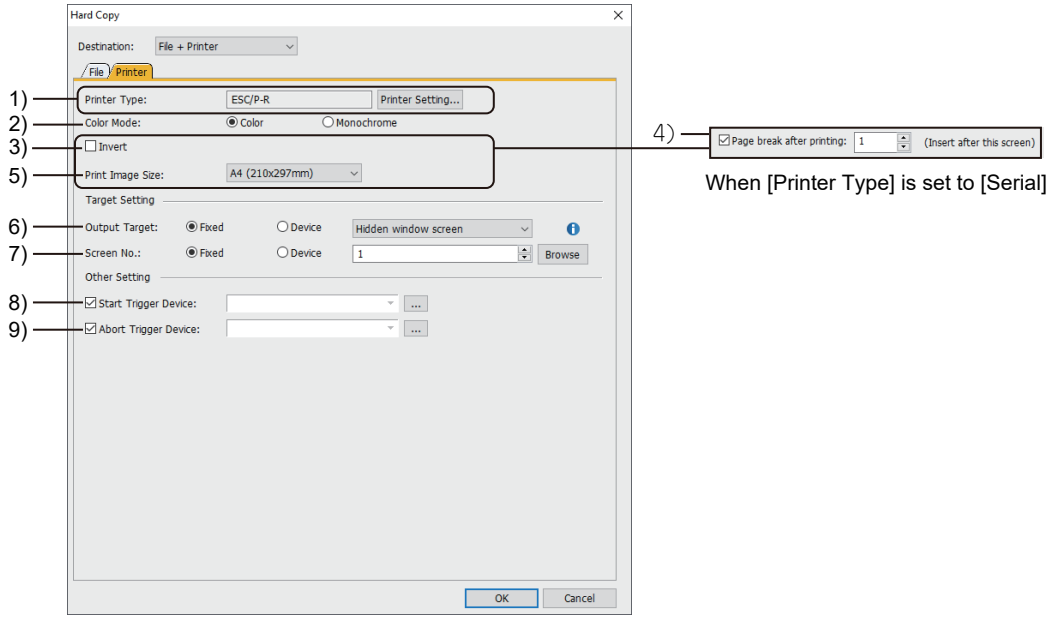
Set the device that specifies the file number of a file to be saved.
The data type of the device is unsigned 16-bit binary.
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

The valid range of the file number is 1 to 9999.
If a specified file number exists, the corresponding file is overwritten.
If a specified file number is outside the valid range, the file is not saved.
This setting overrides the setting of [Delete the file with the smallest number and create another file when the capacity of the destination is exceeded]. (The GOT performs the operation with the latter item deselected.)

■2 [Printer] tab

Not available to GT25HS-V.



When [Printer Type] is set to [Serial]

When [Printer Type] is set to [ESC/P-R]

1) **[Printer Type]**

Not available to GT SoftGOT2000.

Type of a selected printer.

To select a printer type, click the [Printer Setting] button.

➟10.11.8 [Printer] dialog

2) **[Color Mode]**

Not available to GT SoftGOT2000.

When [Printer Type] is set to [ESC/P-R]

The following shows selectable items.

- [Color]
- [Monochrome]

3) **[Invert]**

Prints a captured screen image with inverted black and white colors.

For the black and white inversion, refer to the following.

➟9.7.4 ■5 Printing a captured image with inverted black and white colors

This setting is not applied to GT SoftGOT2000.

Configure the print settings on GT SoftGOT2000.

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4) **[Page break after printing]**

Not available to GT SoftGOT2000.

This item can be set only when [Serial] is selected for [Printer Type].

Set the number of screens to print without page break.

The setting range is [1] to [4]

5) **[Print Image Size]**

This item is settable when [Printer Type] is set to [PictBridge], [ESC/P-R], or [PCL5].

The selectable items vary according to the selection for [Printer Type].

○ : Available, ×: Not available

[Printer Type]	[Print Image Size]				
	[L(89x127mm)]	[Postcard(100x148 mm)]	[2L(127x178mm)]	[A4(210x297mm)]	[Letter (8.5"x11")]
[PictBridge]	○	○	○	○	×
[ESC/P-R]	○	○	○	○	○

[Printer Type]	[Print Image Size]				
	[L(89x127mm)]	[Postcard(100x148 mm)]	[2L(127x178mm)]	[A4(210x297mm)]	[Letter (8.5"x11")]
[PCL5]	×	×	×	○	○

This setting is not applied to GT SoftGOT2000.
Configure the print settings on GT SoftGOT2000.

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6) **[Output Target]**
Equivalent to the file output settings.
For details, refer to the following.

➟■1 [File] tab

7) **[Screen No.]**
Equivalent to the file output settings.
For details, refer to the following.

➟■1 [File] tab

8) **[Start Trigger Device]**
Set the device to start a printer output.
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

9) **[Abort Trigger Device]**
Set the device to abort a printer output.
For the setting procedure, refer to the following.

➟6.1.2 How to set devices

This setting is not applied to GT SoftGOT2000.

9.7.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the hard copy as required.
The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Enabling the reverse printing of the hard copy function with the system signal. (Read device: System signal 1-1.b10)	[System Signal 1-1] (Not available to GT SoftGOT2000)
Specifying the invert printing of the hard copy. (Read device: System signal 1-1.b12)	[System Signal 1-1] (Not available to GT SoftGOT2000)
Notifying that data is being output to a file or printer. (Write device: System signal 2-1.b7)	[System Signal 2-1] (Not available to GT SoftGOT2000)
Aborting the printing process. (Read device: System signal 1-2.b15)	[System Signal 1-2] (Not available to GT SoftGOT2000)
Notifying an error of printer while the printing process is being executed. (Write device: System signal 2-1.b15)	[System Signal 2-1] (Not available to GT SoftGOT2000)
Notifying that the printing process is being executed. (Write device: System signal 2-2.b15)	[System Signal 2-2] (Not available to GT SoftGOT2000)
Notifying that the number of files in the save destination folder approaches the upper limit (9999) (Write device: System signal 2-1.b12)	[System Signal 2-1] (Not available to GT SoftGOT2000)

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying the connection status between the GOT and a printer. (Write device) The following printers are supported: PictBridge-compatible printers.	GS258.b0 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying the occurrence of a warning-level error. (Write device) The following printers are supported: PictBridge-compatible printers.	GS258.b1 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying the occurrence of a fatal-level error. (Write device) The following printers are supported: PictBridge-compatible printers.	GS258.b2 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying that the printer is ready or not. (Write device) The following printers are supported: PictBridge-compatible printers, serial printers, and Ethernet printers.	GS258.b3 (Not available to GT SoftGOT2000)
Notifying the error code of the latest error that has occurred in the printer. (Write device) The following printers are supported: Ethernet printers.	GS259 (Not available to GT SoftGOT2000)
Outputting page numbers with a numerical print. (Write device)	GS278
Disabling automatic page breaks when the number of printed lines reaches the number of lines specified in the [Report Setting] dialog. (Read device)	GS524.b0 (Not available to GT SoftGOT2000)
Inserting a page break when GS524.b0 is on. (Read device)	GS524.b1 (Not available to GT SoftGOT2000)
Setting a wait time for communication and drawing to complete.	GS526 (Available to GT27, GT25, and GS25.)
Outputting the number of outputted screen images.	GS693 (Available to GT27, GT25, and GS25.)

9.8 Controlling Operations with Scripts ([Script])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.8.1 Overview of the script function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Scripts allow you to control the GOT display with the GOT's original programs.
By controlling the GOT display with scripts in the GOT, you can significantly reduce the load for the display of the system (controllers).

9.8.2 Features of the script function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Easy system maintenance

With scripts, the controllers can be programmed to handle machine control only, so the system maintenance becomes much easier.

■2 Various screen controls available together with the GOT

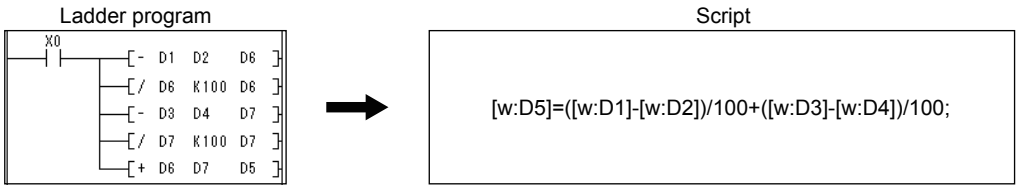
Using scripts enables the following operations that could not be achieved by the GOT alone.

(1) Operations together with other object functions

- The status of multiple bit devices can be indicated by one lamp.
- A specific part can be displayed if any of the bit devices is on, and hidden if all of them are off.
- When a numerical value is input, the part which indicates that it has already been input is pasted next to the then input numerical display frame.
- One touch switch can perform multiple operations corresponding to the status in multiple situations.
- The error handling screen appears automatically upon the detection of a GOT error. (The GOT Error Code device of the system information stores the error code upon its detection.)

(2) Processing complicated arithmetic operations

- Polynomial operations can be expressed simply in a line, which are difficult for ladder programs to express.



- In addition to four arithmetic operations, scripts can be used for various application arithmetic operation functions such as trigonometric and exponential functions.

(3) No limit on application

- You can obtain a target date using an entered date and interval (number of days in between).
  What is the date after 345 days from May 20th, 2012? →April 30th, 2013.
- You can obtain the corresponding day of the week from an entered date.
  What day of the week was February 21st, 1961? →Tuesday.

■3 Simple programming language

Scripts are in a language similar to C language, so you can easily make a program with elementary programming knowledge.

■4 Programming using a commercially available text editor

Commercially-available text editors (such as the Microsoft Windows standard memo pad and Wordpad) which you may use every day can be used for programming, so you can improve program productivity.

■5 Operating conditions settable for each script

Various conditions can be set as triggers for a script, so script execution can be scheduled.
In addition to the above conditions, the execution of an object script can be tied to an input to the object, display on the object, or a touch on a touch switch.
GT21 and GS21 do not support the object script function.

■6 A wide variety of the debug functions

Since scripts and C language are similar, you can simulate the scripts by making minor corrections using a general C language complier or debugger.
Complicated scripts including many control statements can be debugged easily by using them.
The device monitor is useful for debugging controllers using the GOT.
The test function and device monitor are available to check conditional branches in a script.
By monitoring the GOT special register (GS), error information and scripts in execution can be easily checked.

■7 Syntax check of the created scripts

You can check the syntax of a created script on GT Designer3 before running the script on the GOT, improving programming efficiency.

■8 Converting the script language of SCHNEIDER EJH software

You can convert the D-Scripts or Global D-Scripts of SCHNEIDER EJH software so that the scripts run on the GOT.
To convert the script language, use GT Converter2.
For the details of the data to be converted and the conversion method, refer to the following.

➟GT Converter2 Version3 Operating Manual for GT Works3

9.8.3 Script types

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following four types of scripts are supported.

Type	Description	Supported models
Project script	Project scripts are set and operate for the whole project. For the details of project scripts, refer to the following. ➟9.9 Project Script, Screen Script, and Script Part	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Screen script	Screen scripts are set and operate for each base screen and window screen (superimpose windows and overlap windows). For the details of screen scripts, refer to the following. ➟9.9 Project Script, Screen Script, and Script Part	
Script part	A script parts object is placed on a base screen or a window screen (superimpose window or overlap window), and the script set for the object runs. For the details of script parts, refer to the following. ➟9.9 Project Script, Screen Script, and Script Part	
Object script	Object scripts are set and operate for the following objects. • Touch switch ([Switch] only) • [Bit Lamp] • [Word Lamp] • [Numerical Display] • [Numerical Input] • [Text Display] • [Text Input] • [Date Display] • [Time Display] • [Bit Comment] • [Word Comment] • [Parts Display] • [Parts Movement] • [Line Graph] • [Trend Graph] • [Bar Graph] • [Statistics Bar Graph] • [Statistics Pie Graph] • [Scatter Graph] • [Historical Trend Graph] • [Graphical Meter] • [Level] • [Panelmeter] For the details of object scripts, refer to the following. ➟9.10 Object Script	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

9.9 Project Script, Screen Script, and Script Part

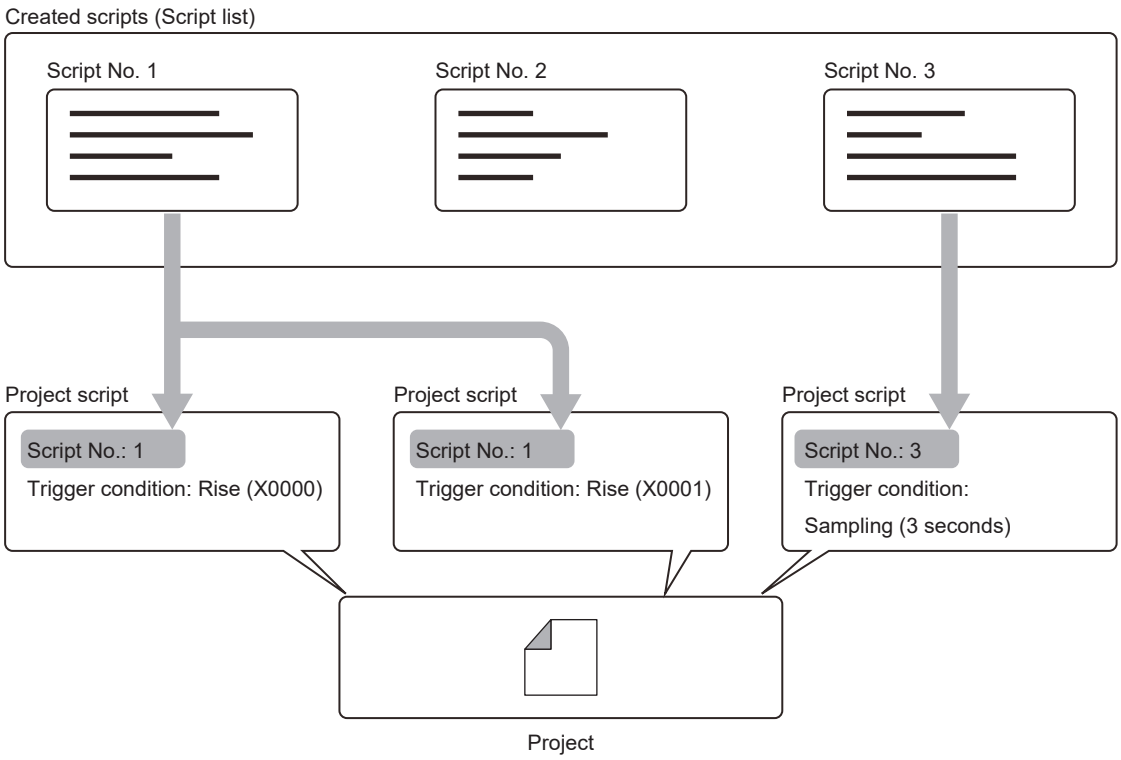
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.9.1 Overview of a project script, screen script, and script part

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

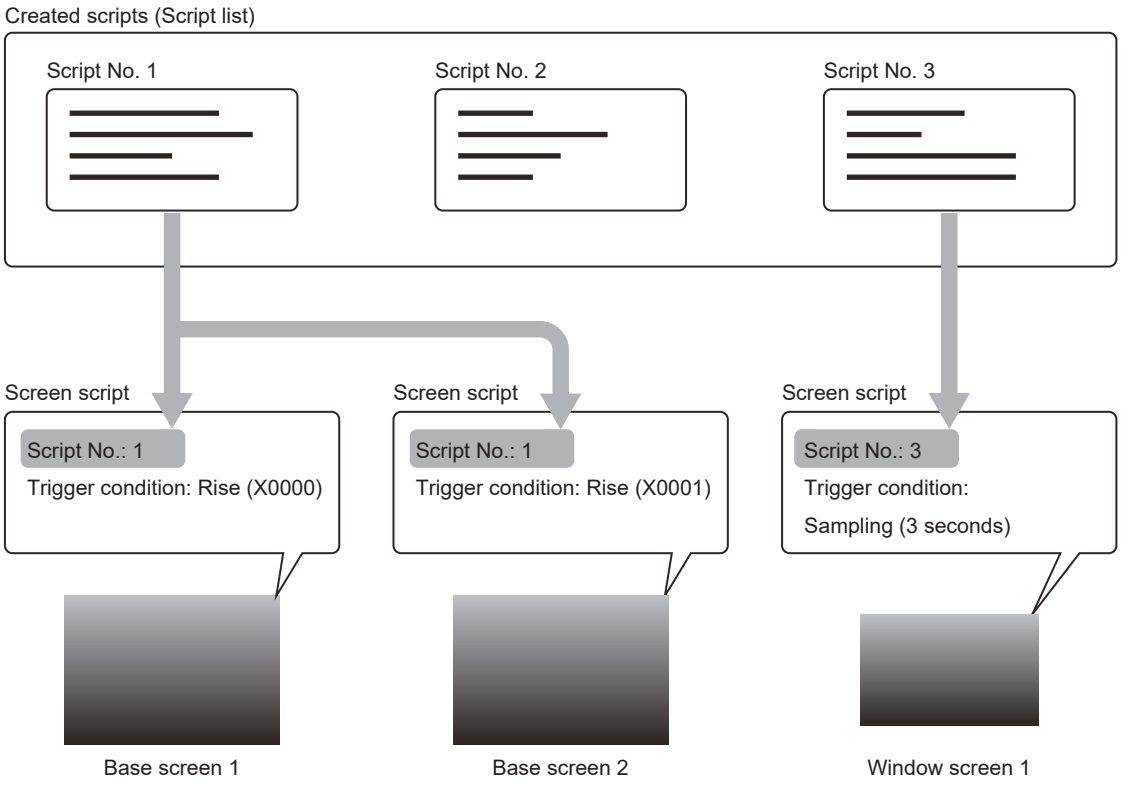
■1 Overview of a project script

Set a project script for the current project.
If the trigger condition of the script is satisfied, the script runs.
A created script can be specified in a project script setting or a screen script setting.
If you edit the script, the edit will affect the project script setting or screen script setting.



■2 Overview of a screen script

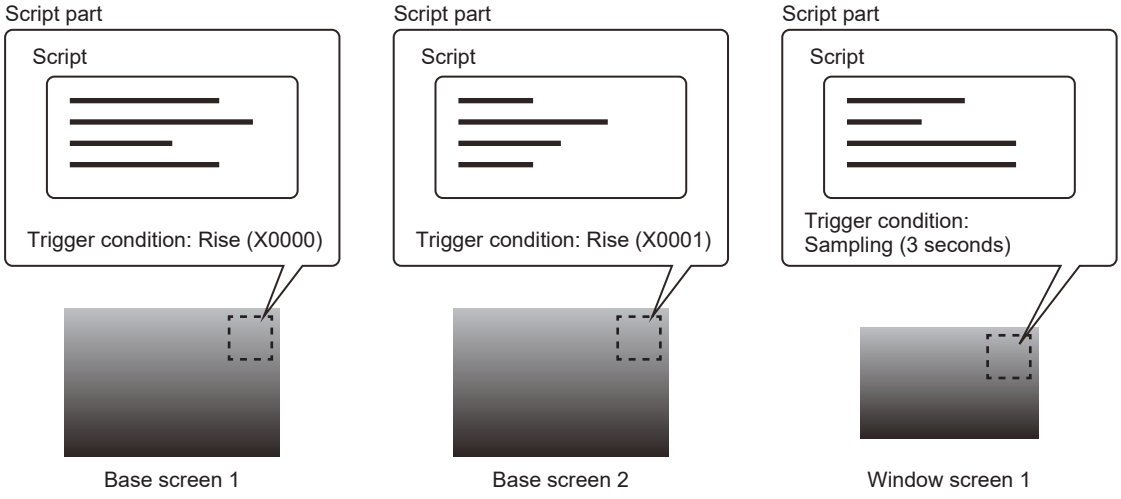
Set a screen script for the user-specified screen.
While the GOT displays the screen, if the trigger condition of the script is satisfied, the script runs.
A created script can be specified in a project script setting or a screen script setting.
If you edit the script, the edit will affect the project script setting or screen script setting.



■3 Overview of a script part

Place a script parts object on a screen to create a script.
While the GOT displays the screen having a script parts object, if the trigger condition of the created script is satisfied, the script runs.
Each script parts object has its own scripts.
If you edit a script of a script parts object, the edit will not affect the other script parts objects.
The following object manipulations are supported.

- Copying to another screen
- Grouping
- Registering to the library
- Adding to a template



A script parts object is visible only on the screen editor of GT Designer3.
The object is invisible on the GOT screen.

9.9.2 Specifications of a project script, screen script, and script part

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Specifications related to a script setting

A script setting consists of a script trigger condition and a script.
The setting target, and the maximum numbers of script settings and scripts vary depending on the script type.

Script type	Setting target	Maximum number of script settings	Maximum number of scripts
Project script	Project	256	32767 (in both the project script settings and the screen script settings)
Screen script	• Base screen • Window screen (superimpose window or overlap window) *1	256 per screen (The script settings for called screens are included.)	
Script part		Maximum number of script parts objects: 32 per screen Maximum number of script settings: 16 per object	16 per object

*1 For GT21 and GS21, screen scripts are not settable for window screens.

■2 Specifications related to the behavior of a script

The following shows the specifications related to the behavior of a script.

Script type	Execution condition	Number of executable scripts
Project script	The trigger condition of a script is satisfied. (Except under conditions where the GOT stops monitoring for reasons including receiving package data.)	256
Screen script	The trigger condition of a script is satisfied while the GOT displays the screen for which the script is set. (Except under conditions where the GOT stops monitoring for reasons including receiving package data.)	256 per screen (in both the screen script settings and the script settings of script parts objects)
Script part		

(1) Specifications of a screen script and script part

The following shows the behavior of a script when the set overlay screen function or a parts display object displays the screen for which the script is set.

Function	Behavior
Set overlay screen	• For GT27, GT25, GT23, GT SoftGOT2000, and GS25 If a calling screen calls a called screen for which a screen script or a script part is set, the script runs. • For GT21 and GS21 If a calling screen calls a called screen for which a screen script or a script part is set, the script does not run.
Parts display	If a parts display object displays a screen for which a screen script or a script part is set, the script does not run.

■3 Control structures for a project script, screen script, and script part

The following explains the control structures for scripts.
Program scripts using the following commands (including control statements, operators, and functions).
You can describe nests (hierarchy) for if, while, and switch statements.
End a script using a return statement.

(1) Control statement

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Control statement	Description	
if	Syntax	if (conditional expression) {statements}
	Function	Performs a conditional control. The if statement evaluates (conditional expression). If the expression is true (other than 0), {statements} is executed. The if statement is a fundamental conditional control and used to execute specified processing when a value satisfies a condition or to alter the flow of program execution.
if to else	Syntax	if (conditional expression) {statements 1} else {statements 2}
	Function	Performs a conditional control. The if statement evaluates (conditional expression). If the expression is true (other than 0), {statements 1} is executed. If the expression is false (0), {statements 2} is executed. The if statement is a fundamental conditional control and used to execute specified processing when a value satisfies a condition or to alter the flow of program execution.
while break	Syntax	while (continuous conditional expression) {statements}
	Function	Evaluates (continuous conditional expression). As long as the expression is true (other than 0), {statements} is repeatedly executed. In the following cases, the iterative loop is terminated. • When (continuous conditional expression) is false (0) • When {statements} includes the break statement The while statement is used to execute processing repeatedly until a target condition is satisfied. (For example, repeating the processing until a device value becomes 0) If a condition is always evaluated to true (other than 0), an infinite loop is created. Use the temporary device area or a GOT internal device as the write destination.

Control statement	Description	

switch
case
default
break
	Syntax	switch (target)
		{
		case constant: statements; break;
		case constant: statements; break;
		default: statements;
		}

	Function	Create a control statement using the combination of four reserved words (switch, case, break, and default). In the following cases, the statements that follow a case statement and the default statement are executed. • When (target) matches a specified constant • When (target) does not match any constant that case statements have and when there is the default statement In the following cases, the switch body {} is terminated. • When there is a break statement in the script • When there is no case statement or default statement that has the constant that matches (target) The break statement and default statement are not required in the control statement. The switch statement is used when various processing are required according to the value of a variable.
return	Syntax	return;
	Function	Terminates the script. A single script can have multiple return statements.
;	Syntax	;
	Function	Indicates the end of a line. It must be put at the end of each line.

(2) Operator (logic)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operator	Description	
&&	Syntax	if ((relevant expression) && (relevant expression) {·····}
	Function	If both of (relevant expression) are true, the result has 1. If either of (relevant expression) is false, the result has 0. (Logical AND operator)
||	Syntax	if ((relevant expression) || (relevant expression)) {·····}
	Function	If either of (relevant expression) is true, the result has 1. If both (relevant expression) are false, the result has 0. (Logical OR operator)
!	Syntax	if (! (relevant expression)) {·····}
	Function	If (relevant expression) is 0, the result has 1. Otherwise the result has 0. (Logical NOT operator)

(3) Operator (relation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operator	Description	
<	Syntax	<target 1> < <target 2>
	Function	<target 1> is less than <target 2>. (Left-inequality operator)
<=	Syntax	<target 1> <= <target 2>
	Function	<target 1> is less than or equal to <target 2>. (Equivalence left-inequality operator)
>	Syntax	<target 1> > <target 2>
	Function	<target 1> is greater than <target 2>. (Right-inequality operator)
>=	Syntax	<target 1> >= <target 2>
	Function	<target 1> is greater than or equal to <target 2>. (Equivalence right-inequality operator)
!=	Syntax	<target 1> != <target 2>
	Function	<target 1> and <target 2> are not equal. (Inequality operator)
==	Syntax	<target 1> == <target 2>
	Function	<target 1> and <target 2> are equal. (Equality operator)

(4) Operator (arithmetic)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operator	Description	
+	Syntax	<target> + <factor>
	Function	Adds <factor> to <target>. (Addition operator)
-	Syntax	<target> - <factor>
	Function	Subtracts <factor> from <target>. (Subtraction operator)
*	Syntax	<target> * <factor>
	Function	Multiplies <target> by <factor>. (Multiplication operator)
/	Syntax	<target> / <factor>
	Function	Divides <target> by <factor>. (Division operator) When <factor> is 0, the script operation stops.
%	Syntax	<target> % <factor>
	Function	Finds the remainder dividing <target> by <factor>. (Remainder operator) When <factor> is 0, the script operation stops.

(5) Operator (bit device)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operator	Description	
&	Syntax	<target> & <factor>
	Function	Finds the logical product (AND) of <target> and <factor>. (Bit accumulation operator)
|	Syntax	<target> | <factor>
	Function	Finds the logical add (OR) of <target> and <factor>. (Bit addition operator)
~	Syntax	~<bit>
	Function	Negates (inverts) <bit>. (Complement operator)
^	Syntax	<target> ^ <factor>
	Function	Finds the exclusive logical add (XOR) of <target> and <factor>. (Bit difference operator)
<<	Syntax	<target> << <factor>
	Function	Shifts <target> left by the number of bits specified by <factor>. (Left-shift operator)
>>	Syntax	<target> >> <factor>
	Function	Shifts <target> right by the number of bits specified by <factor>. (Right-shift operator)

(6) Operator (assignment)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Operator	Description	
=	Syntax	<device> = <target>
	Function	Stores <target> in <device>. (Assignment operator)

(7) Variables

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Variable	Description	
Device and temporary device area	Syntax	[w:GD150]
	Function	Indicates a PLC CPU device, a GOT internal device, or a temporary device area. For devices and temporary device areas, refer to the following. ➡■4 Available data and how to express the data

(8) Functions (device operation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Function		Description
set	Syntax	set (<bit device>)
	Function	Sets <bit device>.
	Example	set([b:M0001]);
rst	Syntax	rst (<bit device>)
	Function	Resets <bit device>.
	Example	rst([b:M0001]);
alt	Syntax	alt (<bit device>)
	Function	Inverts <bit device>.
	Example	alt([b:M0001]);

(9) Functions (consecutive device operation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the data type of arguments, refer to the following.

➟9.9.12 ■3 (2) Data type settings and function definitions

Function		Description
bmov	Syntax	bmov (<word device 1>, (word device 2>, <integer>)
	Function	Batch-transfers the data in the devices in the contiguous sequence, the first area of which is <word device 1>, to the devices in the contiguous sequence, the first area of which is <word device 2>. The number of the devices in the contiguous sequence is specified by <integer>.
	Data type of arguments	<word device 1>, <word device 2>: specified data type *1 <integer>: long
	Example	bmov([w:D100],[w:D500],10);
fmov	Syntax	fmov (<word device 1>, (word device 2>, <integer>)
	Function	Transfers the data in <word device 1> to the devices in the contiguous sequence, the first area of which is <word device 2>. The number of the devices in the contiguous sequence is specified by <integer>.
	Data type of arguments	<word device 1>, <word device 2>: specified data type *1 <integer>: long
	Example	fmov([w:D100],[w:D500],10);

*1 Set the same data type for the word device 1 and the word device 2.

(10)Functions (application arithmetic operation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the data type of arguments and return values, refer to the following.

➟9.9.12 ■3 (2) Data type settings and function definitions

Function		Description
sin	Syntax	sin (<word device or constant>)
	Function	Calculates the sine of a specified <word device or constant>. (Sine) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	sin([w:D100]);

Function	Description	
cos	Syntax	cos (<word device or constant>)
	Function	Calculates the cosine of a specified <word device or constant>. (Cosine) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	cos([w:D100]);
tan	Syntax	tan (<word device or constant>)
	Function	Calculates the tangent of a specified <word device or constant>. (Tangent) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	tan([w:D100]);
asin	Syntax	asin (<word device or constant>)
	Function	Calculates the arc sine of <word device or constant>. (Arc sine) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	asin([w:D100]);
acos	Syntax	acos (<word device or constant>)
	Function	Calculates the arc cosine of <word device or constant>. (Arc cosine) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	acos([w:D100]);
atan	Syntax	atan (<word device or constant>)
	Function	Calculates the arc tangent of <word device or constant>. (Arc tangent) Specify <word device or constant> in radian.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	atan([w:D100]);
abs	Syntax	abs (<word device or constant>)
	Function	Calculates the absolute value of <word device or constant>. (Absolute value)
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	abs([w:D100]);

Function	Description	
log	Syntax	log (<word device or constant>)
	Function	Calculates the base-e logarithm <natural logarithm> of <word device or constant>.
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	log([w:D100]);
log10	Syntax	log10 (<word device or constant>)
	Function	Calculates the base-10 logarithm (common logarithm) of <word device or constant>. (Common logarithm)
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	log10([w:D100]);
exp	Syntax	exp (<word device or constant>)
	Function	Calculates the value of e raised to the power of <word device or constant>. (Exponent)
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	exp([w:D100]);
ldexp	Syntax	ldexp (<word device 1 or constant 1>, <word device 2 or constant 2>)
	Function	Calculates the formula: <word device 1 or constant 1> × (2 raised to the power of <word device 2 or constant 2>). (Exponent of product)
	Data type of arguments	<word device 1 or constant 1>: double <word device 2 or constant 2>: long
	Return value	double
	Example	ldexp([w:D100], [w:D101]);
sqrt	Syntax	sqrt (<word device or constant>)
	Function	Calculates the square root of <word device or constant>. (Square root)
	Data type of arguments	<word device or constant>: double
	Return value	double
	Example	sqrt([w:D100]);

(11)Functions (file operation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the argument used for the file operation function, refer to the following.

➟■4 Available data and how to express the data

For the data type of arguments and return values, refer to the following.

➟9.9.12 ■3 (2) Data type settings and function definitions

Function	Description	
file_getlist	Syntax	file_getlist (<folder name>, <file name>, <storage device>, <offset>, <number of files>, <maximum number of characters>)
	Function	Extracts file names equivalent to the number of characters specified by <maximum number of characters>, and stores the file names in <storage device> and the following devices in the contiguous sequence. The number of files specified by <number of files> is read from the xth file (x is specified by <offset>) counted from the first specified by <folder name> and <file name>.
	Data type of arguments	<folder name>, <file name>, <storage device>, <offset>, <number of files>, <maximum number of characters>: long
	Return value	long Normal: Number of obtained files When a specified file is nonexistent or the value of <offset> is larger than the number of existing files: 0 Error: -1
	Example	[s16:D500] = file_getlist("X:\\Package1\\", "*.DAT", [w:D100], 3, 2, 8);
file_getfolderlist	Syntax	file_getfolderlist (<folder name 1>, <folder name 2>, <storage device>, <offset>, <number of folders>, <maximum number of characters>)
	Function	In a folder specified by <folder name 1> and <folder name 2>, obtains characters of the name of the <offset>th and subsequent folders. Then, stores the obtained characters in <storage device> and subsequent devices. The number of obtained characters is specified by the <maximum number of characters>, and that of target folders is specified by <number of folders>.
	Data type of arguments	<folder name 1>, <folder name 2>, <offset>, <number of files>, <maximum number of characters>: long <storage device>: Signed BIN32
	Return value	long Normal: Number of obtained folders When a specified folder is nonexistent or the value of <offset> is larger than the number of existing folders: 0 Error: -1
	Example	[s16:D500] = file_getfolderlist("X:\\Package1\\", "", [w:D100], 6, 2, 8);
file_read *2	Syntax	file_read (<folder name>, <file name>, <storage device>, <offset>, <number of read bytes>)
	Function	Reads data of the file specified by <folder name> and <file name>, and stores the data in <storage device> and the following devices in the contiguous sequence. The number of bytes specified by <number of read bytes> is read from the xth byte (x is specified by <offset>).
	Data type of arguments	<folder name>, <file name>, <storage device>, <offset>, <number of read bytes>: long
	Return value	long Normal: Size of read data (bytes) When <number of read bytes> is 0 or <offset> is greater than the file size: 0 Error: -1
	Example	[s16:D500] = file_read("X:\\Package1\\", "ARP00001.DAT", [w:D100], 4, 16);

Function	Description	
file_lineread *2	Syntax	file_lineread (<folder name>, <file name>, <storage device>, <offset>, <maximum number of read bytes>)
	Function	This function is for an ASCII or Shift-JIS file. Reads 1-line data starting from the <offset>th byte from a file specified by <folder name> and <file name>, and stores the data in <storage device> and subsequent devices. Data size that can be read at a time is within <maximum number of read bytes>.
	Data type of arguments	<folder name>, <file name>, <storage device>, <offset>, <maximum number of read bytes>: long
	Return value	long Normal: Size of read data (bytes)*1 When <number of read bytes> is 0 or <offset> is greater than the file size: 0 Error: -1
	Example	[s16:D200] = file_lineread("X:\\Package1\\", "ARP00001.CSV", [w:D300], 0, 32);
file_unilineread *2	Syntax	file_unilineread (<folder name>, <file name>, <storage device>, <offset>, <maximum number of read bytes>)
	Function	This function is for a Unicode file. Reads 1-line data starting from the <offset>th byte from a file specified by <folder name> and <file name>, and stores the data in <storage device> and subsequent devices. Data size that can be read at a time is within <maximum number of read bytes>.
	Data type of arguments	<folder name>, <file name>, <storage device>, <offset>, <maximum number of read bytes>: long
	Return value	long Normal: Size of read data (bytes)*1 When <number of read bytes> is 0 or <offset> is greater than the file size: 0 Error: -1
	Example	[s16:D200] = file_unilineread("X:\\Package1\\", "ARP00001.txt", [w:D300], 0, 32);
file_write *2	Syntax	file_write (<folder name>, <file name>, <storage device>, <offset>, <number of write bytes>, <mode>)
	Function	Writes data in a manner specified by <mode>. • New: 0 Creates the file specified by <folder name> and <file name> to which device data is written. The number of bytes specified by <number of write bytes> of the device data in <storage device> and the following devices in the contiguous sequence is written. When the file that <file name> specifies already exists, the file is deleted and a new file is created. • Addition: 1 Adds data equivalent to the number of bytes specified by <number of write bytes> in <storage device> and the following devices in the contiguous sequence to the end of the file specified by <folder name> and <file name>. When <file name> specifies a file that does not exist, a new file is created. • Overwrite: 2 Overwrites a position in the file specified by <folder name> and <file name> with the device data equivalent to the number of bytes specified by <number of write bytes> in <storage device> and the following devices in the contiguous sequence. The position in the file is specified by <offset>.
	Data type of arguments	<folder name>, <file name>, <storage device>, <offset>, <number of write bytes>, <mode>: long
	Return value	long Normal: Size of written data (bytes) Error: -1
	Example	[s16:D500] = file_write("X:\\Package1\\", "ARP00001.DAT", [w:D100], 4, 16, 2);
file_rename	Syntax	file_rename (<folder name>, <file name>, <new file name>)
	Function	Changes <file name> of the file specified by <folder name> and the <file name> to <new file name>.
	Data type of arguments	<folder name>, <file name>, <renamed file name>: long
	Return value	long Normal: 0 Error: -1
	Example	[s16:D500] = file_rename("X:\\Package1\\", "ARP00001.DAT", "DATA1201.DAT");

Function	Description	
file_delete	Syntax	file_delete (<folder name>, <file name>)
	Function	Deletes a specified <file name> in <folder name>.
	Data type of arguments	<folder name>, <file name>: long
	Return value	long Normal: 0 Error: -1
	Example	[s16:D500] = file_delete("X:\\Package1\\", "ARP00001.DAT");
file_copy	Syntax	file_copy (<copy source folder name>, <copy source file name>, <copy destination folder name>, <copy destination file name>, <copy mode>)
	Function	Copies the file specified by <copy source folder name> and <copy source file name> into the folder specified by <copy destination folder name> changing the file name to <copy destination file name>. With <copy mode>, whether or not write protection is imposed can be specified. When <copy destination folder name> specifies a folder that does not exist, a new folder is created and the file is pasted. A file with the length of 0 byte is copied.
	Data type of arguments	<original folder name>, <original file name>, <destination folder name>, <destination file name>, <copy mode>: long
	Return value	long Normal: 0 Error: -1
	Example	[s16:D500] = file_copy("X:\\Package1\\", "ARP00001.DAT", "B:\\backup\\", "", 1);
file_xcopy	Syntax	file_xcopy (<copy source folder name 1>, <copy source folder name 2>, <copy destination folder name 1>, <copy destination folder name 2>, <copy mode>)
	Function	Copies the folders specified by <copy source folder name 1> and <copy source folder name 2> to the folders specified by <copy destination folder name 1> and <copy destination folder name 2>. With <copy mode>, whether or not write protection is imposed and sub folders are set as the target for a copy can be specified.
	Data type of arguments	<original folder name 1>, <original folder name 2>, <destination folder name 1>, <destination folder name 2>, <copy mode>: long
	Return value	long Normal: 0 Error: -1
	Example	[s16:D500] = file_xcopy("X:\\Package1\\", "sample1", "B:\\backup\\", "sample1", 1);
#pragma folder_name_length	Syntax	#pragma folder_name_length (<maximum number of folder name characters>)
	Function	Declare this function at the top of a script. Sets <maximum number of folder name characters> when a device is specified as the folder name.
	Example	#pragma folder_name_length(14)
#pragma file_name_length	Syntax	#pragma file_name_length (<maximum number of file name characters>)
	Function	Declare this function at the top of a script. Sets <maximum number of file name characters> when a device is specified as the file name.
	Example	#pragma file_name_length(12)
#pragma use_character_code unicode	Syntax	#pragma use_character_code unicode
	Function	Declare this function at the top of a script. Uses the characters of the folder name and file name specified in a file operation function as Unicode characters. The characters of the folder name and file name, which are obtained using "file_getlist" or "file_getfolderlist", are encoded in Unicode.
	Example	#pragma use_character_code unicode

*1 The data which is read does not contain line feed codes but the return value contains the number of bytes containing line feed codes.

*2 Specify a data storage order (from higher-order bytes or from lower-order bytes) on GT Designer3 or with GS390.

Setting method	Description
Setting on GT Designer3	Set [File/Text Handling Function Storage Order] on the [Option] tab in the [Script] dialog. ➟9.9.5 ■4 [Option] tab

Setting method	Description
Setting with GS390	Specify a data storage order with the value of GS390. • 0 or 3 or more: Data is stored in the order specified on GT Designer3. • 1: Data is stored from lower-order bytes. • 2: Data is stored from higher-order bytes.

(a) Folder and file name character number specification functions (#pragma folder_name_length, #pragma file_name_engthe)

- Scope

  The folder and file name character number specification functions are used to specify a folder name or file name with a device.

  If a folder name or file name is directly specified by character strings, this function is invalid.
- Maximum number of characters per folder name or file name (when these function are not used)

  Up to 12 characters can be used for a folder name and file name when the folder and file name character number specification functions are not used.

(b) Use Unicode declare function (#pragma use_character_code unicode)

- Scope

  The use Unicode declare function is used to specify the folder name and file name in a file operation function in Unicode.
- Character code specified without this function

  The characters of the folder name and file name are encoded in ASCII.

(c) Devices used for arguments

If a controller device is used for any of the following arguments, a function using the argument takes a long time to execute. Therefore, using a GOT internal device is recommended.

- <folder name>
- <folder name 1>
- <folder name 2>
- <file name>
- <storage device>
- <new file name>
- <copy source folder name>
- <copy source folder name 1>
- <copy source folder name 2>
- <copy source file name>
- <copy destination folder name>
- <copy destination folder name 1>
- <copy destination folder name 2>
- <copy destination file name>

(12)Functions (string operation)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the arguments used for the string operation functions, refer to the following.

➟■4 Available data and how to express the data

For the data type of arguments and return values, refer to the following.

➟9.9.12 ■3 (2) Data type settings and function definitions

Function		Description
str_scanf	Syntax	str_scanf (<input string storage device>, <input byte count>, <offset>, <format>, <input value storage device>, <input value storage device>, ...)
	Function	Use this function to read data from an ASCII or Shift JIS string. Stores the character string equivalent to <input byte count> extending from the xth byte (x is specified by <offset>) of <input string storage device> in <input value storage device> in the format specified by <format>. Up to 10 pieces of data can be read.
	Data type of arguments	<input string storage device>, <input byte count>, <offset>: long <format>: Character string <input value storage device>, ...: Changes the specified data type to the device type.
	Return value	long Normal: Number of the pieces of read data Error: -1
	Example	[s16:D500] = str_scanf([w:D100], 32, 0, "%d,%4x", [w:D200], [w:D204]);
str_printf	Syntax	str_printf (<output string storage device>, <output byte count>, <format>, <output value storage device>, <output value storage device>, ...)
	Function	Use this function to write a device value in ASCII or Shift JIS code. Writes the value of <output value storage device> equivalent to <output byte count>, starting from the first byte of <output string storage device> in <format>. A null is appended to a string, and therefore specify "the number of characters + 1" for <output byte count>. Up to 10 pieces of data can be written.
	Data type of arguments	<output string storage device>, <output byte count>: long <format>: Character string <output value storage device>, ...: Changes the device value to the specified data type.
	Return value	long Normal: Size of the written character string (bytes) Error: -1
	Example	[s16:D500] = str_printf([w:D100], 18, "%04d,%4x,%4.2f\r\n", [s16:D200], [s16:D300], [flt:D400]);
str_strlen	Syntax	str_strlen (<input string storage device>, <input byte count>)
	Function	Use this function to obtain the data length of an ASCII or Shift JIS string. Obtains the data length of characters from the first byte of <input string storage device> to the byte specified by <input byte count>.
	Data type of arguments	<input string storage device>, <input byte count>: long
	Return value	long Normal: Data length of the character string (bytes) Error: -1
	Example	[s16:D500] = str_strlen([w:D100], 10);
str_strmid	Syntax	str_strmid (<input string storage device>, <output string storage device>, <offset>, <string length>)
	Function	Use this function to read a part of an ASCII or Shift JIS string and write the read data to a device. Stores the character string equivalent to <string length> extending from the xth byte (x is specified by <offset>) of <input string storage device> in <output string storage device>.
	Data type of arguments	<input string storage device>, <output string storage device>, <offset>, <string length>: long
	Return value	long Normal: Data length of the read string (bytes) Error: -1
	Example	[s16:D500] = str_strmid([w:D100], [w:D200], 5, 7);

Function	Description	
str_uniscanf	Syntax	str_uniscanf (<input string storage device>, <input byte count>, <offset>, <format>, <input value storage device>, <input value storage device>, ...)
	Function	Use this function to read data from a Unicode string. Stores the character string equivalent to <input byte count> extending from the xth byte (x is specified by <offset>) of <input string storage device> in <input value storage device> in the format specified by <format>. Up to 10 pieces of data can be read.
	Data type of arguments	<input string storage device>, <input byte count>, <offset>: long <format>: Character string <input value storage device>, ...: Changes the specified type to the device type.
	Return value	long Normal: Number of the pieces of read data Error: -1
	Example	[s16:D500] = str_uniscanf([w:D100], 32, 0, "%d%5s", [s16:D200], [w:D300]);
str_uniprintf	Syntax	str_uniprintf (<output string storage device>, <output byte count>, <format>, <output value storage device>, <output value storage device>, ...)
	Function	Use this function to write a device value in Unicode. Writes the value of <output value storage device> equivalent to <output byte count>, starting from the first byte of <output string storage device> in <format>. A null is appended to a string, and therefore specify "the number of characters + 2" for <output byte count>. Up to 10 pieces of data can be written.
	Data type of arguments	<output string storage device>, <output byte count>: long <format>: Character string <output value storage device>, ...: Changes the device value to the specified type.
	Return value	long Normal: Size of the written character string (bytes) Error: -1
	Example	[s16:GD400] = str_uniprintf([w:GD100], 32, "%04d/t%5s\r\n", [s16:GD200], [w:GD300]);
str_unistrlen	Syntax	str_unistrlen (<input string storage device>, <input byte count>)
	Function	Use this function to obtain the data length of a Unicode string. Obtains the data length of the character string stored from the first byte of <input string storage device> to the xth byte (x is specified by <input byte count>).
	Data type of arguments	<input string storage device>, <input byte count>: long
	Return value	long Normal: Data length of the character string (bytes) Error: -1
	Example	[s16:GD200] = str_unistrlen([w:GD100], 20);
str_unistrmid	Syntax	str_unistrmid (<input string storage device>, <output string storage device>, <offset>, <string length>)
	Function	Use this function to read a part of a Unicode string and write it to a device. Stores the character string equivalent to <string length> extending from the xth byte (x is specified by <offset>) of <input string storage device> in <output string storage device>.
	Data type of arguments	<input string storage device>, <output string storage device>, <offset>, <string length>: long
	Return value	long Normal: Data length of the read string (bytes) Error: -1
	Example	[s16:GD400] = str_unistrmid([w:GD100], [w:GD200], 10, 5);

Function		Description
str_lc2uni	Syntax	str_lc2uni (<local code type>, <original string storage device>, <destination string storage device>, <input byte count>, <output byte count>)
	Function	Reads characters from a string in <local code type> in <original string storage device> and subsequent devices. The number of read characters is specified by <input byte count>. Encodes the read characters to Unicode, and writes the Unicode characters to <destination string storage device> and subsequent devices. The number of written characters is specified by <output byte count>. A character that cannot be encoded is replaced with a space.
	Data type of arguments	<local code type>, <original string storage device>, <destination string storage device>, <input byte count>, <output byte count>: long
	Return value	long Normal: Size of the written character string (bytes) Error: -1
	Example	[s16:GD300] = str_lc2uni(1, [w:GD100], [w:GD200], 6, 12);
str_uni2lc	Syntax	str_uni2lc (<local code type>, <original string storage device>, <destination string storage device>, <input byte count>, <output byte count>)
	Function	Reads characters from a Unicode string in <original string storage device> and subsequent devices. The number of read characters is specified by <input byte count>. Encodes the read characters to <local code type>, and writes the encoded characters to <destination string storage device> and subsequent devices. The number of written characters is specified by <output byte count>. A character that cannot be encoded is replaced with a space.
	Data type of arguments	<local code type>, <original string storage device>, <destination string storage device>, <input byte count>, <output byte count>: long
	Return value	long Normal: Size of the written character string (bytes) Error: -1
	Example	[s16:GD300] = str_uni2lc(3, [w:GD100], [w:GD200], 12, 6);

(a) **Combination with the file operation function**

By using a file operation function together with a string operation function, you can read data from a CSV file or Unicode text file, or edit the file.

(b) **Devices used for arguments**

If a controller device is used for any of the following arguments, a function using the argument takes a long time to execute. Therefore, using a GOT internal device is recommended.

- <input string storage device>
- <output string storage device>
- <input value storage device>
- <output value storage device>
- <original string storage device>
- <destination string storage device>

(13)Others

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item		Description
Constant	Syntax	1234
	Function	Constant (decimal number, hexadecimal number, BCD, real number, character string) For the details of the constants, refer to the following. ➟■4 Available data and how to express the data
#pragma use_ptmp_length	Syntax	#pragma use_ptmp_length (<points to be used>)
	Function	This function is usable in the scripts of a script parts object only. Declare this function at the top of a script. Specifies the maximum number of script parts temporary device areas (PTMP) ranging from 1 to 32768. If this function is not declared, the maximum number of PTMPs is specified as shown below. • GT27, GT25, GT23, GT SoftGOT2000, GS25 1024 (PTMP0 to PTMP1023) • GT21, GS21 256 (PTMP0 to PTMP255)
	Example	#pragma use_ptmp_length (32768)

Item		Description
Local Symbol Definition	Syntax	#defsym <symbol name> <symbol definition>
	Function	Defines <symbol name>. Replaces the contents of <symbol name> in a script with those of <symbol definition> while the script is running. Even if a same-name symbol of the following types already exists in the script, the symbol name will be replaced with the symbol definition by #defsym. • Script symbol • Script parts symbol • Object script symbol The set symbol definition is effective from the definition line to the end of the script.
	Example	#defsym XYZ 10
Comment	Syntax	// (comment)
	Function	A comment can be described in (comment).

■4 Available data and how to express the data

The following describes available data used for project scripts and screen scripts and how to express them.

(1) Data type of scripts

The following data types are provided for scripts.

- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

The data types are fixed for each script.

To operate different types of data, using the integer←→real number conversion function enables you to handle integral device values as real numbers for each script.

➟(16) Integer←→real number conversion function

Select a data type when creating a monitor screen with GT Designer3.

(2) Available constants and how to express the constants

The following four constants are provided for scripts.

Constant	Expression example	Remarks
Decimal number	124	When the data type is 64-bit, append LL to the constant number. Example) 124LL
Hexadecimal number	0xFF12, 0x14AC67F1	When the data type is 64-bit, append LL to the constant number. Example) 0xFF12LL
BCD	344	When the data type is 64-bit, append LL to the constant number. Example) 344LL
Real number	32.124, 3.2124e + 10	When the data type is 64-bit, append LF to the constant number. Example) 3.2124e+10LF

However, available constants and the data range are determined according to the data type of each script as shown below.

Data type	Available constant	Available data range
Signed BIN16	Decimal number	-32768 to 32767
	Hexadecimal number	0 to FFFF
Unsigned BIN16	Decimal number	0 to 65535
	Hexadecimal number	0 to FFFF
Signed BIN32	Decimal number	-2147483648 to 2147483647
	Hexadecimal number	0 to FFFFFFFF

Data type	Available constant	Available data range
Unsigned BIN32	Decimal number	0 to 4294967295
	Hexadecimal number	0 to FFFFFFFF
Signed BIN64*4	Decimal number	-9223372036854775808 to 9223372036854775807
	Hexadecimal number	0 to FFFFFFFFFFFFFFFF
Unsigned BIN64*4	Decimal number	0 to 18446744073709551615
	Hexadecimal number	0 to FFFFFFFFFFFFFFFF
BCD16	BCD	0 to 9999
BCD32	BCD	0 to 99999999
BCD64	BCD	0 to 9999999999999999
Real(32bit)*1	Real number	0, ±1.17550e-38 to 3.40282e+38*2
Real(64bit)*1	Real number	0, ±2.2250738585073e-308 to 1.7976931348623e+308*3

*1 When a value exceeding the number of digits to which a real number is accurate is set, the set value and the operating value differ.
For a real number, set the number of digits not exceeding the number of digits to which the real number is accurate.
*2 The real number precision is given to 6-digit.
*3 The real number precision is given to 14-digit.
*4 When a real number (32 bits or 64 bits) is mixed in the formula of a single, if, switch, or while statement, the precision is reduced to 14 digits, which is the precision of real numbers (64 bits).

(3) Available devices and how to express the devices

Scripts use the same devices as the ones used by other monitor functions.
Expressions of devices differ according to the device type and whether a station is specified or not.
Devices which can be monitored by the GOT depend on the PLC CPU to be monitored.

➟12.4 Device Range and Settings of Each Controller

To readily specify a device in the device setting screen, use the input navigation in the [Edit Script (script name)] dialog.

➟9.9.7 [Edit Script(script name)] dialog

Device type	Statement example	Expression example	Supported models
Word device	[w: Device No.] *1	[w:D100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Word device (offset) *6	[w: Device No.[w: Offset device No.]] *1*2*3	[w:D100[w:D0]]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Bit device	[b: Device No.] *1	[b:X100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Bit device (offset) *6	[b: Device No.[w: Offset device No.]] *1*2*3	[b:X100[w:D0]]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Word device specified as bit device	[b: Device No.. Bit location] *1	[b:D100.b1]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Bit device specified as word device	[w: Device No.] *1	[w:X100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device type		Statement example	Expression example	Supported models
Station number-specified device *4		[Network No.-station number:w: device No.] *1	[0-FF:w:D100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Multiple CPU No. specification *5		[Network No.-station number/CPU No.:w: device No.]	[0-FF/1:w:D100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Block No. specification for extension file register *7		[w: ER block No.-device No.]	[w:ER255-100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Specifying the start I/O No. of the buffer memory (BM) *8		[w: BM buffer memory start I/O No.-device No.]	[w:BM1E-100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Specifying the unit No. of the buffer memory (G) *9		[w: U Unit No.-G device No.]	[w:U2F-G100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Specifying the SFC block No. of the step relay (block) (BLS) *10		[b: BL SFC block No.-S device No.]	[b:BL2-S100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Specifying the axis No. for the servo amplifier device *11		[w: A Axis No.-device No.]	[w:A1-PA3]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
		[w: U Unit No.-A Axis No.-device No.]	[w:U2F-A1-PA3]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Channel specification *12*13		[@Channel No.:w: device No.]	[@3:w:D100]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
System label *14		[<t:System Label Name>]	[<t:System Label Name>]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Global Label *15	Bit	[gl_b::(Global Label Name)]	[4-5:gl_b::Global label Name]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word	[gl_w::(Global Label Name)]	[4-5:gl_w::Global label Name]	
	Signed BIN16	[gl_s16::(Global Label Name)]	[4-5:gl_s16::Global label Name]	
	Unsigned BIN16	[gl_u16::(Global Label Name)]	[4-5:gl_u16::Global label Name]	
	Signed BIN32	[gl_s32::(Global Label Name)]	[4-5:gl_s32::Global label Name]	
	Unsigned BIN32	[gl_u32::(Global Label Name)]	[4-5:gl_u32::Global label Name]	
	Real(32bit)	[gl_flt::(Global Label Name)]	[4-5:gl_flt::Global label Name]	
	Real(64bit)	[gl_flt64::(Global Label Name)]	[4-5:gl_flt::Global label Name]	

Device type		Statement example	Expression example	Supported models
Global label (Motion Control Setting Function) *15*20	Bit	[gl_b::U (Module No.)-(Global Label Name)]	[4-5:gl_b::U Module No.-Global label Name]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word	[gl_w::U (Module No.)-(Global Label Name)]	[4-5:gl_w::U Module No.-Global label Name]	
	Signed BIN16	[gl_s16::U (Module No.)-(Global Label Name)]	[4-5:gl_s16::U Module No.-Global label Name]	
	Unsigned BIN16	[gl_u16::U (Module No.)-(Global Label Name)]	[4-5:gl_u16::U Module No.-Global label Name]	
	Signed BIN32	[gl_s32::U (Module No.)-(Global Label Name)]	[4-5:gl_s32::U Module No.-Global label Name]	
	Unsigned BIN32	[gl_u32::U (Module No.)-(Global Label Name)]	[4-5:gl_u32::U Module No.-Global label Name]	
	Real(32bit)	[gl_flt::U (Module No.)-(Global Label Name)]	[4-5:gl_flt::U Module No.-Global label Name]	
	Real(64bit)	[gl_flt64::U (Module No.)-(Global Label Name)]	[4-5:gl_flt::U Module No.-Global label Name]	
Label (GT Designer3) *16		[<$:Group Name:Label Name>]	[<$:Group Name:Label Name>]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
OMRON NJ/NX tag *17	Bit	[gl_b::(Tag Name)]	[4-5:gl_b::Tag name]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word	[gl_w::(Tag Name)]	[4-5:gl_w::Tag name]	
	Signed BIN16	[gl_s16::(Tag Name)]	[4-5:gl_s16::Tag name]	
	Unsigned BIN16	[gl_u16::(Tag Name)]	[4-5:gl_u16::Tag name]	
	Signed BIN32	[gl_s32::(Tag Name)]	[4-5:gl_s32::Tag name]	
	Unsigned BIN32	[gl_u32::(Tag Name)]	[4-5:gl_u32::Tag name]	
	Signed BIN64	[gl_s64::(Tag Name)]	[4-5:gl_s64::Tag name]	
	Unsigned BIN64	[gl_u64::(Tag Name)]	[4-5:gl_u64::Tag name]	
	Signed BIN8	[gl_s8::(Tag Name)]	[4-5:gl_s8::Tag name]	
	Unsigned BIN8	[gl_u8::(Tag Name)]	[4-5:gl_u8::Tag name]	
	Real(32bit)	[gl_flt::(Tag Name)]	[4-5:gl_flt::Tag name]	
	Real(64bit)	[gl_flt64::(Tag Name)]	[4-5:gl_flt64::Tag name]	
AB native tag *18	Bit	[gl_b::(Tag Name)]	[4-5:gl_b::Tag name]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word	[gl_w::(Tag Name)]	[4-5:gl_w::Tag name]	
	Signed BIN16	[gl_s16::(Tag Name)]	[4-5:gl_s16::Tag name]	
	Unsigned BIN16	[gl_u16::(Tag Name)]	[4-5:gl_u16::Tag name]	
	Signed BIN32	[gl_s32::(Tag Name)]	[4-5:gl_s32::Tag name]	
	Unsigned BIN32	[gl_u32::(Tag Name)]	[4-5:gl_u32::Tag name]	
	Real(32bit)	[gl_flt::(Tag Name)]	[4-5:gl_flt::Tag name]	
OPC UA tag *19	Bit	[ou_b::&(Tag Name)]	[@2:ou_b::&(Tag Name)]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Word	[ou_w::&(Tag Name)]	[@2:ou_w::&(Tag Name)]	
	Signed BIN16	[ou_s16::&(Tag Name)]	[@2:ou_s16::&(Tag Name)]	
	Unsigned BIN16	[ou_u16::&(Tag Name)]	[@2:ou_u16::&(Tag Name)]	
	Signed BIN32	[ou_s32::&(Tag Name)]	[@2:ou_s32::&(Tag Name)]	
	Unsigned BIN32	[ou_u32::&(Tag Name)]	[@2:ou_u32::&(Tag Name)]	
	Real(32bit)	[ou_flt::&(Tag Name)]	[@2:ou_flt::&(Tag Name)]	

*1 Depending on the PLC CPU device to be monitored, the device number may need to be expressed with the number of digits

shown in the following table.

PLC CPU	Device name	Number of digits		Expression example	Remarks
		Word specification	Bit specification		
OMRON PLC	..	-	2	[b:..2303]	Since the form is Channel + Relay, specify the relay part with a two-digit number.
	LR, AR, HR, WR	-	2	[b:HR207]	
ALLEN-BRADLEY PLC	B	6	7	[w:B000003] [b:MB02343]	Specify the file No. and element No. with a three-digit number, and the bit location with a single-digit number.
	N, TP, TA, CP, CA	6	-	[w:N007255]	Specify the file No. and element No. with a three-digit number.
	TT, TN, CU, CD, CN	-	6	[b:TT004255]	
SIEMENS PLC	D	-	9	[w:D000100000]	Specify Data Block (DB) with a four-digit number and DataWord (DW) with a five-digit number.

*2 Available data range is 16 bits (-32768 to 32767).
*3 If a data type other than [w:] is specified for the offset device No., the offset can be used within the range appropriate for the data type.
*4 To specify the host station or all stations, specification of a network number and station number can be omitted.
However, enter 0-0 to specify all stations for monitoring MODBUS salve equipment.
*5 Even if the target PLC is the host station (0-FF), station specification must be performed.
*6 For the details of the offset devices, refer to the following.
➟(15) Offset device specification
*7 Can be set only when an ER device is used.
*8 The start I/O No. can be specified only when a BM device is used.
*9 The unit No. can be specified only when a G device is used.
*10 The SFC block No. can be specified only when a BLS device is used.
*11 The axis No. can be specified only when a device of the servo amplifier is used.
The unit No. can be specified only when the target device is monitored through a simple motion module.
*12 When specifying both a channel No. and a station number, specify the channel No. first. (Example: [@3:0-FF:w:D100])
*13 When specifying a device of channel No.1, specification of the channel No. (@channel No.:) can be omitted.
([@1:w:D100] can also be expressed as [w:D100] by omitting "@1:" part.)
*14 Can be set only when [Use system labels in conjunction with MELSOFT Navigator] is checked in the [Type Setting] dialog.
➟5.1.5 [Type Setting] dialog
*15 Settable only when an RCPU model is set in the [Controller Setting] window.
➟5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting])
*16 Settable only when a label (GT Designer3) is registered.
➟6.1.5 How to set labels (GT Designer3)
*17 Settable only when [OMRON NJ/NX] is set for the controller type in the [Controller Setting] window.
➟5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting])
*18 Settable only when [AB Control/CompactLogix(Tag)] is set for the controller type in the [Controller Setting] window.
➟5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting])
*19 Settable only when [OPC UA] is selected for the controller type in the [Controller Setting] window.
➟5.5 Configuring the Communication Method between the GOT and the Controller ([Controller Setting])
*20 For the global label created by the Motion Control Setting Function, specify the module number.
Specify the second and third values of the start I/O number of the connected Motion module.
Example) When the start I/O number is 0FE0, set FE to module number.

(4) Available arguments and how to express the arguments

GT21 and GS21 do not support the file operation functions.

The following shows available arguments for the file operation function of scripts.

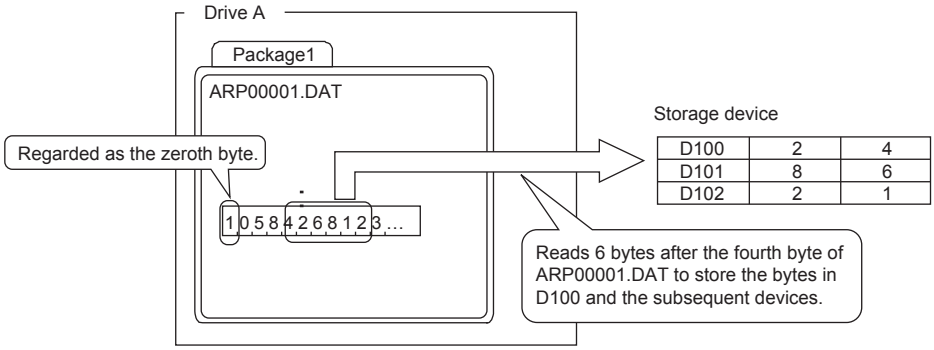
Argument	Expression example	Available data range
Folder name *1 Folder name 1 *1 Folder name 2 *1 Copy source folder name *1 Copy source folder name 1 *1 Copy source folder name 2 *1 Copy destination folder name *1 Copy destination folder name 1 *1 Copy destination folder name 2 *1	For specifying with character strings: "X:\\Package1\\" For specifying with devices: [w:D0001]	The following drives can be specified. A, B, E, F, G, X The total number of the characters of a folder name and a file name must be 78 or less. This specification is also applied to a case where multiple arguments are used to specify a folder name or file name. ➟(6) Folder names and file names An argument can be specified using a device. ➟(3) Available devices and how to express the devices
File name *1 Copy source file name *1 Copy destination file name *1	For specifying with character strings: "FILE00001.CSV" For specifying with devices: [w:D0001]	
New file name *1	For specifying with character strings: "FILE00001.BAK" For specifying with devices: [w:D0001]	
Storage device *1	[w:GD200]	For applicable devices, refer to the following. ➟(3) Available devices and how to express the devices Bit devices and the word specification of bit devices cannot be used.
Number of folders Number of files	1	The setting range is 1 to 32. An argument can be specified using a device. ➟(3) Available devices and how to express the devices
Offset	0	• For the file operation function 16 bits: 0 to 65535 32 bits: 0 to 2147483647 When the offset is used for the file name obtaining function (file_getlist), only 16 bits can be specified. When the file write function (file_write) is used, the offset is available only when <mode> is 2 (overwrite). For a mode other than overwrite, set 0 for the offset. • For the string operation function (str_scanf, str_strmid) 0 to 255 • For the string operation function (str_uniscanf, str_unistrmid) 0 to 510 Make sure to set an even number. An argument can be specified using a device. ➟(3) Available devices and how to express the devices For the details of the offset, refer to the following. ➟(5) How to use the offset
Maximum number of characters	8	The setting range is 1 to 78. An argument can be specified using a device. ➟(3) Available devices and how to express the devices
Number of read bytes Number of write bytes	For specifying with character strings: 32 For specifying with devices: [w:GD200]	The setting range is 1 to 2048. An argument can be specified using a device. ➟(3) Available devices and how to express the devices
Input byte count String length Output byte count	For specifying with character strings: 32 For specifying with devices: [w:GD200]	• For str_scanf, str_printf, str_strlen, str_strmid, and str_lc2uni 1 to 256 • For str_uniscanf, str_uniprintf, str_unistrlen, str_unistrmid, and str_uni2lc 2 to 512 An argument can be specified using a device. ➟(3) Available devices and how to express the devices
Maximum number of read bytes	256	The setting range is 1 to 256. Set an even number in "file_unilineread". An argument can be specified using a device. ➟(3) Available devices and how to express the devices

Argument	Expression example	Available data range
Mode	0	The following shows the setting range. • 0: New • 1: Addition • 2: Overwrite For operations of the file write function (file_write) for each mode, refer to the following. ⇒■3 Control structures for a project script, screen script, and script part An argument can be specified using a device. ⇒(3) Available devices and how to express the devices
Copy mode	For specifying with character strings: 3 For specifying with devices: [w:D0001]	The setting range is 0 to 3. Each bit of the setting value determines the copy mode. • Bit 0 0: Prohibits overwriting a file. 1: Allows overwriting a file. • Bit 1 0: Does not copy subfolders. 1: Copies subfolders. • Bit 2 to 15: Use prohibited An argument can be specified using a device. ⇒(3) Available devices and how to express the devices
Maximum number of folder name characters	12	The setting range is 1 to 78.
Maximum number of file name characters	12	The setting range is 1 to 78.
Input string storage device *1	[w:GD200]	For applicable devices, refer to the following. ⇒(3) Available devices and how to express the devices
Output string storage device *1		
Format	For specifying with character strings: "%d,%5s" For specifying with comments: cmt(1, 3)	• For specifying with character strings: Number of characters: 256 characters or less Number of format specifiers: 10 or less Enclose a format specifier in double quotation marks. ⇒(7) How to specify a format • For specifying with comments: cmt (comment group, comment No.) Comment group: 1 to 255 Comment No.: 1 to 32767 Only the comments registered in the comment group can be used.
Input value storage device *1	[w:GD200]	For applicable devices, refer to the following. ⇒(3) Available devices and how to express the devices
Output value storage device *1		
Local code type	1	The following shows the setting range. • 0: Depends on the system language. (ASCII for English, Shift JIS for other languages) • 1: Shift JIS • 2: ASCII • 3: GB • 4: KS • 5: Big5
Conversion source string storage device *1	[w:GD200]	For applicable devices, refer to the following. ⇒(3) Available devices and how to express the devices
Conversion destination string storage device *1		

*1 An error occurs if a primitive data type label is set.
When using a label, set an array-type or structure-type label.

(5) How to use the offset

The offset is the argument which represents the storage location of the target data in a folder or file.
To express the storage location of the target data with the offset, a start folder or file is regarded as zeroth one (or zeroth byte).
The following shows an application example of the offset using the file read function (file_read).
Example) Offset of the file name ARP00001.DAT:
If the data starting from the forth byte is read for six bytes (for number of read bytes) and stored to storage device D100 and later devices
[s16:D500] = file_read("A:\\Package1\\", "ARP00001.DAT", [w:D100], 4, 6); //Reads file



(6) Folder names and file names

Not available to GT21 and GS21.

(a) How to use the delimiter (\)

To specify a folder name with character strings, use \\ in a path as a delimiter.
In the file operation function, the first \ is recognized as a control character.
Therefore, unless the delimiter is used as \\, the path is not correctly specified and an error occurs.
Example) A:\Package\ (actual path) → A:\\Package\\ (path used as an argument)
To specify a folder name with devices, do not use \\ as a delimiter.
The path is not correctly specified and an error occurs.

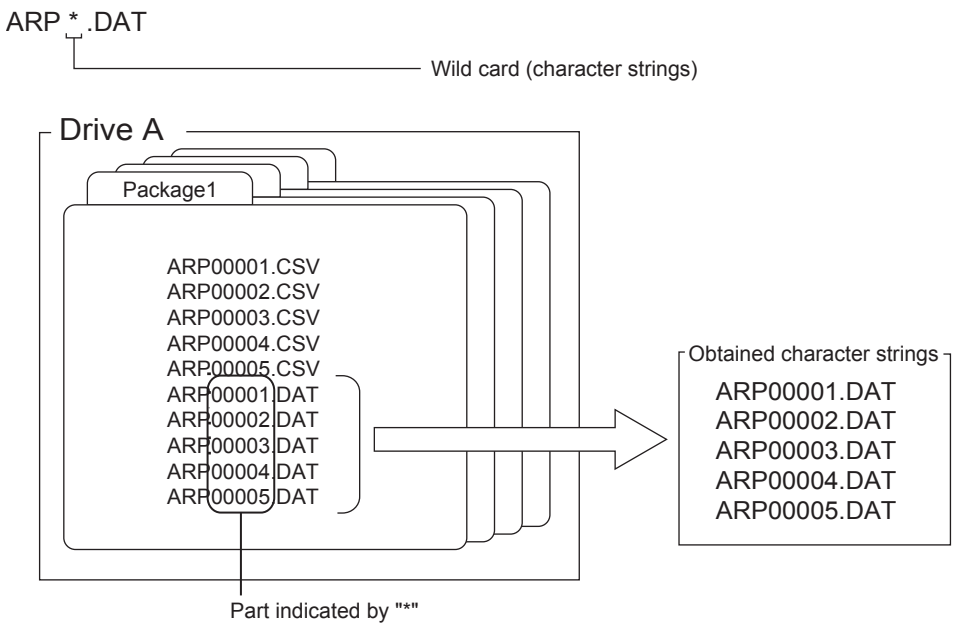
(b) Restrictions for folder names and file names

For the character strings available and unavailable for folder names and file names, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

(c) Specifying with wild cards

Only when the file name obtaining function (file_getlist) is used, you can use wild cards to specify a file name.
Wild cards handle an unknown part of the name as character strings.
The part specified by wild cards can be any character strings.
The following shows application examples of wild cards.
Example) For obtaining the file stored in the folder A:\\Package1\\ and the name starts with ARP and ends with DAT
[s16:D500] = file_getlist("A:\\Package1\\", "ARP*.DAT", [w:GD100], 0, 5, 12); //Obtains file name



Use wild cards under the following conditions.

- Only [*] can be used as the wild card.
  Example of valid use: ARP*.DAT
  Example of invalid use: ARP?????.DAT
- Only one [*] can be used in an argument.
  However, you can use [*.*] as an exception.
  Example of valid use: *.DAT

Example of invalid use: ARP*.*

- When [*] is used in the file name of the script, [*] can be placed only right before [.] (period).
  Example of valid use: ARP*.DAT
  Example of invalid use: ARP*01.DAT
- When [*] is used in the extension part of the file name of the script, the extension must consist of the wild card only.
  Example of valid use: ARP00001.*
  Example of invalid use: ARP00001.*AT

(7) How to specify a format

Specify a format using format specifiers and escape sequences.

(a) Specifying a format with comments

Only the comments registered in the comment group can be used.
Do not enter a line feed in the format.
The description after a line feed is not reflected in the format.

(b) Format specifier

Determines the data type for reading and writing.
The form of a format specifier differs according to the function used.
Describe one format specifier for one data.
The number of format specifiers must be the same as the number of devices, which are the storage locations of read or written data.

(c) Escape sequence

Skips or writes control symbols.
Available format specifiers and escape sequences differ according to the functions used.

➟(8) String input function (str_scanf, str_uniscanf)
(9) String output function (str_printf, str_uniprintf)

(8) String input function (str_scanf, str_uniscanf)

Not available to GT21 and GS21.

(a) Format specifier

Describe format specifiers in the following formats.
% + flag + field width + type specifier
Description example)
For skipping one character and reading the data (field width: 5) in decimal number :%*c%5d

- Flag
  The flag is the processing to be executed when the data is read.
  Add a flag after % as required.

Flag	Expression	Description example	Description
Skip	*	%*d	Skips the specified type data. The number of the skipped data is not added to the number of the read data (return value). (Description example: when decimal data is skipped)

- Field width
  The field width is the maximum number of characters which can be read from character strings.
  When the read data is larger than the field width, the excess portion of the data which is larger than the number of bytes specified with the field width cannot be read.
  Describe the field width in nonnegative integers.
  Add a field width before a type specifier as required.
- Type specifier
  Specifies the type of the data to be read from character strings.
  A format specifier must be used with a type specifier.

Type specifier	Description
c	Reads one character.
s	Reads character strings.
d	Reads integers in decimal numbers.
lld	Reads 64-bit integers in decimal.
u	Reads unsigned integers in decimal numbers.

Type specifier	Description
llu	Reads unsigned 64-bit integers in decimal.
o	Reads integers in octal numbers.
llo	Reads 64-bit integers in octal.
x	Reads integers in hexadecimal numbers.
llx	Reads 64-bit integers in hexadecimal.
f	Reads real numbers (32 bits).
lf	Reads real numbers (64 bits).
[...]	Reads the characters specified with square brackets. Reading is stopped at the time of reading characters which are not specified with the brackets. Example) If %[ABC] is set for a format specifier and the character string CBAGAB is read, the result is CBA. If ^ is added to the character string in square brackets, characters other than the specified ones are read. Reading is stopped at the time of reading the character string specified with square brackets. Example) If %[^ABC] is set for a format specifier and the character string DEFADE is read, the result is DEF.
%	Skips a percent sign (%).

(b) **Escape sequence**

Escape sequence	Description
\n	Skips a line feed (LF).
\t	Skips a tab.
\\	Skips a backslash (\).
\?	Skips a question mark (?).
\'	Skips a single quotation mark (').
\"	Skips a double quotation mark (").

(9) String output function (str_printf, str_uniprintf)

Not available to GT21 and GS21.

(a) **Format specifier**

Describe format specifiers in the following formats.

% + flag + field width + precision specification + type specifier

Description example)

For writing the data (field width: 5) in fixed-point numbers of four digits after the decimal point and left-aligning the numbers: %-5.4f

- Flag

  The flag is the processing to be executed when the data is written. Add a flag after % as required.

Flag	Expression	Description example	Description
Left alignment	-	%-d	Left-aligns character strings when a field width is specified. (Description example: when decimal data is written and left-aligned)
Plus sign (+) addition	+	%+d	Adds a plus sign before a numerical value and writes the data. (Description example: when decimal data is written after a plus sign is added to the data)
Blank addition	Blank	%d	Adds a blank before a numerical value and writes the data. (Description example: when decimal data is written after a blank is added to the data)
Zero padding	0	%05d	Adds a zero to blank spaces and writes the data when a field width is specified. (Description example: when decimal data is written after a zero is added to the data)
Prefix addition	#	%#5x	Adds 0, 0x, or 0X as a prefix when octal or hexadecimal numbers are written. (Description example: when hexadecimal data is written after 0x is added as a prefix to the data)

- Field width

  The field width is the maximum number of characters which can be written in a field.

  If the number of characters of written data exceeds the field width, a value of -1 (error) is returned.

  If the written number of characters in the data is smaller than the field width, blanks are added to the remaining digits.

Describe the field width in nonnegative integers.
Add a field width before a type specifier as required.

• Precision specification

Specify a period (.) and nonnegative integers.
Every type specifier has different meanings of precision specification.
If precision specification is not added, the default value is applied.
Add a precision specification after the field width as required.

Type specifier	Description	Default value
c	The precision specification is invalid.	-
s	Specifies the maximum number of characters to be output. The characters which exceed the value of precision specification are not output. Example) Outputting a string of 26 alphabetic characters (A to Z) • %s (default value): Outputting 8 characters (A to H) • %.10s (10 characters specified): Outputting 10 characters (A to J)	8
d, u, o, x, X	Specifies the minimum value of the number of digits to be written. If the number of digits in an argument is smaller than the specified value, Null or zero is input into the remaining digits. (Whether either one is input into the digits differs according to a flag to be specified.) If the number of digits exceeds the value of precision specification, the value is not rounded down.	1
f*1	Specifies the number of digits after the decimal point of decimal numbers. When the decimal point is displayed, integers are displayed. The value is rounded down until the value becomes an appropriate number of digits.	6
e, E*1	Specifies the number of digits to be output after the decimal point of decimal numbers. Up to 39 digits can be specified for precision. The last number of the data to be output is rounded down.	
g, G	Specifies the maximum value of the number of significant digits to be written. Up to 14 digits can be specified for precision.	

*1 The values after the decimal point are not output in the following cases.
When 0 is set for the precision specification
When a period (.) is set without specifying subsequent numerical values

• Type specifier

Specifies the type of the data to be written into character strings.
A format specifier must be used with a type specifier.

Type specifier	Description
c	Writes one character.
s	Writes character strings.
d	Writes integers in signed decimal numbers.
lld	Writes 64-bit integers in signed decimal.
u	Writes integers in unsigned decimal numbers.
llu	Writes 64-bit integers in unsigned decimal.
o	Writes integers in octal numbers.
llo	Writes 64-bit integers in octal.
x, X	Writes integers in hexadecimal numbers. When X is used, alphabets in the data are capitalized.
llx, llX	Writes 64-bit integers in hexadecimal. When X is used, alphabets in the data are capitalized.
f	Writes real numbers in real number form. Example) 123.456
e, E	Writes real numbers in exponential form. The exponents are displayed with three digits. Example) 12345.6e-002 When E is used, alphabets in the data are capitalized.
g, G	Writes real numbers in an optimal form. If an exponent is either of the following, real numbers are written in exponential form. • Value less than -4 • Value larger than the precision value specified with the precision specification For an exponent other than the above, real numbers are written in real number form. When G is used, alphabets in the data are capitalized.

Type specifier	Description
%	Writes a percent sign (%). Specifying the corresponding device is not required. Even though a field width and a flag are specified, they are invalid.

(b) **Escape sequence**

Escape sequence	Description
\n	Writes a line feed (LF).
\r	Writes a carriage return (CR).
\t	Writes a tab.
\\	Writes a backslash (\).
\?	Writes a question mark (?).
\'	Writes a single quotation mark (').
\"	Writes a double quotation mark (").

(10)Temporary device areas and their uses

Temporary device areas are usable in a script in addition to controller devices.
Data is written to the specified temporary device areas in real time during script execution.
The GOT does not need to communicate with a controller when using temporary device areas, reducing communication load.
The following types of temporary device areas are supported.

Type	Specifications
Temporary device area (TMP)	A TMP is a global variable that is accessible by multiple scripts. TMPs can be specified in the following scripts. • Project script • Screen script • Script part • Object script For the details, refer to the following. ➟(11) Specifications of a temporary device area (TMP)
Script parts temporary device area (PTMP)	A PTMP is a local variable that is accessible by the scripts of each script parts object. PTMPs can be specified in the scripts of the object or as the trigger devices to run the scripts. For the details, refer to the following. ➟(12) Specifications of a script parts temporary device area (PTMP)

The following shows the uses of these temporary device areas.

Use	Description

To prevent an assignment delay	If a controller device is specified as the write destination in a script, the operation result will be written to the device when the script ends, resulting in an assignment delay.
	If a temporary device area is specified instead, the result will be written to the area in real time without delay.
	Example) If you manipulate a bit device, and then use the bit device in a conditional formula
	`if(...) {`
	`  alt([b:TMP0001.03]);  //Invert TMP0001.03.`
	`}`
	`if([b:TMP0001.03] == ON) {  //A branch is executed based on the status of TMP0001.03.`
	`  ...`
	`} else {`
	`  ...`
	`}`
	For the details of the assignment delay, refer to the following.
	➟9.9.12 ■1 Precautions for use

As the write destination device of a while statement	A device causing an assignment delay cannot be used as the write destination device of a while statement. Use a temporary device area or a GOT internal device accordingly.

(11)Specifications of a temporary device area (TMP)

The following shows the specifications of a temporary device area (TMP).

Item	Specifications
Size	One TMP is 64 bits long. If a TMP is used as a bit device, it is handled as 16 bits long. The settable bit range is 0 to 15.
Initial value	A TMP stores 0 when the GOT is powered on.
Maximum number of the areas	• For GT27, GT25, GT23, GT SoftGOT2000, and GS25 1024 (TMP0 to TMP1023) • For GT21 and GS21 256 (TMP0 to TMP255)
Example of a representation	• To handle TMP0001 as a word device [w:TMP0001] • To handle bit 1 of TMP1023 as a bit device [b:TMP1023.01]

Project scripts, screen scripts, and script parts use common TMPs.
Object scripts use different TMPs.
Accordingly, object scripts and the other types of scripts cannot exchange data using their TMPs.
To exchange data, use the GOT internal devices (GD or GB).

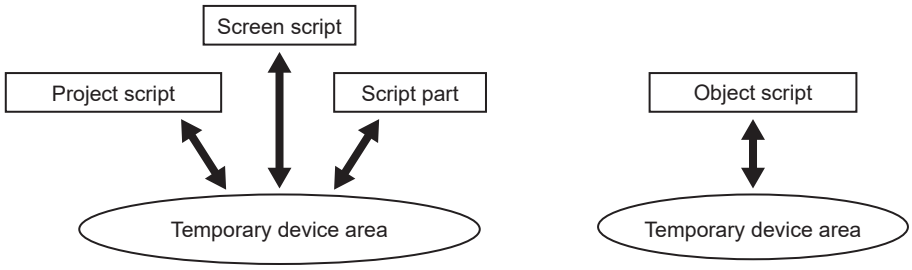


Figure conceptualizing the access to each TMP with the same number

To access the same TMP from multiple scripts, set the same data type for the scripts and the same representation for the TMP in the scripts.
Otherwise, the stored value may be rendered invalid in the following uses.

Invalid use	Example

Scripts with different data types access the same TMP.	Script A (unsigned BIN16) writes a value to TMP0000, and then script B (unsigned BIN32) reads the value from TMP0000.
	Script A ([Data Type]: [Unsigned BIN16])
	[w:TMP0000] = 0x1234; //Write a value to TMP0000 as unsigned 16-bit binary data.
	Script B ([Data Type]: [Unsigned BIN32])
	[w:GD0000] = [w:TMP0000]) //Read the value from TMP0000 as unsigned 32-bit binary data.

The representation of a TMP at reading differs from the one at writing.	Script A writes a hexadecimal value to TMP0000 represented as a word device, and then script B reads the value from TMP0000 represented as a bit device.
	[w:TMP0000] = 0x3; //Write a value to TMP0000 represented as a word device.
	if([b:TMP0000.b0] == ON) {... //Read the value from TMP0000 represented as a bit device.

(12)Specifications of a script parts temporary device area (PTMP)

The following shows the specifications of a script parts temporary device area (PTMP).

Item	Specifications
Size	One PTMP is 32 bits long. If a PTMP is used as a bit device, it is handled as 16 bits long. The settable bit range is 0 to 15.
Initial value	A PTMP is reset to 0 at screen switching. The value stored during script execution is retained until the next screen switching.
Maximum number of the areas	Using #pragma use_ptmp_length, you can specify the maximum number of PTMPs ranging from 1 to 32768. The default is set as shown below. • For GT27, GT25, GT23, GT SoftGOT2000, and GS25 1024 (PTMP0 to PTMP1023) • For GT21 and GS21 256 (PTMP0 to PTMP255)
Example of a representation	• To handle PTMP0001 as a word device [w:PTMP0001] • To handle bit 1 of PTMP1023 as a bit device [b:PTMP1023.01]

Each script parts object uses its own PTMPs.
The scripts of a script parts object can exchange data each other using their common PTMPs.
Script parts objects cannot exchange data each other using their PTMPs.
To exchange data, use the GOT internal devices (GD or GB) or temporary device areas (TMPs).

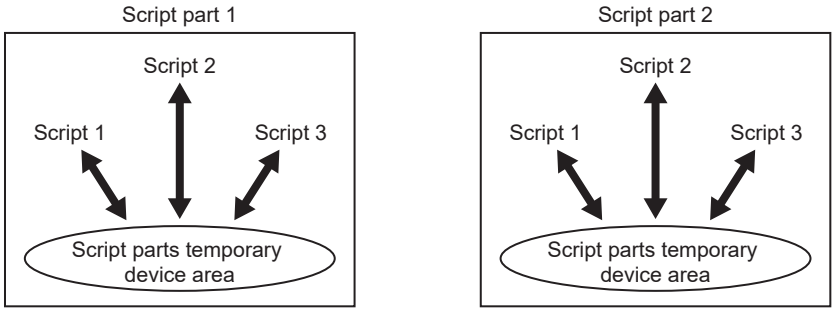


Figure conceptualizing the access to each PTMP with the same number

(13)How to express bit devices (system define)

The following expressions can be used for bit devices.

(a) If a relevant expression for bit devices is processed

Device values which are normally expressed with 1 or 0 can be expressed with on and off.

```
if([b:X100]==1){[w:D0]=100;} //If X100 is on, D0 is 100.
↓
if([b:X100]==ON){[w:D0]=100;} //If X100 is on, D0 is 100.
```

(b) If assignment processing of bit devices is processed

Device values which are normally expressed with the set statement, the rst statement, 1, or 0 can be expressed with on or off.

```
set([b:X100]); //X100 turns on.
[b:X100]=1; //X100 turns on.
↓
[b:X100]=ON; //X100 turns on.
```

(14)Substituting devices and constants by the user-defined character strings

The devices and constants in a script are substitutable by the user-defined character strings.
Define character strings as symbols for devices and constants. You can check for duplicate devices and constants, and apply changes of devices and constants to the script without editing the script directly.
Example) Substituting the device [b:X1000] by the character string "ERROR_CHECK"
if(ERROR_CHECK == 1) {[w:D0] = 100;} // Write 100 to D0 if ERROR_CHECK ([b:X1000]) turns on.
The following types of symbols are supported.

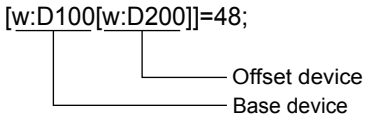
Symbol	Description
Script symbol	Script symbols are usable in the following scripts. • Project script • Screen script For information on how to set a script symbol, refer to the following. ⇒9.9.5 ■3 [Script Symbol] tab
Script parts symbol	Script parts symbols are usable in the scripts of a script parts object. Each script parts object has its own script parts symbols. For information on how to set a script parts symbol, refer to the following. ⇒9.9.10 ■2 [Script Parts Symbol] tab
Object script symbol	Object script symbols are usable in object scripts only. For information on how to set an object script symbol, refer to the following. ⇒9.9.9 [Script Symbol] dialog
Local symbol	Local symbols are usable in all types of scripts. Local symbols are valid only in the script where they are defined. For the local symbols, refer to the following. ⇒■3 Control structures for a project script, screen script, and script part

(15)Offset device specification

The offset device can be specified.

(a) Format

Example) When D200 is 5, 48 is stored in D105.



(b) Available devices

- Base device
  Controller devices, GOT internal devices, gateway devices, and temporary device areas can be specified.
  Word devices and bit devices can be used.
- Offset device
  Controller devices, GOT internal devices, gateway devices, and temporary device areas can be specified.
  Only word devices can be used. (Bit devices can be specified as word devices. Specify a device with a multiple of 16.)
  The device cannot use when the data type is 8 bits or 64 bits.

(c) Application examples

Changing parameters according to the operation mode

- D10: For switching the operation mode
- D100 to D109: For storing parameter values
- GD500: Base device
- TMP100: Offset device

Script 1 (specifies a parameter value.)

```
[w:GD500]=10; //Parameter value of operation mode 1
[w:GD501]=11;
[w:GD502]=12;
:
[w:GD600]=20; //Parameter value of operation mode 2
[w:GD601]=21;
[w:GD602]=22;
:
[w:GD700]=30; //Parameter value of operation mode 3
```

[w:GD701]=31;
[w:GD702]=32;
Script 2 (determines an offset value according to the device value for switching the operation mode.)
switch([w: D10]){
case 1: //If D10 is 1, the offset value is 0.
[w:TMP100]=0;
break;
case 2: //If D10 is 2, the offset value is 100.
[w:TMP100]=100;
break;
case 3: //If D10 is 3, the offset value is 200.
[w:TMP100]=200;
break;
}
Scripts 3 (writes parameters according to the offset value.)
bmov([w:GD500[w:TMP100]],[w:D100],10); //Writes the device value of [GD500 + value of TMP100] to the devices from D100 to D109.
If script 2 and 3 are processed simultaneously or as one script, the scripts do not operate properly due to the switching delay of offsets.

(d) **Data type of offset devices**

The data type of offset devices is converted into signed BIN 16 data regardless of [Data Type] set in [Edit Script].
Example) [w:GD100] = [w:D1000[s32:GD1000]];
1) If 65535 is set to GD1000 (signed BIN 32), the equation "65535 (signed BIN 32) = -1 (signed BIN 16)" is satisfied and the value in D999 is assigned to GD100.
2) If 65537 is set to GD1000 (signed BIN 32), the equation "65537 (signed BIN 32) = 1 (signed BIN 16)" is satisfied and the value in D1001 is assigned to GD100.
Example) [w:GD100] = [w:D1000[d32:GD1000]];
If 10 is set to GD1000 (signed BIN 32), the equation "10 (signed BIN 32) = 16 (signed BIN 16)" is satisfied and the value in D1016 is assigned to GD100.
Example) [w:GD100] = [w:D1000[flt:GD1000]];
1) If 65535.0 is set to GD1000 (real number), the equation "65535.0 (real number) = -1 (signed BIN 16)" is satisfied and the value in D999 is assigned to GD100.
2) If 65537.0 is set to GD1000 (real number), the equation "65537.0 (real number) = 1 (signed BIN 16)" is satisfied and the value in D1001 is assigned to GD100.

(e) **Delay at assignment of offset devices**

If a controller device is used as a base device, delay may occur and the offset may not operate properly even though the offset device value is changed.
If the offset does not operate properly, use temporary device areas or GOT internal devices.

➟9.9.12 ■1 Precautions for use

(16)Integer←→real number conversion function

Not available to GT21 and GS21.

For scripts, the data type is selected for each script. However, using the integer←→real number conversion function enables you to use integral device values as real numbers for operation.

The integer←→real number conversion function is available only for GOT internal devices (GD).

To convert the value of a controller device, transfer the value to the GOT internal device using a script (bmov instruction).

When real numbers are converted into integers, the value after the decimal point is rounded down. (1.53 → 1)

If the real number is out of the range, an error occurs before the value after the decimal point is rounded down and the real number is not converted.

(a) Conversion method

The integer←→real number conversion is executed using the GOT internal device (GD) as the target to be converted.

Execute the integer←→real number conversion by specifying the following devices by scripts.

Up to 4096 points can be converted at once.

For the details of the GOT internal devices, refer to the following.

➟12.1.3 GOT special register (GS)

• Read device

Device	Function	Description
GS460	Conversion Start Indication	Specifies the conversion start and the conversion method with each bit. b0: Unsigned BIN 16 data is converted into real numbers. b1: Signed BIN 16 data is converted into real numbers. b2 and b3: Use prohibited b4: Real numbers are converted into unsigned BIN 16 data. b5: Real numbers are converted into signed BIN 16 data. b6 to b14: Use prohibited b15: This bit is turned on when conversion is executed.
GS461	Number of Conversion Devices	Specifies the number of devices to be converted.
GS462	Conversion Source Head Device No.	Specifies the start device No. of the GOT internal device (GD) where the value before conversion is stored.
GS463	Conversion Destination Head Device No.	Specifies the start device No. of the GOT internal device (GD) where the conversion result is to be stored.
GS464	Storage Error Value	Specifies the device value to be stored in the conversion destination device when a conversion error occurs. (Using this device for error recognition may be useful.)

Turn off the Conversion Start Indication (GS460) after completion of conversion.

If the Conversion Start Indication is executed when it is on, the device value is not converted.

• Write device

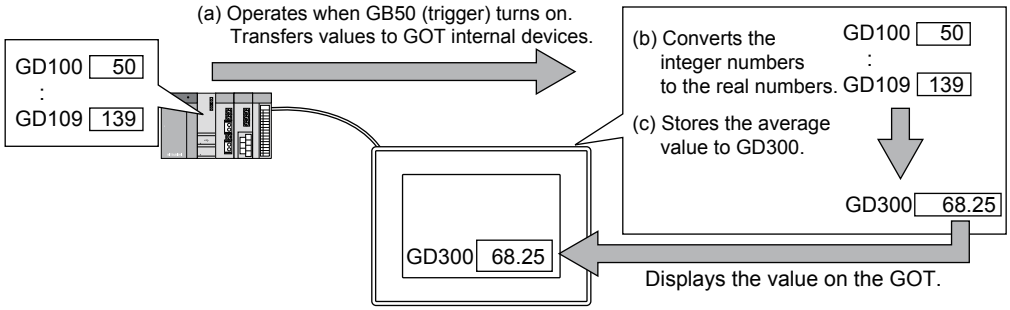
Device	Function	Description
GS260	Status	Stores the conversion completion notification and an error occurrence in each bit. If the Conversion Start Indication (GS460.b15) is turned off (0), each bit becomes 0. b0 to b13: Use prohibited b14: This bit turns on when an error occurs during conversion in the GOT. (An error code is stored in GS261.) b15: This bit turns on when conversion is finished in the GOT.
GS261	Error code*1	Stores an error which has occurred at conversion. When conversion is finished properly, 0 is stored in this device.

*1 The following shows the error codes to be stored in GS261.

Error code	Description	Remarks
1	The Conversion Start Indication is not initialized.	Conversion processing is not executed.
2	The setting of the Conversion Start Indication is incorrectly configured.	
3	The number of devices is out of range.	
4	The device is out of range.	
5	The conversion souse and destination are the same.	
6	Not used	-
7	Conversion error (such as an overflow)	Conversion processing continues.

(b) Application examples

The average value of the data (signed BIN 16) stored in controller devices is displayed on the GOT in real numbers.



• Script 1 (conversion start processing)

Transfers the values of the controller devices (D100 to D109) to the GOT internal devices (GD100 to GD109) and converts integer numbers to real numbers.

Script 2 is started after the conversion is started.

· Data type: Signed BIN 16

· Trigger: Rise of GB50

```
bmov([w:D100],[w:GD100],10);
[w:GS461]=10; //Number of devices to be converted
[w:GS462]=100; //Conversion source head device No.
[w:GS463]=200; //Conversion destination head device No.
[w:GS460]=0x8002; //Starts conversion.
set([b:GB100]); //Launches script 2.
```

• Script 2 (conversion completion monitor processing)

Waits completion of the conversion from integral numbers to real numbers. When no error occurs after completion of the conversion, the Conversion Start Indication device is cleared at the same time of starting script 3.

· Data type: Signed BIN 16

· Trigger: While GB100 is on

```
if([b:GS260.15]==1)
{ //Conversion is complete.
if([b:GS260.14]==0)
{
set([b:GB101]); //Conversion is complete and the status is normal. (Launches script 3.)
}
[w:GS460]=0; //Clears the conversion start trigger.
rst([b:GB100]); //Clears the script 2 trigger.
}
```

• Script 3 (Average calculation processing)

Calculates the average value of the GOT internal device values converted into real numbers and stores the average value in GD300.

· Data type: Real number

· Trigger: Rise of GB101

```
[w:TMP001]=0;
[w:TMP001]=[w:TMP001]+[w:GD200];
[w:TMP001]=[w:TMP001]+[w:GD202];
[w:TMP001]=[w:TMP001]+[w:GD204];
[w:TMP001]=[w:TMP001]+[w:GD206];
[w:TMP001]=[w:TMP001]+[w:GD208];
[w:TMP001]=[w:TMP001]+[w:GD210];
[w:TMP001]=[w:TMP001]+[w:GD212];
[w:TMP001]=[w:TMP001]+[w:GD214];
[w:TMP001]=[w:TMP001]+[w:GD216];
[w:TMP001]=[w:TMP001]+[w:GD218];
[w:GD300]=[w:TMP001]/10; //Stores the average in GD300 (real number).
rst([b:GB101]); //Clears the script 3 trigger.
```

(17)Data type conversion function

Using this function enables you to calculate integral device values as real numbers much easier than using the integer←→real number conversion function.
The values of word devices can be converted into a specified data type for reading or writing.
Specify the data type when reading or writing the device values.
The following shows the list of the data types which can be specified with the data type conversion function.

Data type after conversion	Statement example	Expression example	
Signed BIN8	[s8:device]	[s8:GB50]=[s16:D100];	Refers to the values in D100 and D101 as the signed BIN 16, converts the value into the signed BIN 8 data, and assigns the data to GB50 to GB81.
Unsigned BIN8	[u8:device]	[u8:GB50]=[s16:D100];	Refers to the values in D100 and D101 as the signed BIN 16, converts the value into the unsigned BIN 8 data, and assigns the data to GB50 to GB81.
Signed BIN 16	[s16:device]	[s16:D0]=[w:GD0];	Refers to the value in GD0 as the data type set in [Data Type], converts the value into the signed BIN 16 data, and assigns the data to D0.
Unsigned BIN 16	[u16:device]	[w:GD0]=[u16:D0];	Refers to the value in D0 as the unsigned BIN 16 data, converts the value into the data type set in [Data Type], and assigns the data to GD0.
Signed BIN 32	[s32:device]	if([s32:D0]<0){	Refers to the values in D0 and D1 as the signed BIN 32 data and compares the data with 0.
Unsigned BIN 32	[u32:device]	[u32:GD10]=[w:GD0]*[w:GD1];	Refers to the values in GD0 and GD1 as the data type set in [Data Type], converts the operation results into the unsigned BIN 32 data, and assigns the results to GD10 and GD11.
Signed BIN64	[s64:device]	[s64:W12]=[w:D100];	Refers to the values in D100 to D103 as the data type set in [Data Type], converts the value into the signed BIN 64 data, and assigns the data to W12 to W15.
Unsigned BIN64	[u64:device]	[u64:D100]=[s64:D40];	Refers to the values in D40 and D43 as the signed BIN 64, converts the value into the unsigned BIN 64 data, and assigns the data to D100 to D103.
BCD16	[d16:device]	[d16:GD0]=[w:D0]&0x000F;	Refers to the value in D0 as the data type set in [Data Type], converts the operation result into BCD16 data, and assigns the result to GD0.
BCD32	[d32:device]	[w:GD0]=[d32:D0];	Refers to the value in D0 and D1 as the BCD32 data, converts the values into the data type set in [Data Type], and assigns the values to GD0.
BCD64	[d64:device]	[d64:D10]=[flt64:D30];	Refers to the values in D30 to D33 as the real numbers (64 bits), converts the values into the BCD64 data, and assigns the values to D10 to D13.
Real(32bit)	[flt:device]	[flt:D100]=log([w:D200]);	Refers to the value in D200 as the data type set in [Data Type], converts the operation result into real numbers (32 bits), and assigns the result to D100 and D101.
Real(64bit)	[flt64:device]	[flt64:D10]=[u64:D30];	Refers to the values in D30 to D33 as the unsigned BIN 64, converts the values into real numbers (64 bits), and assigns the values to D10 to D13.

The following shows application examples of the data type conversion function.
Example 1) If signed BIN 16 is set for [Data Type] and the average value of the device values is assigned in real numbers (32 bits)
[flt:D10]=([w:D20]+[w:D30]+[w:D40]+[w:D50]+[w:D60])/5;
Example 2) If the device value in real number (32 bits) is rounded down and written to the signed BIN 32 data
[s32:D100]=[flt:D200];
Example 3) If the device value in real numbers (32 bits) is rounded off and written to the signed BIN 32 data
[s32:D100]=[flt:D200]+0.5;

When converting the data type of a device value to a different data type, note the following.

- When the data type is converted from a real data type to an integer data type, the values after the decimal point are omitted.
- If a device value after conversion exceeds the setting range of the data type, do not convert the value.
- If a device value is negative, do not convert the data type to an unsigned data type.

9.9.3 How to use a project script, screen script, or script part

This section explains how to use a project script, screen script, or script part.

■1 Setting procedure

The following shows the procedure for setting a script.

(1) Procedure for setting a project script or screen script

Step 1 Configure the script settings with GT Designer3, such as the data type and trigger type.

➟9.9.5 [Script] dialog

Step 2 Create or edit a script with the script editor or a commercially available text editor.

➟9.9.7 [Edit Script(script name)] dialog

Step 3 When you have created or edited a script with a commercially available text editor, read the script with GT Designer3.

Step 4 Check the syntax of the script with GT Designer3.

➟9.9.7 [Edit Script(script name)] dialog
If an error is detected, return to step 1 to correct the script.
A general C language compiler is also usable to simulate the operation.
➟9.9.14 ■1 Simulation using a general C language compiler or debugger

Step 5 Write the project from the personal computer to the GOT with GT Designer3.

➟4. COMMUNICATING WITH GOT

Step 6 Start monitoring and check the script operation using the device monitor.

➟GOT2000 Series User's Manual (Monitor)
If the script runs properly, the creation of the script is complete.
If the script runs improperly, return to step 1 to correct the script.

(2) Procedure for setting a script part

When you place a script parts object on the screen editor, make sure that the object overlaps the screen display area 1 dot or more.
Otherwise, the script set for the object does not run.

Step 1 Select [Object] → [Script Parts] from the menu.

Step 2 Click the position to place a script parts object.

Step 3 Double-click the script parts object to display the [Script Parts] dialog.

➟9.9.10 [Script Parts] dialog

Step 4 On the [Script Setting] tab, set a trigger type and a script.

Step 5 Check the syntax of the script with GT Designer3.

➟9.9.7 [Edit Script(script name)] dialog
9.9.11 [Script Edit] dialog (for script parts)
If an error is detected, return to step 4 to correct the script.
A general C language compiler is also usable to simulate the operation.
➟9.9.14 ■1 Simulation using a general C language compiler or debugger

Step 6 Write the project from the personal computer to the GOT with GT Designer3.

➟4. COMMUNICATING WITH GOT

Step 7 Start monitoring and check the script operation using the device monitor.

➟GOT2000 Series User's Manual (Monitor)
If the script runs properly, the creation of the script is complete.
If the script runs improperly, return to step 4 to correct the script.

■2 Operation

The following shows the operation of a project script, screen script, or script part.

(1) Trigger condition

A project script, a screen script, or the script of a script parts object runs when its trigger condition is satisfied, and the result is written to a target PLC CPU.

The following shows the selectable trigger types.

- [Ordinary]
- [ON]
- [OFF]
- [Rise]
- [Fall]
- [Rise/Fall]
- [ON Sampling]
- [OFF Sampling]
- [Sampling] (Unit: second)
- [When closing a screen] (for screen scripts and script parts)

(2) Execution unit

Project scripts, screen scripts, and the scripts of a script parts object run one by one.

Even if the trigger conditions of multiple scripts are satisfied, the scripts do not run simultaneously.

(3) Execution order

The GOT check whether the trigger conditions of project scripts, screen scripts, and scripts of script parts objects are satisfied in top-to-bottom order as shown in the table below.

Depending on when the trigger device status is refreshed, the scripts may not run in the specified order even though the same trigger device is set for the scripts.

To control the execution order of scripts, establish a handshake between the scripts.

Priority order of screens	Priority order of scripts	Hierarchical order of the set overlay screen function	Execution order specified on GT Designer3	Number of executable scripts
-	Project script	-	1 → 2 → ...	256
Base screen	Screen script	Basic screen	1 → 2 → ...	256
		Called screen of the 1st layer	1 → 2 → ...	
		:	:	
		Called screen of the 16th layer	1 → 2 → ...	
	Script part	32 script parts objects on the basic screen	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		32 script parts objects on a called screen of the 1st layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		:	:	
		32 script parts objects on the called screens of the 16th layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	

Priority order of screens	Priority order of scripts	Hierarchical order of the set overlay screen function	Execution order specified on GT Designer3	Number of executable scripts
Superimpose window 1	Screen script	Basic screen	1 → 2 → ...	256
		Called screen of the 1st layer	1 → 2 → ...	
		:	:	
		Called screen of the 16th layer	1 → 2 → ...	
	Script part	32 script parts objects on the basic screen	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		32 script parts objects on a called screen of the 1st layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		:	:	
		32 script parts objects on the called screens of the 16th layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
Superimpose window 2	Screen script	Basic screen	1 → 2 → ...	256
		Called screen of the 1st layer	1 → 2 → ...	
		:	:	
		Called screen of the 16th layer	1 → 2 → ...	
	Script part	32 script parts objects on the basic screen	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		32 script parts objects on a called screen of the 1st layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		:	:	
		32 script parts objects on the called screens of the 16th layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
Overlap window 1	Screen script	Basic screen	1 → 2 → ...	256
		Called screen of the 1st layer	1 → 2 → ...	
		:	:	
		Called screen of the 16th layer	1 → 2 → ...	
	Script part	32 script parts objects on the basic screen	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		32 script parts objects on a called screen of the 1st layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		:	:	
		32 script parts objects on the called screens of the 16th layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
:	:	:	:	:

Priority order of screens	Priority order of scripts	Hierarchical order of the set overlay screen function	Execution order specified on GT Designer3	Number of executable scripts
Overlap window 5	Screen script	Basic screen	1 → 2 → ...	256
		Called screen of the 1st layer	1 → 2 → ...	
		:	:	
		Called screen of the 16th layer	1 → 2 → ...	
	Script part	32 script parts objects on the basic screen	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		32 script parts objects on a called screen of the 1st layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	
		:	:	
		32 script parts objects on the called screens of the 16th layer	Script parts object 1: 1 → 2 → ... : Script parts object 32: 1 → 2 → ...	

(4) Execution status

A project script, a screen script, or the script of a script parts object is processed according to the script execution status.

Script execution status	Processing
Waiting for turn	• Waits for the processing turn according to the execution order. • When the turn has come, the script enters the "Waiting for execution" status.
Waiting for execution	• The processing differs depending on the operating condition. Satisfied: The script enters the "Execution" status. Not satisfied: The script enters the "Waiting for turn" status, and the next script enters the "Waiting for execution" status.
Execution	• When the script has ended, the processing result is written to the PLC CPU and the script enters the "Waiting for turn" status. The next script enters the "Waiting for execution" status. • If an error occurs, the script enters the "Stop" status and the next script enters the "Waiting for execution" status. • When a screen is switched while screen scripts are used, the next script does not enter the "Waiting for execution" status until all the scripts set in the screen have been executed.
Stop	• The "Stop" status is held until the error history is cleared.

■3 Monitoring time for a project script, screen script, or script part

Specify the monitoring time of a script with GS385.

If a script does not end after a lapse of the specified monitoring time, the script is aborted.

The setting range is 1 second to 300 seconds. (Units of 1 second)

If the set value falls outside this range, 10 seconds are assumed.

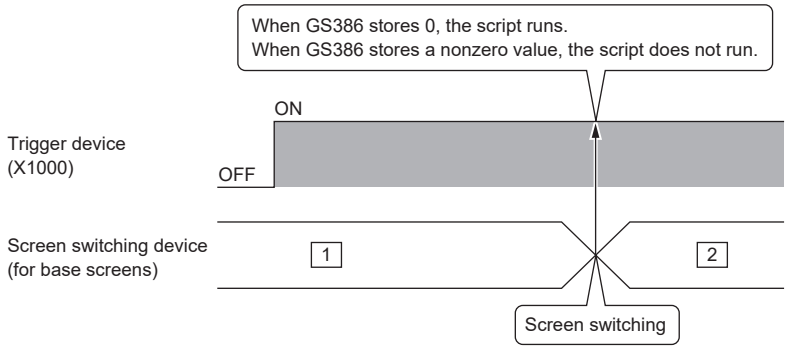
If error code 15 is output during script execution, specify a longer monitoring time with GS385.

■4 Running a project script, screen script, or script of a script parts object upon an applicable process

Use GS386 to set whether to run a script upon screen switching or other applicable processes.
When GS386 stores 0: Runs the script upon an applicable process.
When GS386 stores a nonzero value: Does not run the script upon an applicable process.
This setting is applied to the project scripts, screen scripts, and script parts where the following trigger types are set.

Trigger type	When running a script upon an applicable process
[Rise]	When the trigger device is on, the script runs upon screen switching or other applicable processes.
[Fall]	When the trigger device is off, the script runs upon screen switching or other applicable processes.
[Rise/Fall]	When the trigger device is on or off, the script runs upon screen switching or other applicable processes.

Example) When a screen script ([Trigger Type]: [Rise], [Trigger Device]: X1000) is set for base screen 2



The following shows the processes upon which a script runs.

Script type	Process	Remarks
Project script	When the GOT is powered on or when the GOT returns from offline	-
Screen script Script part	Screen switching	The scripts, which are set for the screen displayed after screen switching, are executed.
	Security switching *1	-
	Language switching *1	-
	System language switching *1	-
	Station No. switching *1	When the station No. switching devices are set by screen type, the scripts that are set for the screens of the target screen type are executed.
	Offset switching *1	On a screen having a script setting, when offset switching occurs in any device of the screen, the script is executed.
	Buffer memory unit No. switching *1	-
	When object script "redraw_screen()" is executed *1	-

*1 When [Perform script initial operation (screen/object) only when switching screens] is deselected on the [Option] tab in the [Script] dialog, the script runs upon the process.

➟9.9.5 ■4 [Option] tab

9.9.4 Examples of project scripts, screen scripts, and the scripts of script parts objects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

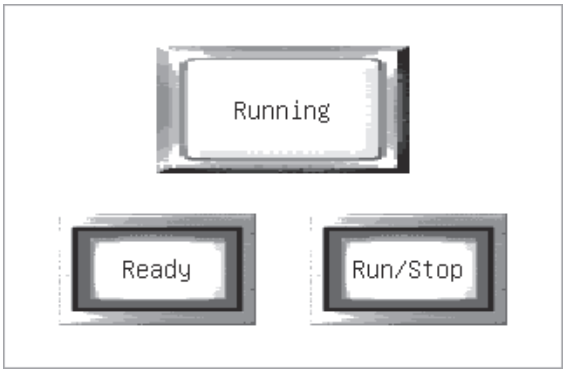
The following shows the examples of project scripts, screen scripts, and the scripts of script parts objects.

■1 Switches with the interlock function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Operation

When the ready switch and the run/stop switch turn on, the running lamp turns on.
The system operation is controlled associating with the running lamp.

Screen image	Operation of each object
	Running lamp: Displays the operation status of the system. Ready switch: Operates as an interlock of the run/stop switch. Run/Stop switch: Switches the operation status of the system (running or stop).

(2) Monitor screen setting

Object name	Type	Setting item	Setting
Running lamp	Bit lamp	Monitor device	M0003 (System operation control device)
Ready switch	Bit switch	Monitor device	M0001
		Operation setting	Bit set
Run/Stop switch	Bit switch	Monitor device	M0002
		Operation setting	Bit set

(3) Program example

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

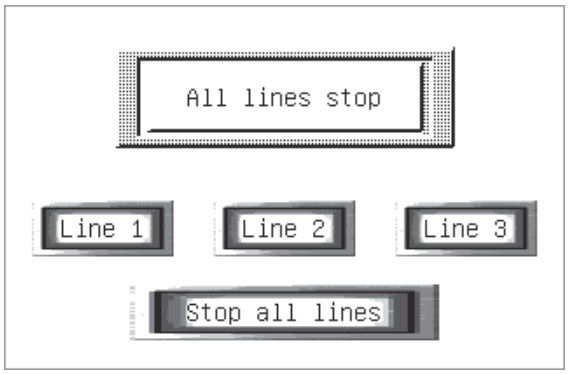
Script	if ([b:M0001]&&[b:M0002]){
	set([b:M0003]);
	}else{
	rst([b:M0003]);
	rst([b:M0002]);
	}
		//When both the ready switch and the run/stop switch turn on,
		//the running lamp turns on and the system operation starts.
		//If not,
		//the running lamp turns off and the system stops and
		//the run/stop switch is reset.

■2 Lamps which change display objects according to multiple conditions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Operation

The operations of three lines are controlled by the switches, and the control statuses of each line are indicated by one lamp.

Screen image	Operation of each object
	Control status lamp: The lamp color and the comment change according to the operation status of each line. Line 1 to Line 3 switch: Control the operations of line 1 to line 3. Stop all lines switch: Stops all the lines.

(2) Monitor screen setting

Object name	Type	Setting item	Setting
Control status lamp	Word lamp	Monitor device	D10
Control status lamp	Word lamp	Style, text	Display range: $V==0 Lamp color: 182 Text: All lines stop
			Display range: $V==1 Lamp color: 3 Text: Line 1 running
			Display range: $V==2 Lamp color: 224 Text: Line 2 running
			Display range: $V==3 Lamp color: 227 Text: Line 3 running
			Display range: $V==4 Lamp color: 28 Text: Line1 and 2 running
			Display range: $V==5 Lamp color: 31 Text: Line1 and 3 running
			Display range: $V==6 Lamp color: 252 Text: Line2 and 3 running
			Display range: $V==7 Lamp color: 162 Text: Line1, 2 and 3 running
Line 1 switch	Bit switch	Monitor device	X1
		Operation setting	Bit alternate
Line 2 switch	Bit switch	Monitor device	X2
		Operation setting	Bit alternate
Line 3 switch	Bit switch	Monitor device	X3
		Operation setting	Bit alternate
Stop all lines switch	Bit switch	Monitor device	X0
		Operation setting	Bit set

(3) Program example

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

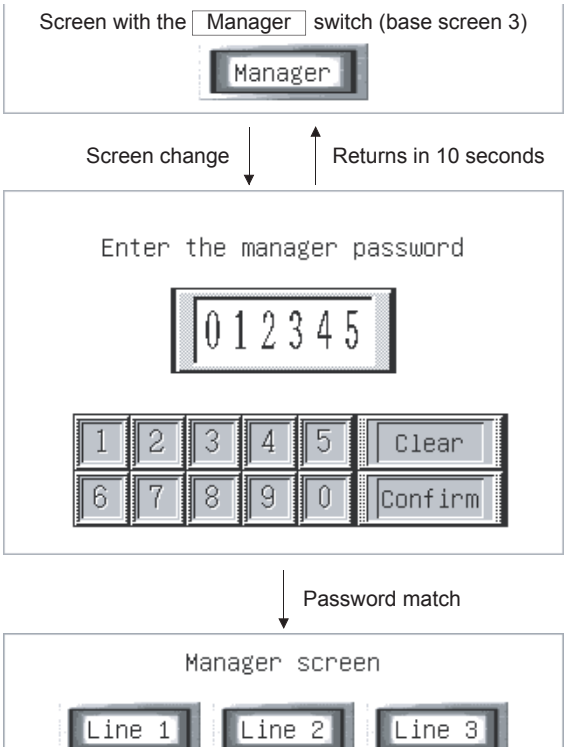
Script	if(([b:X1]==OFF)&&([b:X2]==OFF)&&([b:X3]==OFF)){
	[w:D10]=0;
	}
	if(([b:X1]==ON)&&([b:X2]==OFF)&&([b:X3]==OFF)){
	[w:D10]=1;
	}
	if(([b:X1]==OFF)&&([b:X2]==ON)&&([b:X3]==OFF)){
	[w:D10]=2;
	}
	if(([b:X1]==OFF)&&([b:X2]==OFF)&&([b:X3]==ON)){
	[w:D10]=3;
	}
	if(([b:X1]==ON)&&([b:X2]==ON)&&([b:X3]==OFF)){
	[w:D10]=4;
	}
	if(([b:X1]==ON)&&([b:X2]==OFF)&&([b:X3]==ON)){
	[w:D10]=5;
	}
	if(([b:X1]==OFF)&&([b:X2]==ON)&&([b:X3]==ON)){
	[w:D10]=6;
	}
	if(([b:X1]==ON)&&([b:X2]==ON)&&([b:X3]==ON)){
	[w:D10]=7;
	}
	if ([b:X0]==ON){
	rst([b:X1]);
	rst([b:X2]);
	rst([b:X3]);
	rst([b:X0]);
	}
		//When line 1, 2, and 3 are off,
		//0 is stored in D10.
		//When line 1 is on and line 2 and 3 are off,
		//1 is stored in D10.
		//When line 2 is on and line 1 and 3 are off,
		//2 is stored in D10.
		//When line 3 is on and line 1 and 2 are off,
		//3 is stored in D10.
		//When line 1 and 2 are on and line 3 is off,
		//4 is stored in D10.
		//When line 1 and 3 are on and line 2 is off,
		//5 is stored in D10.
		//When line 2 and 3 are on and line 1 is off,
		//6 is stored in D10.
		//When line 1, 2, and 3 are on,
		//7 is stored in D10.
		//When the Stop all lines switch is turned on,
		//line 1 is turned off.
		//line 2 is turned off.
		//line 3 is turned off.
		//The Stop all lines switch is turned off.

■3 Password entry screen with time limit function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Operation

The password entry screen is displayed. If the correct password is not entered within 10 seconds, the screen returns to the previous screen.

Screen image	Operation of each object
 Manager screen (base screen 5) appears.	Manager button: Displays the password entry screen (base screen 4). Password entry: Displays the password entered using 0 to 9 switches. 0 to 9 switch: Inputs a value. Clear switch: Clears the input value. Confirm switch: Confirms the input value.

(2) Monitor screen setting

Object name	Type	Setting item	Setting
Manager button	Go To Screen switch	Operation setting	Base screen switching 4
Password entry	Numerical input	Monitor device	D10
1 switch	Key code switch	Operation setting	Key code [0031h]
2 switch	Key code switch	Operation setting	Key code [0032h]
3 switch	Key code switch	Operation setting	Key code [0033h]
4 switch	Key code switch	Operation setting	Key code [0034h]
5 switch	Key code switch	Operation setting	Key code [0035h]
6 switch	Key code switch	Operation setting	Key code [0036h]
7 switch	Key code switch	Operation setting	Key code [0037h]
8 switch	Key code switch	Operation setting	Key code [0038h]
9 switch	Key code switch	Operation setting	Key code [0039h]
0 switch	Key code switch	Operation setting	Key code [0030h]
Clear switch	Key code switch	Operation setting	Key code [0088h]
Confirm switch	Key code switch	Operation setting	Key code [000Dh]

(3) Program example

This program example uses the GOT special registers (GS devices).
In the GOT special registers, the GOT internal information, the communication status, and the error information of the scripts are stored.
Associating the GOT special registers with scripts enables various operations.
For the details of the GOT special register, refer to the following.

➟12.1.3 GOT special register (GS)

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if([b:GS1.01]==ON){
	[w:TMP0001]=[w:GS7];
	}
	if([w:D10]==3238){
	[w:D0]=5; [w:D10]=0; }if([w:GS7]-[w:TMP0001]>=10){
	[w:D0]=3; }
		//Only when the screen switches to the password entry screen,
		//TMP0001 is input to GS7.
		//When the correct password is entered,
		//the manager screen (base screen 5) appears.
		//Clear password
		//When 10 seconds or longer have passed after the password entry screen appears,
		//the screen with the manager switch (base screen 3) appears.

■4 GOT operation check (watchdog) on a PLC

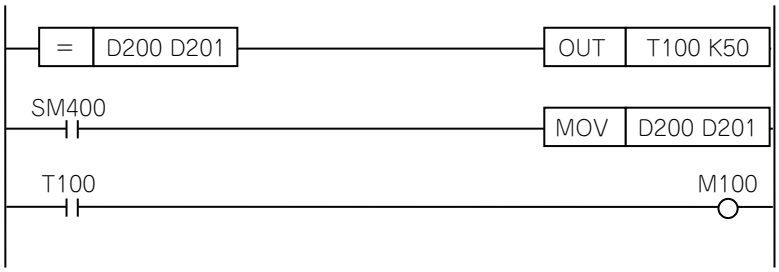
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Write data from the GOT to device [D200] of the PLC at regular intervals.
This enables the PLC to check whether the GOT is operating normally.
For example, if you configure a setting so that the indicator light is lit on the GOT screen when the value in [D200] does not change, the GOT visually notifies that it operates abnormally.

(1) Devices and ladder diagrams of the PLC

The following shows the devices and the ladder diagrams to be used in the PLC.

Description	Device
Write destination device from GOT	D200
Written device from the GOT change confirmation device	D201
Timeout timer	T100
Processing start trigger	M100



(2) Program examples

Item	Description
Trigger type	Cycle (1 second)
Script	[u16:D200] = [u16:D200] + 1;

■5 Selecting data and swapping between upper and lower data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GOT selects higher-order bits or lower-order bits of 16 or 32 bit data or swap the data.
The following shows program examples and the results using scripts.
Trigger types are user-selected.

(1) Selecting higher-order bits of 8 bit data

The GOT selects the higher-order 8 bits of the 16 bit data stored in [D300] and stores the data in [D350].

```
[u16:D350] = ([u16:D300] & 0xFF00) >> 8;
```

(2) Selecting lower-order bits of 8 bit data

The GOT selects the lower-order 8 bits of the 16-bit data stored in [D300] and stores the data in [D351].

```
[u16:D351] = [u16:D300] & 0x00FF;
```

(3) Swapping data between higher-order bits and lower-order bits of 16 bit data

The GOT swaps data between higher-order bits of 8 bits and lower-order bits of 8 bits of 16 bit data stored in [D300] and stores in [D352].

```
[u16:D352] = (([u16:D300] & 0x00FF) << 8) | (([u16:D300] & 0xFF00) >> 8);
```

(4) Swapping data between higher-order bits and lower-order bits of 32 bit data

The GOT swaps data between higher-order bits of 16 bits and lower-order bits of 16 bits of the 32-bit data stored in [D400] and stores the data in [D450].

```
[u32:D450] = (([u32:D400] & 0x0000FFFF) << 16) | (([u32:D400] & 0xFFFF0000) >> 16);
```

Specify [u16] or [u32] so that the data type is unsigned.

Specify the unsigned data type for a script when specifying [w].

The examples of the result using a script

Description		Device	Example of stored data
16-bit source data storage destination device		D300	0x1234
(1)	Higher-order bit data storage destination device	D350	0x12
(2)	Lower-order bit data storage destination device	D351	0x34
(3)	Higher/lower bit data swap storage destination device	D352	0x3412
32-bit source data storage destination device		D400	0x12345678
(4)	Higher/lower bit data swap storage destination device	D450	0x56781234

■6 Data type conversion

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Convert decimal data into BCD data or BCD data into decimal.
The following shows program examples and the results using a script.
Trigger types are user-selected.

(1) Converting decimal data into BCD data

The GOT converts decimal data stored in [D300] into BCD data and stores the data in [D350].

```
if( [u16:D300] < 10000 ) {
    [d16:D350] = [u16:D300];
}
```

If 5 digits of data or more is stored in [D300], set the storage destination to 32 bits instead of using an if statement like the following.

```
[d32:D350] = [u16:D300];
```

(2) Converting BCD data into decimal data

The GOT converts BCD data in [D400] into decimal data and stores the data in [D450].

```
[[u16:D450] = [d16:D400];
```

The examples of the result using a script

Description		Device	Example of stored data
Decimal data storage destination device		D300	1234
(1)	Converted BCD data storage device	D350	0x1234
BCD data storage destination device		D400	0x1234
(2)	Converted decimal data storage device	D450	1234

■7 Application examples of the file operation function

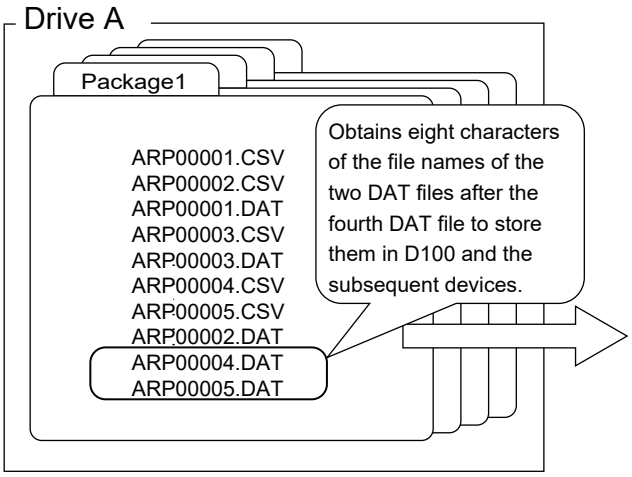
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows application examples of the file operation function.

(1) File name obtaining function (file_getlist)

Example) To obtain the file names of the two DAT files after the fourth DAT file in the folder Package 1 of drive A and to store eight characters of each file name in D100 and the subsequent devices

```
(Without using the declare function, #pragma use_character_code unicode)
[s16:D500] = file_getlist("A:\\Package1\\", "*.DAT", [w:D100], 3, 2, 8); //Obtain a file name
```



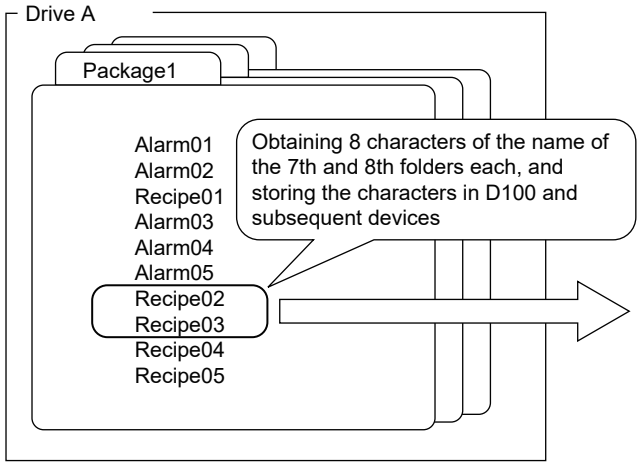
Storage device

D100	R	A
D101	0	P
D102	0	0
D103	4	0
D104	\0	\0
D105	R	A
D106	0	P
D107	0	0
D108	5	0
D109	\0	\0

(2) Obtain folder name function (file_getfolderlist)

Example) To obtain 8 characters of the name of the 7th and 8th folders each in the Package1 folder in drive A, and store the characters in D100 and subsequent devices

```
(Without using the declare function, #pragma use_character_code unicode)
[s16:D500] = file_getfolderlist("A:\\Package1\\", "",[w:D100],6,2,8); // Obtain a folder name.
```



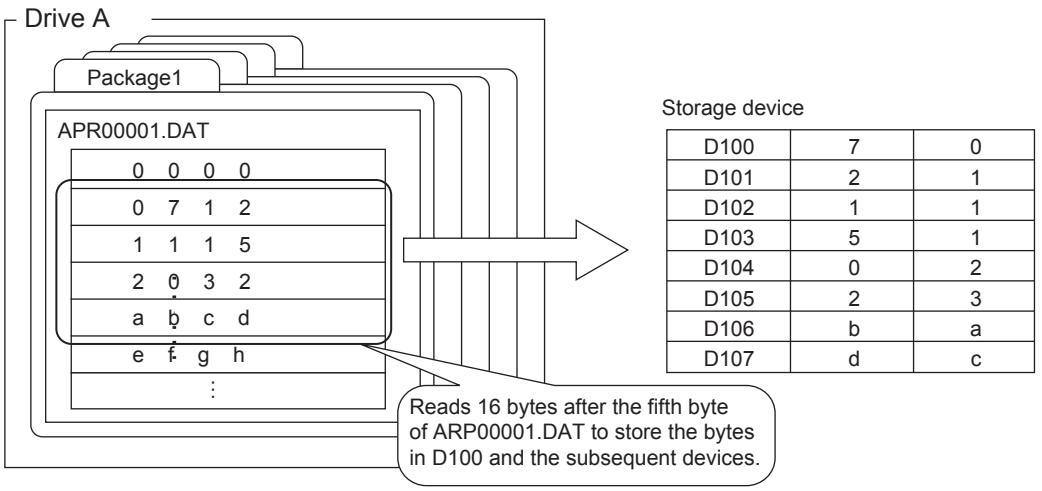
Storage device

D100	e	R
D101	i	c
D102	e	p
D103	2	0
D104	\0	\0
D105	e	R
D106	i	c
D107	e	p
D108	3	0
D109	\0	\0

(3) File read function (file_read)

Example) To read 16 bytes after the fifth byte of ARP00001.DAT in the folder Package 1 of drive A and to store the bytes in D100 and the subsequent devices

```
[s16:D500] = file_read("A:\\Package1\\", "ARP00001.DAT", [w:D100], 4, 16); //Reads file
```

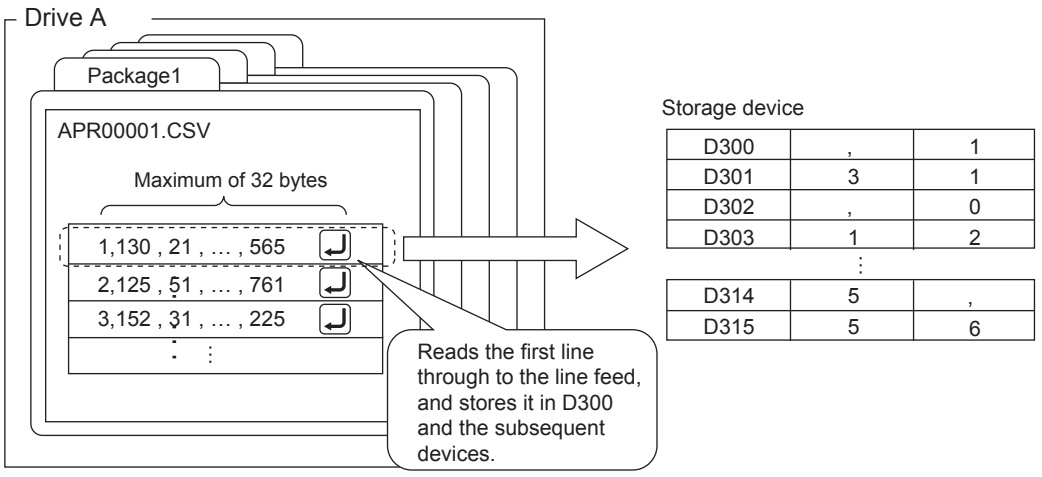


(4) File line read function (file_lineread, file_unilineread)

Example) To read the first line of ARP00001.CSV in the folder Package 1 of drive A and to store it in D300 and the subsequent devices

- Length of one line: Up to 32 bytes
- D200: Return value (number of read bytes)
- D300: Device storing the read data

```
[s16:D200] = file_lineread("A:\\Package1\\","ARP00001.CSV",[w:D300],0,32); //Read one line
```



By adding the number of read bytes stored in the return value to the offset, the second or later lines can be read consecutively.

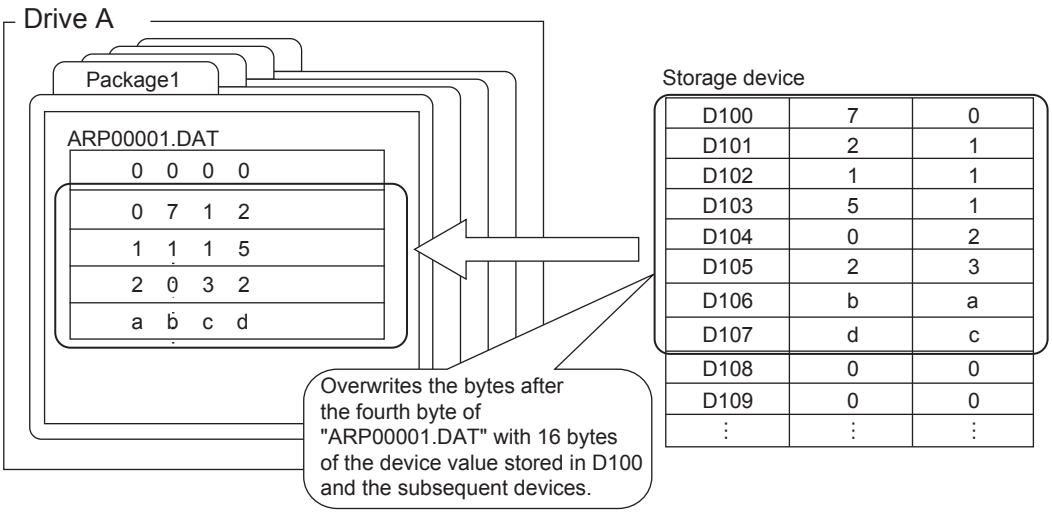
Example)

```
[s16:D400] = [s16:D400] + [s16:D200]; //Add the number of read bytes to the offset
[s16:D200] = file_lineread("A:\\Package1\\","ARP00001.CSV",[w:D300],[s16:D400],256);
```

(5) File write function (file_write)

Example) To overwrite the bytes after the fourth byte of ARP00001.DAT in the folder Package 1 of drive A with 16 bytes of the device value stored in D100 and the subsequent devices

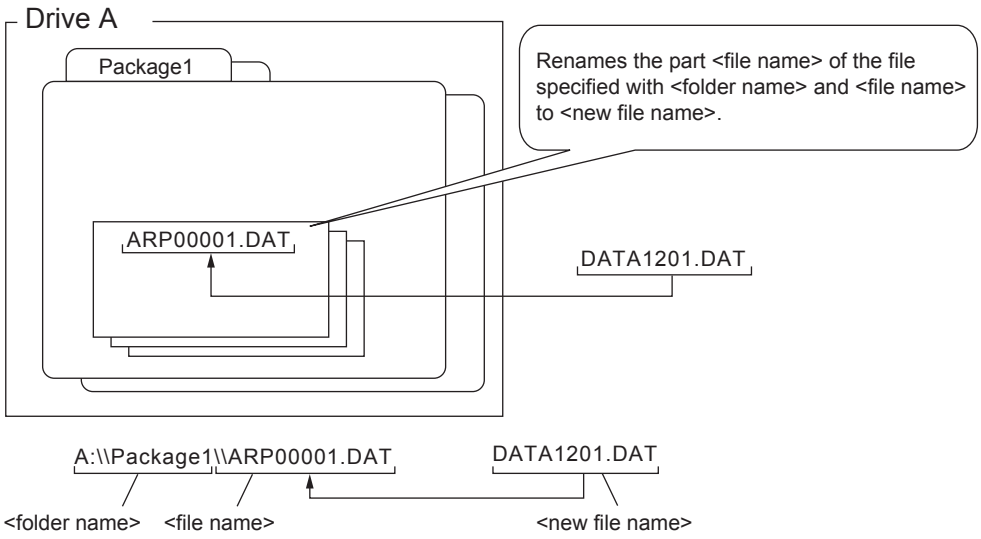
```
[s16:D500] = file_write("A:\\Package1\\", "ARP00001.DAT", [w:D100], 4, 16, 2); //Write file
```



(6) File rename function (file_rename)

Example) To rename ARP00001.DAT in the folder Package 1 of drive A to DATA1201.DAT

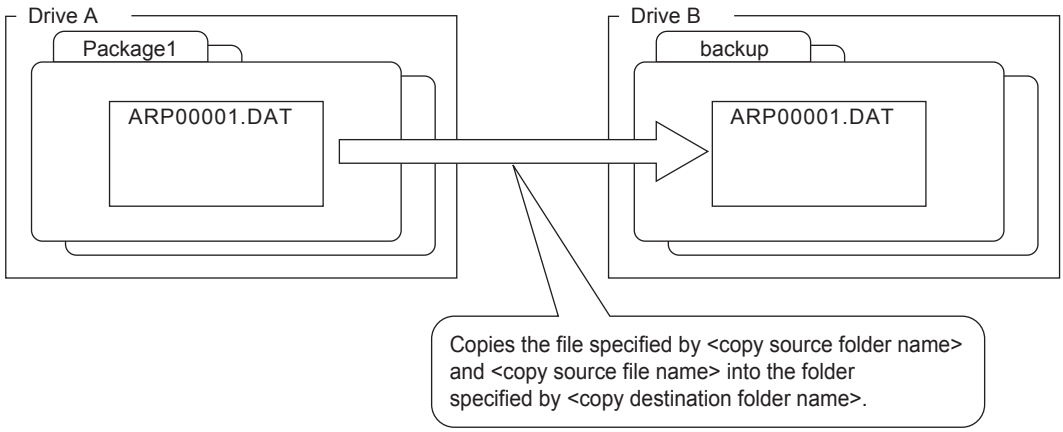
```
[s16:D500] = file_rename("A:\\Package1\\", "ARP00001.DAT", "DATA1201.DAT"); //Rename file
```



(7) File copy function (file_copy)

Example) To copy ARP00001.DAT in the folder Package1 of drive A to the backup folder of drive B

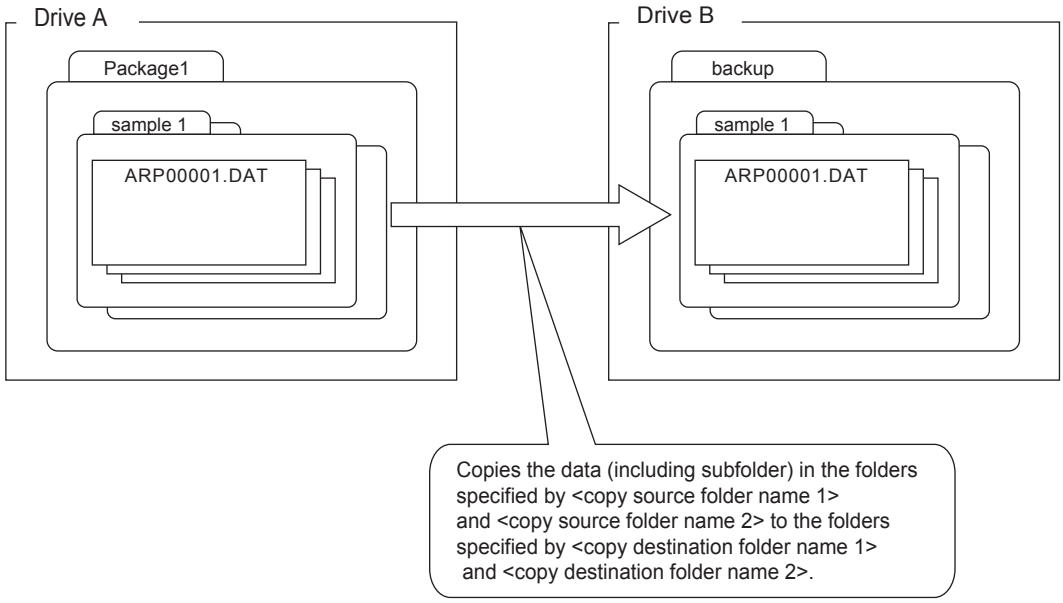
```
[s16:D500] = file_copy("A:\\Package1\\", "ARP00001.DAT", "B:\\backup\\", "", 1); //Copy file.
```



(8) Folder copy function (file_xcopy)

Example) To copy the data (including subfolder) in the folder Package 1 of drive A to the backup folder of drive B

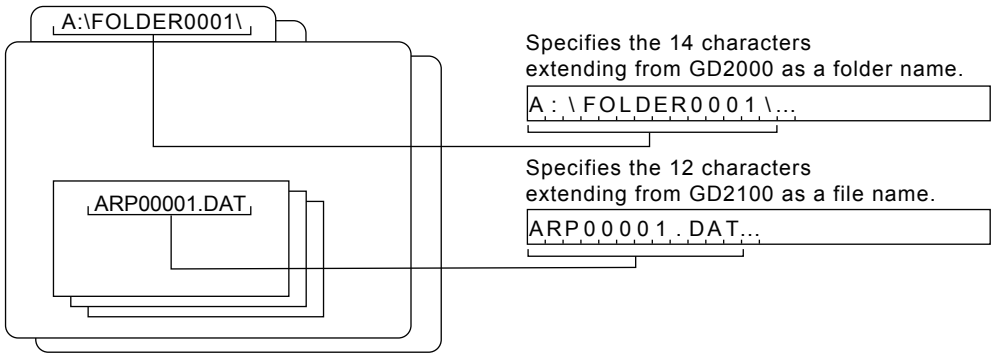
```
[s16:D500] = file_xcopy("A:\\Package1\\", "sample1", "B:\\backup\\", "sample1", 1); //Copy folder.
```



(9) Folder and file name character number specification functions (#pragma folder_name_length, #pragma file_name_length)

Example) To limit the folder name to 14 characters and file name to 12 characters at file reading
GD2000 to GD2006: Store folder name A: \FOLDER0001\.
GD2100 to GD2105: Store file name ARP00001.DAT.
GD3000 to GD3015: Store the data read from a file.

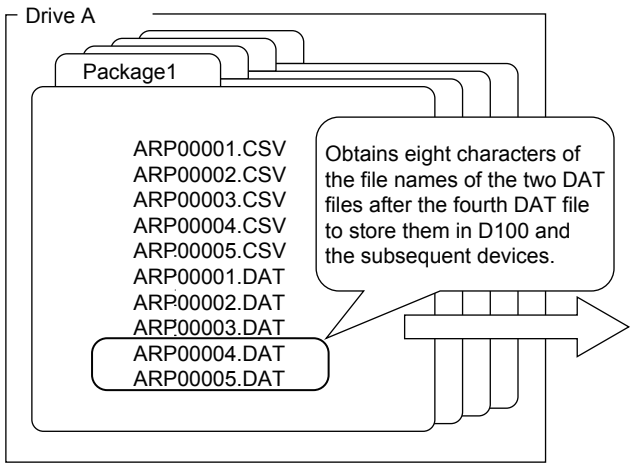
```
#pragma folder_name_length(14) //Limit the folder name length to 14 characters
#pragma file_name_length(12) //Limit the file name length to 12 characters
[s16:D500]=file_read([w:GD2000],[w:GD2100],[w:GD3000],0,32);//Read 32 characters from the start of file name GD2100
```



(10) Use Unicode declare function (#pragma use_character_code unicode)

Example) To specify a folder name and a file name in Unicode at file reading

```
#pragma use_character_code unicode
[s16:D500] = file_getlist("A:\\Package1\\","*.DAT", [w:D100], 3, 2, 8); //Obtain a file name
```



Storage device

D100	A
D101	R
D102	P
D103	0
D104	0
D105	0
D106	0
D107	4
D108	\0
D109	A
D110	R
D111	P
D112	0
D113	0
D114	0
D115	0
D116	5
D117	\0

■8 Application examples of the string operation function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

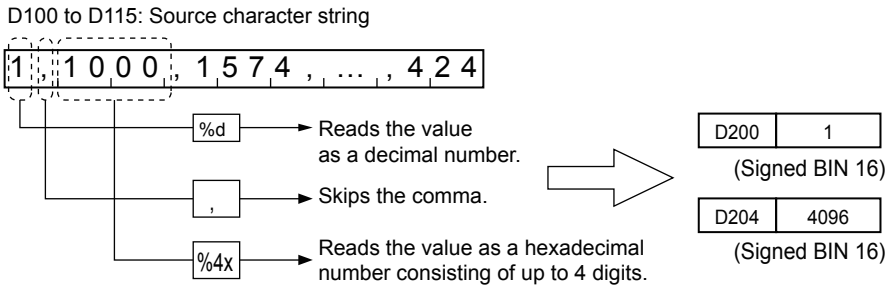
The following shows application examples of the string operation function.

(1) String input function (str_scanf, str_uniscanf)

Example) To read the first two fields from one line stored in D100 and the subsequent devices

- D500: Return value
- D100: Input string storage device (read one-line data)
- D200: Input value storage device (first field)
- D204: Input value storage device (second field)

```
[s16:D500] = str_scanf([w:D100], 32, 0, "%d,%4x", [w:D200], [w:D204]); //Obtain two data sets
```

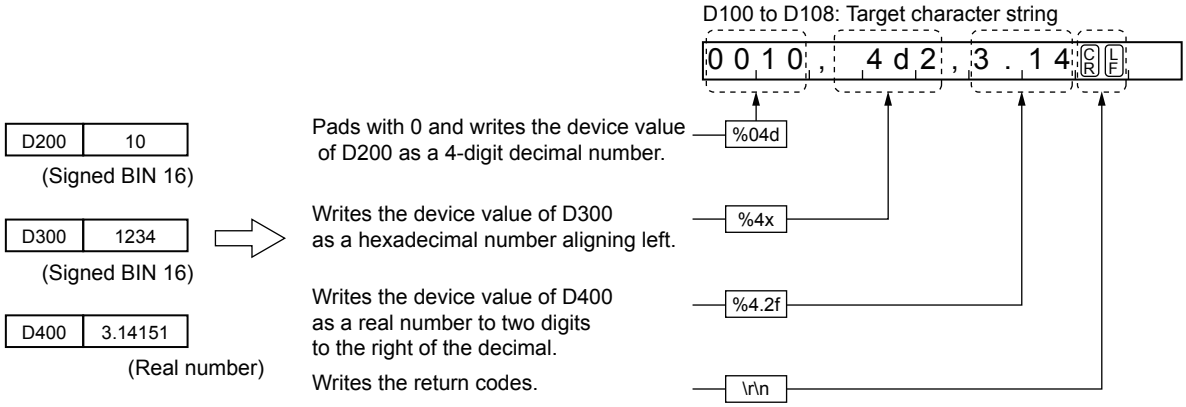


(2) String output function (str_printf, str_uniprintf)

Example) To write three data sets stored in D200, D300, and D400 to one character string stored in D100 and the subsequent devices

- D500: Return value
- D100: Output string storage device (target character string)
- D200: Output value storage device (data to be written to the first field)
- D300: Output value storage device (data to be written to the second field)
- D400: Output value storage device (data to be written to the third field)

```
[s16:D500] = str_printf([w:D100],18,"%04d,%4x,%4.2f\r\n",[s16:D200],[s16:D300],[flt:D400]); //Write three data sets
```

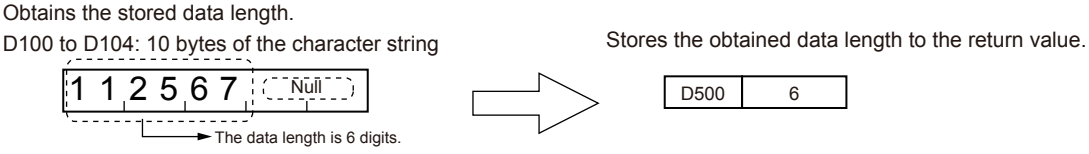


(3) String length acquisition function (str_strlen, str_unistrlen)

Example) To obtain the data length of characters from the 1st byte of D100 to the 10th byte

- D500: Return value (data length)
- D100: Input string storage device

```
[s16:D500] = str_strlen([w:D100],10); //Obtain data length of D100
```

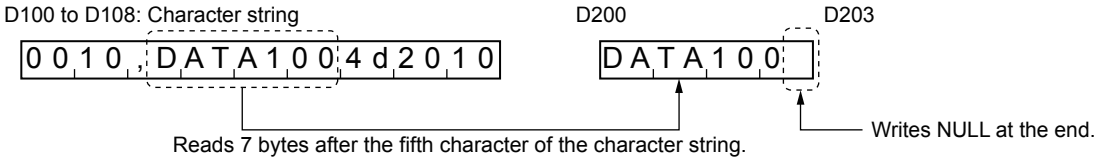


(4) Partial string acquisition function (str_strmid, str_unistrmid)

Example) To read 7 bytes after the fifth character of the string stored in D100 and the subsequent devices and to store the bytes in D200

- D500: Return value (read data amount)
- D100: Input string storage device (source character string)
- D200: Output string storage device (read data)

```
[s16:D500] = str_strmid([w:D100], [w:D200], 5, 7); //Obtain a part of the string of D100.
```

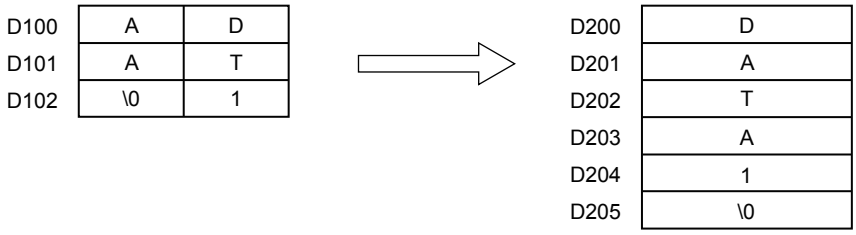


(5) Convert character code function (Local code to Unicode) (str_lc2uni)

Example) To read 6 characters (6-byte data) from an ASCII string in D100 and subsequent devices, encode the characters to Unicode, and write the 6 Unicode characters (12-byte data) to D200 and subsequent devices

- Order of storing data: Lower to higher

```
[s16:D500] = str_lc2uni(2, [w:D100], [w:D200], 6, 12); // Convert a character code.
```



D100	A	D
D101	A	T
D102	\0	1

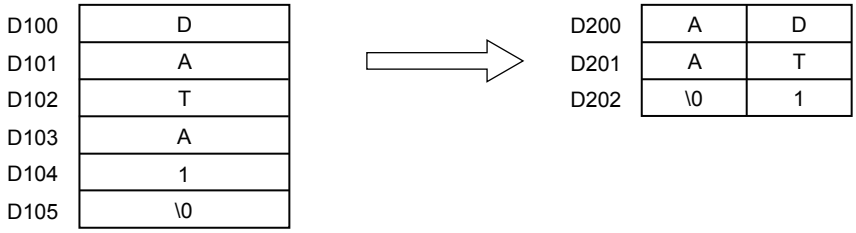
D200	D
D201	A
D202	T
D203	A
D204	1
D205	\0

(6) Convert character code function (Unicode to local code) (str_uni2lc)

Example) To read 6 characters (12-byte data) from a Unicode string in D100 and subsequent devices, encode the characters to ASCII, and writes the 6 ASCII characters (6-byte data) to D200 and subsequent devices

- Order of storing data: Lower to higher

```
[s16:D500] = str_uni2lc(2, [w:D100], [w:D200], 12, 6); // Convert a character code.
```



D100	D
D101	A
D102	T
D103	A
D104	1
D105	\0

D200	A	D
D201	A	T
D202	\0	1

9.9.5 [Script] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

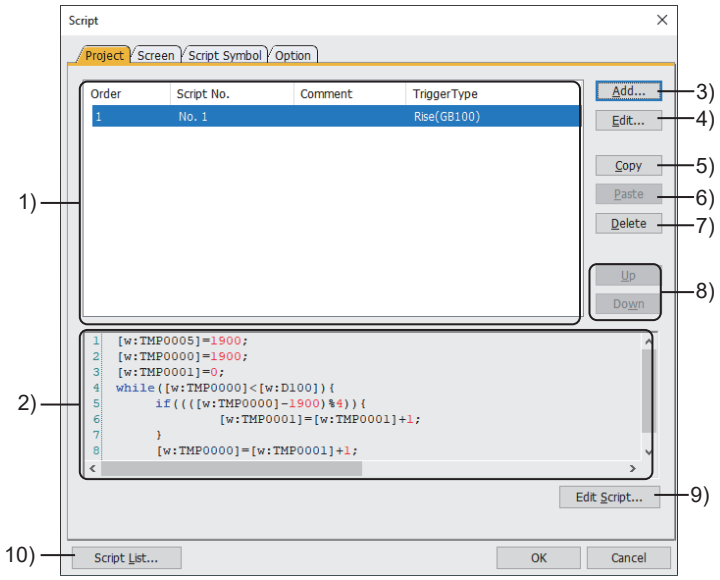
This dialog is used for setting a project script or screen script.
To display this dialog, select [Common] → [Script] → [Script] from the menu.

➟■1 [Project] tab
■2 [Screen] tab
■3 [Script Symbol] tab
■4 [Option] tab

■1 [Project] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the project scripts which operate to the whole project.



1) **Script setting list**
Displays the list of script settings.
The script of the selected script No. is displayed in the space below the script setting list.

2) **Script preview**
Displays the content of the script selected in the script setting list.

3) **[Add] button**
Add a new script setting to the list.
Click this button to display the [Script Edit] dialog.

➟9.9.6 [Script Edit] dialog (for project scripts and screen scripts)

The execution order of the scripts is set according to the order in which the scripts are added.

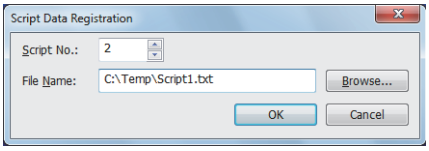
4) **[Edit] button**
Edit the selected script setting.
Click this button to display the [Script Edit] dialog.

➟9.9.6 [Script Edit] dialog (for project scripts and screen scripts)

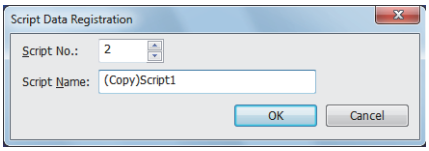
5) **[Copy] button**
Copies the selected script setting.

6) **[Paste] button**
Pastes the copied script setting to the last line of the list.
Click the [Paste] button to display the dialog for selecting the method to paste the script.
The pasting method differs depending on the [Yes] or [No] button.
[Yes] button: Copies the source script.

Select the [Yes] button to display the following dialog.



When [External File (External Data)] is selected in the [Option] tab



When [Project Data (Internal Data)] is selected in the [Option] tab

- **[Script No.]**
  Set the script No. for the script to be registered. (Default: The minimum number of the non-registered script No.) After registered, the script is reflected to the script list.
  ➟9.9.8 [Script File List] dialog
- **[File Name]**
  This item is displayed when [External File (External Data)] is selected in the [Option] tab.
  Click the [Browse] button to set the path name and file name of the script to be registered.
- **[Script Name]**
  This item is displayed when [Project Data (Internal Data)] is selected in the [Option] tab.
  Set the name of the script to be registered.
  The setting range is 1 character to 32 characters.

[No] button: Refers to the same script as that of the copy source.

7) **[Delete] button**
Deletes the selected script setting.

8) **[Up] button, [Down] button**
Changes the execution order of the selected script setting.

9) **[Edit Script] button**
Edit the selected project script with the editor selected in [Script Editor Selection] in the [Option] tab.
➟[Option] tab: ■4 [Option] tab
Script editor: 9.9.7 [Edit Script(script name)] dialog

10) **[Script List] button**
Displays the list of the registered scripts.
You can register scripts additionally and edit the scripts in the list.
➟9.9.8 [Script File List] dialog

■2 [Screen] tab

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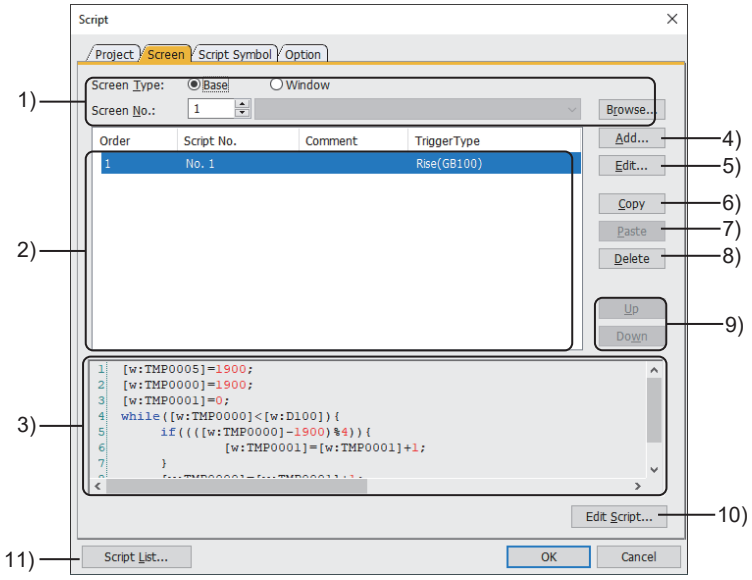


1) **[Screen Type]**
Select the screen ([Base] or [Windows]) in which the script setting operates and the screen number.
The setting range is [0] to [32767].
The screen number can be selected with the screen title.
Click the [Browse] button to display the [Screen Image List] dialog.
➟2.5 Creating, Opening, and Closing a Screen

2) **Script setting list**
Displays the list of script settings.

The script of the selected script No. is displayed in the space below the script setting list.

3) **Script preview**

Displays the content of the script selected in the script setting list.

4) **[Add] button**

Add a new script setting to the list.

Click this button to display the [Script Edit] dialog.

➟9.9.6 [Script Edit] dialog (for project scripts and screen scripts)

The execution order of the scripts is set according to the order in which the scripts are added.

5) **[Edit] button**

Edit the selected script setting.

Click this button to display the [Script Edit] dialog.

➟9.9.6 [Script Edit] dialog (for project scripts and screen scripts)

6) **[Copy] button**

Copies the selected script setting.

7) **[Paste] button**

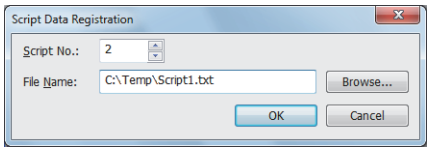
Pastes the copied script setting to the last line of the list.

Click the [Paste] button to display the dialog for selecting the method to paste the script.

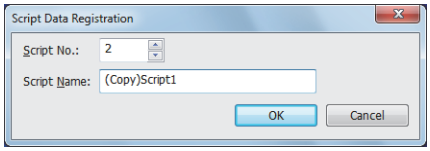
The pasting method differs depending on the [Yes] or [No] button.

[Yes] button: Copies the source script.

Select the [Yes] button to display the following dialog.



When [External File (External Data)] is selected in the [Option] tab



When [Project Data (Internal Data)] is selected in the [Option] tab

- **[Script No.]**

  Set the script No. for the script to be registered. (Default: The minimum number of the non-registered script No.) After registered, the script is reflected to the script list.

  ➟9.9.8 [Script File List] dialog

- **[File Name]**

  This item is displayed when [External File (External Data)] is selected in the [Option] tab.
  Click the [Browse] button to set the path name and file name of the script to be registered.

- **[Script Name]**

  This item is displayed when [Project Data (Internal Data)] is selected in the [Option] tab.
  Set the name of the script to be registered.
  The setting range is 1 character to 32 characters.

[No] button: Refers to the same script as that of the copy source.

8) **[Delete] button**

Deletes the selected script setting.

9) **[Up] button, [Down] button**

Changes the execution order of the selected script setting.

10) **[Edit Script] button**

Edit the selected project script with the editor selected in [Script Editor Selection] in the [Option] tab.

➟[Option] tab: ■4 [Option] tab

Script editor: 9.9.7 [Edit Script(script name)] dialog

11) **[Script List] button**

Displays the list of the registered scripts.

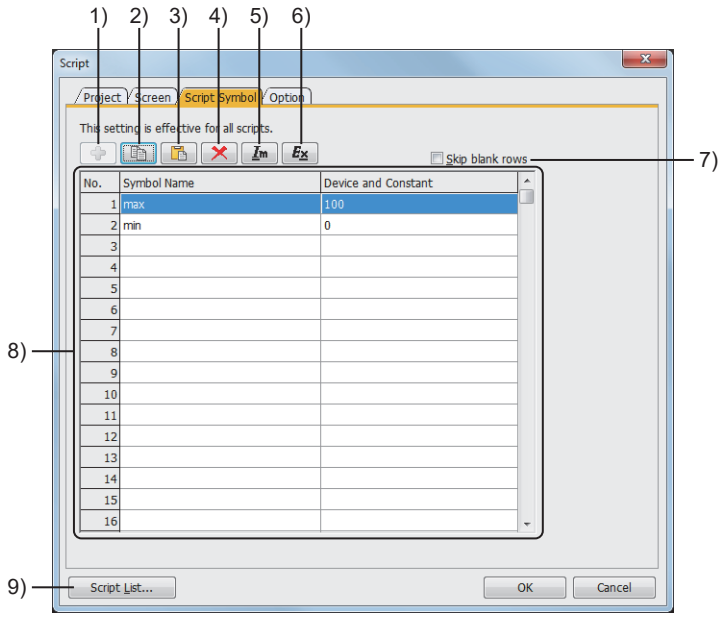
You can register scripts additionally and edit the scripts in the list.

➟9.9.8 [Script File List] dialog

■3 [Script Symbol] tab

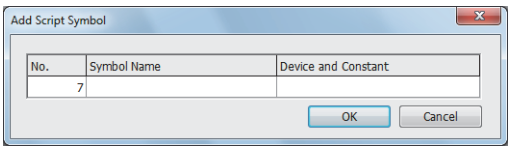
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Register character strings as script symbols.
Devices and constants in a script can be substituted by the registered character strings.
The set script symbols are usable in project scripts and screen scripts.



1) **[Add] button**

This button is available when [Skip blank rows] is selected.
Displays the [Add Script Symbol] dialog.



- [No.]
  Set a number for the script symbol to be added.
  The setting range is [1] to [10000].
- [Symbol Name]
  Set a character string to be described in a script.
  Up to 32 alphanumeric characters and symbols can be entered.
  However, the symbol # is not usable.
- [Device and Constant]
  Set a device or constant for the symbol name.
  Up to 32 alphanumeric characters and symbols can be entered.

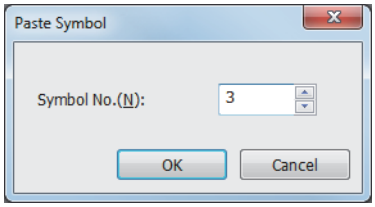
2) **[Copy] button**

Copies the setting from the row selected in the script symbol list.
You can copy the settings from multiple rows at one time.
When [Skip blank rows] is selected, the settings in the hidden rows are also copied.
The copied settings can be pasted to another script symbol setting dialog.

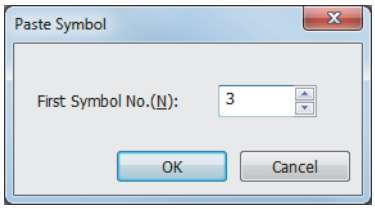
3) **[Paste] button**

Pastes the copied setting to the selected row.

When [Skip blank rows] is selected, the [Paste Symbol] dialog is displayed.



When pasting a setting to one row



When pasting settings to multiple rows

- [Symbol No.]
  Set a symbol number for the destination row.
  The setting range is [1] to [10000].
- [First Symbol No.]
  Set a symbol number for the first destination row.
  The setting range is [1] to [10000].

4) **[Delete] button**

Deletes the setting from the selected row.
You can delete the settings from multiple rows at one time.

5) **[Import] button**

Displays the [Open] dialog.
Read the script symbol settings from a Unicode text file or CSV file.

6) **[Export] button**

Displays the [Save As] dialog.
Save the script symbol settings to a Unicode text file or CSV file.
If multi-language characters are used in the settings, use the Unicode text file format.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

7) **[Skip blank rows]**

Displays only the rows in which script symbols have been registered.

8) **Script symbol list**

Lists the registered script symbols.
[Symbol Name] and [Device and Constant] are editable.

Item	Description
[No.]	Row number. Clicking a row number selects the relevant row.
[Symbol Name]	Set a character string to be described in a script. Up to 32 alphanumeric characters and symbols can be entered. However, the symbol # is not usable.
[Device and Constant]	Set a device or constant for the symbol name. Up to 32 alphanumeric characters and symbols can be entered.

9) **[Script List] button**

Displays the [Script List] dialog.
The [Script List] dialog lists the registered scripts.
You can register scripts additionally and edit the scripts in the list.

➟9.9.8 [Script File List] dialog

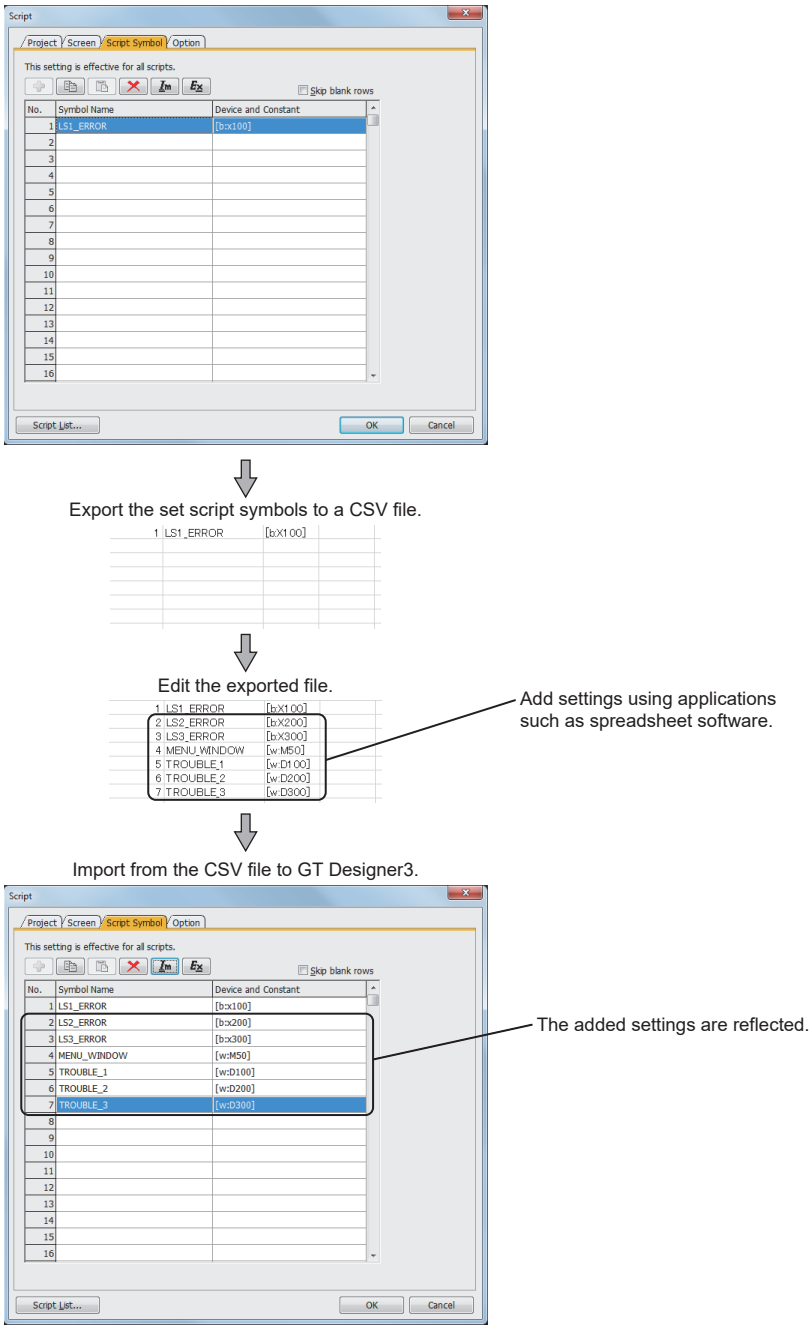
Point

(1) **Editing method of scripts**

You can edit scripts in the exported Unicode text file or CSV file using spreadsheet software and other software.
The edited Unicode text file or CSV file can be imported and read to GT Designer3.

(2) **Editing the exported file**

Example) When script settings are exported into and imported from a CSV file

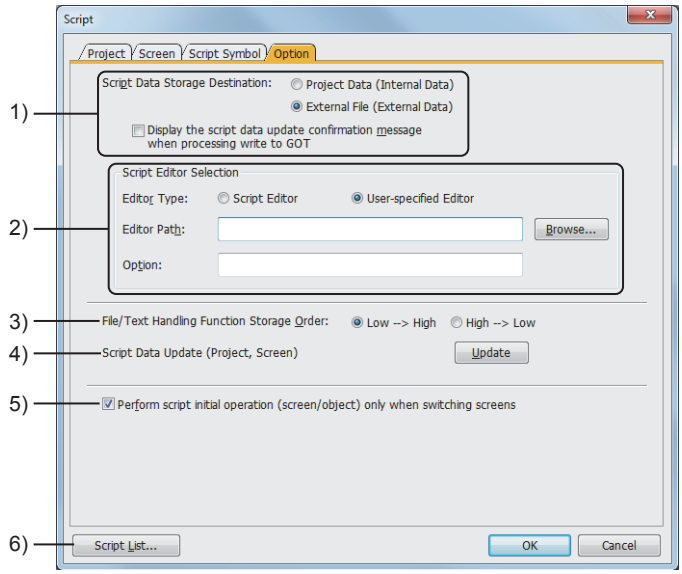


When 0 is set at the beginning of the symbol name, device, or constant, 0 at the beginning may be deleted depending on the function of the application for editing files (spreadsheet software and other software).
Pay attention to the above for editing exported files.

■4 [Option] tab

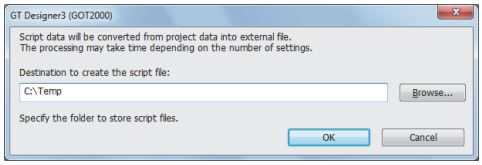
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the storage location of script data, editor used for editing scripts, and processing when an internal device is used.



1) [Script Data Storage Destination]

Select the location to store the script data of project scripts and screen scripts.

Item	Description
[Project Data (Internal Data)]	Select this item to store the script data in the project data. When the setting is changed from [External File (External Data)] to [Project Data (Internal Data)], the script data is converted from the script file to the project data.
[External File (External Data)]	Select this item to store the script data in the script file. When the setting is changed from [Project Data (Internal Data)] to [External File (External Data)], the script data is converted from the project data to the script file. Select [External File (External Data)] in [Script Data Storage Destination] to display the following dialog.  • **[Destination to create the script file]**[*1] Specify the folder to save the script file in. Click the [OK] button to convert the script data to a script file.
[Display the script data update confirmation message when processing write to GOT]	This item can be selected when [Script Data Storage Destination] is set to [External File (External Data)]. Select this item to display the message to check whether to update the script data for communication with the GOT (when [Communication] is selected from the menu).

*1 Up to 32 alphanumeric characters or symbols can be set for the script file name in the project data.
When the setting is changed from [External File (External Data)] to [Project Data (Internal Data)], the 33rd and later characters in the script file name are deleted.

2) [Script Editor Selection]

Set the editor for editing project scripts and screen scripts.

Item	Description
[Editor Type]	[Script Editor]: Select this item to use the script editor built in GT Designer3. [User-specified Editor]: Select this item to use the text editor specified by the user. This item can be selected only when [Script Data Storage Destination] is set to [External File (External Data)]. When selecting [User-specified Editor], set [Editor Path] and [Option] below.
[Editor Path]	Set the start-up file of the text editor (such as Notepad (NOTEPAD.EXE) or WordPad (WORDPAD.EXE) of Windows).
[Option]	Specify the option for the text editor.

3) **[File/Text Handling Function Storage Order]**

Select the order of data storage when file_read or file_write is used.

- [Low-->High]: Select this item to store data in the order of lower to upper data.
- [High-->Low]: Select this item to store data in the order of upper to lower data.

4) **[Script Data Update (Project, Screen)]**

Click the [Update] button to update the setting of the script data read to GT Designer3.

5) **[Perform script initial operation (screen/object) only when switching screens]**

Enables the initial operation of the screen script or the object script upon screen switching only.

The screen scripts and object scripts, which the following trigger type is set in, are executed upon screen switching.

- [Rise]

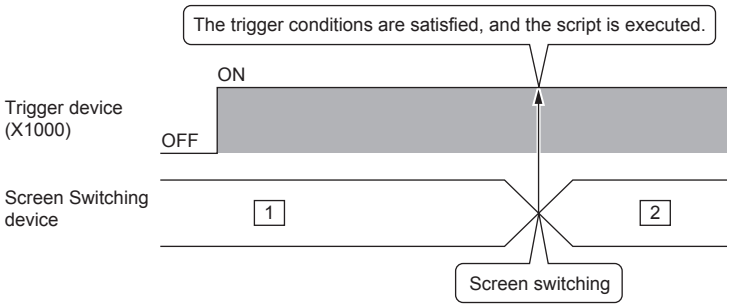
  Executes the script when the trigger device turns on after screen switching or other processes.
- [Fall]

  Executes the script when the trigger device turns off after screen switching or other processes.
- [Rise/Fall]

  Executes the script when the trigger device turns on or off after screen switching or other processes.

When the screen script ([Trigger Type]: [Rise], [Trigger Device]: X1000) is set for base screen 2

After base screen 1 is switched to base screen 2, if the trigger device (X1000) turns on, the screen script set for base screen 2 is executed.



The setting determines the process that triggers the initial operation of the script as shown below.

Setting	Process
Selected	• Screen switching The scripts, which are set for the screen displayed after screen switching, are executed.
Cleared	• Screen switching The scripts, which are set for the screen displayed after screen switching, are executed. • Security switching • Language switching • System language switching • Station No. switching When the station No. switching devices are set by screen type, the scripts that are set for the screens of the target screen type are executed. • Offset switching Only the screen scripts are executed. On a screen having a script setting, when offset switching occurs in any device of the screen, the script is executed. • Buffer memory unit No. switching • When object script "redraw_screen()" is executed

You can disable the initial operation of the scripts by using the GOT internal devices.

- Project script and screen script: GS386
- Object script: GS389

➟12.1.3 ■4 Read device list

6) **[Script List] button**

Displays the [Script List] dialog.

Displays the list of the registered scripts.

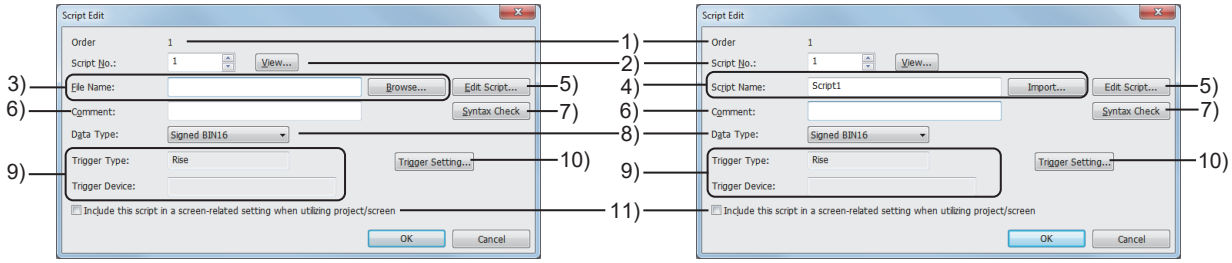
You can register scripts additionally and edit the scripts in the list.

➟9.9.8 [Script File List] dialog

9.9.6 [Script Edit] dialog (for project scripts and screen scripts)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This dialog is used for setting a project script or screen script.
For each script setting, set a trigger condition and a script.



When [External File (External Data)] is selected in the [Option] tab of the [Script] dialog

When [Project Data (Internal Data)] is selected in the [Option] tab of the [Script] dialog

1) **[Order]**
Displays the execution order of the script being edited.

2) **[Script No.]**
Set the registration number of the script that is to be executed by the script being edited.
Click the [View] button to check the registration number of other scripts.

➟9.9.8 [Script File List] dialog

3) **[File Name]**
Displays the drive and folder where the script file to be executed is stored when [External File (External Data))] is selected in the [Option] tab.
When no script file is registered, click the [Browse] button to set the script file to be executed.
Up to 32 characters can be set for the file name of the script file (excluding the extension.TXT).
When [Project Data (Internal Data)] is selected in the [Option] tab and the script data is converted, the file name is used for [Script Name].
When 32 or more characters are used for a file name, only the 32 characters are used for [Script Name] and the 33rd or later characters are not used.

4) **[Script Name]**
When [Project Data (Internal Data)] is selected in the [Option] tab, set the script name to be executed.
The following symbols cannot be entered into [Script Name].
/ \ ? * : | " < >
Click the [Import] button to read the script edited in the text file format to GT Designer3.
When a script file is imported, the file name excluding the extension (.TXT) is displayed at [Script Name].
Set [Script Name] which is different from that of other scripts.
When [External File (External Data)] is selected in the [Option] tab and the script data is converted, [Script Name] is used for the file name of the script file.
Therefore, when [Script Name] is duplicated, take a measure such as changing the file name.

5) **[Edit Script] button**
Edit the script selected in [File Name] or [Script Name] with the editor which is selected in [Script Editor Selection] in the [Option] tab.

➟[Option] tab: 9.9.5 ■4 [Option] tab
Script editor: 9.9.7 [Edit Script(script name)] dialog

6) **[Comment]**
Set the comment (note) of the script being edited.
Up to 32 characters can be set.

7) **[Syntax Check] button**
Checks the syntax of the script selected in [File Name] or [Script Name].
The available device type and device range are also checked.

➟9.9.14 ■2 Messages to be displayed at the syntax check

8) **[Data Type]**
Select the data type of the script to be executed.
The following shows the items to be selected.
• [Signed BIN16]

- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

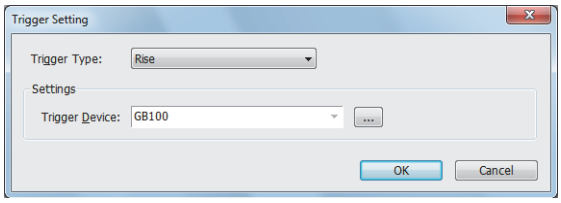
9) **[Trigger Type], [Trigger Device]**

Displays the operating condition and trigger device of the script which are set in the [Trigger Setting] dialog.

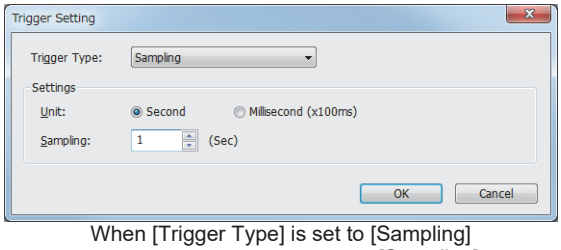
10) **[Trigger Setting] button**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog.

➟6.2.2 Setting Trigger Types

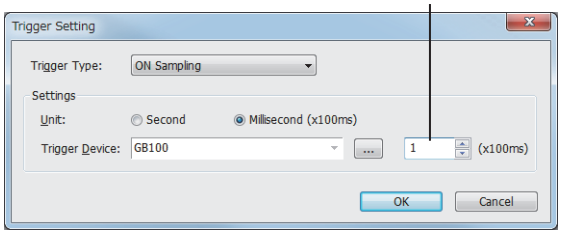


When [Trigger Type] is set to [Rise]



When [Trigger Type] is set to [Sampling]

[Sampling]



When [Trigger Type] is set to [ON Sampling]

- **[Trigger Type]**

  Select the operating condition of the script.
  The following shows the items to be selected.
  - [Ordinary]
  - [ON]
  - [OFF]
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
  - [When closing a screen] (Available to the screen script only)
- **[Trigger Device]**

  Set this item when [Trigger Type] is set to [ON], [OFF], [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling].
  Set a trigger device to execute the script.
- **[Unit]**

  Set this item when [Trigger Type] is set to [Sampling], [ON Sampling], or [OFF Sampling].
  Select the unit of the cycle time to execute the script.
  The following shows the items to be selected.
  - [Second]
  - [Millisecond (x100ms)]
- **[Sampling]**

  Set this item when [Trigger Type] is set to [Sampling], [ON Sampling], or [OFF Sampling].
  Set the cycle time to execute the script.
  The setting range depends on the setting of [Unit].
  When [Unit] is set to [Second], the setting range is [1] second to [3600] seconds.
  When [Unit] is set to [Millisecond (x100ms)], the setting range is [1] × 100 ms to [600] × 100 ms.
  The counting of the cycle time starts when the trigger condition is satisfied.
  When the satisfied trigger condition becomes unsatisfied, the count of the cycle time is reset.
  Example) When [Trigger Type] is set to [ON Sampling] and the cycle time is set to 10 seconds
  After the trigger device has been on for 10 seconds, the script runs.
  If the trigger device turns off before a lapse of 10 seconds, the script does not run.

11) **[Include this script in a screen-related setting when utilizing project/screen]**

This item is displayed only when this dialog has been brought up from the [Project] tab of the [Script] dialog.
Utilizes this script as a screen-related setting when the project or screen utilization is executed.

■1 Behavior of the script for which [Trigger Type] is set to [When closing a screen]

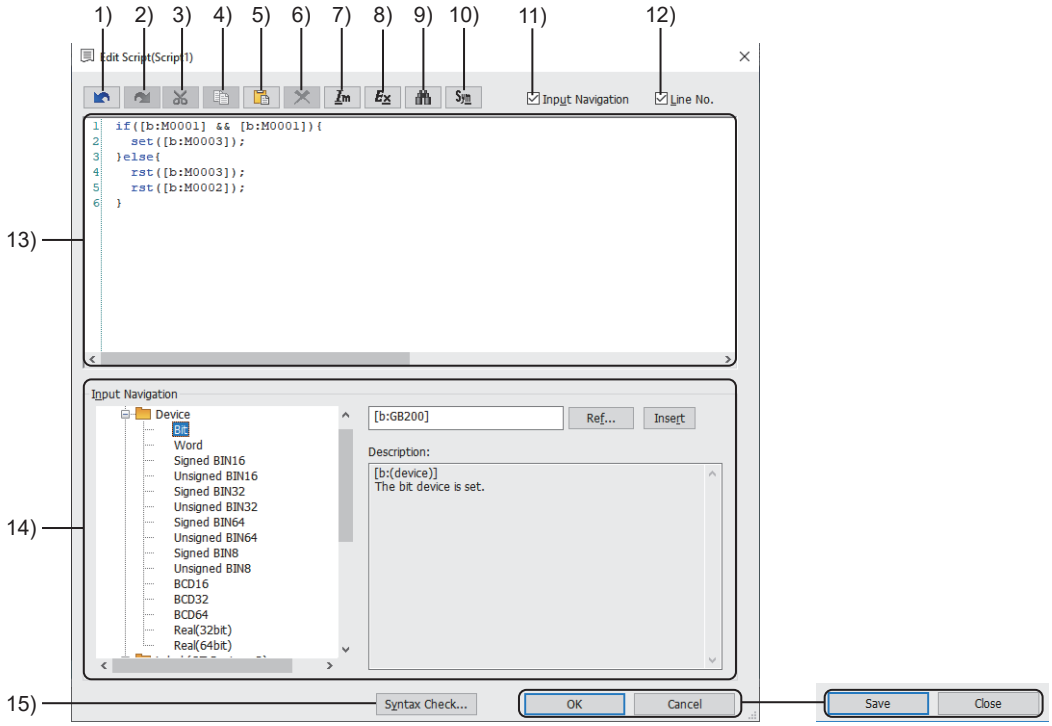
Such a script runs immediately before the relevant screen is switched or closed.
The screen will not be switched until the script execution is complete.
If an error or a timeout occurs during script execution, the screen is switched upon the occurrence of the event.
When [Trigger Type] is set to [When closing a screen], take the following precautions.

Item	Description
Response speed for screen switching	Depending on the controller device used in the script, there may be a delay in response when switching screens.
Restrictions during script execution	When a trigger type other than [When closing a screen] is set for a script, the script does not run if its trigger condition is satisfied during the execution of another script whose trigger type is [When closing a screen]. The GOT can accept inputs from a touch switch or others.
State of not notifying of an error	An error is not notified in the state where the communication is unestablished for reasons including a cable disconnection or screen switching.

9.7 [Edit Script(script name)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This dialog is used for setting a project script, screen script, script part, or object script.
Edit, import, or export a script.



When [External File (External Data)] is selected in the [Option] tab of the [Script] dialog

1) **[Undo] button**
Returns the editing operation of the script to the previous step.

2) **[Redo] button**
Redoes the returned operation.

3) **[Cut] button**
Cuts the selected character strings.

4) **[Copy] button**
Copies the selected character strings.

5) **[Paste] button**
Pastes the copied or cut character strings.

6) **[Delete] button**
Deletes the selected character strings.

7) **[Import] button**
Displays the [Open] dialog.
Read a script from a text file.

8) **[Export] button**
Displays the [Save As] dialog.
Save the script in the script edit area to a text file.
If the script contains multi-language characters, use the Unicode text file format.
For the precautions for using a Unicode text file, refer to the following.

➟12.9 Precautions for Using Unicode Text File

9) **[Search] button**
Displays the [Search] dialog.
Input the text to be searched and select the search direction ([Up], [Down]). Then click the [Search Next] button to search the input text.

10) **[Symbol] button**
Displays the dialog for selecting a script symbol to be inserted.

The script symbol is inserted into the cursor position in the script edit area.
The dialog to appear varies depending on the type of the script being edited.

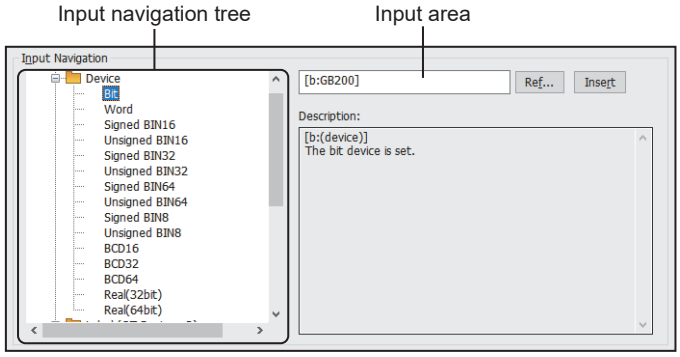
Script	Reference
Project script	➟9.9.9 [Script Symbol] dialog
Screen script	
Script part	➟9.9.10 ■2 [Script Parts Symbol] tab
Object script	➟9.10.5 [Object Script Symbol] dialog

11) **[Input Navigation]**
Displays [Input Navigation] in the dialog.

12) **[Line No.]**
Displays line numbers in the script edit area.

13) **Script edit area**
Area to edit a script.
The following editing operations are available.
- Cutting and pasting a selected string by drag and drop
- Copying and pasting a selected string by drag and drop while holding down the [Ctrl] key

14) **[Input Navigation]**
Insert a device or function to the script.
Select an item from the input navigation tree to display its expression in the input area.
Click the [Insert] button to insert the entry in the input area into the cursor position in the script edit area.



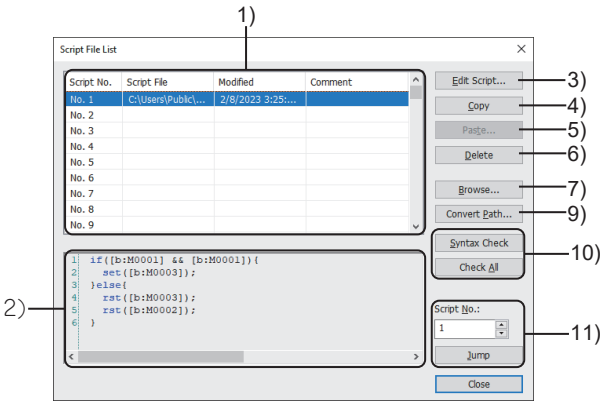
Item	Description
Input navigation tree	Select a device or function to be inserted. The expression of the selected item appears in the input area.
Input area	Make an entry to be inserted to the script.
[Ref] button	This item appears when a device, label, or tag is selected in the input navigation tree. Displays the setting dialog of the selected device, label, or tag. The settings made in the dialog is reflected to the input area. To display the [Select CH No.] dialog, hold down the [Shift] key and click the [Ref] button. To specify a channel, label, or tag, bring up the relevant setting dialog from the [Select CH No.] dialog. ➟6.1.2 ■1 Setting devices in the device setting dialog
[Insert] button	Inserts the entry in the input area into the cursor position in the script edit area.
[Description]	Describes the expression and function of the item selected in the input navigation tree.

15) **[Syntax Check] button**
Checks the syntax of the script being edited.
The available device type and device range are also checked.
➟9.9.14 ■2 Messages to be displayed at the syntax check

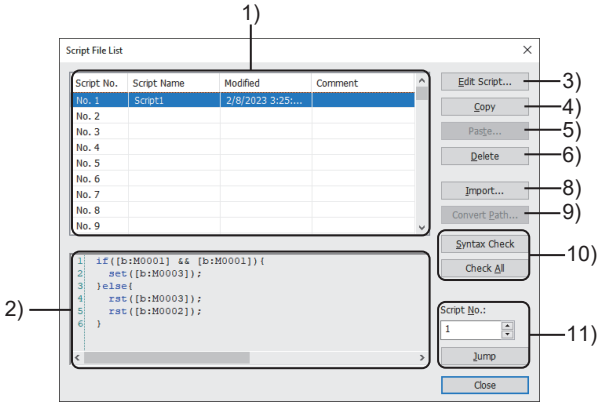
9.8.8 [Script File List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This dialog is used for setting a project script or screen script.
Select [Common] → [Script] → [Script File List] from the menu to display the setting dialog.
Register scripts additionally and edit the scripts in the list of the registered scripts.



When [External File (External Data)] is selected in the [Option] tab of the [Script] dialog



When [Project Data (Internal Data)] is selected in the [Option] tab of the [Script] dialog

1) **Script list**
Displays the list of the registered scripts (script file or script name, modified date, and comment).
For script files and script names, the path name is displayed when [External File (External Data)] is selected in the [Option] tab and the script name is displayed when [Project Data (Internal Data)] is selected in the [Option] tab.
Even if a script is set in the [Edit Script] dialog, the setting is applied to this dialog.
You can input the comment directly in the comment column in the list.
The content of the selected script is displayed in the space below the script setting list.

2) **Script preview**
Displays the content of the script selected in the script setting list.

3) **[Edit Script] button**
Edit the selected script with the script editor which is selected in [Script Editor Selection] in the [Option] tab or the editor specified by the user.
For the details of the [Option] tab and script editors, refer to the following.

➟[Option] tab: 9.9.5 ■4 [Option] tab
Script editor: 9.9.7 [Edit Script(script name)] dialog

4) **[Copy] button**
Copies the selected script.

5) **[Paste] button**
Pastes the copied script to the selected script No.

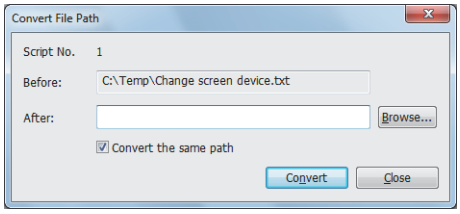
6) **[Delete] button**
Deletes the selected script.

7) **[Browse] button**
Register the script file to be referred to in the script list when [External File (External Data)] is selected in the [Option] tab.

8) **[Import] button**
Reads the script edited in the text file to GT Designer3 when [Project Data (Internal Data)] is selected in the [Option] tab.

9) **[Convert Path] button**
Changes the path name of the script file when [External File (External Data)] is selected in the [Option] tab.

Select the row to be changed and click the [Convert Path] button to display the [Convert File Path] dialog.



- **[Script No.]**
  Script No. selected in the script list
- **Previous value**
  Old path name of the script file
- **[Before]**
  Click the [Browse] button to set a new path name of ;othe script file.
- **[Convert the same path]**
  Select this item to convert all the files in the same path name as the file to be converted.

When the script file is saved in the folder of the project data of GT Designer3, the path name of the script file is updated automatically even if the folder in the project data is moved to a different drive or path.
Thus, the path name does not have to be set again.

10) **[Syntax Check] button, [Check All] button**
Checks the script syntax of the selected script or all the registered scripts.
When an error occurs, the row number with an error and error details are displayed.
The available device type and device range are also checked.

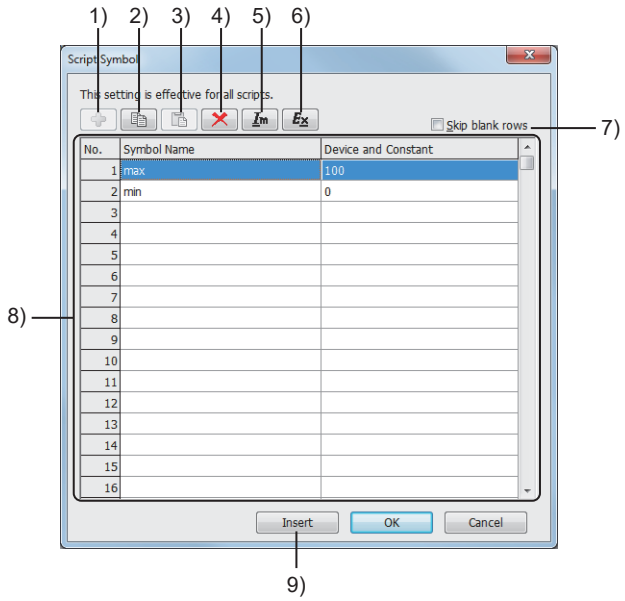
➟9.9.14 ■2 Messages to be displayed at the syntax check

11) **[Jump] button**
Selects the script set in [Script No.].

9.9.9 [Script Symbol] dialog

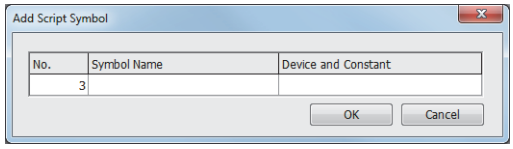
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This dialog is used for setting a project script or screen script.
Select [Common] → [Script] → [Script Symbol] from the menu to display the setting dialog.
Register character strings as script symbols.
Devices and constants in a script can be substituted by the registered character strings.
The set script symbols are usable in project scripts and screen scripts.



1) **[Add] button**
This button is available when [Skip blank rows] is selected.

Displays the [Add Script Symbol] dialog.



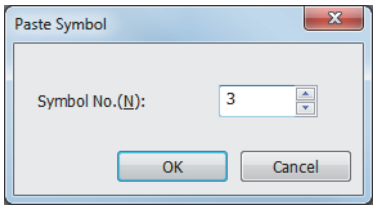
- [No.]
  Set a number for the script symbol to be added.
  The setting range is [1] to [10000].
- [Symbol Name]
  Set a character string to be described in a script.
  Up to 32 alphanumeric characters and symbols can be entered.
  However, the symbol # is not usable.
- [Device and Constant]
  Set a device or constant for the symbol name.
  Up to 32 alphanumeric characters and symbols can be entered.

2) **[Copy] button**

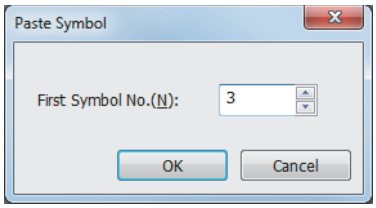
Copies the setting from the row selected in the script symbol list.
You can copy the settings from multiple rows at one time.
When [Skip blank rows] is selected, the settings in the hidden rows are also copied.
The copied settings can be pasted to another script symbol setting dialog.

3) **[Paste] button**

Pastes the copied setting to the selected row.
When [Skip blank rows] is selected, the [Paste Symbol] dialog is displayed.



When pasting a setting to one row



When pasting settings to multiple rows

- [Symbol No.]
  Set a symbol number for the destination row.
  The setting range is [1] to [10000].
- [First Symbol No.]
  Set a symbol number for the first destination row.
  The setting range is [1] to [10000].

4) **[Delete] button**

Deletes the setting from the selected row.
You can delete the settings from multiple rows at one time.

5) **[Import] button**

Displays the [Open] dialog.
Read the script symbol settings from a Unicode text file or CSV file.

6) **[Export] button**

Displays the [Save As] dialog.
Save the script symbol settings to a Unicode text file or CSV file.
If multi-language characters are used in the settings, use the Unicode text file format.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

7) **[Skip blank rows]**

Displays only the rows in which script symbols have been registered.

8) **Script symbol list**

Lists the registered script symbols.
[Symbol Name] and [Device and Constant] are editable.

Item	Description
[No.]	Row number. Clicking a row number selects the relevant row.
[Symbol Name]	Set a character string to be described in a script. Up to 32 alphanumeric characters and symbols can be entered. However, the symbol # is not usable.

Item	Description
[Device and Constant]	Set a device or constant for the symbol name. Up to 32 alphanumeric characters and symbols can be entered.

9) **[Insert] button**

This item appears when this dialog is brought up from the [Edit Script(script name)] dialog.
Inserts the selected script symbol into the script edit area in the [Edit Script(script name)] dialog.

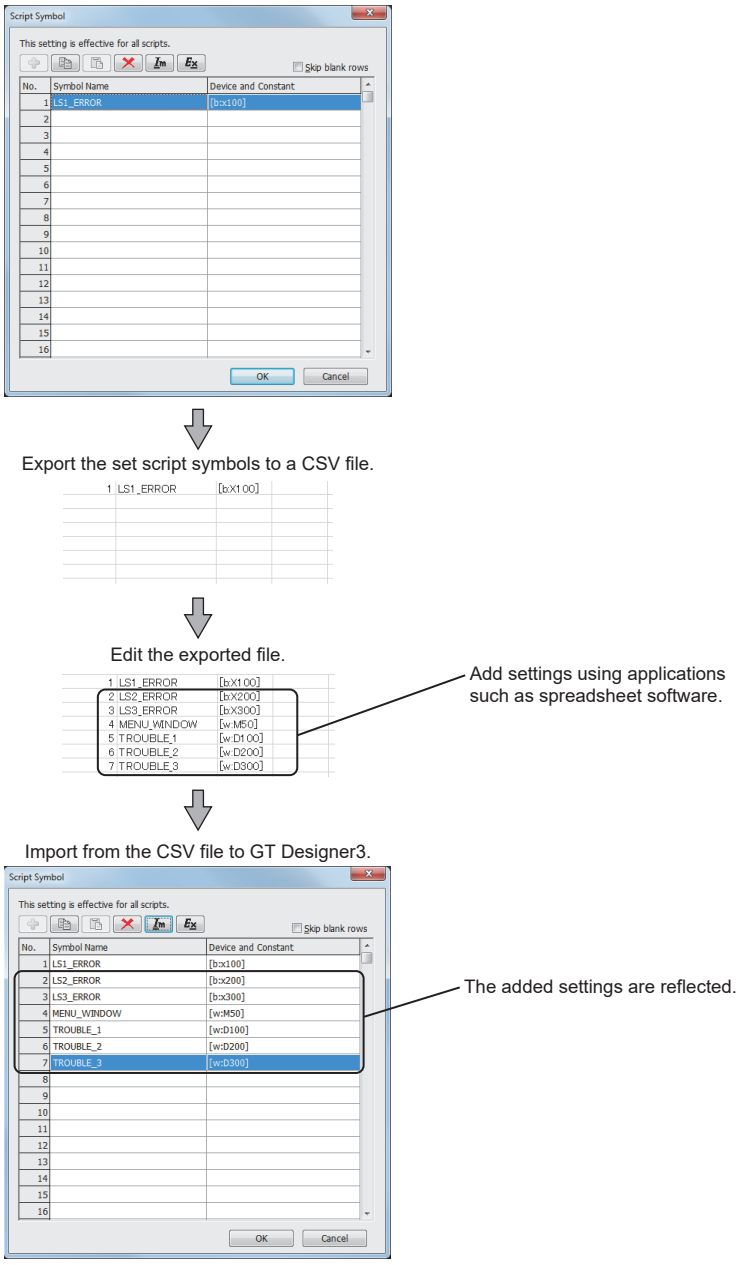
Point

(1) **Editing method of scripts**

You can edit scripts in the exported Unicode text file or CSV file using spreadsheet software and other software.
The edited Unicode text file or CSV file can be imported and read to GT Designer3.

(2) **Editing the exported file**

When 0 is set at the beginning of the symbol name, device, or constant, 0 at the beginning may be deleted depending on the function of the application for editing files (spreadsheet software and other software).
Pay attention to the above for editing exported files.
Example) When script settings are exported into and imported from a CSV file



9.9.10 [Script Parts] dialog

This dialog is used for setting a script part.

Step 1 Select [Object] → [Script Parts] from the menu.

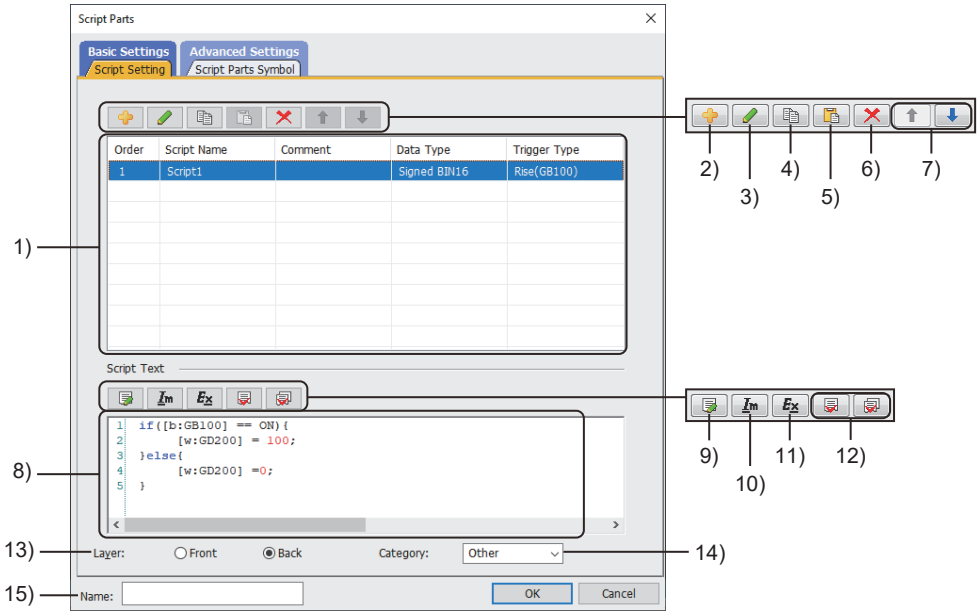
Step 2 Click the position to place a script parts object.

Step 3 Double-click the script parts object to display the setting dialog.

➟■1 [Script Setting] tab
■2 [Script Parts Symbol] tab

■1 [Script Setting] tab

Set a script trigger condition and a script.



1) **Script setting list**
Lists the scripts set for the current script parts object.

2) **[Add] button**
Displays the [Script Edit] dialog.
Add a new script setting to the list.

➟9.9.11 [Script Edit] dialog (for script parts)

3) **[Edit] button**
Displays the [Script Edit] dialog.
Edit the selected script setting.

➟9.9.11 [Script Edit] dialog (for script parts)

4) **[Copy] button**
Copies the selected script setting.

5) **[Paste] button**
Pastes the copied script setting to the last line of the list.

6) **[Delete] button**
Deletes the selected script setting.

7) **[Up] button or [Down] button**
Changes the execution order of the selected script setting.

8) **Script preview**
Displays a preview of the script set for the selected script setting.

9) **[Edit Script] button**
Displays the [Edit Script(script name)] dialog.
Edit the script.

➟9.9.7 [Edit Script(script name)] dialog

10) **[Import] button**
Displays the [Open] dialog.

Read a script from a text file.
The name of the read text file is set as the script name.

11) **[Export] button**
Displays the [Save As] dialog.
Save the previewed script to a text file.

12) **[Syntax Check] button or [Check All] button**
Performs a syntax check on the previewed script or all the scripts set for the script parts object.
If an error is detected, the relevant line number and error details are displayed.
The available device type and device range are also checked.

➟9.9.14 ■2 Messages to be displayed at the syntax check

13) **[Layer]**
Not available to GT21 and GS21.
Select the layer to arrange the object on.
The following shows the items to be selected.

- [Front]
- [Back]

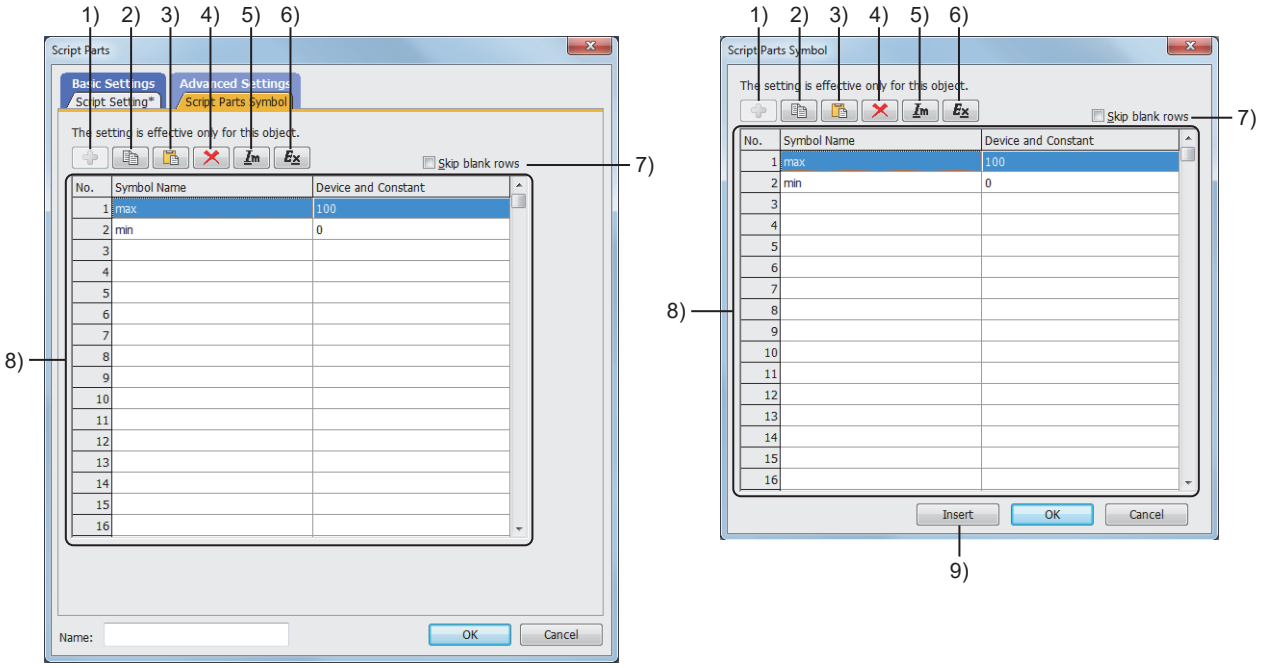
14) **[Category]**
Select the category to assign the object.

➟11.7 Managing figures and objects by category

15) **[Name]**
Set the object name.
The name is displayed in the [Data View] window, property sheet, and others.
The name is changeable on the other tabs as well.
Up to 100 characters can be set.

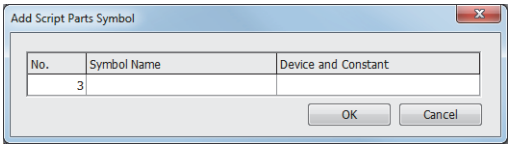
■2 [Script Parts Symbol] tab

Register character strings as script parts symbols.
Devices and constants in a script can be substituted by the registered character strings.
The set script parts symbols are usable only in the scripts of the current script parts object.
Display the [Script Parts Symbol] dialog from the [Edit Script(script name)] dialog.



1) **[Add] button**
This button is available when [Skip blank rows] is selected.

Displays the [Add Script Parts Symbol] dialog.



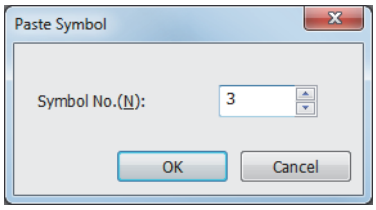
- [No.]
  Set a number for the script symbol to be added.
  The setting range is [1] to [10000].
- [Symbol Name]
  Set a character string to be described in a script.
  Up to 32 alphanumeric characters and symbols can be entered.
  However, the symbol # is not usable.
- [Device and Constant]
  Set a device or constant for the symbol name.
  Up to 32 alphanumeric characters and symbols can be entered.

2) **[Copy] button**

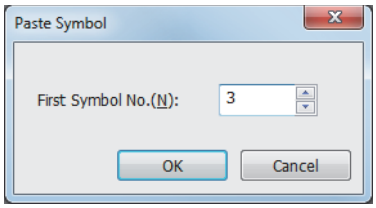
Copies the setting from the row selected in the script symbol list.
You can copy the settings from multiple rows at one time.
When [Skip blank rows] is selected, the settings in the hidden rows are also copied.
The copied settings can be pasted to another script symbol setting dialog.

3) **[Paste] button**

Pastes the copied setting to the selected row.
When [Skip blank rows] is selected, the [Paste Symbol] dialog is displayed.



When pasting a setting to one row



When pasting settings to multiple rows

- [Symbol No.]
  Set a symbol number for the destination row.
  The setting range is [1] to [10000].
- [First Symbol No.]
  Set a symbol number for the first destination row.
  The setting range is [1] to [10000].

4) **[Delete] button**

Deletes the setting from the selected row.
You can delete the settings from multiple rows at one time.

5) **[Import] button**

Displays the [Open] dialog.
Read the script symbol settings from a Unicode text file or CSV file.

6) **[Export] button**

Displays the [Save As] dialog.
Save the script symbol settings to a Unicode text file or CSV file.
If multi-language characters are used in the settings, use the Unicode text file format.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

7) **[Skip blank rows]**

Displays only the rows in which script symbols have been registered.

8) **Script symbol list**

Lists the registered script symbols.
[Symbol Name] and [Device and Constant] are editable.

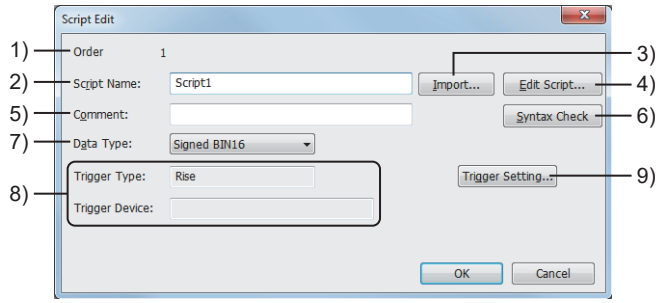
Item	Description
[No.]	Row number. Clicking a row number selects the relevant row.
[Symbol Name]	Set a character string to be described in a script. Up to 32 alphanumeric characters and symbols can be entered. However, the symbol # is not usable.

Item	Description
[Device and Constant]	Set a device or constant for the symbol name. Up to 32 alphanumeric characters and symbols can be entered.

9) **[Insert] button**
Inserts the selected script symbol into the script edit area in the [Edit Script(script name)] dialog.

9.9.11 [Script Edit] dialog (for script parts)

This dialog is used for setting a script part.



1) **[Order]**
Execution order of the current script.

2) **[Script Name]**
Name of the current script.
The following symbols cannot be entered into [Script Name].
/ \ ? * : | " < >

3) **[Import] button**
Displays the [Open] dialog.
Read a script from a text file.
The name of the read text file is set as the script name.

4) **[Edit Script] button**
Displays the [Edit Script(script name)] dialog.
Edit the script.
➟9.9.7 [Edit Script(script name)] dialog

5) **[Comment]**
Set the comment (note) of the script being edited.
Up to 32 characters can be set.

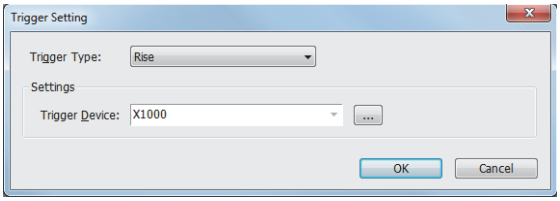
6) **[Syntax Check] button**
Checks the syntax of the script for possible errors.
The available device type and device range are also checked.
➟9.9.14 ■2 Messages to be displayed at the syntax check

7) **[Data Type]**
Select the data type of the script to be executed.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

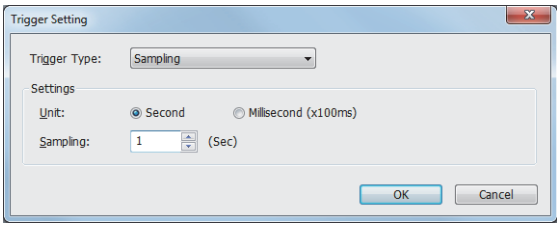
8) **[Trigger Type] or [Trigger Device]**
Displays the script trigger type or trigger device set in the [Trigger Setting] dialog.

9) **[Trigger Setting] button**

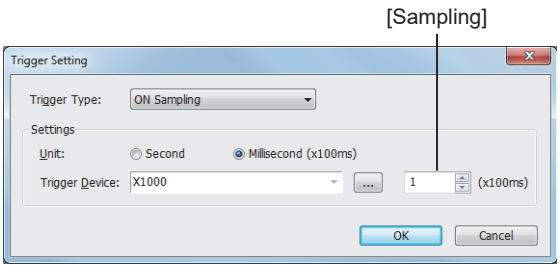
Displays the [Trigger Setting] dialog.
Set a script trigger condition.



When [Trigger Type] is set to [Rise]



When [Trigger Type] is set to [Sampling]



When [Trigger Type] is set to [ON Sampling]

- **[Trigger Type]**
  Select the operating condition of the script.
  The following shows the items to be selected.
  - [Ordinary]
  - [ON]
  - [OFF]
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
  - [When closing a screen]
- **[Trigger Device]**
  Set this item when [Trigger Type] is set to [ON], [OFF], [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling].
  Set a trigger device to execute the script.
- **[Unit]**
  Set this item when [Trigger Type] is set to [Sampling], [ON Sampling], or [OFF Sampling].
  Select the unit of the cycle time to execute the script.
  The following shows the items to be selected.
  - [Second]
  - [Millisecond (x100ms)]
- **[Sampling]**
  Set this item when [Trigger Type] is set to [Sampling], [ON Sampling], or [OFF Sampling].
  Set the cycle time to execute the script.
  The setting range depends on the setting of [Unit].
  When [Unit] is set to [Second], the setting range is [1] second to [3600] seconds.
  When [Unit] is set to [Millisecond (x100ms)], the setting range is [1] × 100 ms to [600] × 100 ms.
  The counting of the cycle time starts when the trigger condition is satisfied.
  When the satisfied trigger condition becomes unsatisfied, the count of the cycle time is reset.
  Example) When [Trigger Type] is set to [ON Sampling] and the cycle time is set to 10 seconds
  After the trigger device has been on for 10 seconds, the script runs.
  If the trigger device turns off before a lapse of 10 seconds, the script does not run.

■1 Behavior of the script for which [Trigger Type] is set to [When closing a screen]

Such a script runs immediately before the relevant screen is switched or closed.
The screen will not be switched until the script execution is complete.
If an error or a timeout occurs during script execution, the screen is switched upon the occurrence of the event.
When [Trigger Type] is set to [When closing a screen], take the following precautions.

Item	Description
Response speed for screen switching	Depending on the controller device used in the script, there may be a delay in response when switching screens.
Restrictions during script execution	When a trigger type other than [When closing a screen] is set for a script, the script does not run if its trigger condition is satisfied during the execution of another script whose trigger type is [When closing a screen]. The GOT can accept inputs from a touch switch or others.
State of not notifying of an error	An error is not notified in the state where the communication is unestablished for reasons including a cable disconnection or screen switching.

9.9.12 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for use

(1) Applicable range of the scripts

Since this function is designed to control the GOT display, do not use it for machine control that requires precise time management.

When changing the data in PLC through the GOT, create an interlock circuit using a sequence program to ensure the whole system can always operate safely.

The following periods may vary depending on projects.

- The period between when the trigger device condition of the script is satisfied and when the script is actually executed
- Processing time of the script

(2) Stop of the script processing

In any of the following cases, the corresponding script being processed stops and an error occurs.

- In division, when the divisor becomes 0 and the calculation becomes zero division
- When [BCD16], [BCD32], or [BCD64] is selected as the script data type but a value of the monitor device cannot be handled as BCD
- When [BCD16], [BCD32], or [BCD64] is selected as the script data type but the operation result is out of the BCD range
- When a device of the controller is specified as the write destination device of a while statement

For the available data type and data range, refer to the following.

➟9.9.2 ■4 Available data and how to express the data

For the details of the while statement, refer to the following.

➟9.9.2 ■3 Control structures for a project script, screen script, and script part

For troubleshooting the script processing stop, refer to the following.

➟9.9.14 Troubleshooting

(3) Variation of the result of processing depending on data types

In the following cases, you may get an unexpected result of processing.

- When a data type other than [BCD16], [BCD32], or [BCD64] is selected as the script data type but a constant out of the selected type range is included
- When [Unsigned BIN16] or [Unsigned BIN32] is selected as the script data type but a negative constant is included
- When a data type other than [Real] is selected as the script data type but a value with the decimal point is used as a constant

For the details of data types, refer to the following.

➟9.9.2 ■4 Available data and how to express the data

(4) Bitwise operation and data type

If you perform a bitwise operation on the device with a signed data type, an unexpected value may result.

Set an unsigned data type for the target device of a bitwise operation.

(5) Digit limitation when describing monitor devices

Depending on controllers to be monitored, the device number for them must be described in specific digits.

Otherwise, malfunction may result.

For the details of how to describe the device number, refer to the following.

➟9.9.2 ■4 Available data and how to express the data

(6) Writing the project in the GOT after editing the script

If you edit a screen script or an object script, write the project being edited in the GOT.

Otherwise, the change you made is not reflected to the GOT.

(7) Operation while a script is being edited

When you click the [Edit Script] button and edit a script using a script editor or a text editor, you cannot operate GT Designer3.

GT Designer3 reacts as if it freezes up then, but once you close the script editor or the text editor, you can operate GT Designer3 again.

(8) Precautions for assignment delay

(a) Assignment delay

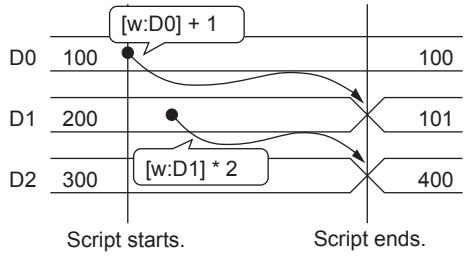
Depending on devices where you write the operation result of scripts, some time (called assignment delay) is needed for writing the result to the device when the operation of a script is complete.
The following shows whether each device needs assignment delay or not.

Synchronized: The result is written in synchronization with the script. Delay: Assignment delay occurs.

Device and temporary device area	Script
Controller device	Delay
GB	Synchronized
GD	
GS	
TMP	

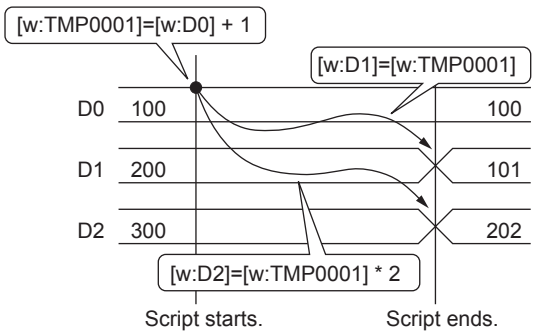
If you perform an assignment as shown in example 1, an assignment delay leads to an unexpected operation result.
To reduce the frequency of communication with the PLC CPU to lower the influence on the monitoring process, describe the script as shown in example 2 or 3.
Example 1) Assignment using PLC CPU devices

```
[w:D1] = [w:D0]+1; // Assign the operation result of D0+1 to D1.
[w:D2] = [w:D1]*2; // Assign the operation result of D1*2 to D2.
```



In this example, due to an assignment delay, after the script ends, the operation result of the first line (D0+1) is reflected to D1.
Therefore, the operation result of the first line is not reflected to that of the second line (D1*2).
Example 2) Assignment using a temporary device area

```
[w:TMP0001] = [w:D0]+1; // Assign the operation result of D0+1 to TMP0001.
[w:D1] = [w:TMP0001]; // Assign the value of TMP0001 to D1.
[w:D2] = [w:TMP0001]*2; // Assign the operation result of TMP0001*2 to D2.
```



Using a temporary device area for the script avoids an assignment delay.
For the details of temporary device areas, refer to the following.

➟9.9.2 ■4 Available data and how to express the data

Example 3) Assignment processing using GOT internal devices (GD, GB)

```
[w:GD1] = [w:D0]+1; // Assign the operation result of D0+1 to GD1.
[w:D1] = [w:GD1]; // Assign GD1 to D1.
[w:D2] = [w:GD1]*2; // Assign the operation result of GD1*2 to D2.
```

The processing timing with GOT internal devices (GD and GB) is the same as one with temporary device areas. Therefore, you can avoid assignment delays.

Point

(1) **LS devices specified in a script created using SCHNEIDER EJH software**

The LS devices specified in the script language of SCHNEIDER EJH software are designed to be free from assignment delays.
Therefore, when a script including LS devices shown in example 1 above is converted, the converted script may not run as intended on the GOT.
To prevent an assignment delay, use temporary device areas for scripts including LS devices as shown in example 2 above.

(b) **Assignment delay when an offset is specified**

• When reading values from devices

If you specify an offset in a script when devices of controllers are used as base devices, assignment delays may occur and the script may not operate correctly even if the values of offset devices are changed.
Example 1) Specifying a target device for reading with an offset device does not work correctly (when R200 = 10)

```
[w:TMP0000]=[w:R200];
[w:TMP0001]=[w:R100[w:TMP0000]];    The value of R110 cannot be referred at this timing.
    Base device ┘      └ Offset device
```

In the above example, the value of the offset device (TMP0000) remains the same as that before the assignment.
If the device numbers are out of the range of the base device (R), an error occurs.
If no assignment delays occur, use the temporary device area or GOT internal devices for both base devices and offset devices.
Example 2) Measure to avoid the assignment delay using temporary device areas (when R200 = 10)

```
bmov([w:R100],[w:TMP0100],11)
[w:TMP0000]=[w:R200];
[w:TMP0001]=[w:TMP0100[w:TMP0000]];    The value of R110 can be referred at this timing.
```

By assigning the values of R devices to the temporary device areas using bmov in advance, the operation that cannot be done in example 1 becomes available.
Notes on example 2
In example 2, the range of the offset device (R200) is 0 to 10, and the values of 11 devices counted from the base device (R100) are assigned to the temporary device areas.
Therefore, the number of devices to be assigned to the temporary device areas must be changed according to the range of offset devices.

• When writing values to devices

When writing values to devices, there are no specific restrictions applied when reading values from devices. (Refer to the following example 1.) However, when controller devices are used as base devices, you cannot assign values repeatedly by switching values of offset devices in a while statement as shown in example 2.
Even in this case, it becomes available by using the temporary device area or GOT internal devices (GB and GD) for both base devices and offset devices in the same way as mentioned earlier for reading values from devices.
Example 1) Specifying a target device for writing with an offset device (Enabled)

```
          [w:TMP0000]=10;
          [w:R100[w:TMP0000]]=[w:TMP0001];    The value can be assigned to R110 at this timing.
Base device ┘      └ Offset device
```

Example 2) Specifying a target device for writing with an offset device in a while statement (Disabled)

```
[w:TMP0000]=10;
while([w:TMP0000]<20){
[w:R100[w:TMP0000]]=[w:TMP0001];          An error occurs.
[w:TMP0000]=[w:TMP0000]+2;
}
```

Example 3) Measure to avoid the error in example 2

```
bmov([w:R110],[W:TMP0110],10);
[w:TMP0000]=10;
while([w:TMP0000]<20){
[w:TMP0100[w:TMP0000]]=[w:TMP0001];        No error occurs.
[w:TMP0000]=[w:TMP0000]+2;
}
bmov([W:TMP0110],[w:R110],10);
```

By assigning the values last assigned in the temporary device areas with R devices using bmov, the operation that cannot be done in example 2 becomes available.

(9) Simulating using a general C language compiler or debugger

- If [BCD32], [BCD16], or [BCD64] is selected as the script data type, you cannot perform a simulation using the general C language compiler or debugger.
- Since the set, rst, alt, bmov, and fmov statements are dedicated for scripts, you cannot perform a simulation using a general C language compiler or debugger.

  Use assignment of 1 or 0 instead of the set or rst statement.
- When you use the system define (ON, OFF description) of the GOT as they are, the define for it must be added to the C language source file.
- The assignment delay which occurs when a script is executed on the GOT does not occur during a simulation using a general C language compiler or debugger.

  Therefore, when performing a simulation, take a possibility of occurrence of assignment delays into consideration.
- By applying the measures above, a new program created using C language then debugged can be used as a GOT script.
- Offset device specification cannot be made in the above debugging process.

  If you debug the offset specified device, it is necessary to set the corresponding device in advance.

(10)Character code applicable to a file name

(a) Character code applicable to the utility

Only ASCII code is applicable to the screens for file manipulations in the utility.
A file name, which is not encoded in ASCII, is displayed incorrectly in the utility.

(b) Character code applicable to the file transfer (FTP client) function

When a transfer file name is indirectly specified in the file transfer (FTP client) function, only ASCII code is applicable to the file name.
The file transfer (FTP client) function cannot transfer a file whose name is not encoded in ASCII.

(11)Script error control and GOT status

While the GOT displays a screen in which no script is set, the following operations are not available.

- Clearing script error data or executing a script stopped due to an error by using the Script Common Control (GS384)

  ➟12.1.3 ■5 (1) Script Common Control (GS384)
- Resetting script error data in the [GOT Diagnostics] dialog

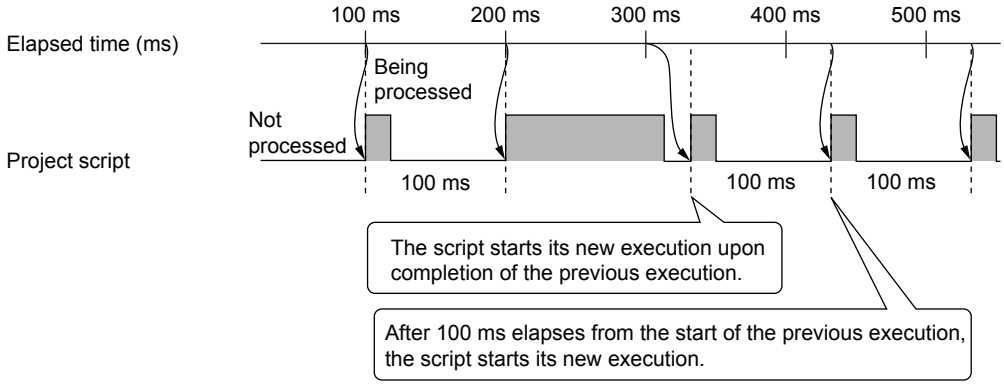
  ➟11.14.5 [GOT Diagnostics] dialog

Perform the above operations while the GOT displays a screen in which a script is set.

(12)Precautions for setting [Sampling], [ON Sampling], or [OFF Sampling] for the trigger type

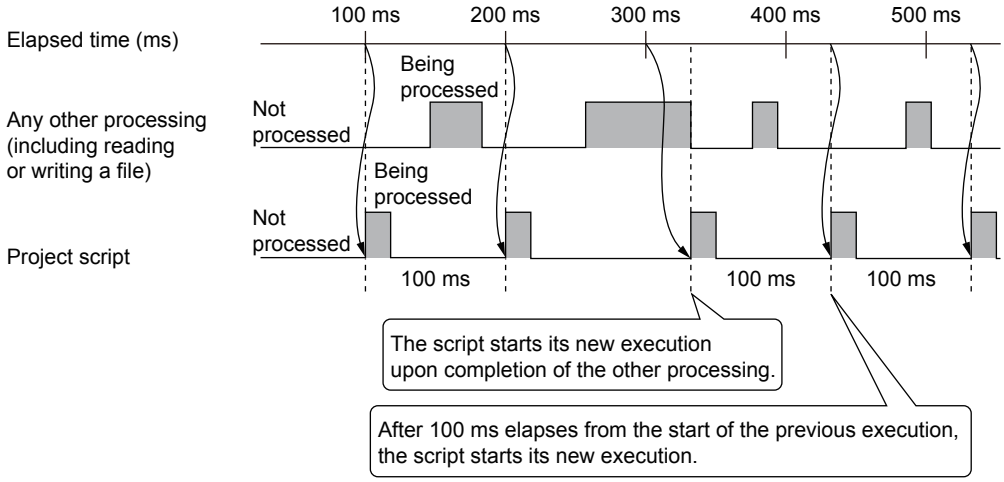
(a) **If a script does not complete within the set cycle time**

If a script does not complete within the set cycle time, its subsequent execution is delayed until the current execution completes.
After the set cycle time elapses from the start of the delayed execution, the script starts its new execution.
Example) Executing a project script for which [Trigger Type] is set to [Sampling] and [Sampling] is set to [1] (x 100 ms)



(b) **If the trigger condition for a script is satisfied while any processing other than the script is in progress**

If the trigger condition for a script is satisfied while any processing other than the script (including reading or writing a file and updating a screen) is in progress, the script execution is delayed until the processing completes.
After the set cycle time elapses from the start of the delayed execution, the script starts its new execution.
Example) Executing a project script for which [Trigger Type] is set to [Sampling] and [Sampling] is set to [1] (x 100 ms)



(c) **If the scripts running periodically are set for multiple screens to be displayed simultaneously**

When these screens are displayed simultaneously, the scripts may fail to run at short time intervals, such as every 100 ms. In such a case, set a longer cycle time.

(13)Precautions when using the string operation function and file operation function

The [File/Text Handling Function Storage Order] setting for the string operation function and file operation function may not be applied depending on arguments.
When the setting is not applied, the argument storage order is fixed to [Low-->High].

➟9.9.5 ■4 [Option] tab

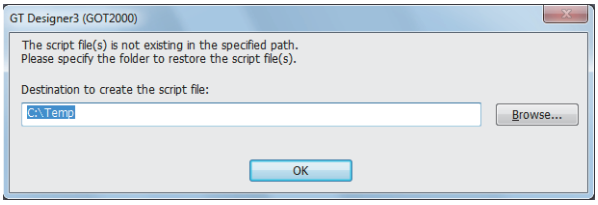
Function	Argument used to apply the [File/Text Handling Function Storage Order] setting	Argument not used to apply the [File/Text Handling Function Storage Order] setting
String operation function	• Input string storage device • Output string storage device	• Arguments other than the input string storage device and output string storage device
File operation function	• File read function storage device • File write function storage device • File line read function storage device	• Arguments other than the storage device for the file read function • Arguments other than the storage device for the file write function • Arguments other than the storage device for the file line read function • All arguments available for the file list obtaining function • All arguments available for the folder list obtaining function • All arguments available for the file renaming function • All arguments available for the file deletion function • All arguments available for the file copy function • All arguments available for the folder copy function

When selecting [High-->Low] for [File/Text Handling Function Storage Order] and using a string operation function and a file operation function together, the resulting operation may not be as intended depending on whether the setting for [File/Text Handling Function Storage Order] is applied or not.

■2 Precautions for drawing

(1) Restoring a script file

When opening a project for which [External File (External Data)] is set in the [Option] tab, GT Designer3 restores the script file if the script file does not exist in the set path.
In such a case, specify a folder in which the script file should be restored in the dialog shown below.



(2) When [Use system labels in conjunction with MELSOFT Navigator] is disabled

When [Use system labels in conjunction with MELSOFT Navigator] is disabled, system labels used in scripts are not converted to devices.
Set the devices for project data.

■3 Precautions when writing a script

(1) Operations that exceed the allowable range of a device value

Do not write a script that causes an operation result which exceeds the allowable range of a device value.
Script operation is processed internally in double-precision real numbers.
Therefore, when a judgment is made using an if statement and others, the result of the judgment may differ depending on the operation methods.
Example) Judgment for the difference between GD100 and D100 using an if statement (in the case of 16-bit signed binary)
When GD100 = -32758 and D100 = 32767

(a) When operation is executed in an evaluation expression

```
if(([w:GD100]-[w:D100])>=10){ //If the difference between GD100 and D100 is 10 or larger,
[w:D200]=0; //Writes 0 to D200.
}
```

The calculation result of "GD100 - D100" (-32758 - 32767) is -65525, thus the condition is not satisfied.

(b) When processing the script after assignment

```
[w:GD200]=[w:GD100]-[w:D100]; //Assigns the value of "GD100 - D100" to GD200.
if([w:GD200]>=10){ //When the value of GD200 is 10 or larger,
[w:D200]=0; //Writes 0 to D200.
}
```

When -65525; the calculation result of "GD100 - D100" (-32758 - 32767), is assigned to GD200 in 16-bit signed binary, GD200 becomes 10, so the condition is satisfied.

(Since a value out of the range that can be handled by a variable (device) is assigned as the result of an operation, the result differs from the result obtained in (a).)

(2) Data type settings and function definitions

Use an argument by casting the set device data type to the data type defined by the function.
Include the return value by casting the operation result obtained in the data type defined by the function to the set device data type.
To use the argument or return value in the data type defined by the function, set the following data type.

- long: Signed BIN32
- double: Real number (64 bits)

(3) When using bmov and fmov

(a) Data type

When using bmov or fmov, use the same data type for the word device 1 and the word device 2.
Otherwise, an error occurs during the syntax check.

➟9.9.5 [Script] dialog

(b) Data type for [w:device]

The data type for [w:device] is set to the one specified in the [Edit Script] dialog.
The following example shows an error that occurs in the syntax check when using [w:device].
Example) When setting [Signed BIN16] for the data type in the [Edit Script] dialog
bmov([w:GD200],[flt:GD201],10);
Since the data type for GD200 is the signed 16-bit binary data while the data type for GD201 is the real number, an error occurs in the syntax check.

➟9.9.2 ■4 (17) Data type conversion function

(c) Syntax check

When a syntax check is done from the [Script File List] dialog, the data type is regarded as [Signed BIN16].
When executing a syntax check using a data type other than [Signed BIN16], first set a desired data type in the [Edit Script] dialog, then execute the syntax check from the script editor.

(4) When using file operation functions

GT21 and GS21 do not support the file operation functions.

(a) Data type

When using the file operation functions, do not specify BCD for the data type of the storage devices.
Doing so may disable detection of abnormality in the script.

➟9.9.5 [Script] dialog

(b) Data type for [w:device]

The data type for [w:device] is set to the one specified in the [Edit Script] dialog.
When using [w:device] for the file operation functions, do not specify BCD for the data type of the storage devices.

(c) Syntax check

When a syntax check is done from the [Script File List] dialog, the data type is regarded as [Signed BIN16].
When executing a syntax check using a data type other than [Signed BIN16], first set a desired data type in the [Edit Script] dialog, then execute the syntax check from the script editor.

(d) Operations while files are read or written

The following file operation functions cannot be executed while the target file is accessed by other functions.
Execute the functions after the access to the target file from the other functions is complete.

- While reading: file_read, file_write, file_lineread, file_unilineread, file_delete
- While writing: file_read, file_write, file_lineread, file_unilineread, file_rename, file_delete

(e) When using the file rename function (file_rename)

When the full path to a file to be renamed is specified in <folder name>, do not leave <file name> blank.
Otherwise, the file name is not renamed correctly.
Example) When specifying the full path to a file in <folder name> without setting <file name>
[s16:D500] = file_rename("A:\\Package1\\ARP00001.DAT", "", "DATA-15-JAN-08.DAT"); //Renames file name.
The file name with the folder name is renamed from "A:\Package1\ARP00001.DAT" to "A:\Package1\ARP00001.DATDATA-15-JAN-08.DAT".
When specifying the full path to a file in <file name>, specify the full path to the file in <renamed file name> also.
Otherwise, the path is changed together with the change of the file name.
Therefore, the file is not moved in the intended location.
Example) When specifying the full path to a file in <file name> without setting <folder name>

[s16:D500] = file_rename("", "A:\\Package1\\ARP00001.DAT", "DATA-15-JAN-08.DAT"); //Renames file name.
The file name is renamed from "A:\Package1\ARP00001.DAT" to "A:\DATA-15-JAN-008.DAT".

(f) **When using the file copy function (file_copy)**

If there is no folder specified in <copy destination folder name>, create a folder when copying the file.
Make sure to add "\\" at the end of <copy destination folder name>.
Otherwise, the file is renamed to the folder name specified in <copy destination folder name> and copied.
Example) When there is no folder specified in <copy destination folder name> and "\\" is not added at the end of <copy destination folder name>
[s16:D200] = file_copy("A:\\Package1\\ARP00001.DAT", "B:\\backup", "", 1); //Copies file.
If no backup folder exists in the drive B, "ARP00001.DAT" is renamed to backup and copied in "B:\\".
Do not create any folder in the same name as that of the file specified in <copy source file name> in the copy destination drive.
Otherwise, the file cannot be copied correctly.

(g) **When using the folder copy function (file_xcopy)**

If an error occurs during the copying process, copying files stops.
The files copied before interruption are correctly copied.
Do not create any folder in the same name as that of the file specified in <copy source file name> in the copy destination drive.
Otherwise, the file cannot be copied correctly.

(h) **How to use the folder and file name character number specification functions (#pragma folder_name_length, #pragma file_name_length), and the use Unicode declare function (#pragma use_character_code unicode)**

Use the folder and file name character number specification function and the use Unicode declare function only one time at the start of a script.
Otherwise, the folder name and file name cannot be specified correctly.

(i) **When specifying the folder and file names using devices**

When specifying the folder and file names using devices, keep the values that are specified by the folder and file name character number specification functions (#pragma folder_name_length, #pragma file_name length) to a minimum.
When specifying the folder and file names with devices, the GOT reads as many devices as the number of the characters specified in the folder and file name character number specification functions.
If the values specified in the functions exceed the actual number of the file and folder name characters, the GOT reads unnecessary devices.
Reading unnecessary data results in an excessive load on the communication process, so such an operation as updating a screen or executing a script may take longer time.
Example) When the maximum number of file name characters is set to 22 and the number of actual file name characters is 16
D100 to D110: Holds the folder name "A:\folder-00001\".
D200 to D210: Holds the file name "DATA-15-JAN-2008".
GD100: Storage device

```
#pragma folder_name_length(22)                          //Limits the maximum folder name length to 22 characters.
#pragma file_name_length(22)                            //Limits the maximum folder name length to 22 characters.
[s16:D500]=file_read([w:D100],[w:D200],[w:GD100],0,16); //Reads the 16-byte data from the specified file.
```

D100	:	A		D200	A	D
D101	f	\		D201	A	T
D102	l	o		D202	1	-
D103	e	d		D203	-	5
D104	-	r		D204	A	J
D105	0	0		D205	-	N
D106	0	0		D206	0	2
D107	\	1		D207	8	0
D108				D208		
D109				D209		
D110				D210		

Unnecessary 12 characters of devices are read.

(5) When using the string operation function

GT21 and GS21 do not support the string operation functions.

(a) Available character strings

The string operation function handles ASCII and Shift JIS strings.
If a target string contains any character other than ASCII and Shift JIS characters, a script error occurs.

(b) Return value when an error occurs

If an error occurs when data in a device set as an argument is being read or written, execution of the script is aborted.
Therefore, no return value is stored in the device for storing the return value.

(c) Order of storing data

The order of storing data in the following processes is selectable from between [Low-->High] and [High-->Low].

- Reading data to the input value storage device
- Writing data to the output string storage device

➟9.9.5 ■4 [Option] tab

(6) Precautions for format specification

(a) Field width of the format specifier

When the string input function (ASCII code) is used, the values skipped due to their skip flags (*) are not counted as the number of read data (return value).

(b) Count of the skipped data

When the string input function (ASCII code) is used, the values skipped due to their skip flags (*) are not counted as the number of read data (return value).

(c) Characters that cannot be specified with the format specifier "%[...]"

With the format specifier "%[...]", the following symbols cannot be specified.
Doing so may result in a format error.
-,]

(d) Specifying a format with comments

Comments consist of the Unicode text.
When specifying the format with a comment, do not use a character that cannot be converted from the Unicode text to the ASCII characters.
If such characters are used, they are replaced with blanks.

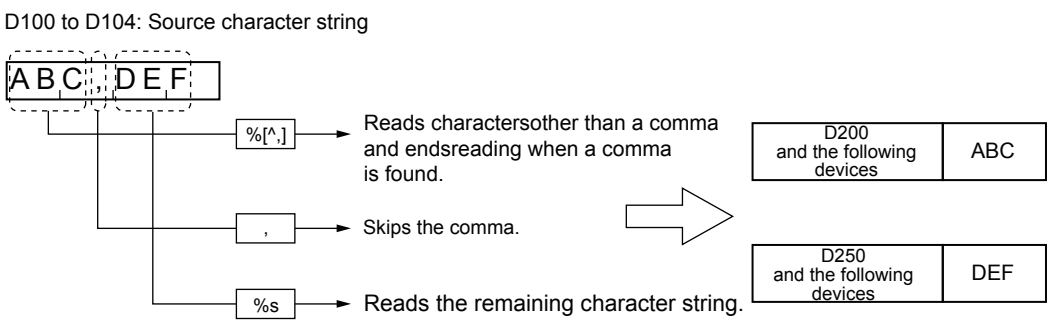
(e) Data delimiter of a CSV file

When reading data obtained from a CSV file, or writing data in character strings to be written to the CSV file, indicate a delimiter with the format specifier.
Example) When reading obtained numerical values from a CSV file

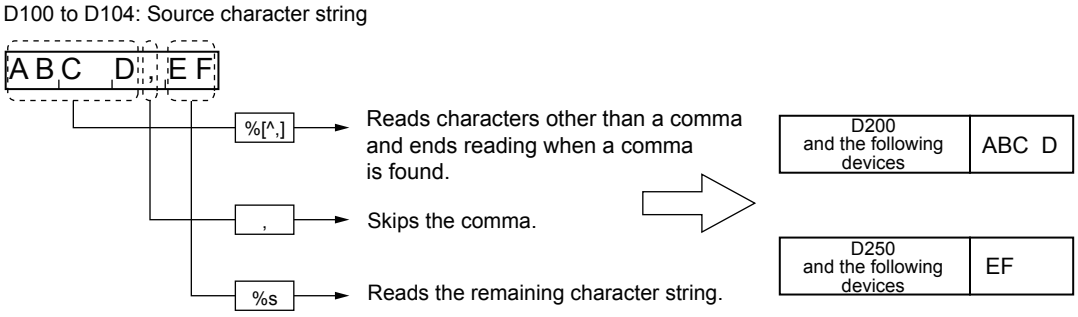
- If delimited by a blank: 123 456 can be read with the syntax %d%d.
- If delimited by a comma: 123,456 can be read with the syntax %d,%d can read.

(f) Character string delimiters

When a character string is read using "%s", a comma is not recognized as a delimiter but as a part of the string.
Therefore, the string with a comma for a delimiter is read as one data including the comma.
To read the character string as the data that is delimited by a comma, use "%[^,]" to read characters other than the comma, and then skip the delimiter with the comma.
Example) When reading the character string ABC,DEF with "%s"
GD100 to D108: Holds the character string ABC,DEF.
GD200: Input value storage device 1
GD250: Input value storage device 2
[s16:GD500]=str_scanf([w:GD100],7,0,"%[^,],%s",GD200,GD250); //Reads the 7-byte character string.



Blanks are recognized as delimiters. Therefore, if a character string including blanks is read, it is read as multiple data.
To read a character string with blanks as one data, use "%[^,]" to read characters other than a comma, then skip a delimiter with the comma.
Example) When reading the character string ABC D,EFG by using the above script



(g) **Number of significant digits for the single precision real number**

The maximum number of significant digits for the single precision real number is six.
If the precision with six digits or more is set for the format specifier, the result may be incorrect.

(h) **Differences in the written result between the GOT and GT SoftGOT2000 or GT Simulator3**

Some of the processing differs between the GOT and GT SoftGOT2000 or GT Simulator3.
If real numbers with the precision of more than six are written, the results may differ between the GOT and GT SoftGOT2000/GT Simulator3.

(i) **When writing a character string with "%s"**

Starting from the device to be written, a number of devices corresponding to that of characters are used.
Reserve the writable device area in advance.

■4 Precautions when setting a project script

The monitor device of a project script is always operating.
Note that displaying the monitor screen may take long when the number of monitor devices is large.

■5 Precautions when switching the screen

If screen switching is executed while a screen script or the script of a script parts object is running, the target screen will not be switched until the script ends.
If screen switching is executed while a project script is running, the script will temporarily stop running until the target screen is switched.

■6 Precautions for script parts

(1) Behavior of a script parts object on the screen displayed in multiple locations

If an overlap window, superimpose window, and the set overlay screen function call a screen having a script parts object, the script of the script parts object runs only when the screen is called up for the first time.
The script does not run in the other locations even after you close the screen where the script has run.
In the above state, if the screen is called up again in any of these locations, the script will run on the newly displayed screen.

(2) User area to be used when script parts temporary device areas (PTMP) are used

When you use PTMPs, the size of the user area to be used depends on the number of the PTMPs.
Set a minimum number of PTMPs.

(3) Syntax check on PTMPs

In a syntax check, whether the number of PTMPs falls within the following range is checked regardless of the settings of the GOT type and #pragma use_ptmp_length.

• 32768 (PTMP0 to PTMP32767)

Even if the number of PTMPs is invalid according to the above settings, no error will occur during the syntax check.
You must check that the number of PTMPs is within the valid range.

■7 Precautions when using bmov

For project scripts or screen scripts, using many bmov commands to read device values from the controller and to store them in the GOT internal devices may slow the performance of the GOT display refresh or the reaction of the touch switch input.
This section explains how to make the GOT monitor operate at a higher speed by reducing the frequency of the communication with controllers by bmov.

(1) How to read device values from controllers without bmov

The GOT can read device values with device data transfer instead of bmov.
With device data transfer, the GOT communicates with controllers only when trigger conditions are satisfied. Therefore, the GOT has no communication loads by always monitoring the device used for the script function.
For the details of device data transfer, refer to the following.

➟9.4 Transferring Data between Devices ([Device Data Transfer])

(2) How to reduce the communication time when using bmov

If the following read operations are performed by the screen script, the script applies only to the currently displayed screen on the GOT.
With project scripts or screen scripts, the GOT only reads a batch of device values from the controller direct addresses all the time, regardless of execution condition of each script, or conditional branches using if or switch statements.
When the offset is specified in the device, the offset device is the device described in the direct address.
Also, when using bmov to read device values from controllers, the GOT only reads the values of source devices all the time by communicating with the controllers one or more times by bmov.
To reduce communication time, it is recommended to first batch-read the bmov source device values into a temporary device area.
Perform the following remedies.

(a) **If device values are read from controllers in divided blocks, change the script into the one that reads a batch of values temporarily into the temporary device area, then divides them again, and then transfers them to the GOT internal devices.**

➟(3) Script solution examples

(b) **If the GOT reads device values according to each execution condition of an if or switch statement, read the values temporarily into the temporary device area before the if or switch statement is executed.**

Then, change the script into the one that transfers the values from the temporary device area to the GOT internal devices by dividing the values into groups according to the condition of if or switch statement.

➟9.9.12 ■7 (3) (b) Reading bmov commands in a script at a time

When reading a batch of devices from the controller to the temporary device area, refer to the number of words (size) shown in the table below as a guide.
If the number of words is larger than the guide, the number is automatically divided in controllers before they are transferred.

Controller type	Approximate number of words transferred by bmov at a time
QCPU (bus connection only)	960 words
Motion CPU (Q mode)	
QCPU (other than bus connection)	480 words
LCPU	
QnACPU	
Motion CPU (A mode)	
ACPU	64 words
FXCPU	

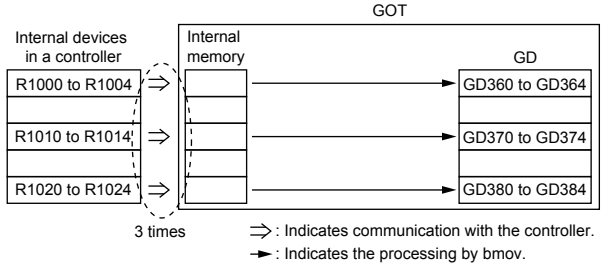
(3) Script solution examples

(a) **Reading a batch of device values into a temporary device area**

This solution saves the communication time by reducing the frequency of communication between the GOT internal memory and the controller from three times to once.
When data are transferred from a temporary device area to GOT internal devices (such as GD), the internal memory does not communicate with controllers.
The internal memory is used for communication processing.
It is a system area, and the user is not permitted to access to the area.
Before applying remedy

- Processing outline
  Device values are transferred from R1000 to R1004, R1010 to R1014 and R1020 to R1024 into GD360 to GD364, GD370 to GD374 and GD380 to GD384 respectively.
- Script description

```
bmov([w:R1000],[w:GD360],5);
bmov([w:R1010],[w:GD370],5);
bmov([w:R1020],[w:GD380],5);
```

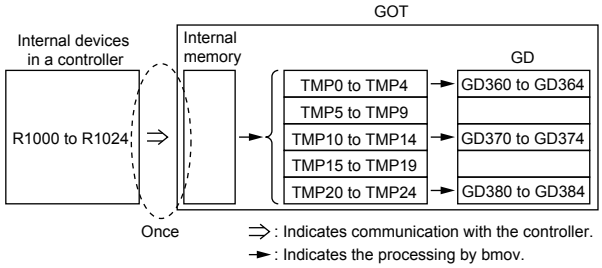


After the remedy is applied

- Processing outline

  Device values are transferred from R1000 to R1024 into TMP0 to TMP24 in the GOT first, then transferred again from TMP0 to TMP24 into GD360 to GD364, GD370 to GD374 and GD380 to GD384 respectively.
- Script description

```
bmov([w:R1000],[w:TMP0],25);
bmov([w:TMP0],[w:GD360],5);
bmov([w:TMP10],[w:GD370],5);
bmov([w:TMP20],[w:GD380],5);
```



(b) **Reading bmov commands in a script at a time**

This solution saves the communication time by reducing the frequency of communication between the GOT internal memory and the controller from ten times to once.

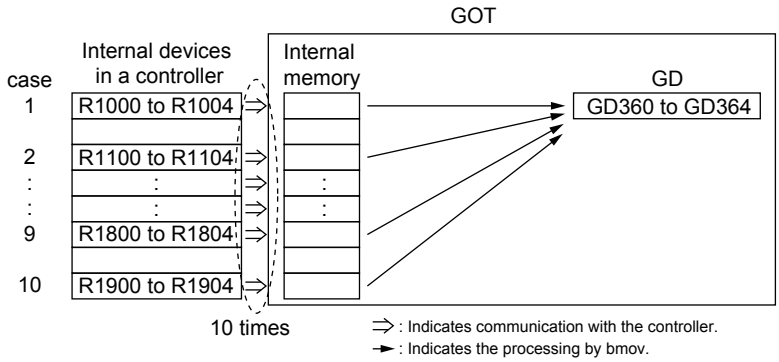
(When internal devices in a controller are read in an if or switch statement, the internal memory communicates with the controller regardless of the operating condition. When data are transferred from a temporary device area to GOT internal devices (such as GD), the internal memory does not communicate with controllers.)

Before applying remedy

- Processing outline

  Device values are transferred from R1000 to R1004, ⋯ and R1900 to R1904 into GD360 to GD364 according to the case statements.
- Script description

```
switch([w:D1000]){
case 1:
bmov([w:R1000],[w:GD360],5);
break;
case 2:
bmov([w:R1100],[w:GD360],5);
break;
:
case 9:
bmov([w:R1800],[w:GD360],5);
break;
case 10:
bmov([w:R1900],[w:GD360],5);
break;
}
rst([b:GB1000]);
```

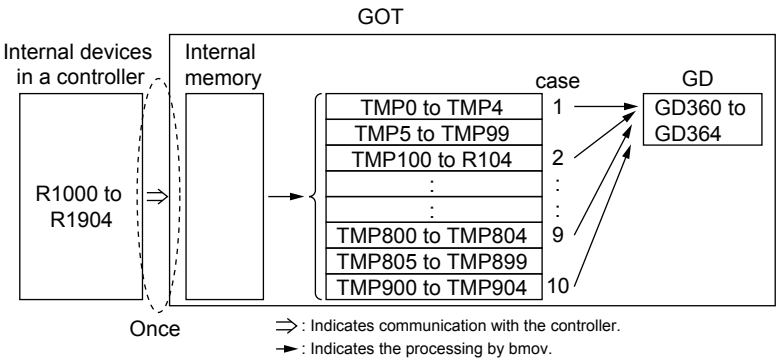


After the remedy is applied

- Processing outline

  Device values are transferred from R1000 to R1904 into TMP0 to TMP904 in the GOT at a time, then transferred again from TMP0 to TMP904 into GD360 to GD364 according to the case statements.
- Script description

```
bmov([w:R1000],[w:TMP0],905);
switch([w:D1000]){
case 1:
bmov([w:TMP0],[w:GD360],5);
break;
case 2:
bmov([w:TMP100],[w:GD360],5);
break;
:
case 9:
bmov([w:TMP800],[w:GD360],5);
break;
case 10:
bmov([w:TMP900],[w:GD360],5);
break;
}
rst([b:GB1000]);
```



9.9.13 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for project scripts, screen scripts, and script parts as required. The following shows the functions that are available by the relevant settings.

■1 GOT internal device

➡12.1.3 GOT special register (GS)

○ : Applicable, -: Not applicable

Function	Setting item	Project script	Screen script	Script part
Notifying that a script error has occurred.	GS14.b0	○	○	○
Notifying that a BCD error has occurred.	GS14.b7	○	○	○
Notifying that a zero division error has occurred.	GS14.b8	○	○	○
Notifying that a communication error (including access to an invalid device) has occurred.	GS14.b12	○	○	○
Storing the start device number of the devices where the latest error record is stored. The devices range from GS16 to GS47.	GS15	○	○	-
Storing the script error records (including script numbers and error codes).	GS16 to GS47	○	○	-
Storing the device number of the device where the latest script execution record is stored. The device is in the range of GS49 to GS79.	GS48	○	○	-
Storing the script numbers of the executed scripts.	GS49 to GS79	○	○	-
Notifying that a file operation function is being executed.	GS154.b0	○	○	○
Notifying that a file operation function error has occurred.	GS154.b15	○	○	○
Storing a number showing the GOT data registers (GD) where the latest error record is stored. The GD devices are specified with GS392 and GS394.	GS157	○	○	○
Storing a number showing the GOT data registers (GD) where the latest script execution record is stored. The GD devices are specified with GS396 and GS398.	GS158	○	○	○
Notifying occurrence of an error which occurs while the integer ← → real number conversion is processed. *1	GS260.b14	○	○	○
Notifying the completion of the integer ← → real number conversion. *1	GS260.b15	○	○	○
Storing the error code of an error which occurs while the integer ← → real number conversion is processed. *1	GS261	○	○	○
Clearing script error records as shown below. • GS14.b0, b7, b8, and b12 store 0. • GS15 stores -1. • GS16 to GS47 store 0.	GS384.b0	○	○	○
Re-executing the script aborted due to an error.	GS384.b1	○	○	○
Setting the monitoring time for one script.	GS385	○	○	○
Controlling whether to run a script upon screen switching or other applicable processes. The applicable script trigger types are as follows. • [Rise] • [Fall] • [Rise/Fall]	GS386	○	○	○
Specifying a data storage order when a file operation function is used. *1	GS390	○	○	○
Storing the detailed script error records.	GS392 GS394 GS395	○	○	○
Storing the detailed script execution records.	GS396 GS398 GS399	○	○	○

Function	Setting item	Project script	Screen script	Script part
Executing an integer-to-real number conversion.	GS460 GS461 GS462 GS463 GS464	○	○	○

*1 Not available to GT21 and GS21.

9.9.14 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Scripts do not display error messages when an error occurs. Stopping the script where an error has occurred prevents other scripts and monitor functions from stopping. Therefore, every script must be debugged following the procedures as shown below.

■1 Simulation using a general C language compiler or debugger

Since scripts and C language are similar, you can simulate the scripts by making minor corrections using a general C language compiler or debugger.
Complicated scripts including many control statements can be debugged easily by using them.
The following shows the procedure to simulate scripts using a general C language compiler or debugger.

Step 1 Change a script file for GOTs (extension.txt) into a C language source file (extension.c).

• Change of the file extension: text1.txt → text1.c

Step 2 Open the C language source file in a commercially-available text editor and create a frame with "main(){}".

Describe "#include<stdio.h>" at the beginning.

• Additional description of "main" and "include"

```
Additional description→  #include<stdio.h>
Additional description→  main(){
                           [w:TMP0001]=0;
                           while([w:TMP0000]<[w:D100]){
                             if(!(([w:TMP0000]-1900)%4)){
                               [w:TMP0001]=[w:TMP0001]+1;
                             ••• ( Omitted) •••
                           [w:TMP0010]=[w:TMP0002]+[w:TMP0003]+[w:TMP0004]-1;
                           [w:D200] = [w:TMP0010]%7;
Additional description→  }
```

Step 3 Change the description method of devices (variables) from the one for scripts to the one for C language.

Using the following definitions to change the variables into the one for C language enables you to smoothly restore them into the GOT scripts.
Using the batch replacement function of a commercially-available text editor may be useful for the change as well.
Definition 1 [w: → _w
Definition 2 [b: → _b
Definition 3] → __

• Change of the description method of devices (variables)

```
                         #include<stdio.h>
                         main(){
Description change→        _wTMP0001__=0;
Description change→        while(_wTMP0000__<_wD100__){
Description change→          if(!((_wTMP0000__-1900)%4)){
Description change→            _wTMP0001__=_wTMP0001__+1;
                           ••• ( Omitted) •••
Description change→        _wTMP0010__=_wTMP0002__+_wTMP0003__+_wTMP0004__-1;
Description change→        _wD200__ = _wTMP0010__%7;
                         }
```

Step 4 For C language, variables to be used must be defined in advance.

Since only one data type can be set for one script, the same variable type of C language must be set for all the

variables.
The following shows the data type of scripts.
If [BCD32], [BCD16], or [BCD64] is selected as the script data type, you cannot perform a simulation using the general C language compiler or debugger.

Data type of scripts	Variable type
Signed BIN 16	short
Unsigned BIN 16	unsigned short
Signed BIN 32	long
Unsigned BIN 32	unsigned long
Signed BIN64	long long
Unsigned BIN64	unsigned long long
BCD16	-
BCD32	
BCD64	
Real(32bit)	float
Real(64bit)	double

• Variable definition (auto variable declaration)

Description change→
Addition →
Addition →
Addition →
Addition →
	#include<stdio.h>
	void main(void){
	unsigned short _wTMP0000__;
	unsigned short _wTMP0001__;
	unsigned short _wTMP0002__;
	unsigned short _wD100__;
	••• (Omitted) •••
	_wTMP0001__=0;
	while(_wTMP0000__<_wD100__){
	if(!((_wTMP0000__-1900)%4)){
	_wTMP0001__=_wTMP0001__+1;
	••• (Omitted) •••
	_wTMP0010__=_wTMP0002__+_wTMP0003__+_wTMP0004__-1;
	_wD200__ = _wTMP0010__%7;
	}

Step 5 Perform a simulation with the general C language compiler or debugger.

The step run, variable watch, and other functions specific to the debugger can be used.
After completion of debugging, perform Step 1 to 4 in reverse order to restore the data into the GOT script file.

■2 Messages to be displayed at the syntax check

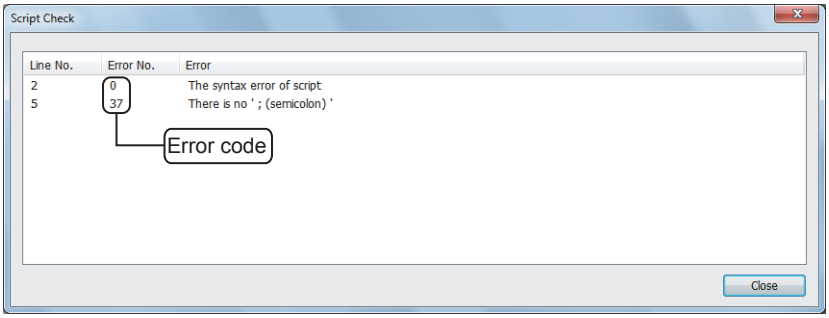
(1) Dialog to be displayed at the syntax check

When you execute a syntax check, the [Script Check] dialog appears to display the error codes of the errors detected in a script.

For the details of the error codes, refer to the following.

➟(2) List of syntax error codes

Example) When executing a syntax check on a project script



Some errors cannot be detected by the syntax check.

If any error which cannot be detected by the syntax check exists in the script, the error is detected when the script is executed on the GOT.

For the errors for the execution of a script and the corrective action on the GOT, refer to the following.

➟■3 Script execution errors and their corrective actions on the GOT

(2) List of syntax error codes

The [Script Check] dialog displays the error codes listed below.

Error code *1	Description
0	The syntax error of script
1	The odd number address is set to the address
2	Extended file register (ER) setting error (inter-block settings)
3	Address is only a multiple of 16
4*2	Out of the range of device No. (displayed in HEX. Number)
5*2	Out of the range of device No. (displayed in DEC. Number)
6	Out of the range of device No. (displayed in OCT. Number address)
7	The setting is not executed with the multiple of 16 when specifying the bit device word
8	The setting is not within the range of 0 to 15 when specifying word device bit
9	The set device is out of the range or does not exist
11	Illegal address
14	Access to the device disabling word accessibility by using bit
15	Access to the device disabling bit accessibility by using bit
16	Octal device are set with odd number
17	The setting is not executed with the multiple of 16 when specifying the bit device word
20	The specified CPU does not exist
21	The specified Word type does not exist
22	A CPU not included with network settings has been specified
24	2 byte code cannot be used
25	No expression exist between {and}
26	There are a lot of expression or control structure
27	There are a lot of expression or control structure
28	case outside of switch
29	"Default" exist although there is no switch statement
30	There are multiple "default" settings in switch

Error code [*1]	Description
31	There are too many switch "case" statements
32	There are too many "switch break" statements
33	Too many nest of switch
34	System memory is insufficient
35	Parenthesis nest is deep
36	Syntax error
37	There is no ' ; (semicolon) '
38	There are invalid characters
39	File input is not specified
40	The specified input file does not exist
41	The nest of if/while is deep
45	The CPU incompatible with multi-CPU is specified as multi-CPU
46	The multi-specified station No. is incorrect
47	Network in GOT internal devices
48	Set network in GOT internal devices
101	No closed parenthesis
111	The bit device is specified for the device with indirect specification
112	Controller Type of channel n is not specified or does not exist [*3]
113	Channel number error
114	Common device cannot use channel
115	The read only variable is written
116	The write only variable is read
117	The read only property is written
118	The write only property is read
119	Unterminated string
120	There is EOF in string
121	The string is too long
122	Unicode translation error
123	Cannot use EG device/the label with EG device allocation in object script
124	Cannot use word type cast
125	There are invalid variables
126	There are invalid properties
127	There are invalid functions
128	There are invalid device type
129	Unterminated label
130	There is EOF in label
131	The label is too long
132	An unavailable label is set
133	The device of label is invalid
134	The device of label is not set
135	Label conversion error
136	Data types of the 1st argument and 2nd one are not equal in bmov/fmov
137	value out of range
138	can't use #pragma except in script head
139	#pragma folder_name_length redeclared
140	#pragma file_name_length redeclared
141	Bit device word cannot be used

Error code [*1]	Description
142	Word device bit cannot be used
143	The format is invalid
144	The number of format designators is out of the valid range
145	The argument count is wrong
147	#pragma use_ptmp_length redeclared
148	PTMP cannot be used except for script parts
201	The device code is unknown
202	The device No. is beyond the valid range
203	Device No. + Device Points are beyond the valid range
204	The network No./Station No./CPU No. are beyond the valid range
205	The device name is invalid
206	The device No. notation is invalid
207	The address No. is invalid (not in even number or multiples of 8/16)
208	The device type is invalid
209	The GOT series is unknown
301	The GOT type does not support global labels/tags
302	Global labels/tags cannot be used for the controller of channel [*3]
303	The global label/tag/label (GT Designer3) is too long
304	An invalid character is used for the global label/tag/label (GT Designer3)
305	Global label/tag/label (GT Designer3) syntax error
306	The global label/tag that is not array type is used for the continuous device setting
307	An unregistered OPC UA tag is set

*1 If the station number setting of the device is incorrect, the same error may be displayed twice.

*2 For devices in which decimal numbers and hexadecimal numbers are used for device numbers (including a coil (MB) of YASKAWA PLC CP-9200SH), error code 4 occurs if a number outside the address range is specified.

*3 The letter "n" indicates a channel number.

■3 Script execution errors and their corrective actions on the GOT

The following shows how to check the errors and their error codes on the GOT.

Item	Description
Checking for the occurrence of an error	Check for the occurrence of the following errors. • Script error • BCD error • Zero division error • Communication error (including access to an invalid device) • File operation function error The following script types are supported: project script, screen script, and script part. ➟(1) Checking for the occurrence of an error
Checking an error record	Check the following information of an error. • Script number • Error code The following script types are supported: project script and screen script. ➟(2) Checking an error record
Checking a detailed error record	Check the following information of an error. • Error code • Script type • Screen number • Script number or object ID number • Execution order number • Screen type • Number of the displayed base screen The following script types are supported: project script, screen script, and script part. ➟(3) Checking a detailed error record
Clearing error records	Turning on GS384.b0 clears the script error records as shown below. • GS14.b0, b7, b8, and b12 store 0. • GS15 stores -1. • GS16 to GS47 store 0. The following script types are supported: project script, screen script, and script part.
Re-executing the script aborted due to an error	Turn on GS384.b1 to re-execute the script aborted due to an error. The following script types are supported: project script, screen script, and script part.

To check device values, use the device monitor function or objects (including a numerical display and lamp).

(1) Checking for the occurrence of an error

The following script types are supported: project script, screen script, and script part.

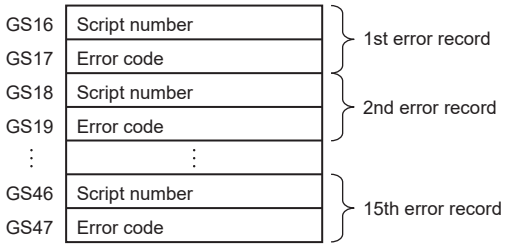
The following GOT internal devices notify the occurrence of errors.

GOT internal device		Description
GS14	b0	Turns on when a script error occurs.
	b7	Turns on when a BCD error occurs.
	b8	Turns on when a zero division error occurs.
	b12	Turns on when a communication error (including access to an invalid device) occurs.
GS154	b15	Turns on when a file operation function error occurs. Turns off when the subsequent file operation function is properly completed.

To reset each bit of GS14, turn on GS384.b0.

(2) Checking an error record

The following script types are supported: project script and screen script.
When an error occurs, the error record is stored into the devices ranging from GS16 to GS47.
GS15 stores the start device number of the devices where the latest error record is stored.
To clear error records, turn on GS384.b0.
The following shows the operation of the relevant GOT internal devices.

GOT internal device	Description
GS15	Stores the start device number of the devices where the latest error record is stored. The devices range from GS16 to GS47. The value of GS15 changes as follows each time an error occurs. -1 → 16 → 18 → 20 → 22 → ... → 46 (The next loop will start from 16.) Example) Relationship between the value of GS15 and the storage location of the latest error record • When GS15 stores 16, the latest error record is stored in GS16 and GS17. • When GS15 stores 46, the latest error record is stored in GS46 and GS47. Turning on GS384.b0 resets GS15 to -1.
GS82 to GS113	Stores the following information when a script error occurs. • Script number • Error code Two word devices are used for one error.  If the number of errors is 17 or more, the error records are overwritten starting from the oldest one.

(3) Checking a detailed error record

The following script types are supported: project script, screen script, and script part.
The specified GOT data registers (GD) store error records.
These GD devices are specified with the following GOT special registers (GS).

- GS392: Specify the start device number of the GD devices to store error records.
- GS394: Specify the maximum number of error records.

Example) When GS392 stores 1000, and GS394 stores 5

GD1000 to GD1007	··· 1st error record
GD1008 to GD1015	··· 2nd error record
GD1016 to GD1023	··· 3rd error record
GD1024 to GD1031	··· 4th error record
GD1032 to GD1039	··· 5th error record

Eight word devices are used for one error.
For the details of an error record, refer to the following.

➟(4) Details of an error record

To start storing error records, turn on GS395.b0.
You can identify the devices storing the latest error record based on the values of GS392 and GS157.
The following shows the operation of the relevant GOT internal devices.

- Write device

GOT internal device	Description
GS157	Stores a number showing the devices where the latest error record is stored. Data type: Signed binary Initial value: -1 Calculate the start device number of the devices storing the latest error record by using the following expression. • GS392 + (GS157 × 8) Example) When GS392 stores 1000, and GS157 stores 5 1000 + (5 × 8) = 1040 In this case, GD1040 to GD1047 (eight GD devices) store the latest error record.

• Read device

GOT internal device		Description
GS392		Specify the start device number of the GD devices to store error records. Data type: Unsigned binary
GS394		Specify the maximum number of error records. Data type: Unsigned binary The setting range is 0 to 5000. If the device stores 0, no error record will be stored. If the device stores 5001 or more, up to 5000 records will be stored. GS395.b1 specifies the operation to be performed when the number of errors has exceeded the maximum number of error records.
GS395	b0	When this bit is turned on, storing error records starts. When this bit is turned off, storing error records ends.
	b1	Specifies the operation to be performed when the number of errors has exceeded the maximum number of error records specified with GS394. When this bit is turned on, storing error records stops. When this bit is turned off, storing error records continues by overwriting the oldest record.
	b8	When this bit is turned on, the project script error records are not stored.
	b9	When this bit is turned on, the screen script error records are not stored.
	b10	When this bit is turned on, the script error records of script parts objects are not stored.
	b11	When this bit is turned on, the records of warnings (that do not abort a script) are not stored.

(4) Details of an error record

The following shows an example of how an error record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Error code	Error code of an error. For the error details and corrective actions, refer to the following. (5) List of script execution error codes
GD1001	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 1: Project script • 2: Screen script (set for a base screen) • 3: Screen script (set for a window screen) • 4: Script part
GD1002	Screen number	Number of the screen for which the script is set. The device stores 0 for a project script.
GD1003	Script number or object ID number	The device stores a script number or object ID number according to the script type. • For project scripts and screen scripts: script number • For script parts: object ID number
GD1004	Execution order number	Script execution order number specified on GT Designer3 The device stores any of the following values according to the script type. • For project scripts: 1 to 256 • For screen scripts: 1 to 256 (per screen) • For script parts: 1 to 16 (per script parts object)
GD1005	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332 The device stores 0 for a project script.

Storage device	Item	Description
GD1006	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1007	Use prohibited	The device stores 0.

(5) List of script execution error codes

Error code	Description	Corrective action
1	Initialization of project script failed.	• Reduce the number of monitor devices in scripts. • Reduce the number of project scripts to be executed.
2	Initialization of screen script (base screen) failed.	• Reduce the number of monitor devices in scripts and base screens. • Reduce the number of screen scripts (base screen) to be executed.
3	Initialization of screen script (superimpose window 1) failed.	• Reduce the number of monitor devices in scripts and superimpose window 1. • Reduce the number of screen scripts (superimpose window 1) to be executed.
4	Initialization of screen script (overlap window 1) failed.	• Reduce the number of monitor devices in scripts and overlap window 1. • Reduce the number of screen scripts (overlap window 1) to be executed.
5	Initialization of screen script (overlap window 2) failed.	• Reduce the number of monitor devices in scripts and overlap window 2. • Reduce the number of screen scripts (overlap window 2) to be executed.
6	An error occurred in reading data from the device that always collects the data.	Correct the description of the device whose data is out of the specified device range.
7	The number of scripts to be executed exceeded the limit. And some scripts were left unexecuted.	• Change the number of scripts to be executed in one project to 256 or less. • Change the number of scripts to be executed in one screen to 256 or less.
8	When [BCD16], [BCD32], or [BCD64] was selected as the script data type, the monitor device value could not be handled as BCD.	• Check whether the device to be monitored is correct. • Check the processing for the device which could not be handled as BCD, and correct the script and sequence program.
9	When [BCD16], [BCD32], or [BCD64] was selected as the script data type, the operation result was outside the BCD data range.	Check the processing for the device that is out of the BCD data range.
10	The numerator was divided by the denominator of 0.	Check the factor that caused zero division in the script, and correct the script.
11	Writing to a device failed.	Check the device description of the script.
12	Reservation of an internal area for writing to a device failed.	Reduce the number of devices to be written in the script.
13	The while statement includes the description of a device that causes an assignment delay.	Replace the device causing an assignment delay in the while statement with the temporary device area or a GOT internal device.
14	The expression was too complicated to process.	Simplify or divide the operation expression in the script.
15	A script did not end within the script monitoring time.	• Check whether the script has gone into an endless loop. • Increase the value of the Script Monitoring Time (GS385).
16	Access to the GOT internal device failed, resulting in an error (out of the specified device range).	• Check the processing to the GOT internal device and correct the script and sequence program. • Check the description of the script.
	Access to gateway device failed.	• Check that the system applications (extended functions) for the gateway function are installed on the GOT. • Check the cable.
18	The number of consecutive devices handled by the FMOV or BMOV function exceeded the maximum as shown below. • Maximum number of word devices: 32766 • Maximum number of double-word devices: 16383 • Quad-word devices: 8191	• Reduce the number of consecutive devices handled by the FMOV or BMOV function.
19	Initialization of screen script (superimpose window 2) failed.	• Reduce the number of monitor devices in scripts and superimpose window 2. • Reduce the number of screen scripts (superimpose window 2) to be executed.
20	The GOT failed to access a temporary device area because the area is invalid.	Correct the descriptions of temporary device areas in the relevant script.
21	A 8-bit or 64-bit device is specified for an indirect device.	Correct the description of the indirect device in the relevant script.
22	Temporary device areas for 32-bit data are used for the script of 64-bit data.	Correct the common setting of the relevant script.
23	The GOT failed to access a script parts temporary device area because the area is invalid.	Correct the descriptions of script parts temporary device areas in the relevant script.

Error code	Description	Corrective action
24	The GOT failed to execute the file operation function because data in the argument used in the function is invalid. (The path is invalid, the data is out of range, or the other errors occur.)	• Check if the argument is not out of the available range. • Correct the folder and file names. • Check if the storage device data and the file size are not out of the available range by the offset, number of write bytes, and/or number of read bytes.
25	The GOT failed to write data because the data storage has insufficient free space.	Check the free space of the data storage.
26	The GOT failed to access the file because no data storage is installed or the SD card cover is opened.	• Check that a data storage is installed on the GOT. • Check that the SD card cover is closed. • Check that the SD card access switch is turned on.
27	The GOT failed to write the data because the data storage is write-protected, the specified file is a read-only file, or a file in the same name as the folder name in the path of the copy destination exists.	• Check if the data storage is not write-protected. • Check if the specified file is not a read-only file. • Check if a file in the same name as the folder name in the path of the copy destination does not exist.
28	The GOT failed to access the file because the data storage is not formatted or is faulty.	• Check if the data storage is formatted. • Check if the data storage is not broken.
29	The GOT failed to access the file because the specified file is used for the other functions.	Check if the file which is being used by the file operation function is not used by other functions at the execution of the file operation function.
30	The GOT stopped copying the file because a file in the same name as the copy source file exists in the copy destination folder.	• Check if the copy destination folder has no file in the name which is the same as the copy source file. • If the copy mode is write protection, disable write protection.
31	The GOT failed to execute the string operation function because arguments in the function specify invalid character strings.	• Correct the format. • Check if the arguments are not out of the available range for specifying.
32	A 64-bit operation overflow has occurred.	Check the description of the relevant script and correct it.
35	Initialization of screen script (overlap window 3) failed.	• Reduce the number of monitor devices in scripts and overlap window 3. • Reduce the number of screen scripts (overlap window 3) to be executed.
36	Initialization of screen script (overlap window 4) failed.	• Reduce the number of monitor devices in scripts and overlap window 4. • Reduce the number of screen scripts (overlap window 4) to be executed.
37	Initialization of screen script (overlap window 5) failed.	• Reduce the number of monitor devices in scripts and overlap window 5. • Reduce the number of screen scripts (overlap window 5) to be executed.

■4 How to check a script execution record

The following shows how to check a script execution record on the GOT.

Item	Description
Checking the execution status of a file operation function	While a file operation function is being executed, GS154.b0 is on. After the execution is complete, GS154.b0 turns off. The following script types are supported: project script, screen script, and script part.
Checking a script execution record	Check the script number of an executed script. The following script types are supported: project script and screen script. ➟(1) Checking a script execution record
Checking a detailed script execution record	Check the following information on an executed script. • Script type • Screen number • Script number or object ID number • Execution order number • Screen type • Number of the displayed base screen The following script types are supported: project script, screen script, and script part. ➟(2) Checking a detailed script execution record

To check device values, use the device monitor function or objects (including a numerical display and lamp).

(1) Checking a script execution record

The following script types are supported: project script and screen script.
When a script runs, the script number is stored into the device in the range of GS49 to GS79.
GS48 stores the device number of the device where the latest script execution record is stored.
The following shows the operation of the relevant GOT internal devices.

GOT internal device	Description
GS48	Stores the device number of the device where the latest script execution record is stored. The device is in the range of GS49 to GS79. The value of GS48 changes as follows each time a script is executed. -1 → 49 → 50 → 51 → 52 → ... → 79 (The next loop will start from 49.)
GS49 to GS79	Store the script numbers of the executed scripts. One word device is used for one script. If the number of the executed scripts is 32 or more, the script execution records are overwritten starting from the oldest one.

(2) Checking a detailed script execution record

The following script types are supported: project script, screen script, and script part.
The specified GOT data registers (GD) store script execution records.
These GD devices are specified with the following GOT special registers (GS).

- GS396: Specify the start device number of the GD devices to store script execution records.
- GS398: Specify the maximum number of script execution records.

Example) When GS396 stores 1000, and GS398 stores 5

GD1000 to GD1007	··· 1st script execution record
GD1008 to GD1015	··· 2nd script execution record
GD1016 to GD1023	··· 3rd script execution record
GD1024 to GD1031	··· 4th script execution record
GD1032 to GD1039	··· 5th script execution record

Eight word devices are used for one script execution record.
For the details of a script execution record, refer to the following.

➟(3) Details of a script execution record

To start storing script execution records, turn on GS399.b0.
You can identify the devices storing the latest script execution record based on the values of GS396 and GS158.
The following shows the operation of the relevant GOT internal devices.

- Write device

GOT internal device	Description
GS158	Stores a number showing the devices where the latest script execution record is stored. Data type: Signed binary Initial value: -1 Calculate the start device number of the devices storing the latest script execution record by using the following expression. • GS396 + (GS158 × 8) Example) When GS396 stores 1000, and GS158 stores 5 1000 + (5 × 8) = 1040 In this case, GD1040 to GD1047 (eight GD devices) store the latest script execution record.

- Read device

GOT internal device	Description
GS396	Specify the start device number of the GD devices to store script execution records. Data type: Unsigned binary
GS398	Specify the maximum number of script execution records. Data type: Unsigned binary The setting range is 0 to 5000. If the device stores 0, no script execution record will be stored. If the device stores 5001 or more, up to 5000 records will be stored. GS399.b1 specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records.

GOT internal device		Description
GS399	b0	When this bit is turned on, storing script execution records starts. When this bit is turned off, storing script execution records ends.
	b1	Specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records specified with GS398. When this bit is turned on, storing script execution records stops. When this bit is turned off, storing script execution records continues by overwriting the oldest record.
	b8	When this bit is turned on, the project script execution records are not stored.
	b9	When this bit is turned on, the screen script execution records are not stored.
	b10	When this bit is turned on, the script execution records of script parts objects are not stored.

(3) Details of a script execution record

The following shows an example of how a script execution record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 1: Project script • 2: Screen script (set for a base screen) • 3: Screen script (set for a window screen) • 4: Script part
GD1001	Screen number	Number of the screen for which the script is set. The device stores 0 for a project script.
GD1002	Script number or object ID number	The device stores a script number or object ID number according to the script type. • For project scripts and screen scripts: script number • For script parts: object ID number
GD1003	Execution order number	Script execution order number specified on GT Designer3 The device stores any of the following values according to the script type. • For project scripts: 1 to 256 • For screen scripts: 1 to 256 (per screen) • For script parts: 1 to 16 (per script parts object)
GD1004	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332 The device stores 0 for a project script.
GD1005	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1006	Use prohibited	The device stores 0.
GD1007	Use prohibited	The device stores 0.

9.10 Object Script

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

9.10.1 Overview of the object script

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Object scripts are settable by object.
If the trigger condition for an object script is satisfied while the relevant object is being displayed, the script runs.

9.10.2 Specifications of the object script

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Object script

(1) Targets for setting and operation

Object scripts are set and operate for the following objects.

- Touch switch ([Switch] only)
- [Bit Lamp]
- [Word Lamp]
- [Numerical Display]
- [Numerical Input]
- [Text Display]
- [Text Input]
- [Date Display]
- [Time Display]
- [Comment Display]
- [Line Graph]
- [Trend Graph]
- [Bar Graph]
- [Statistics Bar Graph]
- [Statistics Pie Graph]
- [Scatter Graph]
- [Historical Trend Graph]
- [Graphical Meter]
- [Level]
- [Panelmeter]
- [Parts Display]
- [Parts Movement]

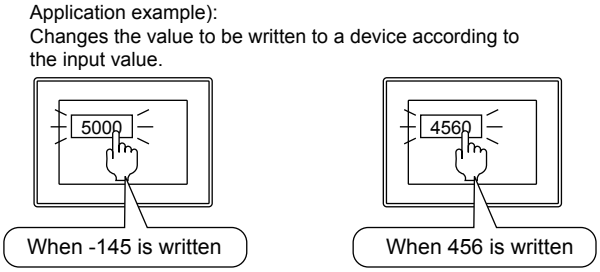
(2) Object script type

The following three types of object scripts are provided.

(a) **Input object script**

Scripts that are executed for objects that input numerical values.

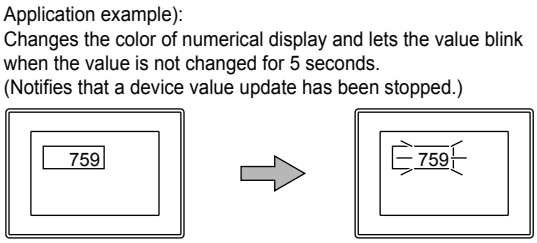
➟9.10.4 ■1 Data operation by a numerical input script



(b) **Display object script**

Scripts that are executed for objects that display texts and lamps.

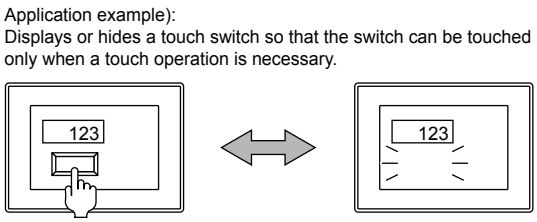
➟9.10.4 ■2 To start blinking after set time



(c) **Switch object script**

Scripts that are executed for touch switches ([Switch] only).

➟9.10.4 ■3 Showing and hiding objects for input and touch operations



(3) The GOT condition under which scripts can be executed

Object scripts can be executed when all the following four conditions are satisfied.

- The GOT is in the online process.
- The screen where the target object is placed has been displayed.
- The target object has been displayed or in operation.
- The target object has no limit on its operations by the security function.

(4) Operating conditions of scripts

Scripts are executed when the operating conditions set for each script are satisfied. The execution is also tied to: Input to the object, the display on the object, and a touch operation on a touch switch.

(5) Maximum number of scripts

For a single object for numerical input and character string input, both an input object script and a display object script can be set.

For a single object for other than numerical input and character string input, either an input object script or a display object script can be set.

Note that it takes longer time than usual for the monitor screen to display when the number of monitor devices in the object script is large.

■2 Control structure of object scripts

For object scripts, the control structure of project scripts and screen scripts (except the following function) and the control structure described in this section are available.

Function for project and screen scripts unavailable in object scripts	
Classification	Name
Contiguous device operation function	bmov
	fmov
File operation function	file_getlist
	file_getfolderlist
	file_read
	file_write
	file_lineread
	file_unilineread
	file_rename
	file_delete
	file_copy
	file_xcopy
String operation function	str_scanf
	str_printf
	str_strlen
	str_strmid
	str_uniscanf
	str_uniprintf
	str_unistrlen
	str_unistrmid
	str_lc2uni
	str_uni2lc

For the control structure of project scripts and screen scripts, refer to the following.

➟9.9.2 ■3 Control structures for a project script, screen script, and script part

(1) Object internal variables (input object script)

Variable	Description	
$$	Statement example	[w:D100] = $$
	Function	Referred to for the script to process a monitor device value. Values cannot be assigned. Using $$ before the object displays the monitor device value interrupts the execution process of the script. (No error occurs.) If the object is displaying the monitor device value at the subsequent script executions, $$ can be read.
	Data type	Data type set in the script setting
$K	Statement example	[w:D100] = $K
	Function	Referred to for the script to process the latest key code input from a touch key. Assigned when a key code is written to the object. If this variable is referred to when no key code has been input, 0xFFFF is obtained.
	Data type	Unsigned BIN 16
$W	Statement example	[w:D100] = $W
	Function	Referred to for the script to process the value input by the determination key of a touch key. Assigned when a value is written to the object. If this variable is referred to when no value has been input by the determination key, 0 is obtained.
	Data type	Data type set in the script setting

Available object internal variables for input object scripts differ depending on the combination of objects and trigger types used.
The following shows available object internal variables.

RW: Reference or substitution is possible, R: Reference is possible, W: Substitution is possible, -: Use prohibited

Object	Trigger type	Variable			
		$$	$K	$W	$V
Numerical Input	Ordinary, ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling	R	-	-	-
	Key Code Input	R	RW	-	-
	Input Fixation	R	-	RW	-
Text Display	Ordinary, ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling	-	-	-	-
	Key Code Input	-	RW	-	-
	Input Fixation	-	-	-	-

(2) Object internal variables (display object script)

Variable	Description	
$$	Statement example	[w:D100] = $$
	Function	Referred to for the script to process a monitor device value. Values cannot be assigned. Using $$ before the object displays the monitor device value interrupts the execution process of the script. (No error occurs.) If the object is displaying the monitor device value at the subsequent script executions, $$ can be read.
	Data type	Data type set in the script setting
$V	Statement example	$V = [w:D100]
	Function	Reference is unavailable. Assigned when the value displayed on the object is changed for another one.
	Data type	Data type set in the script setting

Available object internal variables for display object scripts differ depending on the combination of objects and trigger types used.
The following shows available object internal variables.

RW: Reference or substitution is possible, R: Reference is possible, W: Substitution is possible, -: Use prohibited

Object	Trigger type	Variable			
		$$	$K	$W	$V
Numerical display, numerical input, comment display, level object, parts display, parts movement *1	Ordinary, Synchronize Display Trigger	R	-	-	W
	ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling	R	-	-	-
	View Change	R	-	-	R
Lamp, panelmeter, graphical meter *1	Ordinary	R	-	-	W
	ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling	R	-	-	-
	View Change	R	-	-	R
Text Display, Text Input, Date Display, Time Display, Line Graph, Trend Graph, Bar Graph, Statistics Bar Graph, Statistics Pie Graph, Scatter Graph, Historical Trend Graph	Ordinary, ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling, View Change, Synchronize Display Trigger *2	-			

*1 When the device type set to the object is bit data type, reference of $$ and substitution to $V are not available.
*2 [Trigger Type] cannot be set to [Synchronize Display Trigger] if the object is for date display or time display.

(3) Object internal variables (switch object script)

Variable	Description	
$W	Statement example	$W = [w:D100]
	Function	Reference is unavailable. Assigned when a value processed in the script is used in writing with the touch switch.
	Data type	Data type set in the script setting

Available object internal variables for switch object scripts differ depending on the combination of objects and trigger types used.
The following shows available object internal variables.

RW: Reference or substitution is possible, R: Reference is possible, W: Substitution is possible, -: Use prohibited

Object	Trigger type	Variable			
		$$	$K	$W	$V
Touch switch ([Switch] only)	Ordinary, ON, OFF, Rise, Fall, Rise/Fall, Sampling, ON Sampling, OFF Sampling, Device Writing	-	-	W	-

Point

Using object internal variables that cannot be checked by the syntax check

In the syntax check, object internal variables in the following uses are not checked.

- In referring to an object internal variable that cannot be referred to
- In assigning a value to an object internal variable to which no value can be assigned

Use object internal variables correctly when creating scripts.

(4) Object property

For the correspondence between the read/write operation and object properties, refer to the following.

➡Object script tab of each object

For the timing of the screen reflecting after the settings of object properties, refer to the following.

➡(5) Timing at which the setting change of an object property is reflected

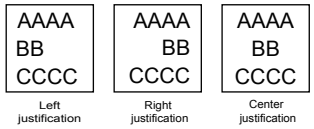
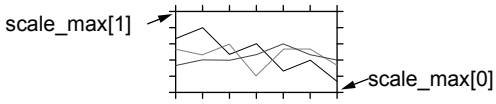
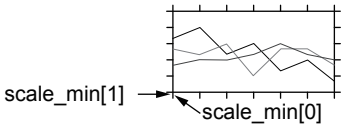
Changes of object properties are retained until the GOT is powered on/powered off/reset, the package data are written, or screen switching is performed.

The following shows the list of the object properties.

Property	Description	
active	Statement example	my.active = 1
	Function	Specifies whether to update the object itself or not. 1: Updates the object itself. 0: Does not update the object itself. The object is not updated even if the display condition is satisfied. When "0" is specified after the screen being switched and before the object being displayed subsequently on the screen, the object itself is not displayed.
x	Statement example	my.x = 0
	Function	Specifies in dots the X coordinate to which the object itself moves. The setting range is 0 to 32767. The left end of the screen is 0. For a parts movement object, this property is enabled only when [Line] is selected for [Move Way] of [Move Format] with GT Designer3. When the specified coordinate is outside the screen area, the object does not move.
y	Statement example	my.y = 0
	Function	Specifies in dots the Y coordinate to which the object itself moves. The setting range is 0 to 32767. The upper end of the screen is 0. For a parts movement object, this property is enabled only when [Line] is selected for [Move Way] of [Move Format] with GT Designer3. When the specified coordinate is outside the screen area, the object does not move.
width	Statement example	[w:D100] = my.width
	Function	Obtains the width of the object frame. The setting range is 1 to 32767.
height	Statement example	[w:D100] = my.height
	Function	Obtains the height of the object frame. The setting range is 1 to 32767.
decimal_point	Statement example	my.decimal_point = 1
	Function	Specifies the number of digits after the decimal point. The setting range is 0 to 32. This property is for a numerical display or numerical input object and enabled only when [Real] is selected for [Format] of [Display Format].

Property	Description	
blink*1	Statement example	my.blink = 0
	Function	Specifies a blink interval and the target item for the blink. (The setting values 129 and greater specify only objects for numerical display, numerical input, character string display, character string input, and comment display.) 0: No blink. 1: Lets numerical values/characters blink. (1 second intervals) 2: Lets numerical values/characters blink. (0.5 second intervals) 3: Lets numerical values/characters blink. (0.2 second intervals) 128: No blink. 129: Lets numerical values/characters and a plate blink. (1 second intervals) 130: Lets numerical values/characters and a plate blink. (0.5 second intervals) 131: Lets numerical values/characters and a plate blink. (0.2 second intervals) Reading out my.blink after writing 128 causes the script to obtain 0.
highlight*1	Statement example	my.highlight = 0
	Function	Specifies whether to invert the colors of characters on the object itself or not. 0: Does not invert the colors. 1: Inverts the colors.
part_no*1	Statement example	my.part_no = 1
	Function	Specifies the part's number associated with the part to be displayed. The setting range is 0 to 32767.
mark_color*1	Statement example	my.mark_color = 255
	Function	When a part is displayed as a mark, specifies a color for which the white color is changed. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
frame_color	Statement example	[w:D100] = my.frame_color
	Function	Obtains the frame color. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
plate_color*1	Statement example	my.plate_color = 255
	Function	Specifies the plate color of the figure. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
graph_color*1	Statement example	my.graph_color = 255
	Function	Specifies the level/needle color of the needle/color fill display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
back_color*1	Statement example	my.back_color = 0
	Function	Specifies the background color of the meter panel display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
pattern*1	Statement example	my.pattern = 1
	Function	Specifies a pattern. The setting range is 1 to 37. 0: Does not use any pattern. (Use is prohibited when a panelmeter is used.) For details of patterns, refer to the following. ➡7.5.1 [Rectangle] dialog

Property	Description	
pattern_bg_color	Statement example	my.pattern_bg_color = 255
	Function	Specifies the fill color of the meter panel display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
fill_color	Statement example	my.fill_color = 255
	Function	Specifies the fill color of the needle/color fill display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
fill_bg_color	Statement example	my.fill_bg_color = 255
	Function	Specifies the background color of the needle/color fill display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
fill_pattern	Statement example	my.fill_pattern = 1
	Function	Specifies the pattern of the needle/fill display attribute. The setting range is 1 to 37. 0: Use is prohibited. For details of patterns, refer to the following. "➡7.5.1 [Rectangle] dialog
core_color	Statement example	my.core_color = 255
	Function	Specifies the fill color of the middle coat display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
core_bg_color	Statement example	my.core_bg_color = 255
	Function	Specifies the background color of the middle coat display attribute. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
core_pattern	Statement example	my.core_pattern = 1
	Function	Specifies the pattern of the middle coat display attribute. The setting range is 1 to 37. 0: Use is prohibited. For details of patterns, refer to the following. "➡7.5.1 [Rectangle] dialog
text_color*1	Statement example	my.text_color = 255
	Function	Specifies the color of numerical values/characters to be displayed. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
text_width	Statement example	my.text_width = 1
	Function	Specifies the scale factor (width) of numbers and characters the object itself displays. 0: 0.5 times 1 to 8: 1 to 8 time (s) For HQ characters, only the setting values 2, 4, 6, and 8 can be specified.
text_height	Statement example	my.text_height = 1
	Function	Specifies the scale factor (height) of numbers and characters the object itself displays. 0: 0.5 times 1 to 8: 1 to 8 time (s) For HQ characters, only the setting values 2, 4, 6, and 8 can be specified.

Property	Description	
arrange	Statement example	my.arrange = 1
	Function	Select the alignment position of character strings in multiple lines. • 0: Left justification • 1: Right justification • 2: Center justification 
scale_max[n]	Statement example	my.scale_max[0] = 255
	Function	Specifies the upper limit value of the scale. The value specified for "n" and the corresponding scale mark orientation depend on the object. • Line graph: 0 = Horizontal, 1 = Vertical • Trend graph: 0 = Horizontal (bottom edge), 1 = Vertical (left edge), 2 = Horizontal (top edge), 3 = Vertical (right edge) • Bar graph: 0 = Vertical, 1 = Horizontal • Scatter graph: 0 = Horizontal, 1 = Vertical • Panelmeter: 0 = Circumference (Range: Range of the monitor devices) 
scale_min[n]	Statement example	my.scale_min[0] = 0
	Function	Specifies the lower limit value of the scale. The value specified for "n" and the corresponding scale mark orientation depend on the object. • Line graph: 0 = Horizontal, 1 = Vertical • Trend graph: 0 = Horizontal (bottom edge), 1 = Vertical (left edge), 2 = Horizontal (top edge), 3 = Vertical (right edge) • Bar graph: 0 = Vertical, 1 = Horizontal • Scatter graph: 0 = Horizontal, 1 = Vertical • Panelmeter: 0 = Circumference (Range: Range of the monitor devices) 
security	Statement example	my.security = 0
	Function	Sets the security level of the object. The setting range is 0 to 15. For the object that can have the security levels of both input and display set with it, this property sets the security level of the display.
input_security	Statement example	my.input_security = 0
	Function	For the object that can have the security levels of both input and display set with it, this property sets the security level of the input. The setting range is 0 to 15.
draw_mode	Statement example	my.draw_mode = 0
	Function	Specifies a drawing mode. • For numerical display, numerical input, and comment display 0: Transparent 1: XOR • For parts display 0: Replace 1: XOR 2: Overwrite Each drawing mode is the same as that which appears in the setting dialog of GT Designer3.

Property	Description	
delay	Statement example	my.delay = 5
	Function	Specifies the delay time in second the object itself takes before it performs an action after a touch. The setting range is 0 to 5. If 0 is set, the object itself takes the action immediately after the touch.
beep	Statement example	my.beep = 0
	Function	Specifies the length of the buzzer and the timing of it being made. 0: One shot 1: One shot (only when the operating condition is satisfied) 2: No buzzer 128: While a key is pressed 129: While a key is pressed (only when the operating condition is satisfied)

*1 When the object has various status imposed, such as the on/off status of a bit and a condition, the object property is reflected only in the normal cases (when the bit is off or the condition is set to 0).
When the bit is on or other than 0 is set for the condition, the object property is not reflected.

(5) Timing at which the setting change of an object property is reflected

If an object property setting is changed, the object type and the object property type determine the timing at which the new setting is reflected.
For the correspondence between object types, object property types, and the timing at which the setting change of an object property is reflected, refer to the following.

➟[Script] tab in the setting dialog for each object

If an object property setting is changed, the new setting is reflected at the following timing.

(a) Upon the setting change of the object property

The object display is refreshed upon the setting change of the object property.

(b) When the object performs the specified action

The new setting is applied when the object performs the specified action.

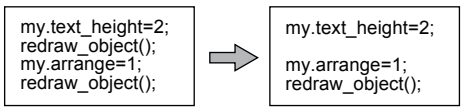
(c) When the object is updated

The object display is refreshed or the object operates with the new setting at the following timing.

- When the "redraw_object()" function is executed

➟(8) Functions (screen control)

The object may be displayed or operate incorrectly until the new setting is reflected.
To reflect the new settings of multiple object properties, use a single "redraw_object()" function to reduce the number of times that the object is redrawn.



- When the display or operating condition of the object is satisfied

(d) When the screen is updated

The object display is refreshed or the object operates with the new setting at the following timing.

- When the "redraw_screen()" function is executed

➟(8) Functions (screen control)

- When screen switching is performed

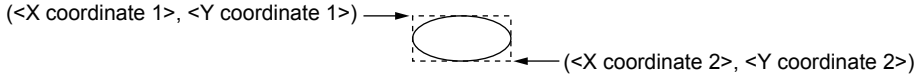
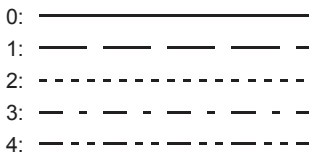
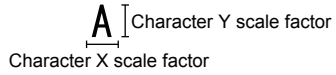
(6) Functions (free figure drawing)

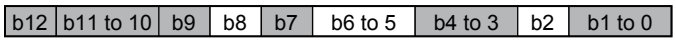
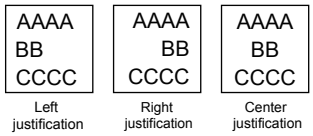
Function	Description	
d_line	Statement example	d_line(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Line type>, <Line width>, <Line color>)
	Function	Draws a line. Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
d_rectangle	Statement example	d_rectangle(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Line type>, <Line width>, <Line color>)
	Function	Draws a rectangle. Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
d_circle	Statement example	d_circle(<X coordinate>, <Y coordinate>, <Radius>, <Line type>, <Line width>, <Line color>)
	Function	Draws a circle.
d_ellipse	Statement example	d_ellipse(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Line type>, <Line width>, <Line color>)
	Function	Draws an ellipse. Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
p_rectangle	Statement example	p_rectangle(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Line type>, <Line width>, <Line color>, <Pattern>, <Figure color>, <Background color>)
	Function	Draws a rectangle (color fill). Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
p_circle	Statement example	p_circle(<X coordinate>, <Y coordinate>, <Radius>, <Line type>, <Line width>, <Line color>, <Pattern>, <Figure color>, <Background color>)
	Function	Draws a circle (color fill).
p_ellipse	Statement example	p_ellipse(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Line type>, <Line width>, <Line color>, <Pattern>, <Figure color>, <Background color>)
	Function	Draws an ellipse (color fill). Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
d_textout	Statement example	d_textout(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Character X scale factor>, <Character Y scale factor>, <Character attribute>, <Character color>, <Character shadow color>, "<Text>")
	Function	Draws a text.
d_commentout	Statement example	d_commentout(<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>, <Character X scale factor>, <Character Y scale factor>, <Character attribute>, <Comment group No.>, <Comment No.>)
	Function	Displays a comment in a comment group. Draws between (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>).
screen_draw	Statement example	screen_draw(<screen draw flag>)
	Function	Specifies the area in which drawing is executed by the free figure drawing function. If the drawing area is not specified by screen_draw(), the drawing is executed in the object area. The object area is equivalent to the area indicated by the coordinates shown in the data list of GT Designer3.

For the arguments of the free figure drawing function, refer to the following.

➟(7) Functions (arguments used for the free figure drawing function)

(7) Functions (arguments used for the free figure drawing function)

Argument	Description
<X coordinate 1>, <Y coordinate 1>, <X coordinate 2>, <Y coordinate 2>	Specifies the area (specified by two points of (<X coordinate 1>, <Y coordinate 1>) and (<X coordinate 2>, <Y coordinate 2>)) in which a figure is drawn in dots. The setting range is -32768 to 32767. (0, 0) indicates the coordinates of the upper left position of the object. Example) Ellipse (d_ellipse())  To specify the coordinates with a rectangle (d_rectangle), ellipse (d_ellipse), rectangle (filled) (p_rectangle), or ellipse (filled) (p_ellipse), the following patterns are available. • (<X coordinate 1>, <Y coordinate 1>) = Upper left, (<X coordinate 2>, <Y coordinate 2>) = Lower right • (<X coordinate 1>, <Y coordinate 1>) = Lower right, (<X coordinate 2>, <Y coordinate 2>) = Upper left • (<X coordinate 1>, <Y coordinate 1>) = Upper right, (<X coordinate 2>, <Y coordinate 2>) = Lower left • (<X coordinate 1>, <Y coordinate 1>) = Lower left, (<X coordinate 2>, <Y coordinate 2>) = Upper right
<X coordinate 1>, <Y coordinate 1>	Specifies the coordinates of the center of a figure in dots. The setting range is -32768 to 32767.
<Radius>	Specifies the radius of a circle in dots. The setting range is 1 to 32767.
<Line type> *1	Selects a line type from those shown below. 
<Line width> *1	Specifies a line width in dots. The setting range is 0 to 5, 7. The setting value 0 is available only for the color fill functions (p_rectangle, p_circle, p_ellipse). When 0 is specified, the line is filled without the frame line displayed.
<Line color>, <Character color>, <Figure color>, <Character shadow color>	Specifies the color of a line, character, figure, background, and background of a character with the corresponding color code number. The setting range is 0 to 255. The correspondence between colors and color code numbers is the same as that in the specification of figure colors by GT Designer3.
<Pattern>	Select a color fill pattern from the following. The setting range is 1 to 37. 0: Use is prohibited. For details of patterns, refer to the following. 7.5.1 [Rectangle] dialog
<Character X scale factor>, <Character Y scale factor>	Specifies the scale factor of a character. Specify 2, 4, 6, or 8 when the HQ character is set for the argument <Character attribute>. Specify 0 and 1 to 8 when the HQ character is not set. If 0 is specified, the scale factor is 0.5. 

Argument	Description
<Character attribute>	Specifies the display attribute of a character. The explanation below assumes binary notation. When specifying in a script, change the representation meeting the applicable notation of the script, such as hexadecimal number.  • b1 to b0: Select the display type of a character. These bits can be used only for d_textout(). Specify 00 (fixed) for other functions. 00: Standard 01: Bold 10: Shadow 11: Engrave • b2: 0 (fixed) • b4 to b3: Select the alignment position of character strings in multiple lines. 00: Left justification 01: Right justification 10: Center justification 11: Use prohibited  • b6 to b5: 00 (fixed) • b7: Select whether to use HQ characters or not. This bit can be used only in d_commentout(). Specify 0 (fixed) for other functions. 0: Does not use HQ characters. 1: Uses HQ characters. • b8: 0 (fixed) • b9: Specify a font size. 0: 16 dots 1: 12 dots • b11 to b10: Specify a Kanji region. 00: Japanese 01: Chinese (Simplified) 10: Chinese (Traditional) 11: Use prohibited • b12: Specify a font. In d_commentout(), this bit can be used only when the use of HQ characters is specified (b7=1). Specify 0 (fixed) when HQ characters are not used. 0: Mincho 1: Gothic
<Character>	Specify a character sting in up to 256 characters.
<Comment group No.>	Specify a comment group No. The setting range is 1 to 500.
<Comment No.>	Specify a comment No. The setting range is 0 to 32767.
<Screen draw flag>	Specifies the area in which drawing is executed by the free figure drawing function. 0: After the execution of screen_draw(), the figure is drawn in the object area. The object area is equivalent to the area indicated by the coordinates shown in the data list of GT Designer3. 1: After the execution of screen_draw(), the figure is drawn within the whole screen.

*1 To use the circle and ellipse drawing functions (d_circle(), d_ellipse(), p_circle(), p_ellipse()), set the solid line for the line type and 1 dot for the line width.
When a line type other than the solid line is specified for the line type and 2 dots or more is specified for the line width, the

circle or ellipse is drawn as shown below.
Drawing example) d_ellipse() with the dashed line for the line type and 4 dots for the line width specified

(8) Functions (screen control)

The functions (redraw_object(), clear_object()) are executed while the object script is executed.
The function (redraw_screen()) is executed at the timing of the screen being drawn after the execution of the object script.

Operator	Description	
redraw_object	Statement example	redraw_object()
	Function	Performs the following operations of the object itself. 1. Deletes a figure which was drawn using the free figure drawing function. 2. Redraws the object itself.
clear_object	Statement example	clear_object()
	Function	Deletes the following items. • Data (such as numbers or characters) the object itself has displayed • Figure drawn by the free figure drawing function of the object script for the object itself If the object is the type that can have a plate color set, such as an object for numerical display, character string display, and comment display, only the frame figure is displayed. If the object is other than those described above, the object itself is deleted.
redraw_screen	Statement example	redraw_screen()
	Function	Performs the following operations for the whole screen. 1. Deletes all figures drawn using the free figure drawing function. 2. Redraws all objects.

■3 Available data and how to express the data

The following describes available data used for object scripts and how to express the data.
For object scripts, the data and the form of the expression that are available for project scripts and screen scripts are also available, as well as the data and the form of the expression described in this section.
For the data and form of the expression of project scripts and screen scripts, refer to the following.

➟9.9.2 ■4 Available data and how to express the data

(1) Available constants and how to express the constants

For object scripts, constants that are available for project scripts and screen scripts are also available, as well as the following constants.

Constant	Expression example
Text	Enclose the text with the double quotation mark (").

(2) Object internal variables

Object internal variables are variables that have been allocated to inputs or outputs of objects.
Using object internal variables enables the following operations.

• Allowing the script to process monitor device values referring to them ($$)
• Changing the display on the object to the process result of the script ($V)
• Assigning the process result of the script with a touch switch ($W)

For reading and writing object internal variables, refer to the following.

➟9.10.2 ■2 (4) Object property

Example) In a numerical display operation, when adding the device value (GD0) to the monitor device value ($$) and then displaying the result on the object ($V)
$V=$$+[w:GD0];

Point

Automatic adjustment to the decimal point

When the automatic adjustment to the decimal point is enabled, a value is processed as shown below.

(1) **When a value is assigned to $V**

The value which has been assigned to $V is assigned to the object as is.

(2) **When a value is assigned to $W**

The value which has been assigned to $W is assigned to the monitor device as is.

Example) In a numerical input operation, when the automatic adjustment to the decimal point is enabled and 2 is set for [Decimal Point]

• When $V=1; is executed, 1.00 is displayed for the numerical input.

• When "$W=1;" is executed, 1 is written to the monitor device.

(3) Object property

With object properties, you can refer to or change (assign) the settings of an object drawn with GT Designer3.

For the details of object properties, refer to the following.

➟Reference, substitution: Object script tab of each object

Setting: 9.10.2 ■2 (4) Object property

(a) **Format**

When using an object property in a script, prefix the object property name with "my.".

Example) Changing the character color and the blink interval of display according to the object security level

```
if(5<=my.security){ //If the object security level is 5 or higher
my.text_color=224; //Changes the text color to red (224).
my.blink=1; //Lets the display of the object blink at a low speed.
}else{ //If the object security level is lower than 5
my.text_color=255; //Changes the text color to white (255).
my.blink=0; //Does not let the object blink.
}
```

9.10.3 How to use object scripts

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This section explains how to use object scripts.

■1 Setting procedure

The following shows the script settings and procedure before execution.

Step 1 Configure the settings for the script with GT Designer3, such as the data type or the trigger type.

➟9.9.5 [Script] dialog

Step 2 Create or edit the script with the script editor or a commercially available text editor.

➟9.9.7 [Edit Script(script name)] dialog

Step 3 When you have created or edited a script with a commercially available text editor, read the script with GT Designer3.

Step 4 Check the syntax of the script with GT Designer3.

➟9.9.7 [Edit Script(script name)] dialog
If an error is detected, return to step 1 to correct the script.
Also, using a general C language compiler can simulate the operation.
➟9.9.14 ■1 Simulation using a general C language compiler or debugger/

Step 5 Write the project from the personal computer to the GOT with GT Designer3.

➟4. COMMUNICATING WITH GOT

Step 6 Start monitoring and check the script operation using the device monitor.

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When the script operates properly, the creation of the script is complete.
If the script runs improperly, return to step 1 to correct the script.

■2 Operation

This section explains the functions and execution of object scripts.

(1) Functions of object scripts

(a) Object internal variables

Object internal variables are variables that have been allocated to inputs or outputs of objects.
By using object internal variables, the monitor device values of an object can be operated and the operation result can be displayed on the object.
For the details of the object internal variables, refer to the following.

➟Types of object internal variables: 9.10.2 ■2 Control structure of object scripts
How to use: 9.10.2 ■3 (2) Object internal variables

(b) Object property

With object properties, you can read or change (write) the settings for an object drawn with GT Designer3.
The settings for the object on the screen can be changed automatically if the object property is changed during monitoring.
For the details of object properties, refer to the following.

➟Reading and writing: The [Operation/Script] tab or the [Script] tab of each object
Setting: 9.10.2 ■2 Control structure of object scripts
Expression form: 9.10.2 ■3 (2) Object internal variables

(c) Free figure drawing function

Figures (such as a line, rectangle, circle, and character), comments, and others can be drawn on an object.
For how to set the free figure drawing function, refer to the following.

➟9.10.2 ■2 (6) Functions (free figure drawing)

To use the free figure drawing function, execute object scripts under the operating conditions other than those described below.
If the free figure drawing function is executed under the following operating conditions, no figure is drawn and no error occurs.

- Key Code Input
- Input Fixation
- Device Writing

(d) **Screen Control Function**

The screen control function controls redrawing or erasing of screens and objects. For the screen control function types, refer to the following.

➟9.10.2 ■2 (8) Functions (screen control)

(e) **Script user ID**

A script user ID number is an arbitrary number that is set for an object script.
If the object script causes an error, the script user ID of the object script is stored in the GOT special register (GS).
By setting different user ID numbers for all object scripts, you can identify the object script that has caused an error.

(f) **Operating conditions of scripts**

The execution of an object script can be tied to an input to the object, display on the object, or a touch on a touch switch, according to the object script type.
It is also possible for object scripts to be executed under conditions other than those described above.
For the operating conditions of object scripts, refer to the following.

➟6.2.2 Setting Trigger Types

(2) Operating condition

Object scripts are executed when all the following conditions from (a) to (d) are satisfied.
Even only one of the following conditions that is not satisfied prevents object scripts from being executed.

(a) **On the screen of the GOT, the arranged target object has been displayed.**

The screen on which the target object is arranged must be displayed under the condition that the GOT and controller are connected.

(b) **The target object has been displayed or operating.**

The target object must be displayed or in operation.

(c) **The target object has no restriction imposed by the security function of the GOT.**

When the security function is used, the object with the object script set at a high security level must not be restricted while it is on display or in operation.

(d) **The operating condition of the script is satisfied.**

The object script can be executed when the operating condition set for it is satisfied.
For the details of the script operating conditions, refer to the following.

➟6.2.2 Setting Trigger Types

(3) Execution unit

Object scripts are executed one by one.
Even when multiple operating conditions are satisfied, the scripts are not processed simultaneously.

(4) Execution order

Object scripts are executed in numerical order of object ID.

(5) Execution status

Object scripts are processed as shown below according to the script status.

Script status	Processing
Waiting for turn	• Waits for the processing turn according to the execution order. • When the turn has come, the script enters the "Waiting for execution" status.
Waiting for execution	• The processing differs depending on the operating condition. Satisfied: The script enters the "Execution" status. Not satisfied: The script enters the "Waiting for turn" status, and the next script enters the "Waiting for execution" status.
Execution	• When the script has ended, the processing result is written to the PLC CPU and the script enters the "Waiting for turn" status. The next script enters the "Waiting for execution" status. • If a fatal error occurs, execution of the script stops and the script enters the "Stop" status. *1 • If an execution error occurs, execution of the script stops and the script enters the "Waiting for turn" status. *1
Stop	• The "Stop" status is held until the error history is cleared.

*1 For details of fatal errors and execution errors, refer to the following.

➟9.9.14 ■3 Script execution errors and their corrective actions on the GOT

■3 Monitoring time of an object script

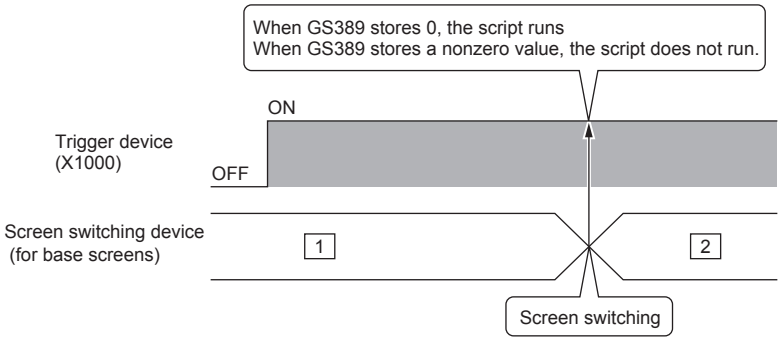
Specify the monitoring time of an object script with GS388.
If a script does not end after a lapse of the specified monitoring time, the script is aborted.
The setting range is 1 second to 300 seconds. (Units of 1 second)
If the set value falls outside this range, 10 seconds are assumed.
If error code 1015 is output during script execution, specify a longer monitoring time with GS388.

■4 Running an object script upon an applicable process

Use GS389 to set whether to run an object script upon screen switching or other applicable processes.
When GS389 stores 0: Runs the script upon an applicable process.
When GS389 stores a nonzero value: Does not run the script upon an applicable process.
This setting is applied to the object scripts where the following trigger types are set.

Trigger type	When running a script upon an applicable process
[Rise]	When the trigger device is on, the script runs upon screen switching or other applicable processes.
[Fall]	When the trigger device is off, the script runs upon screen switching or other applicable processes.
[Rise/Fall]	When the trigger device is on or off, the script runs upon screen switching or other applicable processes.

When the object script ([Trigger Type]: [Rise], [Trigger Device]: X1000) is set for a switch on base screen 2



The following shows the processes upon which a script runs.

Process	Remarks
When the GOT is powered on or when the GOT returns from offline	-
Screen switching	The script set for the destination screen runs.
Security switching *1	-
Language switching *1	-
System language switching *1	-
Station No. switching *1	If a station No. switching device is set for a screen type, the script set for a screen of this type runs.

*1 When [Perform script initial operation (screen/object) only when switching screens] is deselected on the [Option] tab in the [Script] dialog, the script runs upon the process.

➡9.9.5 ■4 [Option] tab

9.10.4 Program examples of object scripts

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This section explains program examples of object scripts.

■1 Data operation by a numerical input script

(1) Operation

Data operation is performed when a device value is written.

Screen image	Operation of each object
	Numerical input: When the written value is 0 or greater, the written value is multiplied by 10. When the written value is less than 0, the written value is set to 5000.

(2) Program example

Item	Description	
Data type	Signed BIN 16	
Trigger type	Input Fixation	

Script	[w:TMP0] = $W;
	if([w:TMP0] >= 0) {
	$W = [w:TMP0] * 10;
	}else{
	$W = 5000;
	}
		//Stores the written value to the temporary area.
		//If the written value is 0 or greater,
		//the written value is multiplied by 10.
		//If the written value is less than 0,
		//the written value is set to 5000.

■2 To start blinking after set time

(1) Operation

A displayed value (monitored device value) blinks when it does not change for set time.
This operation is useful when urging the use of caution is necessary after set time.

Screen image	Operation of each object
	Numerical display: If the displayed value (monitored device value) does not change for 5 seconds, the characters blink in red.

(2) Program example

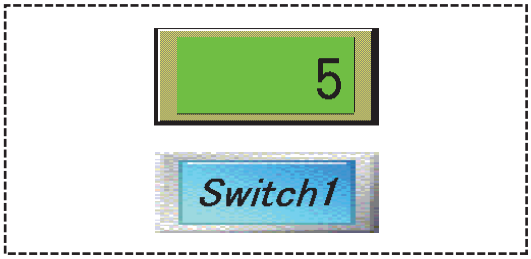
Item	Description	
Data type	Signed BIN 16	
Trigger type	Cycle (1 second)	

Script	if([w:TMP0002] != $$){
	[w:TMP0001] = 5;
	[w:TMP0002] = $$;
	my.blink = 0;
	my.text_color = 0xFF;
	}else{
	if([w:TMP0001] > 0){
	[w:TMP0001] = [w:TMP0001] - 1;
	if([w:TMP0001] == 0){
	my.text_color = 0xE0;
	my.blink = 3;
	}
	}else{
	[w:TMP0001] = 5;
	}
	}
	redraw_object();
		//If the displayed value changes,
		//starts counting (sets time (seconds) when the blinking starts).
		//saves the displayed value.
		//sets so that blinking is not performed.
		//changes the character color to white.
		//If the displayed value does not change,
		//If the count is not 0,
		//starts counting down.
		//If counting down to 0,
		//changes the character color to red.
		//starts high-speed blinking.
		//Lets the object reflect this property.

■3 Showing and hiding objects for input and touch operations

(1) Operation

At screen switching, objects for specific input and touch operations are switched between being displayed and hidden according to the operating conditions.
Since objects used for input and touch operations are displayed only when necessary, this operation is useful for avoiding a wrong input.

Screen image	Operation of each object
	Numerical input: If M0 turns on, the object for numerical input is displayed. If M0 turns off, the object for numerical input is hidden. Switch 1 switch: If M1 turns on, the touch switch is displayed. If M1 turns off, the touch switch is hidden.

(2) Monitor screen setting

Object name	Type	Setting item		Setting
Numerical input	Numerical input	Display condition, operating condition	Trigger type	ON
			Trigger device	M0
Switch 1	Switch	Operating condition	Trigger type	ON
			Trigger device	M1

(3) Program example

Numerical input

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if([b:M0] == ON){
	my.active = 1;
	redraw_object();
	}else{
	my.active = 0;
	clear_object();
	}
		//Enables an update.
		//Updates the object.
		//Disables an update.
		//Clears the object.

Switch 1 switch

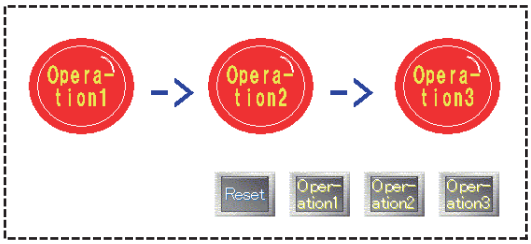
Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if([b:M1] == ON){
	my.active = 1;
	redraw_object();
	}else{
	my.active = 0;
	clear_object();
	}
		//Enables an update.
		//Updates the object.
		//Disables an update.
		//Clears the object.

■4 Drawing according to a device value

(1) Operation

A figure is drawn on the screen according to a device value.

Screen image	Operation of each object
	Operation 1 lamp: Turns on if D500 is 1 and a circle is drawn around the lamp. Operation 2 lamp: Turns on if D500 is 2 and a circle is drawn around the lamp. Operation 3 lamp: Turns on if D500 is 3 and a circle is drawn around the lamp. Reset switch: Resets operation 1 to operation 3. Operation 1 switch to operation 3 switch: Starts operation 1 to operation 3.

(2) Monitor screen setting

Object name	Type	Setting item		Setting
Operation 1 lamp	Word lamp	Device		D500
		Text		Operation 1
		Condition 0	Lamp color	Red
		Condition 1	Range	$V<1
			Lamp color	Black
Operation 2 lamp	Word lamp	Device		D500
		Text		Operation 2
		Condition 0	Lamp color	Red
		Condition 1	Range	$V<2
			Lamp color	Black
Operation 3 lamp	Word lamp	Device		D500
		Text		Operation 3
		Condition 0	Lamp color	Red
		Condition 1	Range	$V<3
			Lamp color	Black
Reset switch	Word switch	Device		D500
		Set value (fixed)		0
		Text		Reset
Operation 1 switch	Word switch	Device		D500
		Set value (fixed)		1
		Text		Operation 1
Operation 2 switch	Word switch	Device		D500
		Set value (fixed)		2
		Text		Operation 2
Operation 3 switch	Word switch	Device		D500
		Set value (fixed)		3
		Text		Operation 3

(3) Program example

Operation 1 lamp

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if ([w:D500] == 1){
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 224);
	}else{
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 255);
	}
		//If D500 is 1,
		//sets the drawing area to the whole screen.
		//draws a circle.
		//If D500 is not 1,
		//sets the drawing area to the whole screen.
		//deletes a circle. (draws a circle in the same color as the background color.)

Operation 2 lamp

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if ([w:D500] == 2){
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 224);
	}else{
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 255);
	}
		//If D500 is 2,
		//sets the drawing area to the whole screen.
		//draws a circle.
		//If D500 is not 2,
		//sets the drawing area to the whole screen.
		//deletes a circle. (draws a circle in the same color as the background color.)

Operation 3 lamp

Item	Description	
Data type	Signed BIN 16	
Trigger type	Always	

Script	if ([w:D500] == 3){
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 224);
	}else{
	screen_draw(1);
	d_circle(57, 52, 65, 0, 2, 255);
	}
		//If D500 is 3,
		//sets the drawing area to the whole screen.
		//draws a circle.
		//If D500 is not 3,
		//sets the drawing area to the whole screen.
		//deletes a circle. (draws a circle in the same color as the background color.)

9.10.5 [Object Script Symbol] dialog

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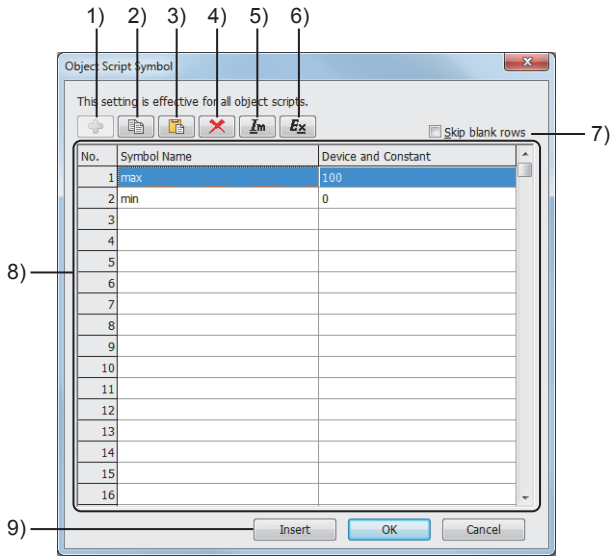
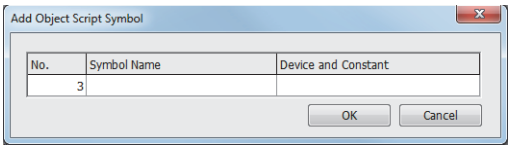
This dialog is used for setting an object script.
Select [Common] → [Script] → [Object Script Symbol] from the menu to display the setting dialog.
Register character strings as script symbols.
Devices and constants in a script can be substituted by the registered character strings.
This setting is enabled only for the object script.



1) **[Add] button**
This button is available when [Skip blank rows] is selected.
Displays the [Add Object Script Symbol] dialog.

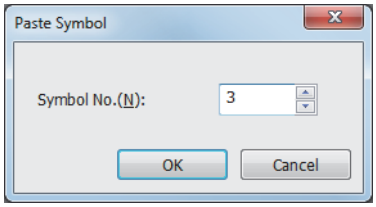


- [No.]
  Set a number for the script symbol to be added.
  The setting range is [1] to [10000].
- [Symbol Name]
  Set a character string to be described in a script.
  Up to 32 alphanumeric characters and symbols can be entered.
  However, the symbol # is not usable.
- [Device and Constant]
  Set a device or constant for the symbol name.
  Up to 32 alphanumeric characters and symbols can be entered.

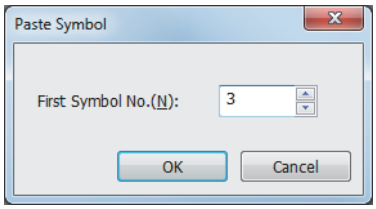
2) **[Copy] button**
Copies the setting from the row selected in the script symbol list.
You can copy the settings from multiple rows at one time.
When [Skip blank rows] is selected, the settings in the hidden rows are also copied.
The copied settings can be pasted to another script symbol setting dialog.

3) **[Paste] button**
Pastes the copied setting to the selected row.

When [Skip blank rows] is selected, the [Paste Symbol] dialog is displayed.



When pasting a setting to one row



When pasting settings to multiple rows

- [Symbol No.]
  Set a symbol number for the destination row.
  The setting range is [1] to [10000].
- [First Symbol No.]
  Set a symbol number for the first destination row.
  The setting range is [1] to [10000].

4) **[Delete] button**

Deletes the setting from the selected row.
You can delete the settings from multiple rows at one time.

5) **[Import] button**

Displays the [Open] dialog.
Read the script symbol settings from a Unicode text file or CSV file.

6) **[Export] button**

Displays the [Save As] dialog.
Save the script symbol settings to a Unicode text file or CSV file.
If multi-language characters are used in the settings, use the Unicode text file format.
For the precautions for using a Unicode text file or CSV file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

7) **[Skip blank rows]**

Displays only the rows in which script symbols have been registered.

8) **Script symbol list**

Lists the registered script symbols.
[Symbol Name] and [Device and Constant] are editable.

Item	Description
[No.]	Row number. Clicking a row number selects the relevant row.
[Symbol Name]	Set a character string to be described in a script. Up to 32 alphanumeric characters and symbols can be entered. However, the symbol # is not usable.
[Device and Constant]	Set a device or constant for the symbol name. Up to 32 alphanumeric characters and symbols can be entered.

9) **[Insert] button**

This item appears when this dialog is brought up from the [Edit Script(script name)] dialog.
Inserts the selected script symbol into the script edit area in the [Edit Script(script name)] dialog.

Point

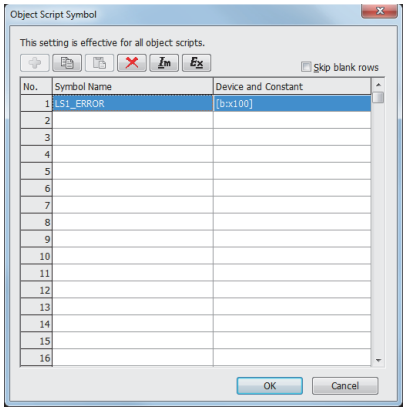
(1) **Editing method of scripts**

You can edit scripts in the exported Unicode text file or CSV file using spreadsheet software and other software.
The edited Unicode text file or CSV file can be imported and read to GT Designer3.

(2) **Editing the exported file**

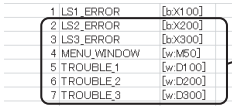
When 0 is set at the beginning of the symbol name, device, or constant, 0 at the beginning may be deleted depending on the function of the application for editing files (spreadsheet software and other software).
Pay attention to the above for editing exported files.

Example) When script settings are exported into and imported from a CSV file



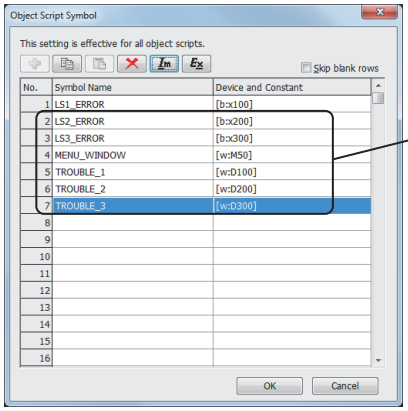
Export the set script symbols to a CSV file.

Edit the exported file.



Add settings using applications such as spreadsheet software.

Import from the CSV file to GT Designer3.



The added settings are reflected.

9.10.6 How to set object scripts

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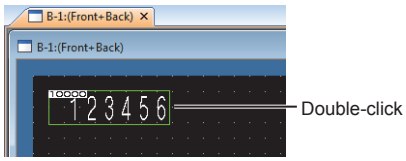
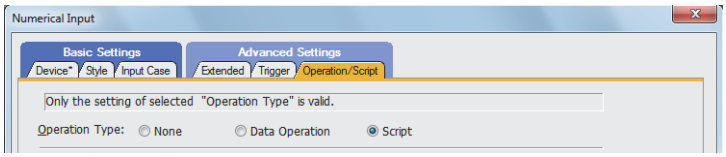
➟■1 [Script] or [Operation/Script] tab for input object scripts
■2 [Script] or [Operation/Script] tab for display object scripts
■3 [Script] tab for switch object scripts

Step 1 Double-click an arranged object to display the setting dialog.



Step 2 Open the [Script] or [Operation/Script] tab to configure the setting for using the object script.

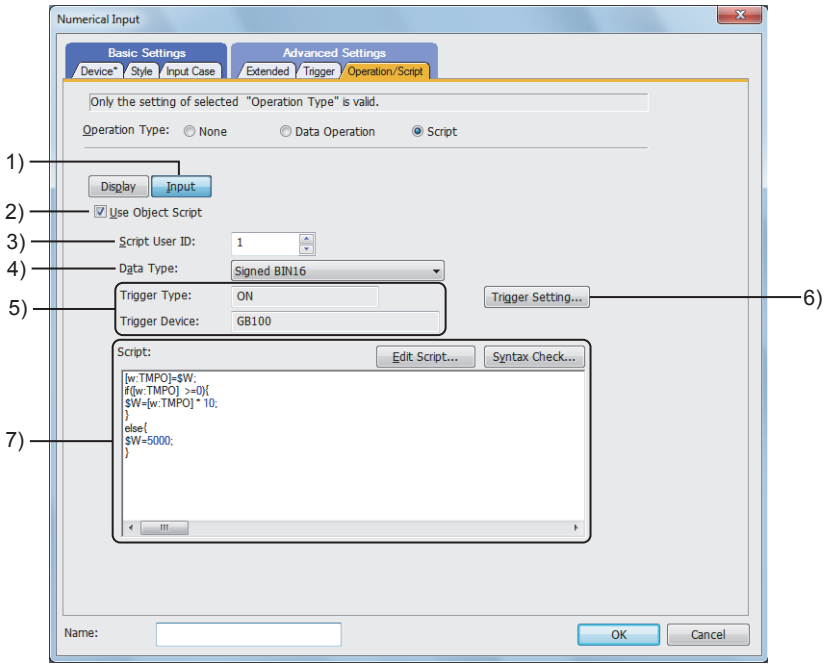


[Operation/Script] tab of numerical input

The setting of the [Script] or [Operation/Script] tab differs depending on the object type.
For the details of the setting of the [Script] or [Operation/Script] tab for each object, refer to the following.

Object script type	Target object	Reference
Input object script	Numerical input, Character string input	➟■1 [Script] or [Operation/Script] tab for input object scripts
Display object script	Bit lamp, word lamp, numerical display, numerical input, text display, text input, date display, time display, comment display, line graph, trend graph, bar graph, statistics bar graph, statistics pie graph, scatter graph, historical trend graph, graphical meter, level object, panelmeter, parts display, parts movement	➟■2 [Script] or [Operation/Script] tab for display object scripts
Switch object script	Touch switch ([Switch] only)	➟■3 [Script] tab for switch object scripts

■1 [Script] or [Operation/Script] tab for input object scripts



Screen in setting an input object script for numerical input

1) **[Input] button**

To set an input object script, click the [Input] button.
Then, the setting items of the input object script are displayed.
This button is displayed only for the following objects.

- [Numerical Input]
- [Text Input]

2) **[Use Object Script]**

Enables the object script.

3) **[Script User ID]**

Set the script user ID number.
The setting range is [1] to [65535].
Set the script user ID number which is different from that of other object scripts.
When a different number is set, the object script in which an error has occurred can be identified.

4) **[Data Type]**

Select the data type of the script to be executed.
The following shows the items to be selected.

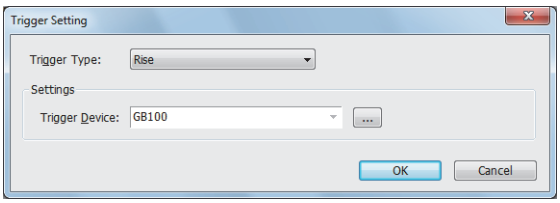
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

5) **[Trigger Type], [Trigger Device]**

Displays the operating condition and trigger device of the script which are set in the [Trigger Setting] dialog.

6) **[Trigger Setting] button**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog.



- **[Trigger type]**

  Select the operating condition of the script.
  The following shows the items to be selected.
  - [Ordinary]
  - [ON]
  - [OFF]
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
  - [Key Code Input]
  - [Input Fixation]

- **[Settings]**

  Set the trigger device which executes the script. (When [ON], [OFF], [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling] is selected in [Trigger type])
  When [Sampling], [ON Sampling], or [OFF Sampling] is selected, set the cycle in units of seconds.
  The setting range is [1] to [3600]. *2

*1 For the precautions for selecting [ON], [OFF], [Sampling], [ON Sampling], or [OFF Sampling], refer to the following.

➟9.10.7 ■8 Precautions when making a script perform its operation periodically

*2 When the trigger condition is satisfied, the count of the cycle starts.
When [ON Sampling] is set and the cycle is set to 10 seconds, the script is executed 10 seconds after the device set in [Trigger Device] turns on. (When [Trigger Device] turns off within 10 seconds, the script is not executed.)
When the trigger condition is not satisfied, the count of the cycle is reset.

➟6.2.2 Setting Trigger Types

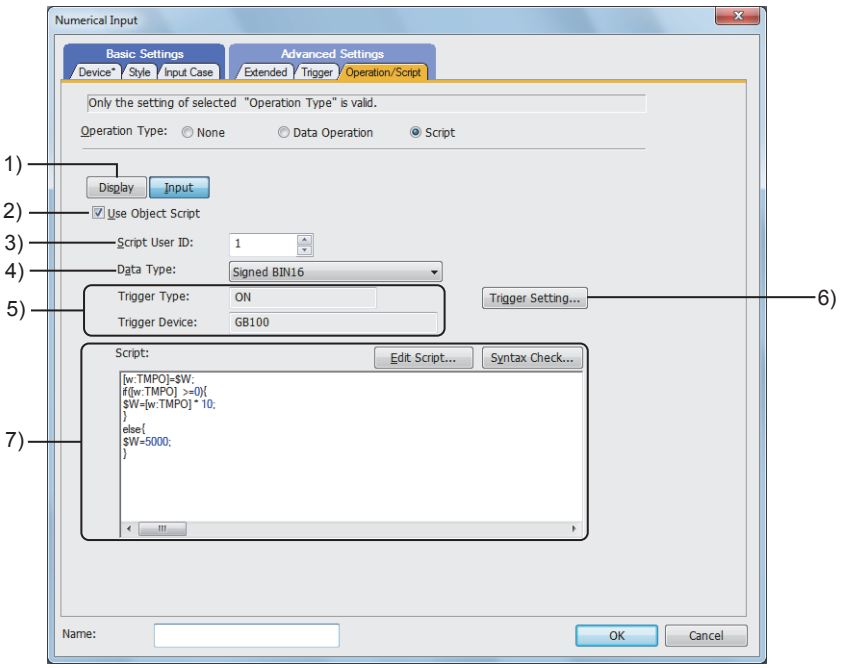
7) **[Script]**

Displays the content of the script.
You can edit the script.

After editing the script, click the [Syntax Check] button to check the syntax.

Item	Description
[Edit Script] button	Opens the editor to edit the script. ➟9.9.7 [Edit Script(script name)] dialog
[Syntax Check] button	Checks the syntax of the displayed script. The available device type and device range are also checked. ➟9.10.9 ■2 Messages to be displayed at the syntax check

■2 [Script] or [Operation/Script] tab for display object scripts



Screen in setting a display object script for numerical input

1) **[Display] button**
To set an input object script, click the [Display] button.
Then, the setting items of the input object script are displayed.
This button is displayed only for the following objects.
- [Numerical Input]
- [Text Input]

2) **[Use Object Script]**
Enables the object script.

3) **[Script User ID]**
Set the script user ID number.
The setting range is [1] to [65535].
Set the script user ID number which is different from that of other object scripts.
When a different number is set, the object script in which an error has occurred can be identified.

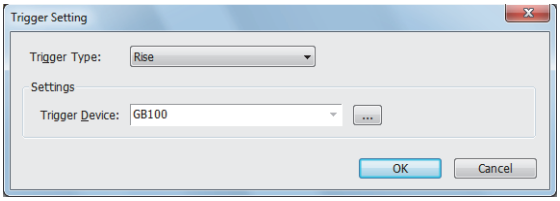
4) **[Data Type]**
Select the data type of the script to be executed.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

5) **[Trigger Type], [Trigger Device]**

Displays the operating condition and trigger device of the script which are set in the [Trigger Setting] dialog.

6) **[Trigger Setting] button**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog.



- [Trigger type]

  Select the operating condition of the script.
  The following shows the items to be selected.
  - [Ordinary]
  - [ON]
  - [OFF]
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
  - [View Change]
  - [Synchronize Display Trigger]*2

- [Settings]

  Set the trigger device which executes the script. (When [ON], [OFF], [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling] is selected in [Trigger type])
  When [Sampling], [ON Sampling], or [OFF Sampling] is selected, set the cycle in units of seconds.
  The setting range is [1] to [3600]. *3

*1 For the precautions for selecting [ON], [OFF], [Sampling], [ON Sampling], or [OFF Sampling], refer to the following.

➟9.10.7 ■8 Precautions when making a script perform its operation periodically

*2 This item is unavailable for the bit lamp, word lamp, date display, time display, graphical meter, and panelmeter.

*3 When the trigger condition is satisfied, the count of the cycle starts.
When [ON Sampling] is set and the cycle is set to 10 seconds, the script is executed 10 seconds after the device set in [Trigger Device] turns on. (When [Trigger Device] turns off within 10 seconds, the script is not executed.)
When the trigger condition is not satisfied, the count of the cycle is reset.

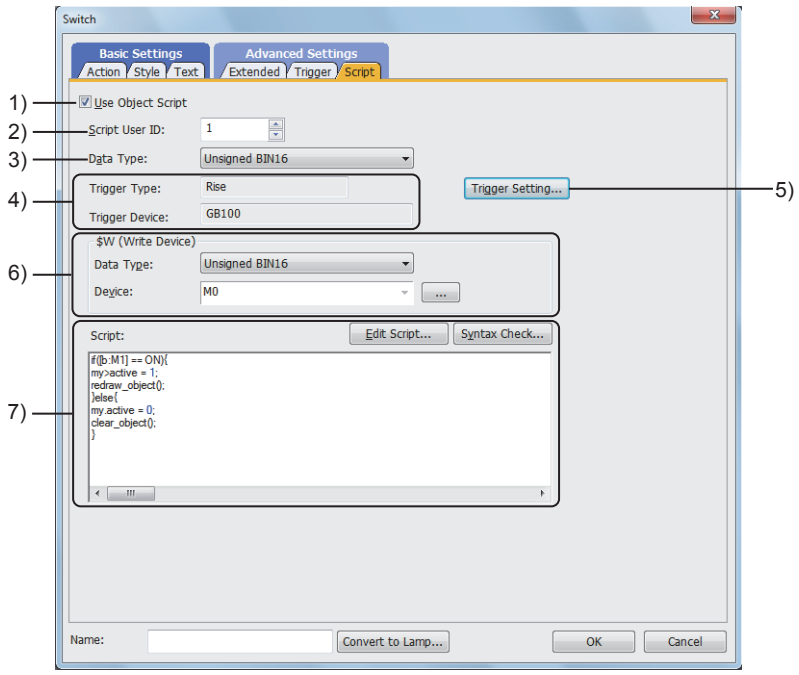
➟6.2.2 Setting Trigger Types

7) **[Script]**

Displays the content of the script.
You can edit the script.
After editing the script, click the [Syntax Check] button to check the syntax.

Item	Description
[Edit Script] button	Opens the editor to edit the script. ➟9.9.7 [Edit Script(script name)] dialog
[Syntax Check] button	Checks the syntax of the displayed script. The available device type and device range are also checked. ➟9.10.9 ■2 Messages to be displayed at the syntax check

■3 [Script] tab for switch object scripts



1) **[Use Object Script]**
Enables the object script.

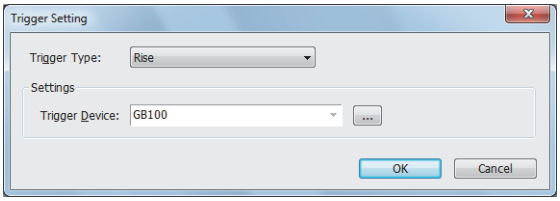
2) **[Script User ID]**
Set the script user ID number.
The setting range is [1] to [65535].
Set the script user ID number which is different from that of other object scripts.
When a different number is set, the object script in which an error has occurred can be identified.

3) **[Data Type]**
Select the data type of the script to be executed.
The following shows the items to be selected.
- [Signed BIN16]
- [Unsigned BIN16]
- [Signed BIN32]
- [Unsigned BIN32]
- [Signed BIN64]
- [Unsigned BIN64]
- [BCD16]
- [BCD32]
- [BCD64]
- [Real(32bit)]
- [Real(64bit)]

4) **[Trigger Type], [Trigger Device]**
Displays the operating condition and trigger device of the script which are set in the [Trigger Setting] dialog.

5) **[Trigger Setting] button**

Click the [Trigger Setting] button to display the [Trigger Setting] dialog.



- **[Trigger type]**
  Select the operating condition of the script.
  The following shows the items to be selected.
  - [Ordinary]
  - [ON]
  - [OFF]
  - [Rise]
  - [Fall]
  - [Rise/Fall]
  - [Sampling]
  - [ON Sampling]
  - [OFF Sampling]
  - [Device Writing]
- **[Settings]**
  Set the trigger device which executes the script. (When [ON], [OFF], [Rise], [Fall], [Rise/Fall], [ON Sampling], or [OFF Sampling] is selected in [Trigger type])
  When [Sampling], [ON Sampling], or [OFF Sampling] is selected, set the cycle in units of seconds.
  The setting range is [1] to [3600]. *2

*1 For the precautions for selecting [ON], [OFF], [Sampling], [ON Sampling], or [OFF Sampling], refer to the following.

➟9.10.7 ■8 Precautions when making a script perform its operation periodically

*2 When the trigger condition is satisfied, the count of the cycle starts.
When [ON Sampling] is set and the cycle is set to 10 seconds, the script is executed 10 seconds after the device set in [Trigger Device] turns on. (When [Trigger Device] turns off within 10 seconds, the script is not executed.)
When the trigger condition is not satisfied, the count of the cycle is reset.

➟6.2.2 Setting Trigger Types

6) [$W (Write Device)]

To assign the value processed in the script to the device with the touch switch, set the target device.

Item	Description
[Data type]	Select the data type of the object internal variable $W (write device).
[Device]	Set the object internal variable $W (write device). ➟6.1 Device Settings

7) [Script]

Displays the content of the script.
You can edit the script.
After editing the script, click the [Syntax Check] button to check the syntax.

Item	Description
[Edit Script] button	Opens the editor to edit the script. • 9.9.6 [Script Editor (Script Name)] dialog
[Syntax Check] button	Checks the syntax of the displayed script. The available device type and device range are also checked. ➟9.10.9 ■2 Messages to be displayed at the syntax check

9.10.7 Precautions

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This section explains the precautions for using object scripts.

■1 Precautions for use

(1) Applicable range of the scripts

Since this function is designed to control the GOT display, do not use it for machine control that requires precise time management.

When changing the data in PLC through the GOT, create an interlock circuit using a sequence program to ensure the whole system can always operate safely.

The following periods may vary depending on projects.

- The period between when the trigger device condition of the script is satisfied and when the script is actually executed
- Processing time of the script

(2) Stop of the script processing

In any of the following cases, the corresponding script being processed stops and an error occurs.

- In division, when the divisor becomes 0 and the calculation becomes zero division
- When [BCD16], [BCD32], or [BCD64] is selected as the script data type but a value of the monitor device cannot be handled as BCD
- When [BCD16], [BCD32], or [BCD64] is selected as the script data type but the operation result is out of the BCD range
- When a device of the controller is specified as the write destination device of a while statement

For the available data type and data range, refer to the following.

➟9.10.2 ■3 Available data and how to express the data

For the details of the while statement, refer to the following.

➟9.10.2 ■2 Control structure of object scripts

For troubleshooting the script processing stop, refer to the following.

➟9.10.9 Troubleshooting

(3) Variation of the result of processing depending on data types

In the following cases, you may get an unexpected result of processing.

- When a data type other than [BCD16], [BCD32], or [BCD64] is selected as the script data type but a constant out of the selected type range is included
- When [Unsigned BIN16] or [Unsigned BIN32] is selected as the script data type but a negative constant is included
- When a data type other than [Real] is selected as the script data type but a value with the decimal point is used as a constant

For the details of data types, refer to the following.

➟9.10.2 ■3 Available data and how to express the data

(4) Bitwise operation and data type

If you perform a bitwise operation on the device with a signed data type, an unexpected value may result.

Set an unsigned data type for the target device of a bitwise operation.

(5) Digit limitation when describing monitor devices

Depending on controllers to be monitored, the device number for them must be described in specific digits.

Otherwise, malfunction may result.

For the details of how to describe the device number, refer to the following.

➟9.10.2 ■3 Available data and how to express the data

(6) Writing the project in the GOT after editing the script

If you edit a screen script or an object script, write the project being edited in the GOT.

Otherwise, the change you made is not reflected to the GOT.

(7) Operation while a script is being edited

When you click the [Edit Script] button and edit a script using a script editor or a text editor, you cannot operate GT Designer3.

GT Designer3 reacts as if it freezes up then, but once you close the script editor or the text editor, you can operate GT Designer3 again.

(8) Precautions for assignment delay

(a) Assignment delay

Depending on devices where you write the operation result of scripts, some time (called assignment delay) is needed for writing the result to the device when the operation of a script is complete.
The following shows whether each device needs assignment delay or not.

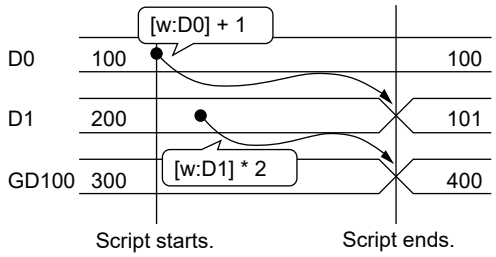
Synchronized: The result is written in synchronization with the script. Delay: Assignment delay occurs.

Device and temporary device area	Script
	Object script
Controller device	Delay
GB	Synchronized
GD	
GS	
TMP	

If you perform an assignment as shown in example 1, an assignment delay leads to an unexpected operation result.
To reduce the frequency of communication with the PLC CPU to lower the influence on the monitoring process, describe the script as shown in example 2 or 3.

Example 1) Assignment using PLC CPU devices (assignment delay example)
In the following example, due to an assignment delay, after the script ends, the operation result of the first line (D0+1) is reflected to D1.
Therefore, the operation result of the first line is not reflected to that of the second line (D1*2).

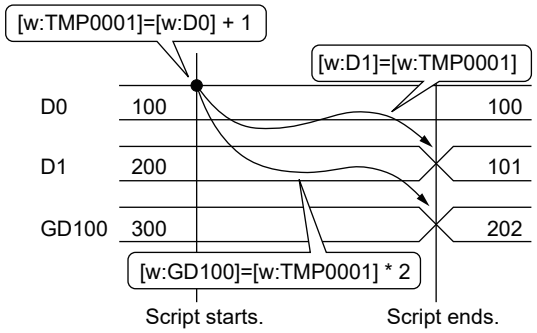
```
[w:D1] = [w:D0]+1          // Assign the operation result of D0+1 to D1.
[w:GD100]=[w:D1]*2         // Assign the operation result of D1*2 to GD100
```



Example 2) Assignment using a temporary device area (assignment delay workaround 1)
Using a temporary device area for the script avoids an assignment delay.
For the details of temporary device areas, refer to the following.

➟9.9.2 (10) Temporary device areas and their uses

```
[w:TMP0001] = [w:D0]+1;       // Assign the operation result of D0+1 to TMP0001.
[w:D1] = [w:TMP0001];         // Assign the value of TMP0001 to D1.
[w:GD100] = [w:TMP0001]*2;    // Assign the operation result of TMP0001*2 to GD100.
```



Example 3) Assignment using GOT internal devices (GD, GB) (assignment delay workaround 2)
The processing timing with GOT internal devices (GD and GB) is the same as one with temporary device areas. Therefore, you can avoid assignment delays.

```
[w:GD10]=[w:D0]+1;        // Assign the operation result of D0+1 to GD10.
[w:D1]=[w:GD10];          // Assign GD10 to D1.
[w:GD100]=[w:GD10]*2;     // Assign the operation result of GD10*2 to GD100.
```

Point

(1) **LS devices specified in a script created using SCHNEIDER EJH software**

The LS devices specified in the script language of SCHNEIDER EJH software are designed to be free from assignment delays.
Therefore, when a script including LS devices shown in example 1 above is converted, the converted script may not run as intended on the GOT.
To prevent an assignment delay, use temporary device areas for scripts including LS devices as shown in example 2 above.

(b) **Assignment delay when an offset is specified**

• When reading values from devices

If you specify an offset in a script when devices of controllers are used as base devices, assignment delays may occur and the script may not operate correctly even if the values of offset devices are changed.

Example 1) Specifying a target device for reading with an offset device does not work correctly (when R200 = 10)
In the following case, the value of the offset device (TMP0000) is the value before assignment. The value of R110 cannot be referenced.

```
[w:TMP0000]=[w:R200];
[w:TMP0001]=[w:R100[w:TMP0000]];    The value of R110 cannot be referred at this timing.
                  |          |
            Base device   Offset device
```

If the "value of R100 + offset device value before assignment" is outside the range of the base device (R), an error other than an assignment delay occurs.

To avoid assignment delays, use temporary device areas or GOT internal devices (GD, GB) for both base devices and offset devices.
Example 2) Measure to avoid the assignment delay using temporary device areas (when R200 = 10)
By assigning the values of R devices to the temporary device areas in advance, the operation not available in example 1 becomes available.
In the following example, values of the offset device (R200) range from 0 to 10, and the values of 11 devices counted from the base device (R100) are assigned to the temporary device areas.
The number of devices to be assigned to the temporary device areas must be changed according to the range of offset device values.

```
[w:TMP0100]=[w:R100];
[w:TMP0101]=[w:R101];
:
[w:TMP0109]=[w:R109];
[w:TMP0110]=[w:R110];
[w:TMP0000]=[w:R200];
[w:TMP0001]=[w:TMP0100[w:TMP0000]];    The value of R110 can be referred at this timing.
```

• When writing values to devices

When writing values to devices, there are no specific restrictions applied when reading values from devices. (Refer to the following example 1.)
Example 1) Specifying a target device for writing with an offset device (Enabled)

```
[w:TMP0000]=10;
[w:R100[w:TMP0000]]=[w:TMP0001];    The value can be assigned to R110 at this timing.
      |          |
Base device   Offset device
```

However, when controller devices are used as base devices, you cannot assign values repeatedly by switching values of offset devices in a while statement as shown in example 2.
Example 2) Specifying a target device for writing with an offset device in a while statement (Disabled)

```
[W:TMP0000]=10;
while([w:TMP0000]<20){
[W:R100[w:TMP0000]]=[w:TMP0001];        An error occurs.
[W:TMP0000]=[w:TMP0000]+2;
}
```

To assign values repeatedly by switching offset device values in a while statement, assign R devices to the temporary device areas in advance, and write the values last assigned to the temporary device areas to R devices as shown in example 3 below.
Example 3) Measure to avoid the error in example 2

```
[w:TMP0110]=[w:R110];
:
[w:TMP0119]=[w:R119];
[w:TMP0000]=10;
while([w:TMP0000]<20){
[w:TMP0100[w:TMP0000]]=[w:TMP0001];      No error occurs.
[w:TMP0000]=[w:TMP0000]+2;
}
[w:R110]=[w:TMP0110];
:
[w:R119]=[w:TMP0119];
```

(9) Simulating using a general C language compiler or debugger

- If [BCD32], [BCD16], or [BCD64] is selected as the script data type, you cannot perform a simulation using the general C language compiler or debugger.
- Since the set, rst, alt, bmov, and fmov statements are dedicated for scripts, you cannot perform a simulation using a general C language compiler or debugger.
  Use assignment of 1 or 0 instead of the set or rst statement.
- When you use the system define (ON, OFF description) of the GOT as they are, the define for it must be added to the C language source file.
- The assignment delay which occurs when a script is executed on the GOT does not occur during a simulation using a general C language compiler or debugger.
  Therefore, when performing a simulation, take a possibility of occurrence of assignment delays into consideration.
- By applying the measures above, a new program created using C language then debugged can be used as a GOT script.
- Offset device specification cannot be made in the above debugging process.
  If you debug the offset specified device, it is necessary to set the corresponding device in advance.

(10)Object script error control and GOT status

While the GOT displays any screen other than a user-created screen, the following operations are not available.

- Clearing object script error data or executing an object script stopped due to an error by using the Object Script Common Control (GS387)

  ➟12.1.3 ■5 (4) Object Script Common Control (GS387)
- Resetting object script error data in the [GOT Diagnostics] dialog

  ➟11.14.5 [GOT Diagnostics] dialog

Perform the above operations while the GOT displays a user-created screen.

■2 Precautions for drawing

If you close the setting dialog clicking the [OK] button after changing numerical input for numerical display or character string input for character string display, the input object script settings are cleared.
Only the display object script settings remain.

■3 Precautions for the operating conditions of object scripts

(1) Functions that cannot be set simultaneously

When any of the following functions is set, object scripts cannot be used.
To use object scripts, do not set the following functions.

- Data operation
- Memory storage

(2) Object status

You cannot execute an object script when it is in either of the following statuses.

- The object is not displayed or operated because it has been extending off the screen.
- The object is not displayed or operated because no monitor device has been set.

(3) Executing an object script for the same window from multiple sources

When the same window is displayed from multiple sources including an overlap window, a superimpose window, and the overlay screen function, only the object script for the window that is displayed first is executed.
Even if the window displayed first is deleted, the object scripts for the windows displayed after the first one are not executed.
If, in the above situation, the same window is newly displayed from an overlap window, a superimpose window, or the overlay screen function, the object scripts for the multiple windows which are the same and have been already displayed are not executed but the object script for the new window is executed.

(4) When setting the operating trigger to the timing of writing to a device

Set the target device for the write operation for the object that has the script set for it.
Otherwise, the script is not executed.

■4 Precautions for devices

(1) Number of writable devices

If the following type of devices is the target for writing, a single script can perform a single write operation of the type.

- Controller device

If the following types of devices are the targets for writing, a single script can perform the write operation of each type.

- GOT bit register (GB)
- GOT data register (GD)
- GOT special register (GS)
- Temporary device area (TMP)

(2) Operation while data are being written to devices by an object script

- The execution process of the script is interrupted temporarily, and resumed after the completion of the write operation.
  Interrupted operation restarts after the completion of write device.
- The display on the object is updated after the completion of the write operation.
  Object display is updated after the completion of write device.
- Inputting a value by touching the object on the screen is enabled after the completion of the write operation.
  Input is enabled after the completion of write device.

■5 Precautions for object properties

(1) The numerical display or comment display movement on the GOT when a level is overlaid

If the objects are drawn with GT Designer3 so that the level can be overlaid, the numerical display or comment display correctly works only when it can be moved within the range of the level display.
If you move the numerical display or the comment display out of the area of the level display, the numerical display or the comment display cannot be displayed normally.
If you draw the numerical display or comment outside the area of the level display with GT Designer3, the numerical display or comment display is not superimposed even it is moved into the area of the level display.

(2) Properties that are not valid unless enabled by GT Designer3 settings

Among the setting items of objects, those which become valid only by GT Designer3 settings (such as the settings which are not valid unless another item is selected) cannot be referred or changed by the object properties.

■6 Precautions for the free figure drawing function

(1) Restrictions when the object stacking order adjustment setting is made

When [Adjust object display order in GOT to the one in GT Designer3] is selected in the [Type Setting] dialog, some restrictions are placed on the free figure drawing function.
For the details of the restrictions, refer to the following.

➟5.1.4 ■5 Precautions for the object stacking order adjustment setting

(2) Overlap of a drawn figure and an object

If a figure drawn using the free figure drawing function overlaps with an object, the part of the figure that overlaps may disappear.

(3) Drawing when other than [View Change] and [Synchronize Display Trigger] are set for the operating condition

When the operating condition is other than [View Change] and [Synchronize Display Trigger], the object itself is overwritten and replaced with the figure drawn by the free figure drawing function. Therefore, the figure drawn by the free figure drawing function may be cleared.

(4) When [Key Code Input], [Input Fixation], or [Device Writing] is set for the operating condition

Drawing is not executed.
In this case, no error occurs.
When using the free figure drawing function, set other than [Key Code Input], [Input Fixation], and [Device Writing] for the operating condition.

(5) Number of drawable figures

Up to 1280 figures can be drawn by one object script.

GOT Graphic Ver.2

If the number of drawn figures exceeds 1280, the oldest figure is deleted and a new figure is drawn.
The maximum number of the text figures drawn with the d_textout or d_commentout function differs depending on the number of lines in the text figure.
Example)

- One-line text: 1280 figures
- Two-line text: 640 figures

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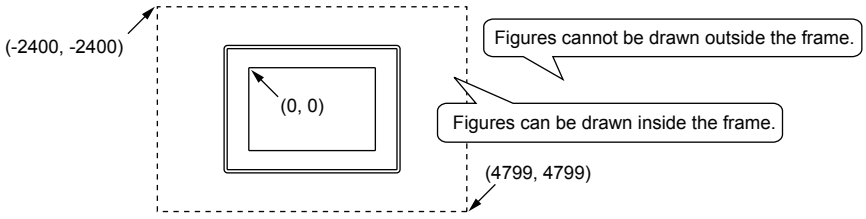
More than 1280 figures cannot be drawn.

(6) Drawing area

In the coordinate system with (0, 0) at the upper left corner of the GOT screen, figures cannot be drawn outside the area of (-2400, -2400) to (4799, 4799).
Specify coordinates inside the area of (-2400, -2400) to (4799, 4799) to draw figures.



■7 Precautions when writing a script

Do not write a script that causes an operation result which exceeds the allowable range of a device value.
Script operation is processed internally in double-precision real numbers.
Therefore, when a judgment is made using an if statement and others, the result of the judgment may differ depending on the operation methods.
Example) Judgment for the difference between GD100 and D100 using an if statement (in the case of 16-bit signed binary)
When GD100 = -32758 and D100 = 32767

(1) Operation in an evaluation expression

```
if(([w:GD100]-[w:D100])>=10){  //If the difference between GD100 and D100 is 10 or larger,
    [w:D200=0;                 //Writes 0 to D200.
}
```

The calculation result of "GD100 - D100" (-32758 - 32767) is -65525, thus the condition is not satisfied.

(2) Processing the script after assignment

```
[w:GD200]=[w:GD100]-[w:D100];  //Assigns the value of "GD100 - D100" to GD200.
if([w:GD200]>=10){             //When the value of GD200 is 10 or larger,
   [w:D200=0;                  //Writes 0 to D200.
}
```

When -65525; the calculation result of "GD100 - D100" (-32758 - 32767), is assigned to GD200 in 16-bit signed binary, GD200 becomes 10, so the condition is satisfied.
(Since a value out of the range that can be handled by a variable (device) is assigned as the result of an operation, the result differs from the result obtained in (1).)

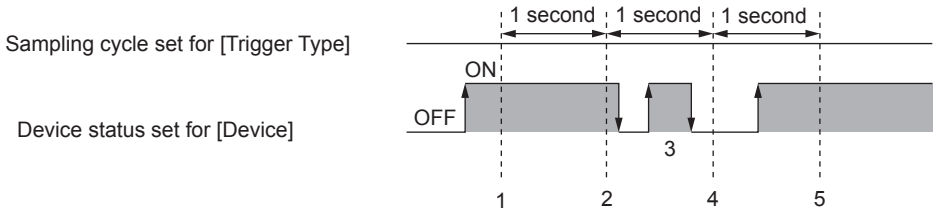
■8 Precautions when making a script perform its operation periodically

(1) Execution timing when [Trigger Type] is set to [ON Sampling] or [OFF Sampling]

➟9.10.6 How to set object scripts

(a) Execution timing

The device status is checked in the sampling cycles set for [Trigger Type].
If the condition is not satisfied at the timing of the check, the object script is not executed.
(when [Trigger Type] is set to [ON Sampling] and [Sampling] is set to 1 second)



The object script is executed at timing 1.
The object script is executed at timing 2.
At timing 3, the object script is not executed because the timing does not match the end of one cycle and thus the condition is not checked.
At timing 4, the object script is not executed because the device condition is not satisfied.
The object script is executed at timing 5.

(b) Using a device condition to trigger the sampling cycle count when the device condition is satisfied

The sampling cycle set for [Trigger Type] does not depend on the device status. (The sampling cycle does not change whether the device is turned on or off.)
To start the cyclic sampling, follow the instructions described below.

- Set [Rise] or [Fall] for [Trigger Type].
- Create a sequence program that turns the device on or off when the object script should be executed.

(2) Execution timing when [Sampling], [ON Sampling], or [OFF Sampling] is set

The sampling cycle count starts and is reset at the following timing.

- When the object itself is displayed (in screen switching, a security level change, or other possible cases)
- When the language switches
- When the station No. switches
- When the security level changes

After the execution of any of the events above, the object script is executed at the start timing of the sampling cycle.

9.10.8 Relevant settings

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Set the relevant settings other than the specific settings for object scripts as required.
The following shows the functions that are available by the relevant settings.

■1 GOT internal device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying that an object script error has occurred.	GS80.b0
Notifying that a BCD error has occurred.	GS80.b7
Notifying that a zero division error has occurred.	GS80.b8
Notifying that a communication error (including access to an invalid device) has occurred.	GS80.b12
Storing the start device number of the devices where the latest error record is stored. The devices range from GS82 to GS113.	GS81
Storing the object script error records (including script user ID numbers and error codes).	GS82 to GS113
Storing the device number of the device where the latest script execution record is stored. The device is in the range of GS115 to GS145.	GS114
Storing the script user ID numbers of the executed scripts.	GS115 to GS145
Storing a number showing the GOT data registers (GD) where the latest error record is stored. The GD devices are specified with GS432 and GS434.	GS159
Storing a number showing the GOT data registers (GD) where the latest script execution record is stored. The GD devices are specified with GS436 and GS438.	GS160
Notifying occurrence of an error which occurs while the integer←→real number conversion is processed.	GS260.b14
Notifying the completion of the integer←→real number conversion.	GS260.b15
Storing the error code of an error which occurs while the integer←→real number conversion is processed.	GS261
Clearing object script error records as shown below. • GS80.b0, b7, b8, and b12 store 0. • GS81 stores -1. • GS82 to GS113 store 0.	GS387.b0
Re-executing the object script aborted due to an error.	GS387.b1
Setting the monitoring time for one script.	GS388
Controlling whether to run an object script upon screen switching or other applicable processes. The applicable script trigger types are as follows. • [Rise] • [Fall] • [Rise/Fall]	GS389
Storing the detailed object script error records.	GS432 GS434 GS435
Storing the detailed object script execution records.	GS436 GS438 GS439
Executing an integer-to-real number conversion.	GS460 GS461 GS462 GS463 GS464

9.10.9 Troubleshooting

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■1 Simulation using a general C language compiler or debugger

Since scripts and C language are similar, you can simulate the scripts by making minor corrections using a general C language compiler or debugger.
Complicated scripts including many control statements can be debugged easily by using them.
The following shows the procedure to simulate scripts using a general C language compiler or debugger.

Step 1 Export an object script created with GT Designer3 to a text file or Unicode text file (extension.txt) and change it into a C language source file (extension.c).

• Change of the file extension: text1.txt → text1.c

Step 2 Open the C language source file in a commercially-available text editor and create a frame with "main(){}". Describe "#include<stdio.h>" at the beginning.

• Additional description of "main" and "include"

Additional description→	#include<stdio.h>
Additional description→	main(){
	[w:TMP0001]=0;
	while([w:TMP0000]<[w:D100]){
	if(!(([w:TMP0000]-1900)%4)){
	[w:TMP0001]=[w:TMP0001]+1;
	my.x = 200;
	my.scale_max[0] = 500;
	••• (Omitted) •••
	[w:TMP0010]=[w:TMP0002]+[w:TMP0003]+[w:TMP0004]-1;
	$W = [w:TMP0010]%7;
Additional description→	}

Step 3 Change the description method of devices (variables, properties) from the one for scripts to the one for C language.

Using the following definitions to change the variables into the one for C language enables you to smoothly restore them into the GOT scripts.

Definition 1 [w: → _w
Definition 2 [b: → _b
Definition 3] → __
Definition 4 my. → my_
Definition 5 $W → device_write
Definition 6 $V → device_value
Definition 7 $$ → monitor_device
Definition 8 $K → key_input
Definition 9 [→ _

Using the batch replacement function of a commercially-available text editor may be useful for the change as well.

• Change of the description method of devices (variables)

	#include<stdio.h>
	main(){
Description change→	_wTMP0001__=0;
Description change→	while(_wTMP0000__<_wD100__){
Description change→	if(!((_wTMP0000__-1900)%4)){
Description change→	_wTMP0001__=_wTMP0001__+1;
Description change→	my_x = 200;
Description change→	my_scale_max_0__ = 500;
	••• (Omitted) •••
Description change→	_wTMP0010__=_wTMP0002__+_wTMP0003__+_wTMP0004__-1;
Description change→	device_write = _wTMP0010__%7;
	}

Step 4 For C language, variables to be used must be defined in advance.

Since only one data type can be set for one script, the same variable type of C language must be set for all the variables.

The following shows the data type of scripts.

If [BCD32], [BCD16], or [BCD64] is selected as the script data type, you cannot perform a simulation using the general C language compiler or debugger.

Data type of scripts	Variable type
Signed BIN 16	short
Unsigned BIN 16	unsigned short
Signed BIN 32	long
Unsigned BIN 32	unsigned long
Signed BIN64	long long
Unsigned BIN64	unsigned long long
BCD16	-
BCD32	
BCD64	
Real(32bit)	float
Real(64bit)	double

Use an appropriate property according to the property range.

Assign an internal variable whose variable type is the same as the data type of the script.

• Variable definition (auto variable declaration)

Description change→
Addition →
Addition →
Addition →
Addition →
Addition →
Addition →
Addition →
	#include<stdio.h>
	void main(void){
	unsigned short _wTMP0000__;
	unsigned short _wTMP0001__;
	unsigned short _wTMP0002__;
	unsigned short _wD100__;
	short my_c;
	unsigned sort my_scale_max_0__;
	unsigned sort device_write;
	••• (Omitted) •••
	_wTMP0001__=0;
	while(_wTMP0000__<_wD100__){
	if(!((_wTMP0000__-1900)%4)){
	_wTMP0001__=_wTMP0001__+1;
	my_x = 200;
	my_scale_max_0__ = 500;
	••• (Omitted) •••
	_wTMP0010__=_wTMP0002__+_wTMP0003__+_wTMP0004__-1;
	device_write = _wTMP0010__%7;
	}

Step 5 Perform a simulation with the general C language compiler or debugger.

The step run, variable watch, and other functions specific to the debugger can be used.

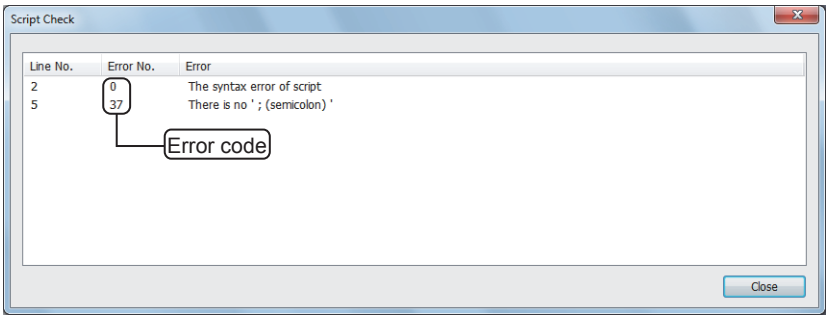
■2 Messages to be displayed at the syntax check

(1) Dialog to be displayed at the syntax check

When you execute a syntax check, the [Script Check] dialog appears to display the error codes of the errors detected in a script.

For the details of the error codes, refer to the following.

➟9.9.14 ■2 (2) List of syntax error codes



Some errors cannot be detected by the syntax check.

If any error which cannot be detected by the syntax check exists in the script, the error is detected when the script is executed on the GOT.

For the errors for the execution of a script and the corrective action on the GOT, refer to the following.

➟■3 Object script execution errors and their corrective actions on the GOT

■3 Object script execution errors and their corrective actions on the GOT

The following shows how to check the errors and their error codes on the GOT.

Item	Description
Checking for the occurrence of an error	Check for the occurrence of the following errors. • Script error • BCD error • Zero division error • Communication error (including access to an invalid device) ➟(1) Checking for the occurrence of an object script error
Checking an error record	Check the following information of an error. • Script user ID number • Error code ➟(2) Checking an object script error record
Checking a detailed error record	Check the following information of an error. • Error code • Script type • Screen number • Object ID number • Screen type • Number of the displayed base screen ➟(3) Checking a detailed object script error record
Clearing error records	Turn on GS387.b0 to clear object script error records as shown below. • GS80.b0, b7, b8, and b12 store 0. • GS81 stores -1. • GS82 to GS113 store 0.
Re-executing the object script aborted due to an error	Turn on GS387.b1 to re-execute the object script aborted due to an error.

To check device values, use the device monitor function or objects (including a numerical display and lamp).

(1) Checking for the occurrence of an object script error

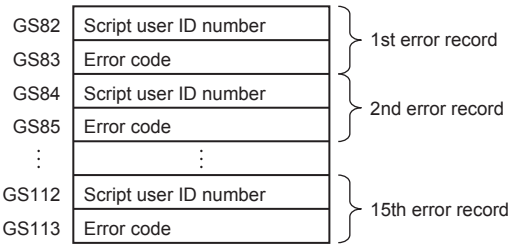
The following GOT internal devices notify the occurrence of errors.

GOT internal device		Description
GS80	b0	Turns on when a script error occurs.
	b7	Turns on when a BCD error occurs.
	b8	Turns on when a zero division error occurs.
	b12	Turns on when a communication error (including access to an invalid device) occurs.

To reset each bit of GS80, turn on GS387.b0.

(2) Checking an object script error record

When an error occurs, the error record is stored into the devices ranging from GS82 to GS113.
GS81 stores the start device number of the devices where the latest error record is stored.
To clear error records, turn on GS387.b0.
The following shows the operation of the relevant GOT internal devices.

GOT internal device	Description
GS81	Stores the start device number of the devices where the latest error record is stored. The devices range from GS82 to GS113. The value of GS81 changes as follows each time an error occurs. -1 → 82 → 84 → 86 → 88 → ... → 112 (The next loop will start from 82.) Example) Relationship between the value of GS81 and the storage location of the latest error record • When GS81 stores 82, the latest error information is stored in GS82 and GS83. • When GS81 stores 112, the latest error information is stored in GS112 and GS113. Turning on GS387.b0 resets GS81 to -1.
GS82 to GS113	Stores the following information when a script error occurs. • Script number • Error code Two word devices are used for one error.  If the number of errors is 17 or more, the error records are overwritten starting from the oldest one.

(3) Checking a detailed object script error record

The specified GOT data registers (GD) store error records.
These GD devices are specified with the following GOT special registers (GS).

- GS432: Specify the start device number of the GD devices to store error records.
- GS434: Specify the maximum number of error records.

Example) When GS432 stores 1000, and GS434 stores 5

GD1000 to GD1007	··· 1st error record
GD1008 to GD1015	··· 2nd error record
GD1016 to GD1023	··· 3rd error record
GD1024 to GD1031	··· 4th error record
GD1032 to GD1039	··· 5th error record

Eight word devices are used for one error.
For the details of an error record, refer to the following.

➥(4) Details of an object script error record

To start storing error records, turn on GS435.b0.
You can identify the devices storing the latest error record based on the values of GS432 and GS159.
The following shows the operation of the relevant GOT internal devices.

- Write device

GOT internal device	Description
GS159	Stores a number showing the devices where the latest error record is stored. Data type: Signed binary Initial value: -1 Calculate the start device number of the devices storing the latest error record by using the following expression. • GS432 + (GS159 × 8) Example) When GS432 stores 1000, and GS159 stores 5 1000 + (5 × 8) = 1040 In this case, GD1040 to GD1047 (eight GD devices) store the latest error record.

- Read device

GOT internal device		Description
GS432		Specify the start device number of the GD devices to store error records. Data type: Unsigned binary
GS434		Specify the maximum number of error records. Data type: Unsigned binary The setting range is 0 to 5000. If the device stores 0, no error record will be stored. If the device stores 5001 or more, up to 5000 records will be stored. GS435.b1 specifies the operation to be performed when the number of errors has exceeded the maximum number of error records.
GS435	b0	When this bit is turned on, storing error records starts. When this bit is turned off, storing error records ends.
	b1	Specifies the operation to be performed when the number of errors has exceeded the maximum number of error records specified with GS434. When this bit is turned on, storing error records stops. When this bit is turned off, storing error records continues by overwriting the oldest record.
	b11	When this bit is turned on, the records of warnings (that do not abort a script) are not stored.

(4) Details of an object script error record

The following shows an example of how an error record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Error code	Error code of an error. For the error details and corrective actions, refer to the following. ➟(5) List of object script execution error codes
GD1001	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 10: Display object script • 11: Input object script
GD1002	Screen number	Number of the screen where the object is placed.
GD1003	Object ID number	ID number of the object where a script error has occurred. • For project scripts and screen scripts: script number • For script parts: object ID number
GD1004	Use prohibited	The device stores 0.
GD1005	Screen type	Type of the screen where the object is placed. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 • 400: User-created key window • 500: Dialog window substituted for a system message If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332
GD1006	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1007	Use prohibited	The device stores 0.

(5) List of object script execution error codes

Error code	Error category*1	Description	Corrective action
1002	Fatal error	Initialization of objects related to the object scripts failed when a screen is switched.	• Reduce the number of monitor devices in object scripts and base screens. • Reduce the number of object scripts presently executed.
1006	Fatal error	An error occurred in reading data from the device that always collects the data.	Correct the description of the device whose data is out of the specified device range.
1011	Execution error	Writing to a device failed.	Check the description of the script.
1014	Fatal error	The expression is too complicated to process.	Simplify the script operation expression by dividing it or by using other appropriate methods.
1015	Fatal error	The object script does not end although the object script monitoring time has elapsed.	• Check whether the script has gone into an endless loop. • Increase the value of the Object Script Monitoring Time (GS388).
1016	Fatal error	The access to a GOT internal device failed.	• Check the operation to a GOT internal device, the script, and sequence program. • Check the description of the script.
1017	Fatal error	The script where an error is detected by the syntax check of GT Designer3 was executed.	Correct the script where an error is detected by the syntax check of GT Designer3.
1018	Fatal error	The access failed since a temporary device area outside the range has been specified.	Specify the temporary device area within the range.
1019	Fatal error	A 8-bit or 64-bit device is specified for an indirect device.	Correct the description of the indirect device in the relevant script.

Error code	Error category*1	Description	Corrective action
1020	Fatal error	Writing to multiple devices was attempted in a single script.	Correct the number of write devices to the available number.
1021	Fatal error	An invalid device type was detected.	Correct the device to the one that can be used by the script.
1022	Fatal error	Temporary device areas for 32-bit data are used for the script of 64-bit data.	Correct the common setting of the relevant script.
1031	Fatal error	Reference of the internal variable was impossible.	Correct the internal valuable according to the object, object script, trigger type that allow referring to the internal variable.
1032	Fatal error	Assignment to the internal variable was impossible.	Correct the internal valuable according to the object, object script, trigger type that allow assigning to the internal variable.
1039	Fatal error	The script where an error is detected by the syntax check of GT Designer3 was executed.	Correct the script where an error is detected by the syntax check of GT Designer3.
1045	Fatal error	Setting that is not in the object was referred to or changed.	Refer to or change the property that can be set by the object itself.
1057	Fatal error	The script where an error is detected by the syntax check of GT Designer3 was executed.	Correct the script where an error is detected by the syntax check of GT Designer3.
1060			
1070	Fatal error	An error occurs in the trigger device setting.	Check the trigger device setting.
1108	Execution error	The operation result cannot be handled in BCD data.	• Check the setting of the monitored device. • Check the operation of device which could not process the BCD data.
1109	Execution error	The operation result was outside the BCD data range.	Check the operation of the device whose BCD data is outside the range.
1110	Execution error	Zero division was executed.	Check the zero division of the script.
1111	Execution error	A 64-bit operation overflow has occurred.	Check the description of the relevant script and correct it.
1131	Execution error	Reference of the internal variable was impossible.	Cheek the internal variable to be referred to.
1141	Execution error	A value outside the property range was set.	Check the assigned value of the property.
1142	Execution error	For the element number of the property that specifies an array, a value outside the range was set.	Check the element number of the property that specifies an array.
1143	Execution error	• The object font was not the standard font. • For object fonts other than 16-dot standard, 0 (display in 0.5 times) was set.	Check the assigned value of the property.
1144	Execution error	The magnification value set in the target object is larger than the value set in the figure.	Check the assigned value of the property.
1246	Warning	The number of decimal places specified for a numerical display or numerical input object cannot be read or written using an object property in the script.	The number of decimal places specified with a device cannot be read or written using an object property in the script. Correct the relevant setting.
1251	Warning	Either of the coordinate or radius is incorrect.	Check the argument in the drawing execution function.
1252	Warning	Any of the line type, line width, or line color is incorrect.	Check the argument in the drawing execution function.
1253	Warning	Any of the pattern, shape color, or background color is incorrect.	Check the argument in the drawing execution function.
1254	Warning	Any of the character attribute, character color, character shade color, character scale ratio, character string code, or character string length is incorrect.	Check the argument in the drawing execution function.
1255	Warning	No comment is assigned to the comment No. of the specified comment group No.	Check the argument in the drawing execution function.
1256	Warning	The stored amount of drawing data exceeded the allowable capacity.	Reduce the number of functions.

*1 For the details of the error categories, refer to the following.

➟(6) Error category of object scripts and operation at error occurrence

(6) Error category of object scripts and operation at error occurrence

(a) Error category

The following shows the categories of the object script error codes. When an error occurs, the object script operates as follows.

Error category	Object script operations at error occurrence
Fatal error	The object script stops. Even if the trigger condition is satisfied again, the object script does not operate. For the object script where the error has occurred, drawing the object and writing to a device stop.*1
Execution error	The object script stops. If the trigger condition is satisfied again, the object script operates. For the object script where the error has occurred, drawing the object and writing to a device stop.*1If this error occurs repeatedly, the subsequent errors are not written into GS82 to GS113.
Warning	The object script does not stop.

*1 The operation of the object with the object script where the error has occurred varies according to the set operating condition.

Operating condition of object script	Monitor function of object	Write function of object
Key code input Input fixation Device writing	Operates	Stops
View Change Synchronize Display Trigger Ordinary	Stops	Operates
Other than above	Stops	Stops

(b) Script which has been executed before an error occurs

Reflection of the written value and execution of a function differ depending on the target device to be written and function to be executed.

Writing to a device:

If writing to a device is executed by the script which has been executed before an error occurs, the written value is reflected as follows.

○: Written value is reflected. ×: Written value is not reflected.

Target device to be written	Operation at error occurrence
GOT internal device (GB and GD)	○
GOT internal device (Other than GB and GD)	×
Controller device	×
Temporary device area	○

Executing a function:

If a function is executed by the script which has been executed before an error occurs, the function is executed as follows.

○: Function is executed. ×: Function is not executed.

Target function to be written or executed	Operation at error occurrence
Free figure drawing	×
Object update function	○
Object display clear function	○
Screen update function	○
Internal variable	×
Property	○

■4 How to check an object script execution record

The following shows how to check a script execution record on the GOT.

Item	Description
Checking a script execution record	Check the script user ID number of an executed script. ➟(1) Checking an object script execution record
Checking a detailed script execution record	Check the following information on an executed script. • Script type • Screen number • Object ID number • Screen type • Number of the displayed base screen ➟(2) Checking a detailed object script execution record

To check device values, use the device monitor function or objects (including a numerical display and lamp).

(1) Checking an object script execution record

When a script runs, the script user ID number is stored into the device in the range of GS115 to GS145.
GS114 stores the device number of the device where the latest script execution record is stored.
The following shows the operation of the relevant GOT internal devices.

GOT internal device	Description
GS114	Stores the device number of the device where the latest script execution record is stored. The device is in the range of GS115 to GS145. The value of GS114 changes as follows each time a script runs. -1 → 115 → 116 → 117 → 118 → ... → 145 (The next loop will start from 115.)
GS115 to GS145	Store the script user ID numbers of the executed scripts. One word device is used for one script. If the number of the executed scripts is 32 or more, the script execution records are overwritten starting from the oldest one.

(2) Checking a detailed object script execution record

The specified GOT data registers (GD) store script execution records.
These GD devices are specified with the following GOT special registers (GS).

- GS436: Specify the start device number of the GD devices to store script execution records.
- GS438: Specify the maximum number of script execution records.

Example) When GS436 stores 1000, and GS438 stores 5

GD1000 to GD1007	··· 1st script execution record
GD1008 to GD1015	··· 2nd script execution record
GD1016 to GD1023	··· 3rd script execution record
GD1024 to GD1031	··· 4th script execution record
GD1032 to GD1039	··· 5th script execution record

Eight word devices are used for one script execution record.
For the details of a script execution record, refer to the following.

➟(3) Details of an object script execution record

To start storing script execution records, turn on GS439.b0.
You can identify the devices storing the latest script execution record based on the values of GS436 and GS160.
The following shows the operation of the relevant GOT internal devices.

- Write device

GOT internal device	Description
GS160	Stores a number showing the devices where the latest script execution record is stored. Data type: Signed binary Initial value: -1 Calculate the start device number of the devices storing the latest script execution record by using the following expression. • GS436 + (GS160 × 8) Example) When GS436 stores 1000, and GS160 stores 5 1000 + (5 × 8) = 1040 In this case, GD1040 to GD1047 (eight GD devices) store the latest script execution record.

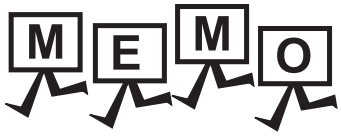
• Read device

GOT internal device		Description
GS436		Specify the start device number of the GD devices to store script execution records. Data type: Unsigned binary
GS438		Specify the maximum number of script execution records. Data type: Unsigned binary The setting range is 0 to 5000. If the device stores 0, no script execution record will be stored. If the device stores 5001 or more, up to 5000 records will be stored. GS439.b1 specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records.
GS439	b0	When this bit is turned on, storing script execution records starts. When this bit is turned off, storing script execution records ends.
	b1	Specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records specified with GS438. When this bit is turned on, storing script execution records stops. When this bit is turned off, storing script execution records continues by overwriting the oldest record.

(3) Details of an object script execution record

The following shows an example of how a script execution record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 10: Display object script or switch object script • 11: Input object script
GD1001	Screen number	Number of the screen where the object is placed.
GD1002	Object ID number	ID number of the object where a script runs.
GD1003	Use prohibited	The device stores 0.
GD1004	Screen type	Type of the screen where the object is placed. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 • 400: User-created key window • 500: Dialog window substituted for a system message If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332 The device stores 0 for a project script.
GD1005	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1006	Use prohibited	The device stores 0.
GD1007	Use prohibited	The device stores 0.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10.FUNCTIONS USED WITH PERIPHERAL DEVICES

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10.1 Using a Barcode Reader with the GOT (Barcode Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

10.1.1 Overview of the barcode function

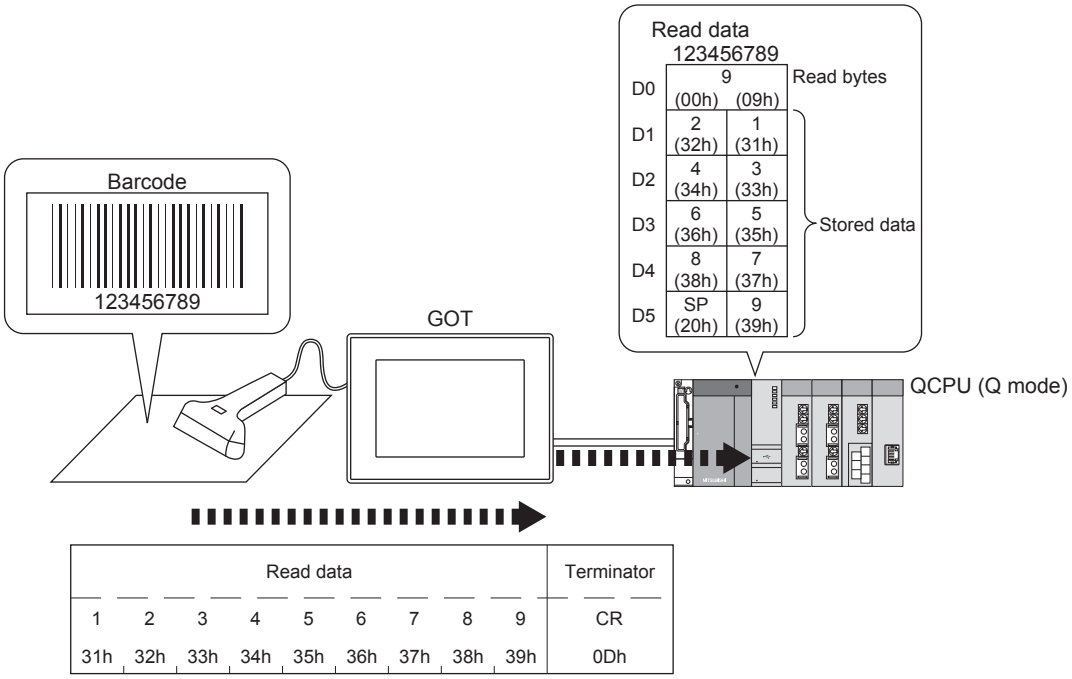
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

The barcode function enables the GOT to read the data from a barcode by using a barcode reader.

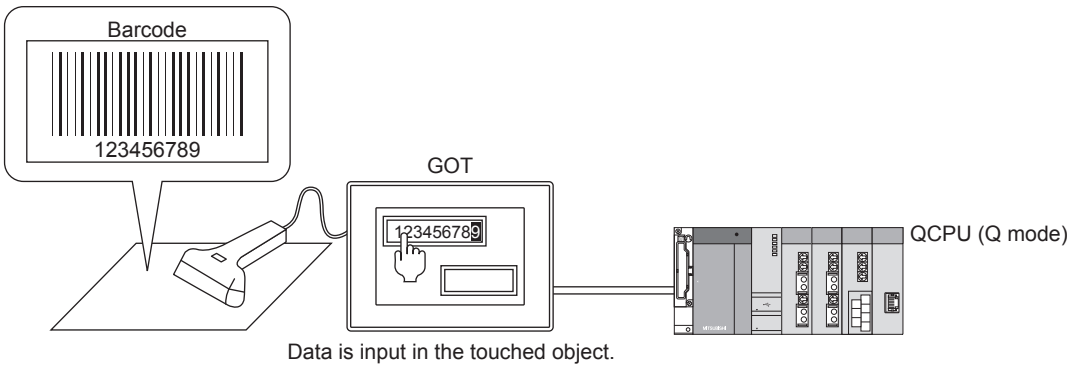
The read data is processed as follows.

■1 Writing read data into controllers



Read data									Terminator
1	2	3	4	5	6	7	8	9	CR
31h	32h	33h	34h	35h	36h	37h	38h	39h	0Dh

■2 Directly inputting read data to objects (numerical input and text input)



Read data									Terminator
1	2	3	4	5	6	7	8	9	CR
31h	32h	33h	34h	35h	36h	37h	38h	39h	0Dh

10.1.2 Specifications of the barcode function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 System application (extended function)

(1) Serial barcode reader

To use the barcode function, a system application (extended function) of [Bar Code (Serial)] is required.
Select [Use Serial Bar Code] in the [Bar Code] dialog ([Serial] tab) to incorporate the application into the package data automatically.

➟10.1.5 [Bar Code] dialog

To use the function on GT21, GT SoftGOT2000, or GS21, the application is not required.

(2) USB barcode reader

Only available to GT2107-W of GT21 models.
Not available to GT SoftGOT2000 and GS21.
To use the barcode function, a system application (extended function) of [Bar Code (USB)] is required.
Select [Use USB Bar Code] in the [Bar Code] dialog ([USB] tab) to incorporate the application into the package data automatically.

➟10.1.5 [Bar Code] dialog

To use the function on GT21, the application is not required.

■2 Applicable barcode readers

One serial barcode reader and one USB barcode reader are usable simultaneously.

(1) Serial barcode reader

You can use the serial barcode readers that satisfy the header and terminator specifications referred to in the following.

➟10.1.7 ■2 Header and terminator

For the validated serial barcode readers, refer to Technical News GOT-A-0160 "List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)" separately available.

(2) USB barcode reader

Only available to GT2107-W of GT21 models.
Not available to GT SoftGOT2000.
You can use the USB barcode readers that satisfy the following conditions.

- A USB keyboard interface is provided.
- The Japanese 106 keyboard or the English 101 keyboard is settable as the USB keyboard type.
- "Enter" is settable as the terminator.

When data is input from a USB barcode reader, the GOT supports only the ASCII code characters that can be output using a USB keyboard.
The GOT ignores data that is input in any characters other than the ASCII code characters.
Katakana, Hiragana, and Kanji characters contained in a QR code cannot be read with USB barcode readers.
These characters are readable with serial barcode readers.
For the validated USB barcode readers, refer to Technical News GOT-A-0160 "List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)" separately available.

■3 Number of barcode function settings for one project

One barcode function setting is available for one project.

■4 Devices for storing data read by the barcode reader and device points

(1) Devices that can store the data

The data can be stored in the word device.
The bit device cannot be specified as the word device.

(2) Maximum number of devices

Up to 2000 device points can be set.
One read byte and up to 1999 read data are stored in the device.

10.1.3 Basic use of the barcode function

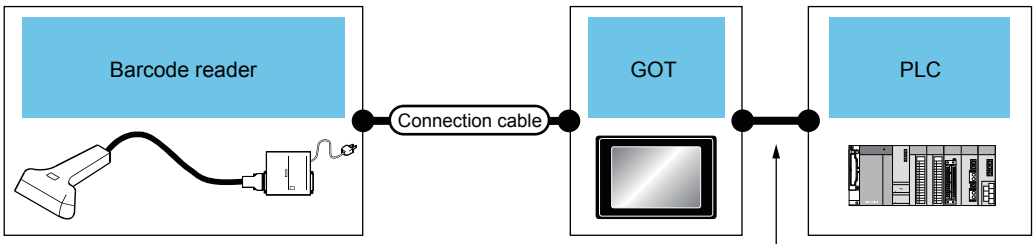
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 System configuration

GT SoftGOT2000 does not support USB barcode readers.
The following shows the system configuration of the barcode reader.
When you use the barcode reader on GT SoftGOT2000, the barcode reader is connected to the personal computer.
Therefore, the barcode reader requires no connection to the GOT hardware.
For the connection method with GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual



Barcode reader	Connection cable	GOT	PLC	Number of connectable barcode readers
For the connectable barcode readers and system devices, the type of the barcode that can be read, and the connection cables, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	Depending on the specifications of the barcode reader	GT27 GT25 GT23 GT21 *1 GS25 GS21 *2	For the system configuration between the GOT and the PLC, refer to each connection manual.	One serial barcode reader and one USB barcode reader for one GOT

*1 Only GT2107-W supports USB barcode readers.
*2 GS21 does not support USB barcode readers.

■2 Setting procedure

(1) Serial barcode reader

Step 1 Connect a serial barcode reader to the GOT.

➟■1 System configuration

Step 2 In the [Bar Code] dialog ([Serial] tab), configure the barcode function setting.

➟10.1.5 [Bar Code] dialog

Step 3 Set the system signal according to the channel number used.

➟10.1.6 System information settings

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Check proper operation of the barcode function.

➟10.1.7 Action of the barcode function

(2) USB barcode reader

Only available to GT2107-W of GT21 models.
Not available to GT SoftGOT2000 and GS21.

Step 1 Connect a USB barcode reader to the GOT.

➟■1 System configuration

Step 2 In the [GOT Setup] window ([USB Host]), select [Use USB keyboard/USB bar code] and set [Keyboard Type] according to the setting of the USB barcode reader used.

➟5.3.4 ■4 [USB Host]

Step 3 In the [Bar Code] dialog ([USB] tab), configure the barcode function setting.

➟10.1.5 [Bar Code] dialog

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Check proper operation of the barcode function.

➟10.1.7 Action of the barcode function

10.1.4 Advanced use of the barcode function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 Directly inputting the data to the object (numerical input or text input)

To directly input the data to the object (numerical input or text input), the setting for using the barcode function is required for the object.

When the object (numerical input or text input) is not in the ready state for the data read by the barcode reader to be directly input, the read data is cleared.

To input the data, touch the object (numerical input or text input) input, and read the data with the cursor displayed.

■2 Input completion notification settings

This setting is required for using a serial barcode reader.

(1) When the input completion notification is disabled

Establishing a handshake is not required by using the External Device I/O signal and the External Device I/O Complete signal.

If the data is sequentially read into the object, old data is immediately overwritten by new data in each time.

(2) When the input completion notification is enabled

The data cannot be input to the object until the External Device I/O signal is turned off by the External Device I/O Complete signal.

For the action of the System signal, refer to the following.

➟10.1.7 (1) Control devices

■3 Switching the behavior of the USB barcode reader

Only available to GT2107-W of GT21 models.

Not available to GT SoftGOT2000 and GS21.

The Switch USB Barcode Input signal is usable to switch between the USB keyboard function and the barcode function.

For setting the Switch USB Barcode Input signal, refer to the following.

➟10.1.5 ■2 [USB] tab

- When the Switch USB Barcode Input signal is on

  The USB barcode reader performs the USB keyboard function.

  For the details of the USB keyboard function, refer to the following.

  ➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

- When the Switch USB Barcode Input signal is off

  The USB barcode reader performs the barcode function.

10.1.5 [Bar Code] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

Select [Common] → [Peripheral Setting] → [Bar Code] from the menu to display the setting dialog.

➥■1 [Serial] tab

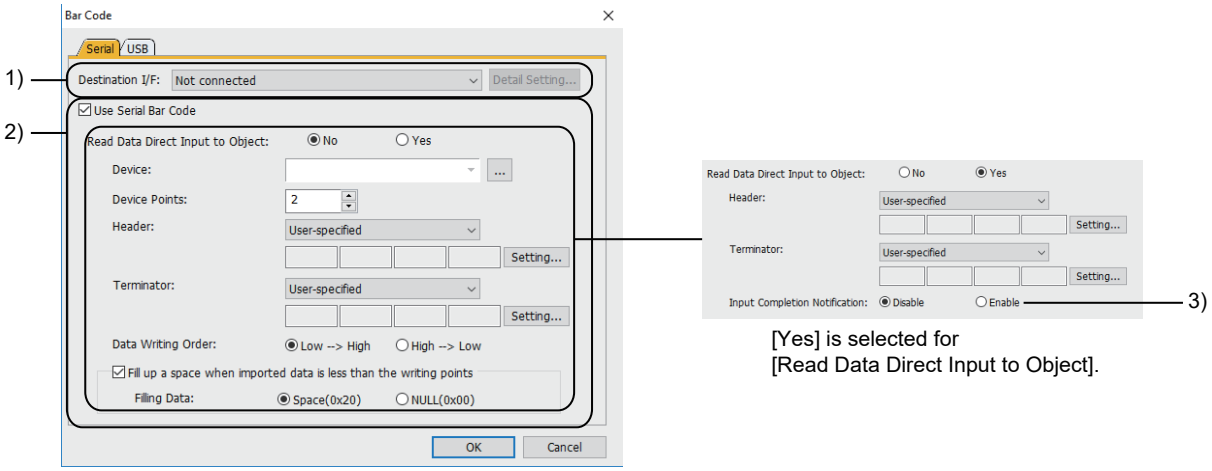
■2 [USB] tab

■1 [Serial] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

This setting is required for using a serial barcode reader.



[No] is selected for [Read Data Direct Input to Object].

[Yes] is selected for [Read Data Direct Input to Object].

1) **[Destination I/F]**

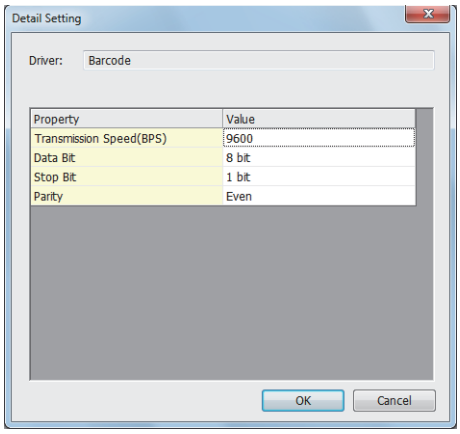
Set the interface of the GOT.

The following shows the items to be selected.

- [Standard I/F(RS422/485)] (For GT21-P: [Standard I/F(RS422/485/232(Side))])
- [Standard I/F(RS232)] (For GT21-P: [Standard I/F(RS232(Back))])
- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

[Extend I/F(1st)], [Extend I/F(2nd)], and [Ex-tend I/F(3rd)] are not available for GT25-W, GT2505-V, GT25HS-V,

GT23, GT21, GT Soft-GOT2000, GS25, and GS21.

Item	Description
[Detail Setting] button	Configure the detail setting in the [Detail Setting] window.  • **[Transmission Speed(BPS)]** Select the transmission speed. The following shows the items to be selected. • [4800] • [9600] • [19200] • [38400] • [57600] • [115200] • **[Data Bit]** Select the data length. The following shows the items to be selected. • [7bit] • [8bit] • **[Stop Bit]** Select the stop bit length. The following shows the items to be selected. • [1bit] • [2bit] • **[Parity]** Select the type for a parity check. The following shows the items to be selected. • [None] • [Even] • [Odd]

2) **[Use Serial Bar Code]**

Enables the barcode function setting.

Item	Description
[Read Data Direct Input to Object]	Select whether to write the data read by a serial barcode reader into controller devices, or to input the read data to an object (numerical input or text input). • [No]: Writes the data into the controller. • [Yes]: Directly inputs the data to the numerical input or text input. To directly input the data to the object (numerical input or text input), the setting for using the barcode reader is required for the object. ➟8.4.5 [Numerical Input] dialog 8.5.5 [Text Input] dialog
[Device]	Set the start device of consecutive devices that store the data read by a serial barcode reader.
[Device Points]	Set the number of devices that store the data read by the barcode reader. The setting range is [2] to [2000].

Item	Description
[Header]	Select a header for the barcode read by a serial barcode reader. The following shows the items to be selected. • [None] • [STX] • [ENQ] • [User-specified]: Up to four bytes are settable. Specify a value for a byte in the range of 0x00 to 0xFF. When you select [User-specified], refer to the following. ➟(1) [Setting] dialog (for setting the header or terminator)
[Terminator]	Select a terminator for the barcode read by a serial barcode reader. The following shows the items to be selected. • [ETX] • [LF] • [CR] • [CR+LF] • [User-specified]: Up to four bytes are settable. Specify a value for a byte in the range of 0x00 to 0xFF. When you select [User-specified], refer to the following. ➟(1) [Setting] dialog (for setting the header or terminator)
[Data Writing Order]	Select the order of writing the data into the controller device. • [Low --> High]: The data is written into the controller device in the order of lower 8 bits to upper 8 bits. • [High --> Low]: The data is written into the controller device in the order of upper 8 bits to lower 8 bits.
[Fill up a space when imported data is less than the writing points]	Select this item to fill blank devices with spaces or NULLs when the number of bytes of the data read by the barcode reader is less than the set device points. • [Space]: Fills the blank device with spaces (20H). • [NULL]: Fills the blank device with NULLs (00H).

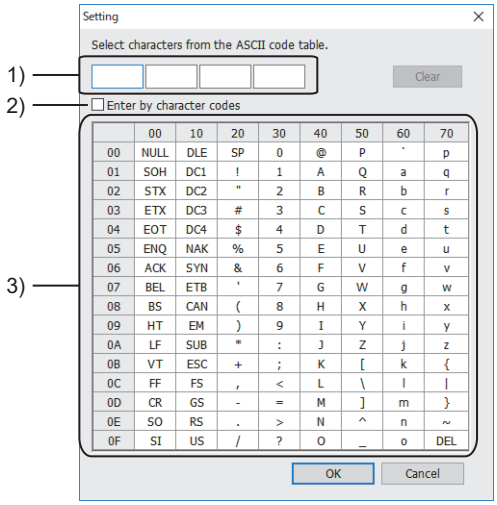
3) **[Input Completion Notification]**

Select whether to enable or disable the completion notification of data input processing by the System signal (External Device I/O signal and External Device I/O Complete signal).

The setting range is [Disable] or [Enable].

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

(1) [Setting] dialog (for setting the header or terminator)



	00	10	20	30	40	50	60	70
00	NULL	DLE	SP	0	@	P	`	p
01	SOH	DC1	!	1	A	Q	a	q
02	STX	DC2	"	2	B	R	b	r
03	ETX	DC3	#	3	C	S	c	s
04	EOT	DC4	$	4	D	T	d	t
05	ENQ	NAK	%	5	E	U	e	u
06	ACK	SYN	&	6	F	V	f	v
07	BEL	ETB	'	7	G	W	g	w
08	BS	CAN	(	8	H	X	h	x
09	HT	EM	)	9	I	Y	i	y
0A	LF	SUB	*	:	J	Z	j	z
0B	VT	ESC	+	;	K	[	k	{
0C	FF	FS	,	<	L	\	l	|
0D	CR	GS	-	=	M	]	m	}
0E	SO	RS	.	>	N	^	n	~
0F	SI	US	/	?	O	_	o	DEL

1) **Header/terminator entry field**

Enter values for the header or terminator.

A cell where an entry is made is counted as a valid byte.

2) **[Enter by character codes]**

Enter values in hexadecimal.

3) **ASCII code table**

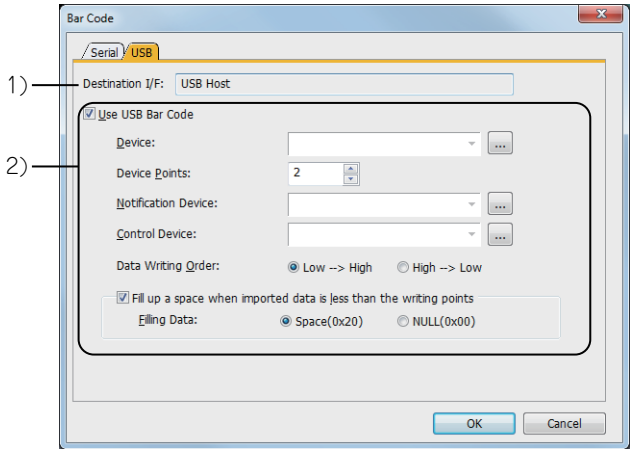
Lists the selectable ASCII codes.

Click a character to enter it into the header/terminator entry field.

■2 [USB] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.
Only available to GT2107-W of GT21 models.
This setting is required for using a USB barcode reader.



1) **[Destination I/F]**
Displays the GOT interface to be used.
The interface is fixed at [USB Host].

2) **[Use USB Bar Code]**
Enables the barcode function setting.

Item	Description
[Device]	Set the start device of consecutive devices that store the data read by a USB barcode reader.
[Device Points]	Set the number of devices that store the data read by the barcode reader. The setting range is [2] to [2000].
[Notification Device]	Set the device that notifies the processing status of the data read by a USB barcode reader. ➟6.1 Device Settings A word device is settable. For the function of each bit of the device, refer to the following. ➟(1) [Notification Device]
[Control Device]	Set the device that controls the processing of the data read by a USB barcode reader. ➟6.1 Device Settings A word device is settable. For the function of each bit of the device, refer to the following. ➟(2) [Control Device]
[Data Writing Order]	Select the order of writing the data into the controller device. • [Low --> High]: The data is written into the controller device in the order of lower 8 bits to upper 8 bits. • [High --> Low]: The data is written into the controller device in the order of upper 8 bits to lower 8 bits.
[Fill up a space when imported data is less than the writing points]	Select this item to fill blank devices with spaces or NULLs when the number of bytes of the data read by the barcode reader is less than the set device points. • [Space]: Fills the blank device with spaces (20H). • [NULL]: Fills the blank device with NULLs (00H).

(1) [Notification Device]

The following shows the function of each bit of the set device.

Bit number	Signal name	Function
b0 to b5	Use prohibited	-
b6	USB Barcode Input signal	Turns on when the data read by a USB barcode reader is stored to specified devices. Turns off when the USB Barcode Read Completed signal (b6 of the control device) turns on.
b7 to b15	Use prohibited	-

(2) [Control Device]

The following shows the function of each bit of the set device.

Bit number	Signal name	Function
b0	Switch USB Barcode Input signal	Switches the behavior of the USB barcode reader This signal is disabled when the Enable Operator Authentication signal (Control device.b1) is turned on and the GOT displays the screen for login with an external authentication device. • ON The USB barcode reader performs the USB keyboard function. For the details of the USB keyboard function, refer to the following. ➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host]) • OFF The USB barcode reader performs the barcode function.
b1	Enable Operator Authentication signal	Turn on this signal and display the screen for login with an external authentication device on the GOT to enable the operator authentication with a USB device. For the details of the operator authentication, refer to the following. ➟5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))
b2	Enable USB Device Input During Operator Authentication signal	Turn on this signal to enable the operator authentication data read by a USB device to be saved into devices. For the details of the operator authentication, refer to the following. ➟5.2.7 Configuring the security settings for the GOT screen ([Screen Security] (Operator authentication))
b3 to b4	Use prohibited	-
b5	Disable USB Barcode Input signal	Turn on this signal to disable the barcode function.
b6	USB Barcode Read Completed signal	Turn on this signal for the GOT to recognize that the stored barcode data has been transferred from the specified devices to different devices. Turn on this signal to turn off the USB Barcode Input signal (b6 of the notification device).
b7 to b15	Use prohibited	-

10.1.6 System information settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

This setting is required for using a serial barcode reader.

If you use a USB barcode reader, set [Notification Device] and [Control Device] in the [Bar Code] dialog ([USB] tab).

➟10.1.5 ■2 [USB] tab

■1 Setting the system information

Make sure to set one of the following System signals according to the channel No. you use.

For GT SoftGOT2000, set the System signal used for channel No.5 of the GOT.

The barcode function is not available without the setting.

Channel No.	System signal
Channel No.8	System signal 1-1, System signal 2-1
Channel No.5	System signal 1-2, System signal 2-3 (Not available to GT21 and GS21)
Channel No.6	
Channel No.7	

For the details of the system information, refer to the following.

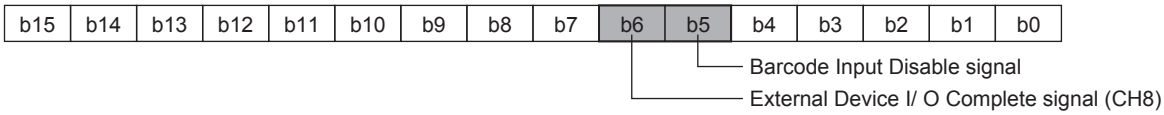
➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

■2 Action of the barcode function according to the System signal status

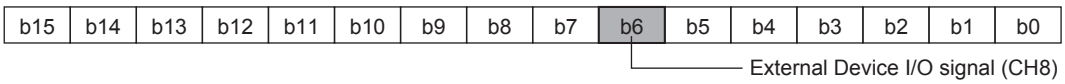
While the following System signals are on, the data read by the barcode reader is not written into the controller.

Use a sequence program or other methods to turn off the External Device I/O signal and the External Device I/O Complete signal.

(1) System signal 1-1



(2) System signal 2-1



10.1.7 Action of the barcode function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

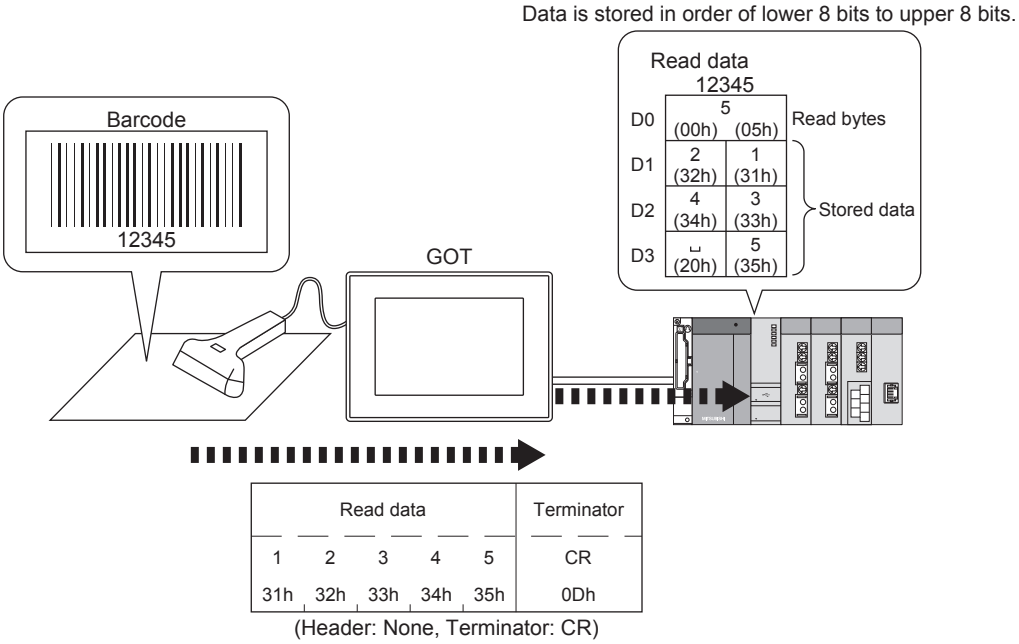
Not available to GT25HS-V.

■1 Order of writing data into the controller

Set the order of writing the data read by the barcode reader into the controller.

(1) Low → High

The data is written into the controller device in the order of lower 8 bits to upper 8 bits.

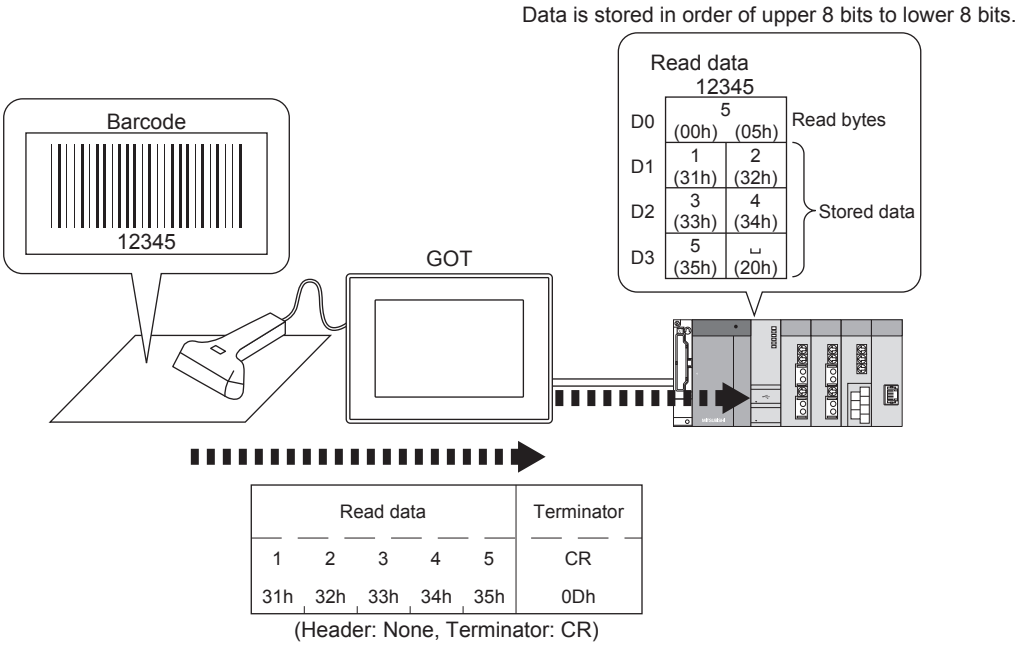


Read data					Terminator
1	2	3	4	5	CR
31h	32h	33h	34h	35h	0Dh

(Header: None, Terminator: CR)

(2) High → Low

The data is written into the controller device in the order of upper 8 bits to lower 8 bits.

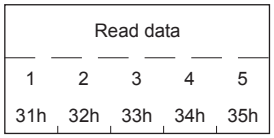
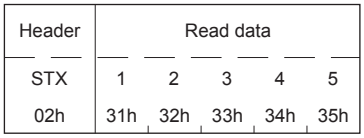
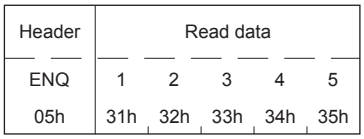
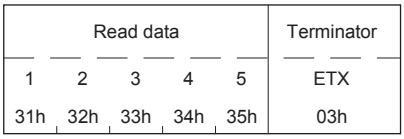
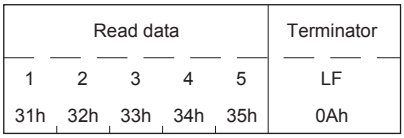
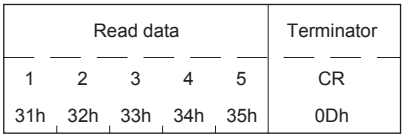
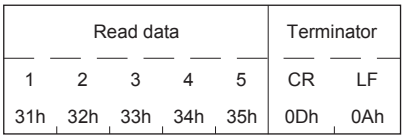
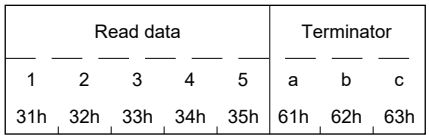


Read data					Terminator
1	2	3	4	5	CR
31h	32h	33h	34h	35h	0Dh

(Header: None, Terminator: CR)

■2 Header and terminator

If you use a serial barcode reader, set the header and terminator for the read barcode.

Item		Description
Header	None (Default)	The read data is as follows when the header is not added to the head of data. 
	STX	The read data and STX are set as follows when STX is added to the head of data. 
	ENQ	The read data and ENQ are set as follows when ENQ is added to the head of data. 
	User-specified	The user-specified values are prepended to the read data. Example) When 41h, 42h, 43h, and 44h are specified
Terminator	ETX	The read data and ETX are set as follows when ETX is added to the end of data. 
	LF	The read data and LF are set as follows when LF is added to the end of data. 
	CR (Default)	The read data and CR are set as follows when CR is added to the end of data. 
	CR+LF	The read data and CR+LF are set as follows when CR+LF is added to the end of data. 
	User-specified	The user-specified values are appended to the read data. Example) When 61h, 62h, and 63h are specified 

■3 Data to be stored in devices

The data read by the barcode reader is written into the controller device as the string data.
Example)

- Read data: 123456789
- Order of writing data: Low → High

(1) When the number of read data is less than the set device points

Settings (Storage device: D0, Data points: 8)

Write device	Stored data	String data	
D0	0009h	-	The GOT writes the bytes of the read data.
D1	3231h	21	The GOT writes the read data in the order from lower byte.
D2	3433h	43	
D3	3635h	65	
D4	3837h	87	
D5	2039h	␣9	When the number of bytes of the data read by the barcode reader is less than the set device points, fill blank devices with spaces (20h) or NULLs (00h).
D6	2020h	␣␣	
D7	2020h	␣␣	

␣: Space

(2) When the number of read data is more than the set device points

Settings (Storage device: D0, Data points: 4)

Write device	Stored data	String data	
D0	0009h	-	The GOT writes the bytes of the read data.
D1	3231h	21	The GOT writes the read data in the order from lower byte.
D2	3433h	43	
D3	3635h	65	
			The data that exceeds the set device points is not written.

■4 Operation example of the barcode function (Serial barcode reader)

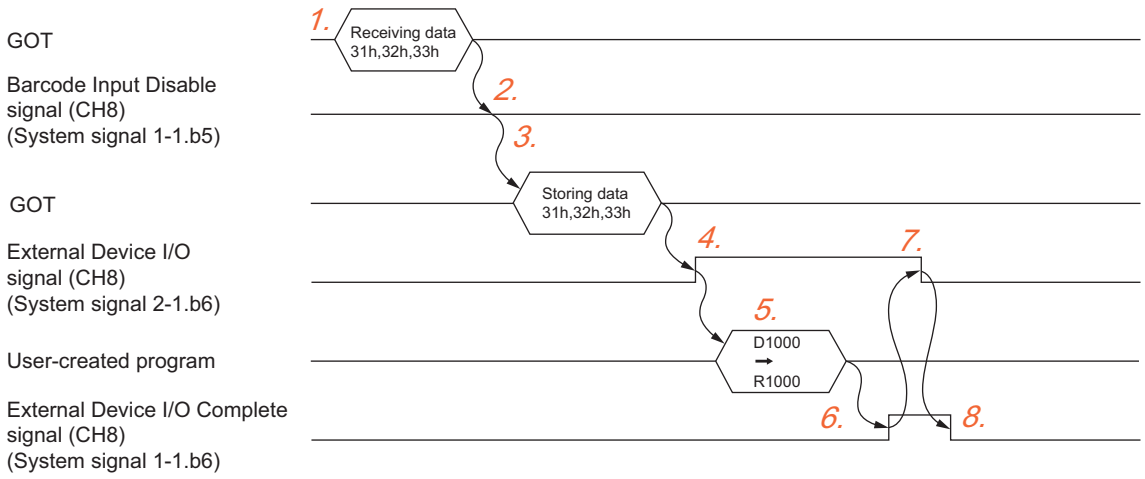
The following shows the action timing of the barcode function.
Example) GT Designer3 settings

- The barcode reader is connected to the GOT by using channel No.8.
- [No] is selected for [Read Data Direct Input to Object].
- System signal 1-1: D11
- System signal 2-1: D12
- Device: D1000
- Data points: 8

(1) Control devices

Device	Item
System information	External Device I/O Complete signal (CH8)(System signal 1-1.b6) External Device I/O signal (CH8)(System signal 2-1.b6) ➡5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

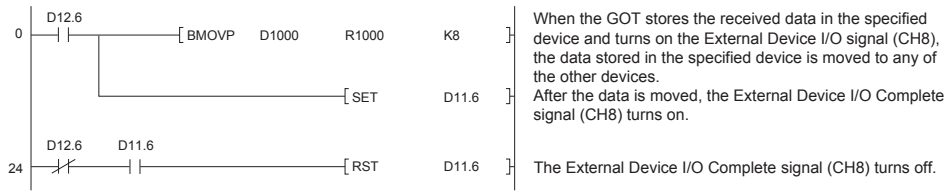
(2) Handshake



Step 1 The GOT receives data from a serial barcode reader.
Step 2 When the Barcode Input Disable signal is off, the process proceeds to the next step.
Step 3 The received data is stored to specified devices.
Step 4 The External Device I/O signal (CH8) turns on upon storage of the data.
Step 5 A user-created program transfers the stored data from the specified devices to different devices.
Step 6 The user-created program turns on the External Device I/O Complete signal (CH8).
Step 7 The External Device I/O signal (CH8) turns off upon turn-on of the External Device I/O Complete signal (CH8).
Step 8 The user-created program turns off the External Device I/O Complete signal (CH8).

(3) Example of the sequence program (When the GOT is connected to QCPU by using channel No.8)

While the External Device I/O Complete signal and the External Device I/O signal are on, the data read by the barcode reader is not written into the controller.
Create a sequence program so that the External Device I/O Complete signal and the External Device I/O signal are turned off.



■5 Operation example of the barcode function (USB barcode reader)

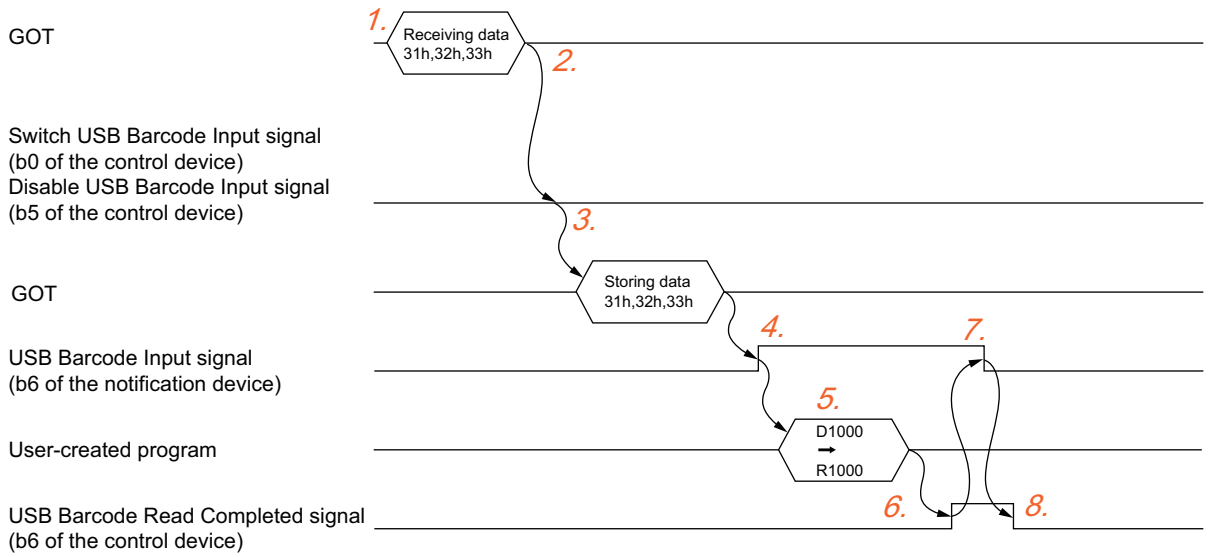
Only available to GT2107-W of GT21 models.
Not available to GT SoftGOT2000 and GS21.
The following shows the action timing of the barcode function.
Example) GT Designer3 settings

- [Notification Device]: D11
- [Control Device]: D12
- Device: D1000
- Data points: 8

(1) [Notification Device], [Control Device]

Device	Item
[Notification Device]	• USB Barcode Input signal (b6 of the notification device)
[Control Device]	• Switch USB Barcode Input signal (b0 of the control device) • Disable USB Barcode Input signal (b5 of the control device) • USB Barcode Read Completed signal (b6 of the control device)

(2) Handshake



Step 1 The GOT receives data from a USB barcode reader.
Step 2 When the Switch USB Barcode Input signal and the Disable USB Barcode Input signal are off, the process proceeds to the next step.
Step 3 The received data is stored to specified devices.
Step 4 The USB Barcode Input signal turns on upon storage of the data.
Step 5 A user-created program transfers the stored data from the specified devices to different devices.
Step 6 The user-created program turns on the USB Barcode Read Completed signal.
Step 7 The USB Barcode Input signal turns off upon turn-on of the USB Barcode Read Completed signal.
Step 8 The user-created program turns off the USB Barcode Read Completed signal.

While the USB Barcode Input signal or the USB Barcode Read Completed signal is on, the read barcode data is not stored to the specified devices.
Create a sequence program so that the USB Barcode Input signal and the USB Barcode Read Completed signal are turned off.

10.1.8 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 Precautions for hardware

When the barcode reader is used with [Standard I/F(RS232)], 5V power supply from the GOT should be enabled on some barcode readers.
For the barcode that can be read, refer to Technical News GOT-A-0160 "List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)" separately available, or contact your local distributor.

■2 Precautions for using a USB barcode reader

(1) Handshake when a USB barcode reader reads data

When you use a USB barcode reader for writing the read data to specified devices, turn off the USB Barcode Input signal and the USB Barcode Read Completed signal before a barcode reading.
If a barcode reading is performed while the signals are on, the read data is deleted.

(2) Outputting a special interrupt code through the microcomputer connection

Even if the special interrupt code output is enabled, the special interrupt code (23H) is not output.
For the special interrupt code output through the microcomputer connection, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

(3) Switching between the ON and OFF states of the Switch USB Barcode Input signal

If you switch between the ON and OFF states of the Switch USB Barcode Input signal while a USB barcode reader is reading data, unintended behavior may result.
Do not switch the ON and OFF states of the signal while a USB barcode reader is reading data.

(4) Character code of the input values

The input values read by a USB barcode reader are handled as ASCII characters.

10.1.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

Set the relevant settings other than the specific settings for the barcode function as required.

The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings (System information)

These settings are unavailable when a USB barcode reader is used.

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Target CH	Function	Setting item
CH5*1	Switching the enabled or disabled status of the barcode function. (Read device: System signal 1-2.b2)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b0). (Read device: System signal 1-2.b3)	[System Signal 1-2]
	Notifying that the data read by the barcode reader is stored into the specified device. (Write device: System signal 2-3.b0)	[System Signal 2-3]
CH6*1	Switching the enabled or disabled status of the barcode function. (Read device: System signal 1-2.b5)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b1). (Read device: System signal 1-2.b6)	[System Signal 1-2]
	Notifying that the data read by the barcode reader is stored into the specified device. (Write device: System signal 2-3.b1)	[System Signal 2-3]
CH7*1	Switching the enabled or disabled status of the barcode function. (Read device: System signal 1-2.b8)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b2). (Read device: System signal 1-2.b9)	[System Signal 1-2]
	Notifying that the data read by the barcode reader is stored into the specified device. (Write device: System signal 2-3.b2)	[System Signal 2-3]
CH8	Switching the enabled or disabled status of the barcode function. (Read device: System signal 1-1.b5)	[System Signal 1-1]
	Turning on this signal turns off the External Device I/O signal (System signal 2-1.b6). (Read device: System signal 1-1.b6)	[System Signal 1-1]
	Notifying that the data read by the barcode reader is stored into the specified device. (Write device: System signal 2-1.b6)	[System Signal 2-1]

*1 Not available to GT21 and GS21.

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying that the object is in the ready state for the data read by the barcode reader and the RFID to be directly input. (Write device)*1	GS243.b15

*1 Not available to GT21 and GS21.

10.2 Using an RFID with the GOT (RFID Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

10.2.1 Overview of the RFID function

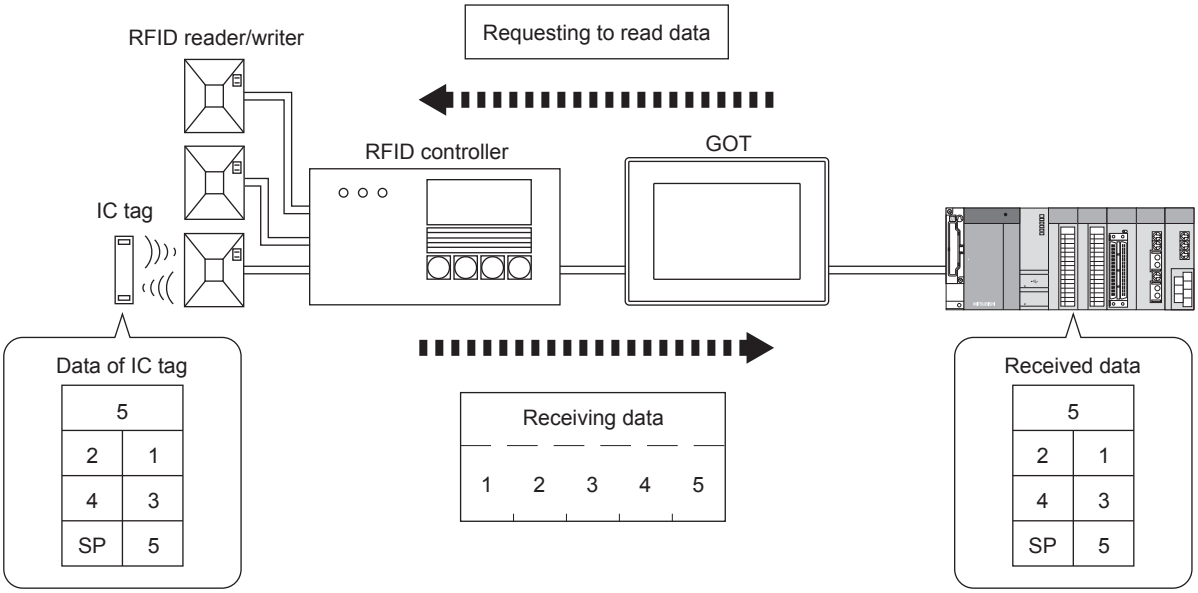
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

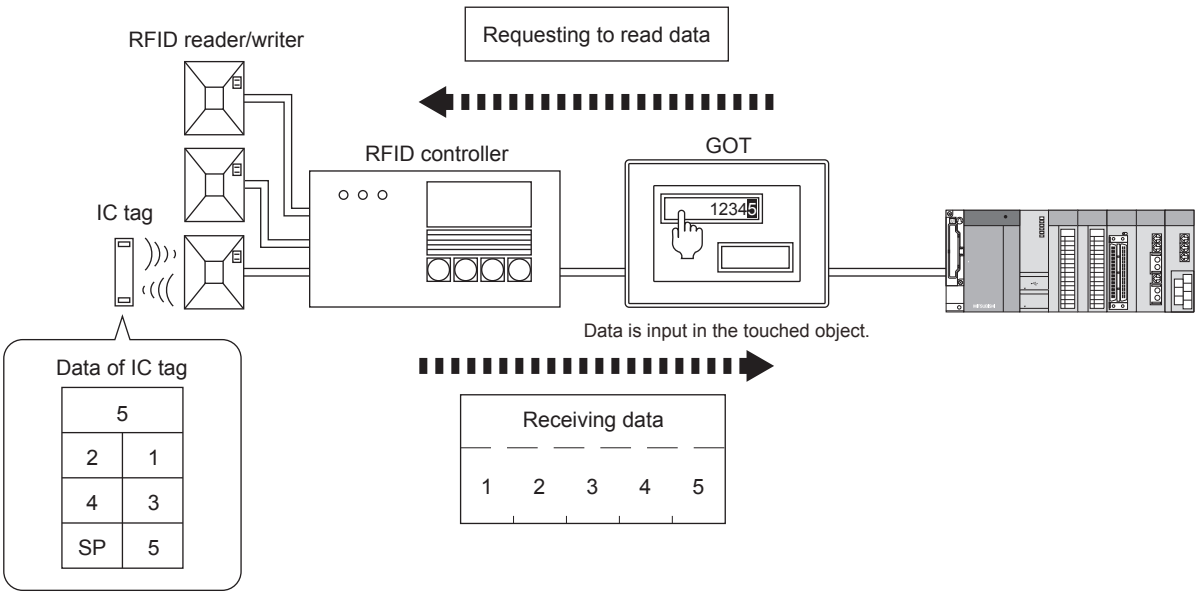
The RFID function enables you to send and receive the data by an RFID reader/writer of an RFID controller connected to the GOT, and enables you to read the data from the received data.

The read data is processed as follows.

■1 Writing read data into controllers



■2 Directly inputting read data to objects (numerical input and text input)



10.2.2 Specifications of the RFID function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 System application (extended function)

To use the RFID function, a system application (extended function) of [RFID] is required.
Selecting [Use RFID] in the [RFID] dialog incorporates the application into the package data automatically.

➡10.2.5 [RFID] dialog

To use the function on GT SoftGOT2000, the application is not required.

■2 Applicable RFID controllers

Applicable RFID controllers should meet the specifications of the dedicated protocol and nonprocedural protocol as shown below.

Protocol	Reference
Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)	➡10.2.7 ■6 (1) Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)
Dedicated protocol (ICU-60S manufactured by MARS TOHKEN SOLUTION CO.LTD.)	➡10.2.7 ■6 (2) Dedicated protocol (ICU-60S or ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.)
Dedicated protocol (ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.)	
Nonprocedural protocol	➡10.2.7 ■6 (3) Nonprocedural protocol

Select the dedicated protocol that corresponds to the RFID controller to be used.
When no dedicated protocol corresponds to the RFID controller to be used, select the nonprocedural protocol.
For selecting the protocol, refer to the following.

➡GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

The following shows devices used for each protocol and a handshake example.

➡10.2.7 Action of an RFID

For applicable RFID controllers, refer to Technical News GOT-A-0160 "List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)" separately available, or contact your local distributor.

■3 Connecting the RFID controller for the operator authentication

To use an RFID controller for the operator authentication, the controller can be connected to only the RS-232 interface built in the GOT.

■4 Number of RFID function settings for one project

One RFID function setting is available for one project.

■5 Devices for storing data read by RFID reader/writer and the number of device points

(1) Devices that can store the data

The data can be stored in the word device.
The bit device cannot be specified as the word device.

(2) Maximum number of devices

Up to 10000 devices can be set for the sent data and the received data in total.
For GT21 and GS21, up to 2000 devices can be set for the sent data and the received data, respectively.

10.2.3 Basic use of the RFID function

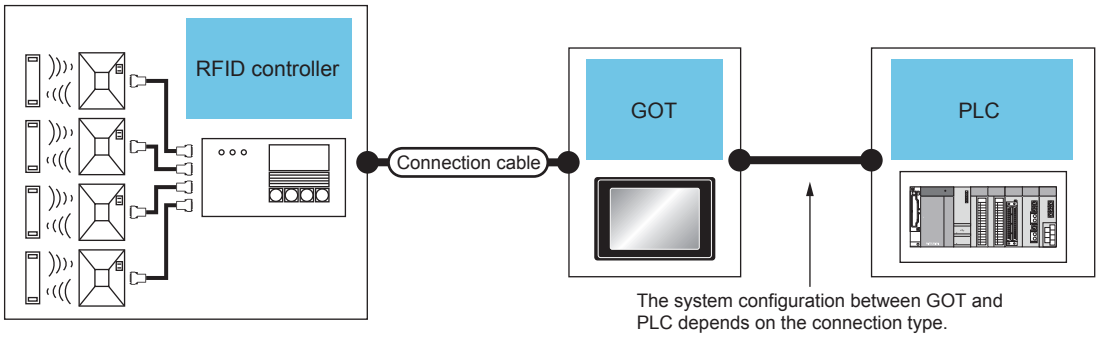
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 System configuration

The following shows the system configuration of RFID.
When you use the RFID on GT SoftGOT2000, the RFID is connected to the personal computer. Therefore, the RFID requires no connection to the GOT hardware.
For the connection method with GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual



RFID controller Model	Connection cable	GOT	PLC	Number of connectable RFID controllers
For the connectable RFID controllers and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	Depending on the specifications of the RFID controller	GT27 GT25 GT23 GT21 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One RFID controller for one GOT

■2 Setting procedure

Step 1 Connect the GOT and the RFID

➟■1 System configuration

Step 2 Configure the settings for the RFID function in the [RFID] dialog.

➟10.2.5 [RFID] dialog

Step 3 Set the System signal according to the channel No. you use.

➟10.2.6 System information settings

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Operate the RFID function.

➟10.2.7 Action of an RFID

10.2.4 Applicative use of the RFID function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 Directly inputting the data to the object (numerical input or text input)

To directly input the data to the object (numerical input or text input), the setting for using the RFID function is required for the object.

(1) Precautions during communication

Do not store or change the send data after starting communication with the RFID controller. The communication error may occur.

(2) Action when the GOT receives an error

When the GOT receives an error from an RFID reader/writer, the received error is directly input to the object (numerical input or text input).
For details of errors, refer to the following.

➟10.2.7 ■5 Errors during communication

(3) Receiving data that is divided into segments

When the data that is divided into segments is received, the segments of the received data are not combined in one.
When the segments of data are received, each segment of data is directly input to the object (numerical input or text input) in each time.

(4) Timing of starting communication

The RFID Request signal is not used for directly inputting data to the numerical input or text input.
The GOT starts communication with the RFID controller after the object (numerical input or text input) is touched and a cursor appears.
Set the data to be used for the communication with the RFID controller before displaying the cursor on the object (numerical input or text input).
The following shows the data used for each protocol communication.

Protocol	Data to be used for the communication with the RFID controller
Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)	RFID Controller signal (IC tag communication time, RFID reader/writer No.)
Nonprocedural protocol	Send data area

For the RFID Controller signal and send data area, refer to the following.

➟10.2.7 ■4 RFID Controller signal, send data area, and receive data area

(5) RFID controllers that cannot directly input data

When the following RFID controllers are used, data cannot be directly input to the object.

(a) **Communication using dedicated protocols**

- ICU-60S manufactured by MARS TOHKEN SOLUTION CO.LTD.
- ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.

(b) **Communication using nonprocedural protocols**

- RFID controllers that receive data for the first time after sending or receiving data in multiple times

(6) Input completion notification

(a) **When the input completion notification is disabled**

Establishing a handshake is not required by using the External Device I/O signal and the External Device I/O Complete signal.
While the cursor is displayed, data is sequentially read to the object, and old data is immediately overwritten by new data in each time.

(b) **When the input completion notification is enabled**

The data cannot be input to the object until the External Device I/O Signal is turned off by the External Device I/O Complete signal.

For communication using nonprocedural protocols, turn off the RFID Receive signal before starting the following communication.

If the data input starts while the RFID Receive signal is turned on, the GOT cannot determine whether the data input is completed.

For the actions of the System signal and RFID Controller signal, refer to the following.

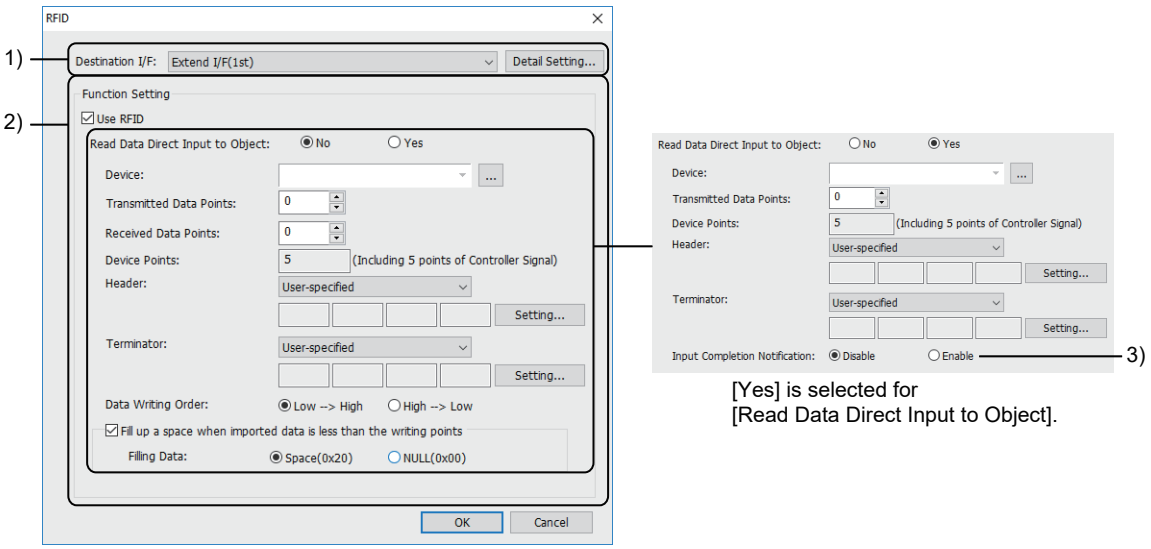
➟10.2.7 ■6 (1) Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)

10.2.5 [RFID] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

Select [Common] → [Peripheral Setting] → [RFID] from the menu to display the setting dialog.



[No] is selected for [Read Data Direct Input to Object].

[Yes] is selected for [Read Data Direct Input to Object].

1) **[Destination I/F]**

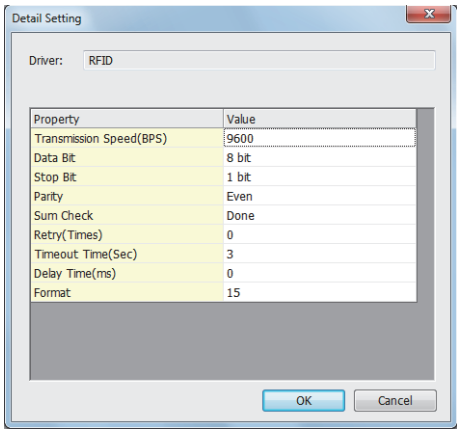
Set the interface of the GOT.

The following shows the items to be selected.

- [Standard I/F(RS422/485)] (For GT21-P: [Standard I/F(RS422/485/232(Side))])
- [Standard I/F(RS232)] (For GT21-P: [Standard I/F(RS232(Back))])
- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

[Extend I/F(1st)], [Extend I/F(2nd)], and [Ex-tend I/F(3rd)] are not available for GT25-W, GT2505-V, GT25HS-V, GT23,

GT21, GT Soft-GOT2000, GS25, and GS21.

Item	Description
[Detail Setting] button	Configure the detail setting in the [Detail Setting] window.  • **[Transmission Speed(BPS)]** Select the transmission speed. The following shows the items to be selected. • [4800] • [9600] • [19200] • [38400] • [57600] • [115200] • **[Data Bit]** Select the data length. The following shows the items to be selected. • [7bit] • [8bit] • **[Stop Bit]** Select the stop bit length. The following shows the items to be selected. • [1bit] • [2bit] • **[Parity]** Select the type for a parity check. The following shows the items to be selected. • [None] • [Even] • [Odd] • **[Sum Check]** Select whether to perform a sum check. The following shows the items to be selected. • [Done] • [None] • **[Retry(Times)]** Set the number of retries to be performed when a communication error occurs. When no response is received after the retries, the communication times out. The range to be selected is [0] to [5]. • **[Timeout Time(Sec)]** Set the interval for communication to time out. The setting range is [3] to [30]. • **[Delay Time(ms)]** Set the send delay time to lower the load of the network and the connected PLCs. The setting range is [0] to [3000]. • **[Format]** Select the communication format. The following shows the items to be selected. • [10]: Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.) • [11]: Dedicated protocol (ICU-60S manufactured by MARS TOHKEN SOLUTION CO.LTD.) • [12]: Dedicated protocol (ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.) • [15]: Nonprocedural protocol

2) **[Use RFID]**

Select this item to enable the RFID setting.

Item	Description
[Read Data Direct Input to Object]	Select whether to write the data read by the RFID reader/writer into the controller, or to directly input the read data to the object (numerical input or text input). • [No]: Writes the data into the controller. • [Yes]: Directly inputs the data to the numerical input or text input. To directly input the data to the object (numerical input or text input), the setting for using the RFID is required for the object. ➟8.4.5 [Numerical Input] dialog 8.5.5 [Text Input] dialog
[Device]	Select a device to be used for the RFID function. Devices equivalent to 5 points starting from the selected device are set as the RFID Controller signal.
[Transmitted Data Points]	Set this item when using a dedicated protocol (ICU-60S or ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.) or a nonprocedural protocol. Set the number of pieces of data to be sent. The following shows the setting range. • [0] to [10000] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) If [No] is selected for [Read Data Direct Input to Object], the total number of [Transmitted Data Points] and [Received Data Points] must be 10000 or less. • [0] to [2000] (GT21 and GS21)
[Received Data Points]	Set the number of pieces of received data. The following shows the setting range. • [0] to [10000] (GT27, GT25, GT23, GT SoftGOT2000, and GS25) The total number of [Transmitted Data Points] and [Received Data Points] must be 10000 or less. • [0] to [2000] (GT21 and GS21)
[Device Points]	The total of device points for [Transmitted Data Points], [Received Data Points], and the RFID Controller signal (5 points) is indicated.
[Header]	Select this item when using the nonprocedural protocol. Select either of the following headers suitable for the protocol of the RFID controller to be used. The following shows the items to be selected. • [None] • [STX] • [ENQ] • [User-specified]: Up to four bytes are settable. Specify a value for a byte in the range of 0x00 to 0xFF. When you select [User-specified], refer to the following. ➟10.1.5 ■1 (1) [Setting] dialog (for setting the header or terminator)
[Terminator]	Select this item when using the nonprocedural protocol. The following shows the items to be selected. • [ETX] • [LF] • [CR] • [CR+LF] • [User-specified]: Up to four bytes are settable. Specify a value for a byte in the range of 0x00 to 0xFF. When you select [User-specified], refer to the following. ➟10.1.5 ■1 (1) [Setting] dialog (for setting the header or terminator)
[Data Writing Order]	Select the order of writing data into the controller device. • [Low --> High]: The data is written into the controller device in the order of lower 8 bits to upper 8 bits. • [High --> Low]: The data is written into the controller device in the order of upper 8 bits to lower 8 bits.
[Fill up a space when imported data is less than the writing points]	Select this item to fill blank devices with spaces or NULLs when the number of bytes of the received data by the RFID reader/writer is less than the device points set for [Received Data Points]. After selecting the item, select the data to fill in blank devices. • [Space]: Fills the blank device with spaces (20H). • [NULL]: Fills the blank device with NULLs (00H).

3) **[Input Completion Notification]**

Select whether to enable or disable the completion notification of data input processing by the System signal (External Device I/O signal and External Device I/O Complete signal) and the RFID Controller signal (RFID Receive signal). The following shows the items to be selected.

• [Disable]

• [Enable]

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

10.2.6 System information settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 Setting the system information

Make sure to set one of the following System signals according to the channel No. you use.
For GT SoftGOT2000, set the System signal used for channel No.8 of the GOT.
The RFID function is unavailable without the settings.

Channel No.	System signal
Channel No.8	System signal 1-1, System signal 1-2, System signal 2-1
Channel No.5	System signal 1-2, System signal 2-3
Channel No.6	
Channel No.7	

For the details of the system information, refer to the following.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

■2 Action of the RFID function according to status of the control device

Depending on status of the control device to be used for communication, the GOT may not send or receive data to/from the RFID controller. For control devices for each protocol, refer to the following.

➟10.2.7 ■6 Example of the RFID action

10.2.7 Action of an RFID

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

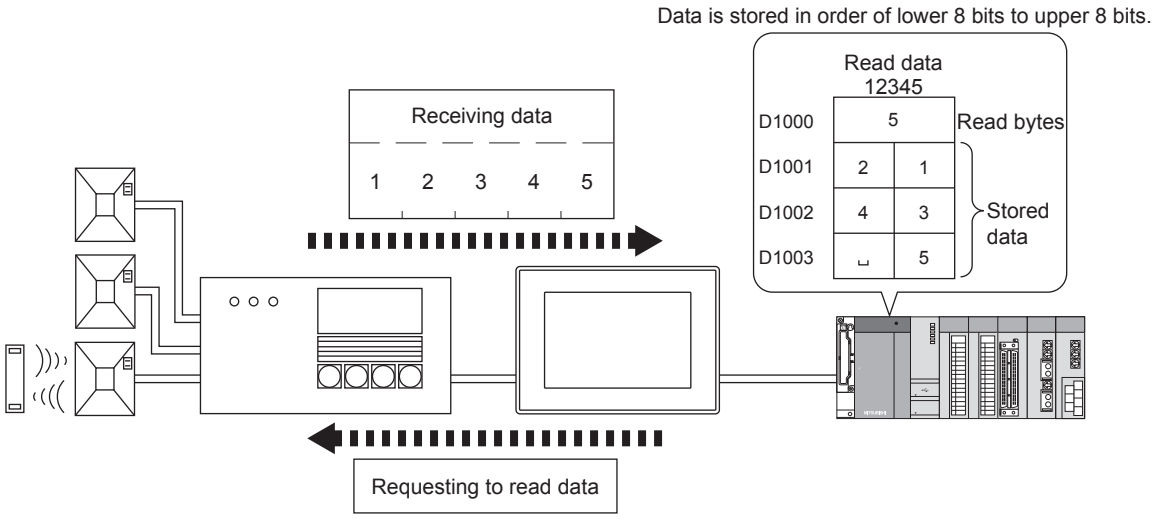
Not available to GT25HS-V.

■1 Order of writing data into the controller

Set the order of writing the data read by the RFID reader/writer into the controller devices.

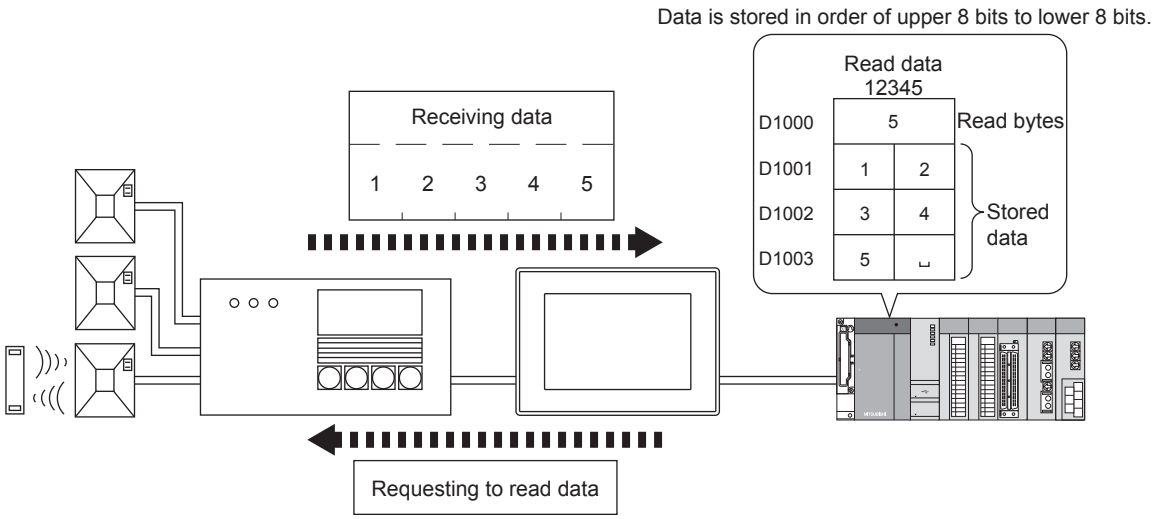
(1) Low → High

The data is written into the controller device in the order of lower 8 bits to upper 8 bits.



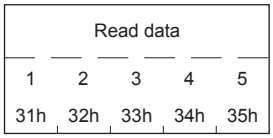
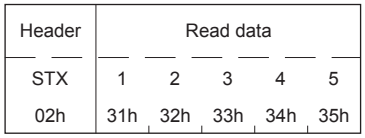
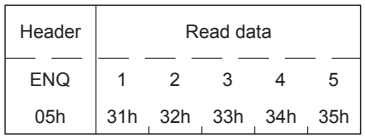
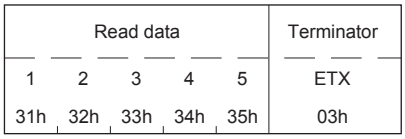
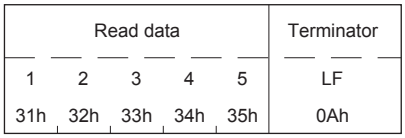
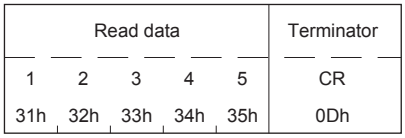
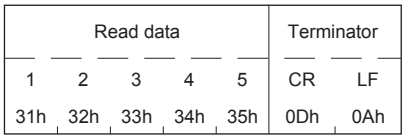
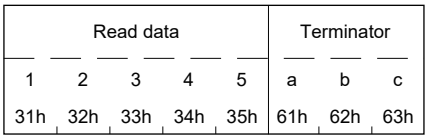
(2) High → Low

The data is written into the controller device in the order of upper 8 bits to lower 8 bits.



■2 Header/terminator

Set the header and terminator of the RFID read by the RFID.

Item		Description
Header	None (Default)	The read data is as follows when the header is not added to the head of data. 
	STX	The read data and STX are set as follows when STX is added to the head of data. 
	ENQ	The read data and ENQ are set as follows when ENQ is added to the head of data. 
	User-specified	The user-specified values are prepended to the read data. Example) When 41h, 42h, 43h, and 44h are specified
Terminator	ETX	The read data and ETX are set as follows when ETX is added to the end of data. 
	LF	The read data and LF are set as follows when LF is added to the end of data. 
	CR (Default)	The read data and CR are set as follows when CR is added to the end of data. 
	CR+LF	The read data and CR+LF are set as follows when CR+LF is added to the end of data. 
	User-specified	The user-specified values are appended to the read data. Example) When 61h, 62h, and 63h are specified 

■3 Data to be stored in devices

The following shows how the GOT writes data to be sent or received by the RFID reader/writer into controller devices as string data.

Example)

- Received data: 123456789
- Order of writing data: Low → High

(1) When the number of read data is less than the set device points

Settings (Storage device: D1005, Data points: 8)

Write device	Stored data	String data	
D1005	0009h	-	The GOT writes the bytes of the read data.
D1006	3231h	21	The GOT writes the read data in the order from lower byte.
D1007	3433h	43	
D1008	3635h	65	
D1009	3837h	87	
D1010	2039h	␣9	When the number of bytes of the data read by the barcode reader is less than the set device points, fill blank devices with spaces (20h) or NULLs (00h).
D1011	2020h	␣␣	
D1012	2020h	␣␣	

␣: Space

(2) When the number of read data is more than the set device points

Settings (Storage device: D1005, Data points: 4)

Write device	Stored data	String data	
D1005	0006h	-	The GOT writes the bytes of the read data.
D1006	3231h	21	The GOT writes the read data in the order from lower byte.
D1007	3433h	43	
D1008	3635h	65	
			The data that exceeds the set device points is not written.

■4 RFID Controller signal, send data area, and receive data area

Set the RFID Controller signal for controlling data transmissions with the RFID function.

Set [Device] in the RFID dialog to automatically set the RFID Controller signal.

➟10.2.5 [RFID] dialog

The following shows a setting example of the RFID Controller signal, send data points, and receive data points.

Example) RFID settings

- Device: D1000
- Send data points: 4
- Receive data points: 8

(1) RFID Controller signal

Device	Bit number	Item	Description
D1000	b0	RFID Receive signal	The bit turns on when the GOT receives data from the RFID controller, when the nonprocedural protocol is used.
	b1 to b14	-	-
	b15	Error signal	The bit turns on when the GOT receives an Error signal.
D1001	b0 to b7	IC tag communication time	The time (second) that the RFID reader/writer sends or receives data from/to an IC tag is stored in the bits when the dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.) is used.
	b8 to b15	RFID reader/writer No.	RFID reader/writer numbers that send or receive data from/to an IC tag are stored in the bits when the dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.) is used.
D1002	b0 to b15	-	-
D1003	b0 to b7	Error No.	Error codes are stored in the bits when errors occur.
	b8 to b15	Number of errors	The number of error occurrences is stored in the bits.

Device	Bit number	Item	Description
D1004	b0 to b15	RFID communication time	The communication time for the RFID function is stored in the bits. • With the dedicated protocol The total elapsed time of sending and receiving data is stored. • With the nonprocedural protocol The elapsed time of sending or receiving data is not stored.

(2) Send data area, receive data area

Device	Item	Description
D1005 to D1008	Send data area	The data to be sent to an IC tag is stored in the devices. The number of bytes for data to be sent is stored in the start device.
D1009 to D1016	Receive data area	The received data from an IC tag is stored in the devices. The number of bytes for the received data is stored in the start device.

■5 Errors during communication

The GOT detects errors when the errors occur while the GOT communicates with the RFID controller.
For the RFID Controller signal, refer to the following.

➟■4 RFID Controller signal, send data area, and receive data area

(1) When using a dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)

When an error occurs, the Error signal of the RFID Controller signal turns on, the number of error occurrences is counted, and an error code is stored in the error No.
Check if an error occurs with the Error signal of the RFID Controller signal.
The following shows error codes to be stored in the error No.

Error code	Description	Corrective action
FFh	Time out	Check if the cable is unplugged and check the RFID controller status. Take the following corrective actions. • Connect the cable again. • Correctly wire the cable. • Turn on the RFID controller.
FEh	SIO error	Check the communication settings and communication environments surrounding controllers. Set the communication settings for the RFID controller suitable for those for the GOT.
FDh	Send setting error	Set the station No. and time within the setting range.
FCh	Receive overflow	Set the receive data area suitable for the received data size.
14h	Time out or no IC tags	Make the GOT send a data read request when communications are available between an RFID controller and an IC tag.

For error codes and corrective actions other than the above, refer to the manual for the RFID controller.
After removing error causes, manually turn off the Error signal and send data again.

(2) When using a dedicated protocol (ICU-60S or ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.) or a nonprocedural protocol

When an error occurs, an error code is stored in the receive data area or the error No. of the RFID Controller signal.

(a) When the GOT receives an error reply from the RFID controller

When the GOT receives the error replay from the RFID controller, an error code is stored in the receive data area.
Check if an error occurs with the Error signal of the RFID Controller signal.
For errors and corrective actions, refer to the manual for the RFID controller. After removing error causes, send data again.

(b) When the GOT receives no error reply from the RFID controller

When the GOT receives no error reply from the RFID controller, the GOT turns on the Error signal of the RFID Controller signal, and the error code is stored in the error No.
Check if an error occurs with the Error signal of the RFID Controller signal.
The following shows error codes to be stored in the error No.

Error code	Description	Corrective action
FFh	Time out	Check if the cable is unplugged and check the RFID controller status. Take the following corrective actions. • Connect the cable again. • Correctly wire the cable. • Turn on the RFID controller.
FEh	SIO error	Check the communication settings and communication environments surrounding controllers.
FDh	Send setting error	Correctly set the send data length

Error code	Description	Corrective action
FCh	Receive overflow	Set the receive data area suitable for the received data size.

After removing error causes, manually turn off the Error signal and send data again.

■6 Example of the RFID action

(1) Dedicated protocol (LSRF manufactured by LS Industrial Systems Co., Ltd.)

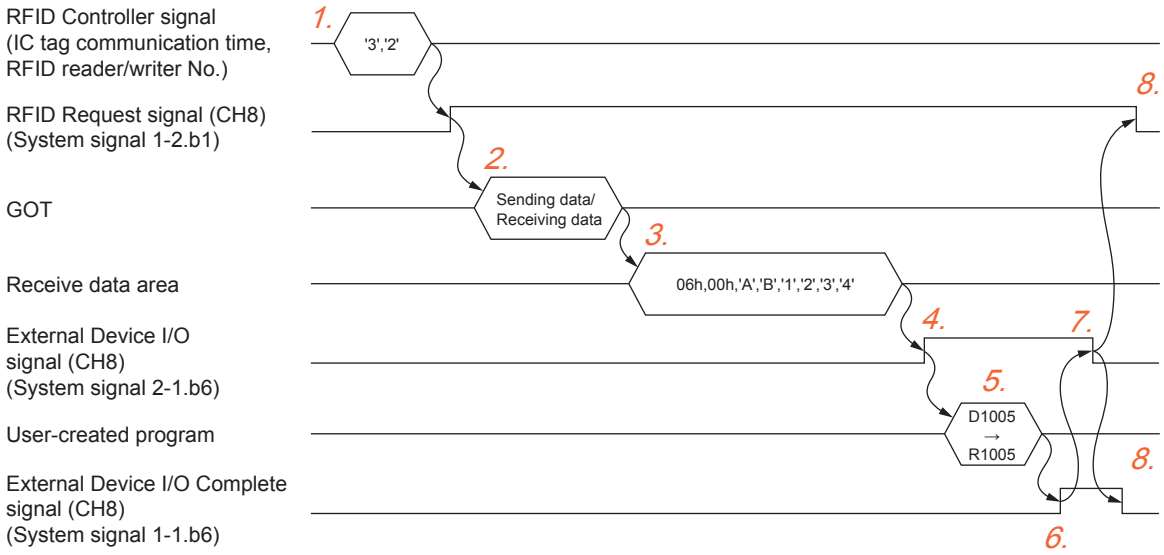
Example) Settings with GT Designer3 (When the GOT is connected to the RFID controller by using channel No.8)

- System signal 1-1: D10, System signal 1-2: D11, System signal 2-1: D12
- Device: D1000, Receive data points: 4

(a) Control devices

Device	Item
System information	External Device I/O Complete signal (CH8)(System signal 1-1.b6) RFID Request signal (CH8) (System signal 1-2.b1), External Device I/O signal (CH8)(System signal 2-1.b6) ➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])
RFID Controller signal	IC tag communication time, RFID reader/writer No. ➟■4 RFID Controller signal, send data area, and receive data area

(b) Handshake



Step 1	Set the RFID reader/writer No. and the time that the RFID reader/writer sends data to an IC tag. Example) RFID reader/writer No: 3, Time to send data to IC tag: 2 seconds
Step 2	Turn on the RFID Request signal, and then the RFID reader/writer communicates with an IC tag.
Step 3	Data of the IC tag read by the RFID reader/writer is stored in the receive data area.
Step 4	After data is stored in the receive data area, the GOT turns on the External Device I/O signal (CH8).
Step 5	Move the data stored in the receive data area to any of the other devices.
Step 6	Check that the data is moved, and then turn on the External Device I/O Complete signal (CH8).
Step 7	The GOT turns off the External Device I/O Complete signal (CH8).
Step 8	Turn off the External Device I/O Complete signal (CH8) and the RFID Request signal (CH8).

(c) Example of the sequence program (When the GOT is connected to QCPU by using channel No.8)

After the GOT receives data from the RFID controller, make sure to turn off the External Device I/O Complete signal and the RFID Request signal.
When the External Device I/O Complete signal and the RFID Request signal are on, the GOT cannot read the data.
Create a sequence program so that the External Device I/O Complete signal and the RFID Request signal turn off.

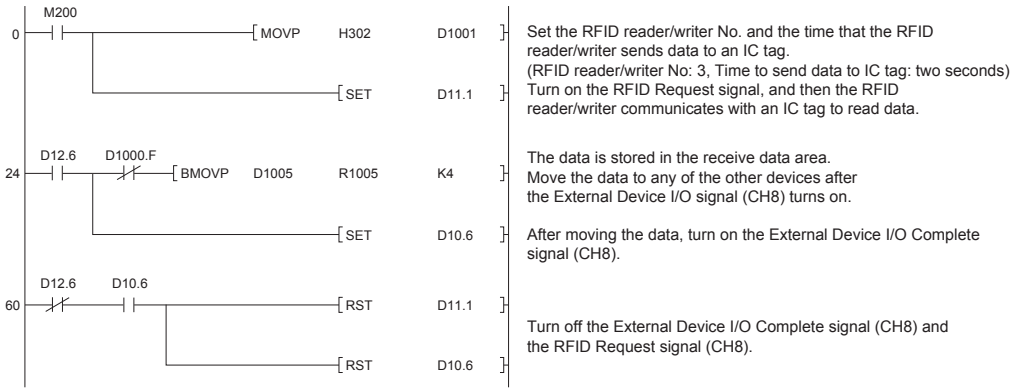
Point

Before using example programs

For applying the example programs in this manual to the actual system, make sure that the target system has no troubles on the control.

Signal to be used in a sequence program

- RFID reader/writer No.3 read command: M200



(2) Dedicated protocol (ICU-60S or ICU-215 (Mifare) manufactured by MARS TOHKEN SOLUTION CO.LTD.)

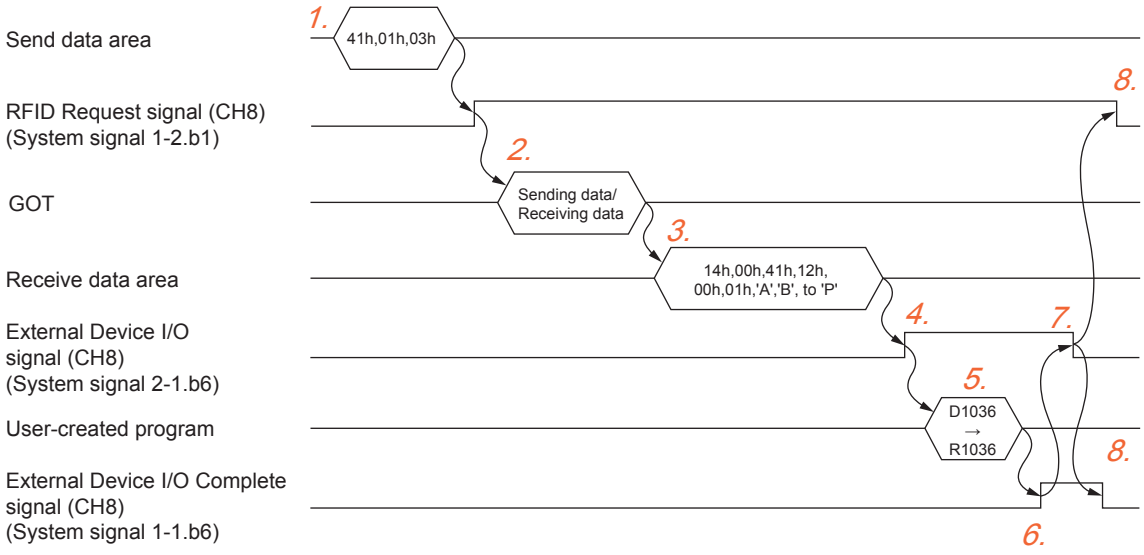
Example) Settings with GT Designer3 (When the GOT is connected to the RFID controller by using channel No.8)

- System signal 1-1: D10, System signal 1-2: D11, System signal 2-1: D12
- Device: D1000, Send data points: 30, Receive data points: 30

(a) Control devices

Device	Item
System information	External Device I/O Complete signal (CH8)(System signal 1-1.b6) RFID Request signal (CH8) (System signal 1-2.b1), External Device I/O signal (CH8)(System signal 2-1.b6) ➡5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

(b) Handshake



Step 1 Set the data to be sent to the RFID controller in the send data area.
Set the data suitable for the protocol of the RFID controller to be used.
Example) Reading record No.3 by "rf_read" command

Step 2 Turn on the RFID Request signal, and then the RFID reader/writer communicates with an IC tag.

Step 3 Data of the IC tag read by the RFID reader/writer is stored in the receive data area.

Step 4 After data is stored in the receive data area, the GOT turns on the External Device I/O signal (CH8).

Step 5 Move the data stored in the receive data area to any of the other devices.

Step 6 Check that the data is moved, and then turn on the External Device I/O Complete signal (CH8).

Step 7 The GOT turns off the External Device I/O Complete signal (CH8).

Step 8 Turn off the External Device I/O Complete signal (CH8) and the RFID Request signal (CH8).

(c) **Example of the sequence program (When the GOT is connected to QCPU by using channel No.8)**

After the GOT receives data from the RFID controller, make sure to turn off the External Device I/O Complete signal and the RFID Request signal.

When the External Device I/O Complete signal and the RFID Request signal are on, the GOT cannot read the data. Create a sequence program so that the External Device I/O Complete signal and the RFID Request signal turn off.

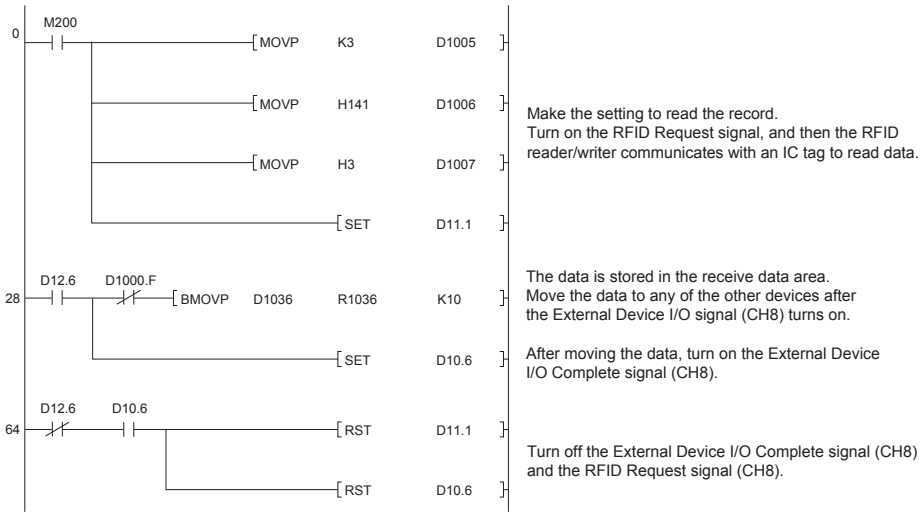
Point

Before using example programs

For applying the example programs in this manual to the actual system, make sure that the target system has no troubles on the control.

Signal to be used in a sequence program

• Record No.3 read command: M200



(3) Nonprocedural protocol

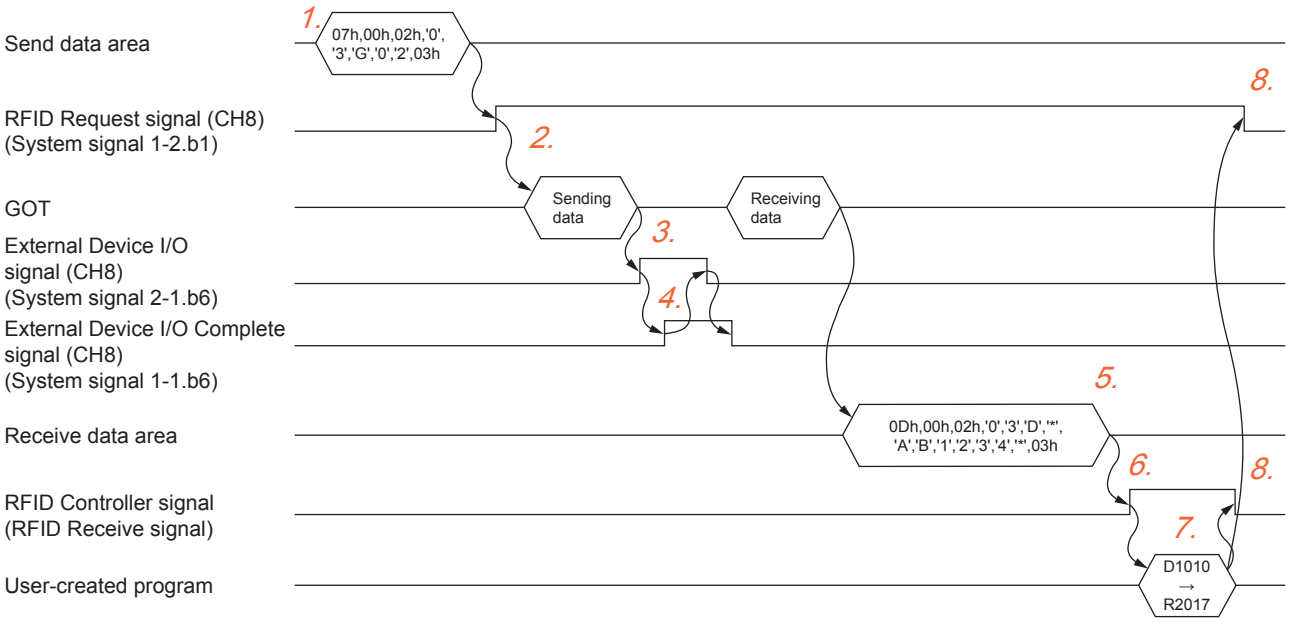
Example) Settings with GT Designer3 (When the GOT is connected to the RFID controller by using channel No.8)

- System signal 1-1: D10, System signal 1-2: D11, System signal 2-1: D12
- Device: D1000, Send data points: 5, Receive data points: 8

(a) Control devices

Device	Item
System information	External Device I/O Complete signal (CH8)(System signal 1-1.b6) RFID Request signal (CH8) (System signal 1-2.b1), External Device I/O signal (CH8)(System signal 2-1.b6) ⇒5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])
RFID Controller signal	IC tag communication time, RFID reader/writer No. ⇒■4 RFID Controller signal, send data area, and receive data area

(b) Handshake



Step 1 Set the data to be sent to the RFID controller in the send data area.

Set the data suitable for the protocol of the RFID controller to be used.

Example) "07h, 00h, 02h, '0', '3', 'G', '0', '2', 03h"

Step 2 Turn on the RFID request signal (CH8), and then the RFID reader/writer sends the data stored in the send data area to the IC tag.

Step 3 The GOT turns on the External Device I/O signal (CH8).

Step 4 Check that the External Device I/O signal (CH8) is on, and then turn on the External Device I/O Complete signal (CH8).

The GOT turns off the External Device I/O Complete signal (CH8).

Turn off the External Device I/O Complete signal (CH8).

Step 5 The IC tag sends data to the RFID reader/writer, and the data is stored in the receive data area.

Step 6 The GOT turns on the RFID Receive signal.

Step 7 Move the data stored in the receive data area to any of the other devices.

Step 8 Turn off the RFID Request signal (CH8) and the RFID Receive signal.

(c) Example of the sequence program (When the GOT is connected to QCPU by using channel No.8)

Be sure to turn off the RFID Request signal and the RFID Receive signal before the GOT sends the next data read request to the RFID controller.

When the RFID Request signal and the RFID Receive signal are on, the GOT cannot communicate with the RFID controller.

Create a sequence program so that the RFID Request signal and the RFID Receive signal turn off.

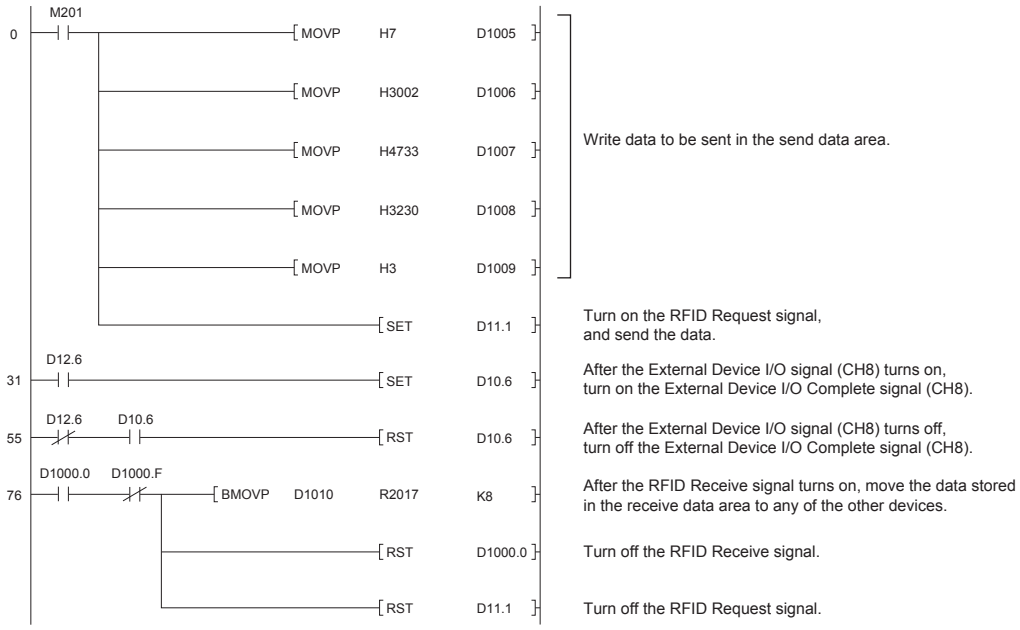
Point

Before using example programs

For applying the example programs in this manual to the actual system, make sure that the target system has no troubles on the control.

Signal to be used in a sequence program

• Data send command: M201



10.2.8 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

■1 Precautions for hardware

When the RFID controller is used with [Standard I/F(RS232)], 5V power supply from the GOT should become enabled on some RFID controllers.

For applicable RFID controllers, refer to Technical News GOT-A-0160 "List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas)" separately available, or contact your local distributor.

10.2.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25HS-V.

Set the relevant settings other than the specific settings for the RFID function as required.

The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu to display the [Environmental Setting] dialog.

➥5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Target CH	Function	Setting item
CH5	Turning on this signal requests the RFID controller to read data. (Read device: System signal 1-2.b4)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b0). (Read device: System signal 1-2.b3)	[System Signal 1-2]
	Notifying that the data read by the RFID reader/writer is stored into the specified device when the dedicated protocol is used. Notifying that sending data to the RFID controllers is completed when the nonprocedural protocol is used. (Write device: System signal 2-3.b0)	[System Signal 2-3]
CH6	Turning on this signal requests the RFID controller to read data. (Read device: System signal 1-2.b7)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b1). (Read device: System signal 1-2.b6)	[System Signal 1-2]
	Notifying that the data read by the RFID reader/writer is stored into the specified device when the dedicated protocol is used. Notifying that sending data to the RFID controllers is completed when the nonprocedural protocol is used. (Write device: System signal 2-3.b1)	[System Signal 2-3]
CH7	Turning on this signal requests the RFID controller to read data. (Read device: System signal 1-2.b10)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-3.b2). (Read device: System signal 1-2.b9)	[System Signal 1-2]
	Notifying that the data read by the RFID reader/writer is stored into the specified device when the dedicated protocol is used. Notifying that sending data to the RFID controllers is completed when the nonprocedural protocol is used. (Write device: System signal 2-3.b2)	[System Signal 2-3]
CH8	Turning on this signal requests the RFID controller to read data. (Read device: System signal 1-2.b1)	[System Signal 1-2]
	Turning on this signal turns off the External Device I/O signal (System signal 2-1.b6). (Read device: System signal 1-1.b6)	[System Signal 1-1]
	Notifying that the data read by the RFID reader/writer is stored into the specified device when the dedicated protocol is used. Notifying that sending data to the RFID controllers is completed when the nonprocedural protocol is used. (Write device: System signal 2-1.b6)	[System Signal 2-1]

■2 GOT Internal Device

➥12.1.3 GOT special register (GS)

Function	Setting item
Notifying that external authentication of operator authentication function succeeds. (Write device)	GS240.b0
Notifying that external authentication of operator authentication function fails. (Write device)	GS240.b1
Notifying that the login screen for the external authentication of operator authentication function is displayed. (Write device)	GS240.b14
Notifying that the object is in the ready state for the data read by the barcode reader and the RFID to be directly input. (Write device)	GS243.b15

10.3 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Ethernet))

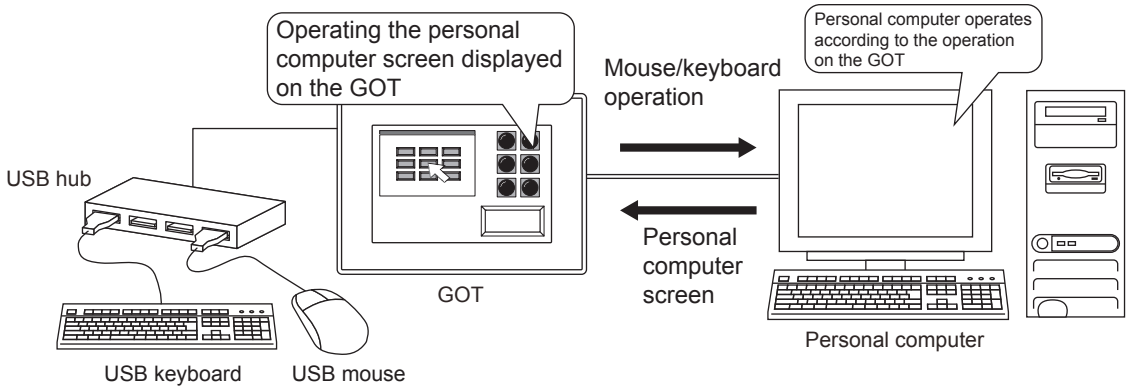
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.3.1 Overview of the remote personal computer operation function (Ethernet)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The remote personal computer operation (Ethernet) enables you to operate the personal computer by using the GOT via Ethernet.

■1 Operating the personal computer on the GOT screen.

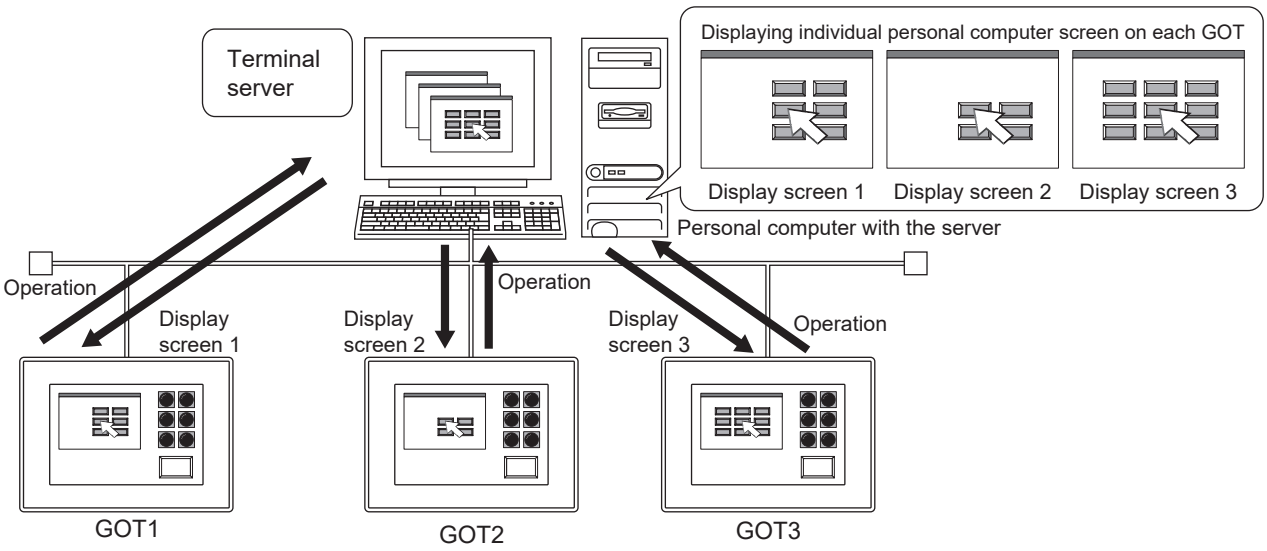


Using the USB mouse/keyboard function enables you to use the USB mouse and USB keyboard for the remote personal computer operation (Ethernet).
For the details of the USB mouse/keyboard function, refer to the following.

➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

■2 Remote personal computer operation (Ethernet) with multiple GOTs

When the personal computer with the server OS is used, the terminal server function of the personal computer enables the multiple GOTs to perform the remote personal computer operation (Ethernet).
When the personal computer screen appears on the GOT, the GOT logs on to the terminal server automatically.
After the logon, the terminal server displays the individual screen of the personal computer on each GOT.



10.3.2 Specifications of the remote personal computer operation (Ethernet)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the remote personal computer operation (Ethernet), a system application (extended function) of [PC Remote Operation(Ethernet)] is required.
Selecting [Use PC Remote Operation (Ethernet)] in the [PC Remote Operation] dialog incorporates the application into the package data automatically.

➟10.3.4 [PC Remote Operation] dialog

■2 Remote personal computer operation (Ethernet) to be set for one project

One remote personal computer operation function is available for one project.

■3 License number registration

To use the remote personal computer operation (Ethernet), register a license number on the GOT.
For how to register the license number, refer to the following.

➟GOT2000 Series User's Manual (Utility)

When the license number is not registered, the 30 minutes of trial for the function is available upon connection to the VNC server.
Up to 30 trials are available.
To start a trail again, turn off and then on the GOT.
After 30 trials, you must register the license number to use the function.

■4 Required software to be installed

Software you need to install depends on the number of the connected GOT and personal computer.

Number of GOTs	Software	Installation procedure
One	VNC server software	➟10.3.5 ■1 For the remote personal computer operation (Ethernet) with one GOT
Two or more	• Windows terminal server function • Encryption software • Terminal service function software	➟10.3.5 ■2 For the remote personal computer operation (Ethernet) with multiple GOTs

(1) VNC server software

Download UltraVNC (Win32 Full version) from the following website.
http://www.uvnc.com/
Note that the above website may be changed without notification.
For the applicable UltraVNC version, refer to the following Technical Bulletin.

➟List of VNC Servers Supporting the Remote Personal Computer Operation (Ethernet) Function Validated to Operate with the GOT2000 Series(GOT-A-0110)

(2) Windows terminal server function

The terminal server function with the following OS is applicable.

- Windows Server 2012 R2 (x64): Automatic logon to the terminal server is not supported.
- Windows Server 2003

(3) Encryption software (OpenSSL)

Name	Manufacturer	Version
Win32OpenSSL	The OpenSSL Project	Depends on the terminal server function to be used. • Windows Server 2012 R2 (x64): Latest version of 1.0.2 • Windows Server 2003: Latest version of 0.9.8

For the operating environment of the software and its downloading, refer to the following website.
http://www.slproweb.com/products/Win32OpenSSL.html
Note that the above website may be changed without notification.

(4) Terminal service function software (RDPGateway(rdp2vnc))

Name	Manufacturer
RDPGateway (rdp2vnc)	Hitachi Solutions, Ltd.

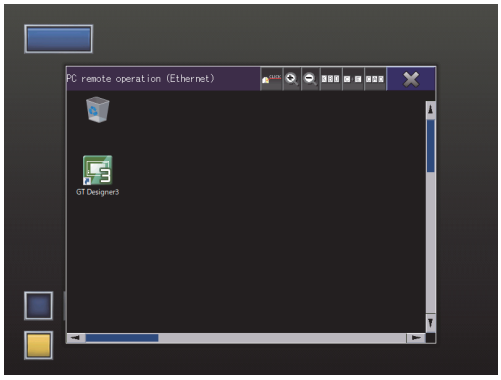
Refer to the following website to download RDPGateway (rdp2vnc).
https://csps.hitachi-solutions.co.jp/rdp2vnc/
Note that the above website may be changed without notice. If you cannot obtain the software, contact your local sales office.

■5 Display modes of the personal computer screen on the GOT

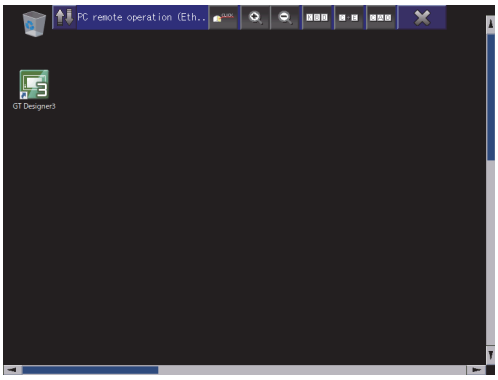
The personal computer screen on the GOT is displayed in the window display mode or full screen mode.
Use GS465.b8 to switch between the display modes.

➟12.1.3 GOT special register (GS)

If you do not use GS465.b8, the personal computer screen on the GOT opens in the window display mode.



Window display mode



Full screen mode

- Window display mode
  The screen is layered on part of the base screen.
  The toolbar is always displayed at the top of the personal computer screen on the GOT.
- Full screen mode
  The screen is displayed on the entire base screen.
  The toolbar is displayed when you first open the screen or touch the toolbar display touch area.
  When the resolution is the same between the GOT and the personal computer, hiding the scroll bars with GS465.b7 displays the entire personal computer screen on the GOT.

The following shows the specifications of the display modes.

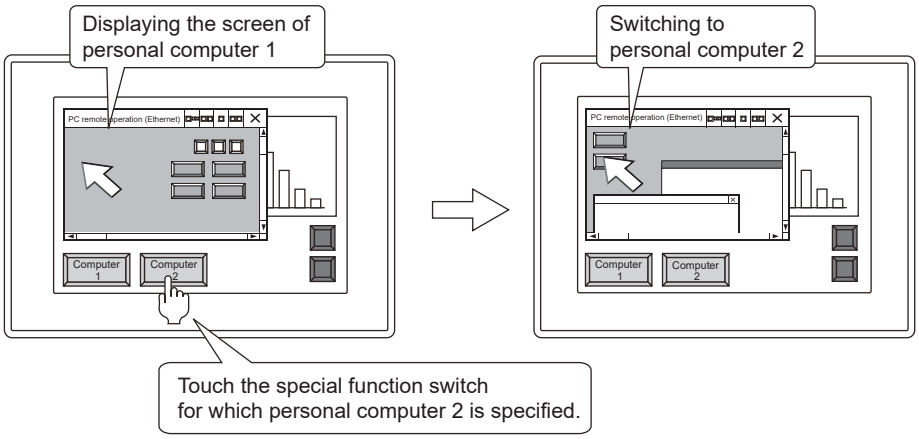
Display mode	Applicable graphics mode	Number of system windows *1	Operating procedure
Window display mode	GOT Graphic Ver.1	1	➟10.3.7 Operation on the personal computer screen on the GOT in the window display mode
	GOT Graphic Ver.2	2	
Full screen mode	GOT Graphic Ver.2	0	➟10.3.8 Operation on the personal computer screen on the GOT in the full screen mode

*1 For system windows, refer to the following.

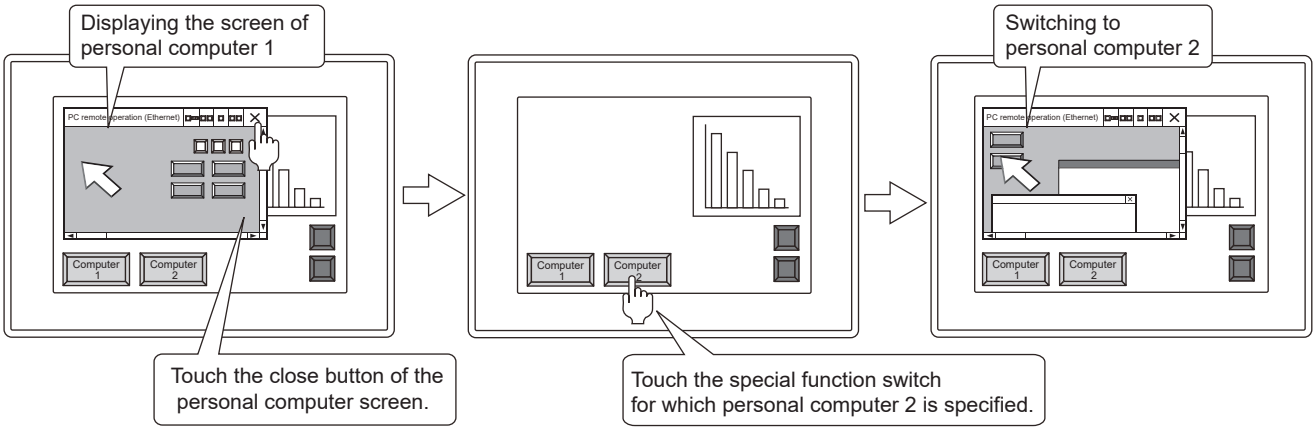
➟5.2.1 ■2 (5) Using an overlap window as the system window

■6 Switching the personal computer screen on the GOT

When the GOT connected with multiple personal computers displays a remote screen window, tuning on GS465.b10 enables switching between personal computer screens without closing the remote screen window.



Touch the function switch for which another personal computer is specified to switch the displayed personal computer screen to the specified personal computer screen without closing the remote screen window.
When GS465.b10 is off, the displayed personal computer screen is not switched and an error message is displayed.
Touch the close button to close the displayed personal computer screen, and then touch the special function switch for which another personal computer is specified to open the screen of that personal computer.



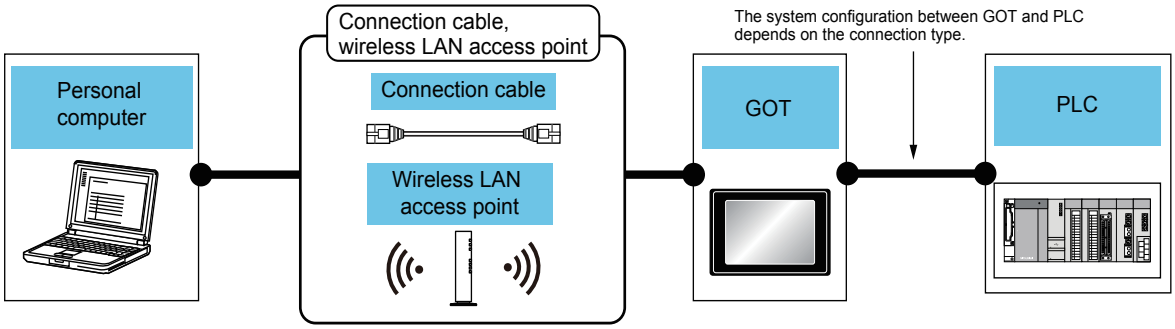
When the connected personal computer is switched without closing the remote screen window, only the operation log [Touch switch: Application switching] is output.

10.3.3 How to use the remote personal computer operation (Ethernet)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

The following shows the system configuration of the personal computer.



Personal computer	Connection cable*1*2, wireless LAN access point	Maximum segment length*3	GOT		PLC	Number of connectable personal computers
			Option	GOT model		
Select by each user	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GS25	For the system configuration between the GOT and the PLC, refer to each connection manual.	One personal computer for one GOT
			GT25-J71E71-100	GT27 GT25 *6		
	-	-	GT25-WLAN	GT27 *4 GT25 *4*6 GS25 *4		
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*6 GS25 *5		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 for a cascade connection (within 500 m)
• 100BASE-TX: Up to 2 for a cascade connection (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➡5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➡5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Not available to GT2505-V and GT25HS-V.

■2 Setting procedure

The following shows how to configure the settings for the remote personal computer operation (Ethernet).

Step 1 Connect the personal computer to the GOT.

➟■1 System configuration

Step 2 Set the destination I/F for the Ethernet download in [Destination I/F] in [Ethernet Download] in the peripheral device setting ([PC (Data Transfer)] dialog).

➟4.8.1 [PC (Data Transfer)] dialog

Step 3 Configure the settings for the remote personal computer operation (Ethernet) in the [PC Remote Operation] dialog.

➟10.3.4 [PC Remote Operation] dialog

Step 4 Set the GOT Ethernet interface.

➟5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

Step 5 Arrange the special function switch on the GT Designer3 screen, then select [PC Remote Operation (Ethernet)] for the switch action.

For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

Step 6 Install the software on the personal computer.

➟10.3.5 Installation of the software

Step 7 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 8 Register the license number on the GOT.

For how to register the license number, refer to the following.

➟GOT2000 Series User's Manual (Utility)

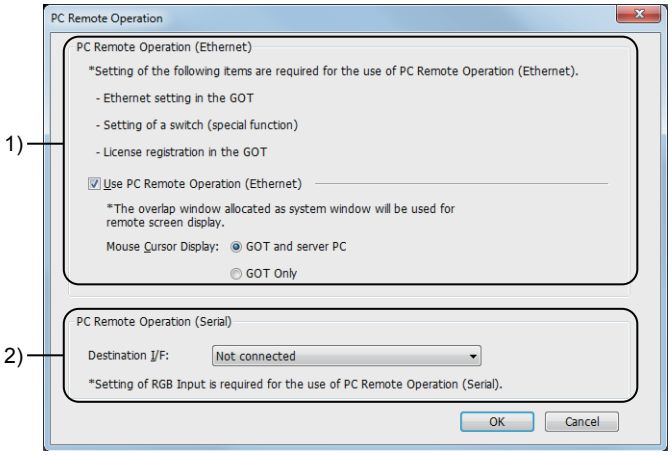
Step 9 Open the personal computer screen on the GOT.

➟10.3.6 Personal computer screen on the GOT

10.3.4 [PC Remote Operation] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [Peripheral Setting] → [PC Remote Operation] from the menu to display the setting dialog.



1) **Remote personal computer operation (Ethernet)**
Set the actions of the remote personal computer operation (Ethernet).

Item	Description
[Use PC Remote Operation (Ethernet)]	Select this item to enable the remote personal computer operation (Ethernet).
[Mouse Cursor Display]	Select how to display the mouse cursor on the GOT when the USB mouse is used. • [GOT and server PC] Select this item to display the mouse cursor on the GOT and the mouse cursor on the personal computer. • [GOT Only] Select this item to display only the mouse cursor on the GOT. The mouse cursor on the personal computer is not displayed.

2) **Remote personal computer operation (Serial)**
No setting is required.

10.3.5 Installation of the software

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the remote personal computer operation (Ethernet) with GOT, install the following software on the personal computer, and configure the settings.

■1 For the remote personal computer operation (Ethernet) with one GOT

Install the VNC server software on the personal computer.
The following shows how to install the software and configure the settings.

(1) How to install Remote Personal Computer Operation Driver (MES_2X)

Step 1 Execute the downloaded file, and start the installer.

Step 2 The setup window appears.

Click the [Next] button until the [License Agreement] screen is displayed.
Confirm the description in the screen, and then select [I accept the agreement].

Step 3 Click the [Next] button until the [Select Destination Location] screen is displayed.

In the screen, select the location where the software is installed.

Step 4 The [Select Components] screen appears.

Select [Full installation] or [UltraVNC Server Only].

Step 5 The [Select Start Menu Folder] screen appears.

Select a start menu folder to create a shortcut.

Step 6 The confirmation window appears to confirm whether to download the following software.

(For Windows 10, the confirmation window does not appear. Proceed to step 7.)

- Optional non-GPL addons recommended for Vista
  Download the software when using Windows Vista.
- Optional non-GPL Mirror Driver
  Download the software.

Step 7 The [Select Additional Tasks] screen appears.

- Select [Register UltraVNC Server as a system service].
  UltraVNC is registered in the system service.
- Select [Start or restart UltraVNC service].
  The UltraVNC service becomes available.
- To create a shortcut icon on the desktop, select [Create UltraVNC desktop icons].
- To open the file with the extension of .vnc by using UltraVNC Viewer, select [Associate UltraVNC Viewer with the .vnc file extension].

Step 8 The confirmation screen for installation appears.

Confirm the description in the screen, and then click the [Install] button.
Installation of UltraVNC starts.

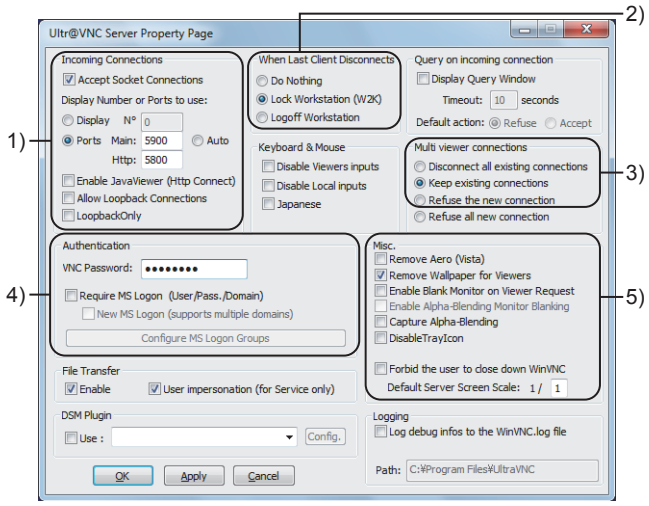
(2) Settings

The following shows the setting method by using UltraVNC version 1.0.5.6 as an example.

Step 1 When UltraVNC is not started, click [UltraVNC]→[UltraVNC Server] from the start menu to start UltraVNC.

Step 2 Right-click the UltraVNC icon in the notification area, and select [Admin Properties].

The setting window appears, and then configure the settings as shown below.
The items to be displayed differ depending on the UltraVNC version.
No setting is required for the items which are not explained in the following.



1) [Incoming connections]

Configure the connection settings between the GOT and the VNC server.

Item	Description
[Accept Socket Connection]	Select this item to accept the socket connection. Without selecting, the GOT cannot be connected to the VNC server.
[Display Number or Ports to use]	Set a port number for the connection. [Display]: Set the port number with a display number. The port number is the set display number with 5900 added. [Ports(Main)]: Set the port number without the display number. The setting range is [1024] to [65535].

2) [When Last Client Disconnects]

Set the action when the last connected VNC client (GOT) is disconnected.
Select [Lock Workstation(W2K)].

3) [Multi viewer connections]

Set the action when multiple VNC clients (GOTs) require to be connected to the VNC server.
Select [Keep existing connections].

4) [Authentication]

Configure the authentication setting to connect the GOT to the VNC server.

Item	Description
[VNC Password]	Set a password for the VNC server.

5) [Misc.]

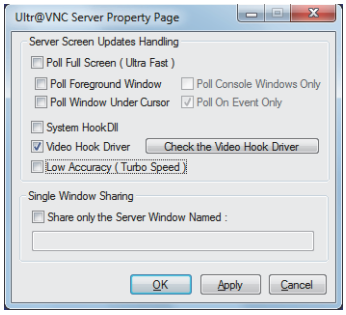
Configure the settings other than the above.

Item	Description
[Remove Aero (Vista)]	Select this item to disable Windows Aero while the GOT is connected to the viewers. Set this item when using Windows Aero.
[Remove Wallpaper for Viewers]	Select this item not to display a wallpaper while the GOT is connected to the viewers.
[Default Server Screen Scale]	Set the default value of the server screen display magnification. Make sure to set 1 as the default value.

Step 3 Right-click the UltraVNC icon in the notification area, and select [Properties].

The setting window appears, and then select [Video Hook Driver].

This setting is not required if the setting item is not displayed.



■2 For the remote personal computer operation (Ethernet) with multiple GOTs

For the remote personal computer operation (Ethernet) with multiple GOTs, use the terminal server function of the personal computer.

To use the the terminal server function, install the following software.

- Windows terminal server function
- Encryption software (OpenSSL)
- Terminal service function software (RDPGateway(rdp2vnc))

(1) How to install the software for terminal server function

Step 1 Click [Start] → [Settings] → [Control Panel].

Step 2 The [Control Panel] window appears.
Click [Add or Remove Programs].

Step 3 The [Add or Remove Programs] window appears.
Click [Add/Remove Windows Components].

Step 4 The [Windows Components Wizard] window appears.
Select [Terminal Server] and [Terminal Server Licensing] in the component list.

Step 5 Click the [Next] button.
Installation of the software for terminal server function starts.

Step 6 After the installation is completed, the [Terminal Server Licensing] window appears.
Right-click a server name you register, and select [Activate Server].

(2) Terminal server function settings

Set the following items in the terminal server function settings.
For how to configure the terminal server settings, refer to the Windows manual.

(a) User name and password

Register a user name and password to log on to the terminal server.
Set the user name with up to 20 characters, and the password with up to 127 characters.
One-byte alphanumeric characters, one-byte space, and symbols (excluding "/[]:; | =,+*?<>\) are available for the user name. One-byte alphanumeric characters, one-byte space, and the following symbols are available for the password.
! " # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

(b) Logon screen display settings

Configure the setting so that the logon screen is displayed on the personal computer with the terminal server when the GOT is connected to the personal computer.
If the logon screen is not displayed on the terminal server, unexpected actions may occur on the personal computer.

(c) Disabling the network level authentication (for Windows Server 2012 R2 (x64))

Step 1 From the Windows start menu, select [Control Panel].

Step 2 In the [Control Panel] window, select [System] → [Remote Settings] from the menu.

Step 3 In the [System Properties] window, select the [Remote] tab and clear [Allow connections only from computers running Remote Desktop with Network Level Authentication].

(3) How to install the encryption software

Step 1 Execute the downloaded file, and start the installer.

Step 2 The setup window appears.

Click the [Next] button until the [License Agreement] screen is displayed. Confirm the description in the screen, and then select [I accept the agreement].

Step 3 Click the [Next] button until the [Select Destination Location] screen is displayed.

In the screen, select the location where the software is installed.

Step 4 The [Select Start Menu Folder] screen appears.

Select a start menu folder to create a shortcut.

Step 5 The [Select Additional Tasks] screen appears.

Select a directory where the DLL file for OpenSSL is copied.

Step 6 The confirmation screen for installation appears.

Confirm the description in the screen, and then click the [Install] button.
Installation of OpenSSL starts.

Step 7 After the installation is completed, the confirmation screen for donation appears.

Confirm the description in the screen, and then select or clear the check box.
When you do not make a donation, clear the check box.

(4) Encryption software settings

No setting is required.

(5) How to install the terminal service function software

Step 1 Decompress the downloaded file.

Step 2 Open the rdp2vnc folder, and execute the install2003jp.bat.

The command prompt starts.

Step 3 Enter the name of the personal computer where RDPGateway (rdp2vnc) is installed.

Step 4 Enter the name and password of the user with administrator authority.

Installation of the software starts.

Step 5 After the installation is completed, press the Enter key to exit the command prompt.

Step 6 Select [Start] → [Control Panel] → [Administrative Tools] → [Services].

The [Services] window appears.
Check that [rdp2vnc Server] is registered.

Step 7 Open the drive C to check that the [rdp2vnc] folder is created.

(6) Terminal service function software settings

Step 1 Select [Start] → [Control Panel] → [Administrative Tools] → [Services].

The [Services] window appears.
Right-click [rdp2vnc Server], and select [Properties].

Step 2 The property setting window appears.

Click the [Recovery] tab to set the following for [First failure], [Second failure], and [Subsequent failures].

- [Restart the Service]

10.3.6 Personal computer screen on the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 How to open the personal computer screen on the GOT

Open the personal computer screen on the GOT with a special function switch.
For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

■2 Changing the display mode

Use GS465.b8 to switch between the display modes of the personal computer screen on the GOT.

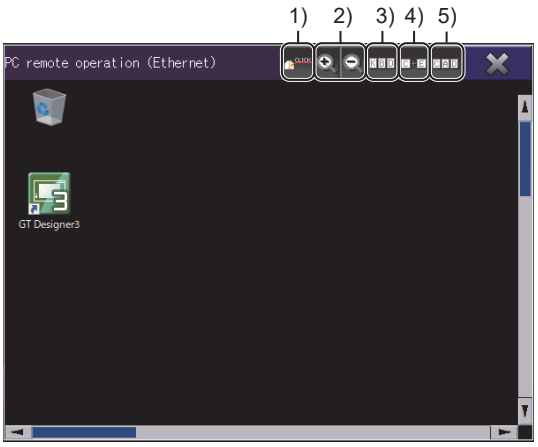
- When GS465.b8 is on: Full screen mode
- When GS465.b8 is off: Window display mode

If you switch the display mode, do so before opening the personal computer screen on the GOT.

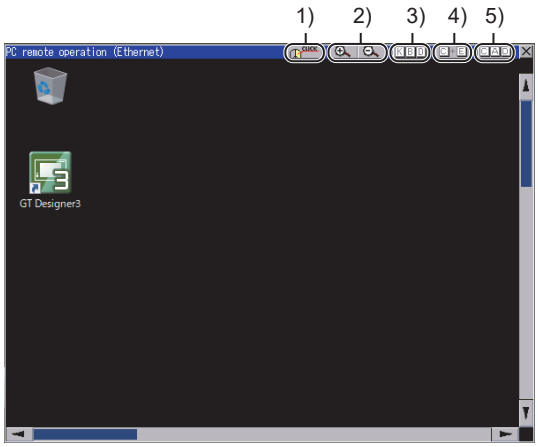
10.3.7 Operation on the personal computer screen on the GOT in the window display mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Touch any part of the screen to move the mouse cursor and left-click.
You can drag on-screen items with a touch-and-slide operation.



GOT Graphic Ver.2



GOT Graphic Ver.1

1) **Click switching button**
Touch this button to switch the click operation to the right-click.
After switching, clicking any part of the screen cancels the right-click.

2) **Zoom in button, Zoom out button**
These buttons change the display magnification of the screen.
The zoom in button zooms in the displayed screen.
The zoom out button zooms out the displayed screen.

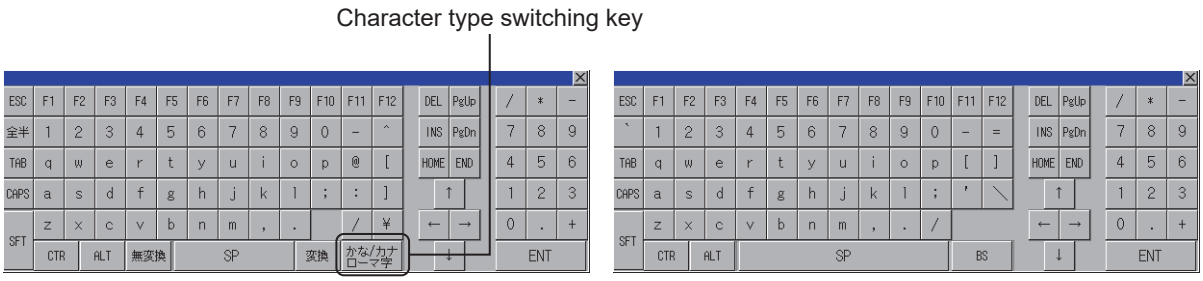
3) **[KBD] button**
Touch this button to display the soft keyboard.
Select the soft keyboard type in the [Special Function Switch] dialog.

➟8.2.9 [Special Function Switch] dialog

4) **[C+E] button**
This button performs the same operation as that of holding down the [Ctrl] key and the [ESC] key simultaneously.

5) **[CAD] button**
This button performs the same operation as that of holding down the [Ctrl] key, the [Alt] key, and the [Del] key simultaneously.

■1 Soft keyboard operation



Japanese 106 keyboard

English 101 keyboard

Touching and holding a key on the soft keyboard performs the same operation as that performed by repeating the input. (The [SFT] key, the [ALT] key, the [CTR] key, and the [CAPS] key are excluded.)
Touching the [SFT] key, the [ALT] key, or the [CTR] key once keeps the state of holding down the key.
To release the key, perform one of the following operations.

- Touch the same key again.
- Touch any key other than the [SFT] key, the [ALT] key, or the [CTR] key.

The [CAPS] key is held down or released each time the key is touched.
Touching the title bar moves the soft keyboard as well as the key window.
Touching the [×] button closes the soft keyboard.
The Ultra VNC server does not support switching character string using the character type switching key.

■2 Operation of a USB mouse and USB keyboard

For details on the USB mouse and USB keyboard, refer to the following.

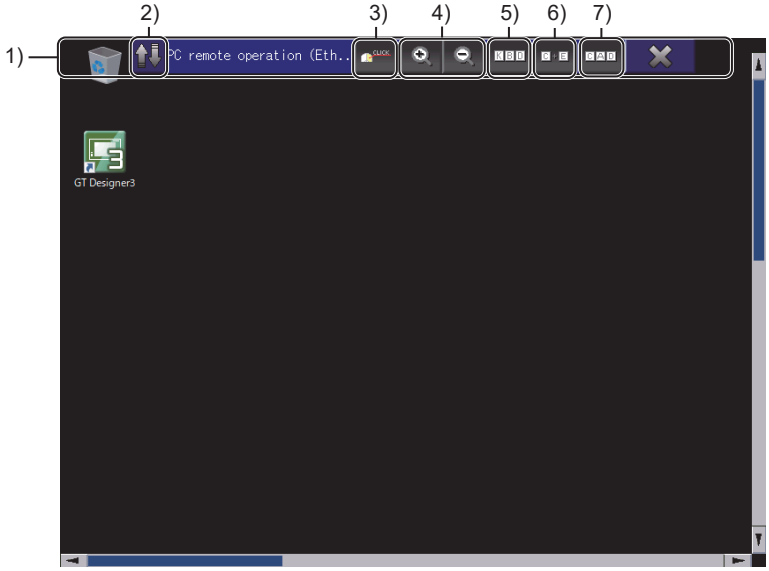
➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

10.3.8 Operation on the personal computer screen on the GOT in the full screen mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GOT Graphic Ver.2

Touch any part of the screen to move the mouse cursor and left-click.
You can drag on-screen items with a touch-and-slide operation.



1) **Toolbar display touch area**
The area 40 dots from the top edge, excluding the area 32 dots from the right edge of the personal computer screen on the GOT, applies to the toolbar display touch area.
Touch this area to display the toolbar in the location it was previously displayed.
The toolbar is displayed at the top or bottom of the screen.
If no operation is performed on the toolbar for a specified time period, the toolbar is hidden.
The toolbar size is 640 dots × 40 dots regardless of the screen resolution.

2) **Toolbar display position switching button**
Switches the toolbar display position either at the top or at the bottom of the screen.

3) **Click switching button**
Touch this button to switch the click operation to the right-click.
After switching, clicking any part of the screen cancels the right-click.

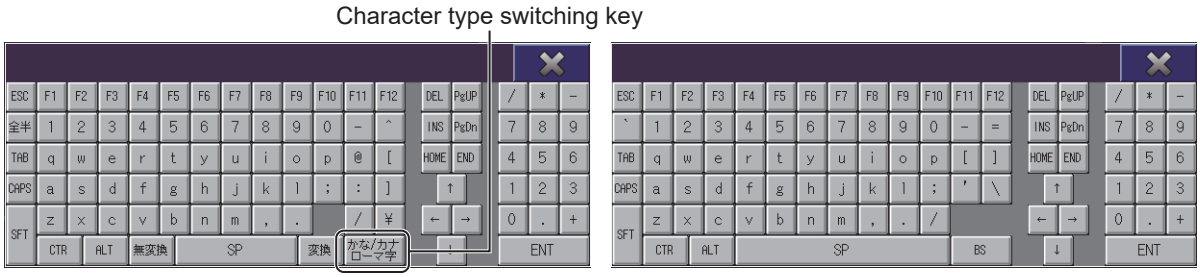
4) **Zoom in button, Zoom out button**
These buttons change the display magnification of the screen.
The zoom in button zooms in the displayed screen.
The zoom out button zooms out the displayed screen.

5) **[KBD] button**
Touch this button to display the soft keyboard.
Select the soft keyboard type in the [Special Function Switch] dialog.
➡8.2.9 [Special Function Switch] dialog

6) **[C+E] button**
This button performs the same operation as that of holding down the [Ctrl] key and the [ESC] key simultaneously.

7) **[CAD] button**
This button performs the same operation as that of holding down the [Ctrl] key, the [Alt] key, and the [Del] key simultaneously.

■1 Soft keyboard operation



Japanese 106 keyboard

English 101 keyboard

Touching and holding a key on the soft keyboard performs the same operation as that performed by repeating the input. (The [SFT] key, the [ALT] key, the [CTR] key, and the [CAPS] key are excluded.)
Touching the [SFT] key, the [ALT] key, or the [CTR] key once keeps the state of holding down the key.
To release the key, perform one of the following operations.

- Touch the same key again.
- Touch any key other than the [SFT] key, the [ALT] key, or the [CTR] key.

The [CAPS] key is held down or released each time the key is touched.
Touching the title bar moves the soft keyboard as well as the key window.
Touching the [×] button closes the soft keyboard.
The Ultra VNC server does not support switching character string using the character type switching key.

■2 Operation of a USB mouse and USB keyboard

For details on the USB mouse and USB keyboard, refer to the following.

➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

10.3.9 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions when changing the graphics mode

(1) Settings for writing the package data

When writing the package data of a project for which the graphics mode is changed into the GOT, perform one of the following operations.

• Select [Synchronize] in [Write Mode] of [Write Option].

➟4.8.3 ■3 [Write Option] dialog

• Delete the package data in [GOT Read], and then rewrite the package data.

➟4.8.2 ■2 (3) Reading the drive information

■2 Precautions for use

(1) Force close of the personal computer screen on the GOT

The personal computer screen on the GOT is forcedly closed in the following cases.

• When starting the utility

• When starting system applications (extended functions), including the sequence program monitors, by using a special function switch

To use the remote personal computer operation (Ethernet) after the monitor screen appears, open the personal computer screen on the GOT again by using the special function switch.

(2) Mouse cursor display when the USB mouse is installed or removed

When the USB mouse is installed or removed while the personal computer screen on the GOT is displayed, the mouse cursor is displayed as shown below.

To display the mouse cursors according to the GT Designer3 settings, close the personal computer screen on the GOT, and then open the screen again.

Mouse cursor display setting	Mouse cursor display method	
GOT and server PC	Installed	Both the mouse cursor on the GOT and the mouse cursor on the personal computer are displayed.
	Removed	Only the mouse cursor on the personal computer is displayed. (The mouse cursor on the GOT is not displayed.)
GOT Only	Installed	Both the mouse cursor on the GOT and the mouse cursor on the personal computer are displayed.
	Removed	The mouse cursors are not displayed. (Neither the mouse cursor on the GOT nor the mouse cursor on the personal computer are displayed.)

(3) Window display when the soft keyboard is used

GOT Graphic Ver.1

The following windows are not displayed while the soft keyboard is being displayed.

• Key window for numerical input object, text input object, and other objects

• Comment window

(4) Display position of the personal computer screen on the GOT in the window display mode

GOT Graphic Ver.2

When all the following conditions are satisfied, the personal computer screen on the GOT is displayed outside the GOT screen, and therefore cannot be moved or exited.

• [Display windows beyond the screen area] in the [Environmental Setting] window is selected.

• The maximum value is set to [Window Position] in the [Special Function Switch] dialog

10.3.10 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the remote personal computer operation function (Ethernet) as required.
The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings [Screen Switching/Windows]

GOT Graphic Ver.2

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] from the menu.

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

Function	Setting item
Displaying window beyond the GOT screen (window display mode only)	[Display windows beyond the screen area]

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Hiding the [CAD] button in the personal computer screen on the GOT	GS465.b0
Hiding the [C+E] button in the personal computer screen on the GOT	GS465.b1
Hiding the [KBD] button in the personal computer screen on the GOT	GS465.b2
Hiding the zoom in button and the zoom out button in the personal computer screen on the GOT, and fixing the display magnification to 100%	GS465.b3
Applying the display magnification specified for the special function switch that calls the personal computer screen. This function is enabled when GS465.b3 is turned on to fix the magnification to 100%.	GS465.b5
Hiding the click switching button of the personal computer screen on the GOT	GS465.b6
Hiding the scroll bars of the personal computer screen on the GOT	GS465.b7
Switching the display mode of the personal computer screen on the GOT	GS465.b8
Enabling switching between personal computer screens without closing the remote screen window displayed on the GOT connected with multiple personal computers.	GS465.b10

10.4 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Serial))

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

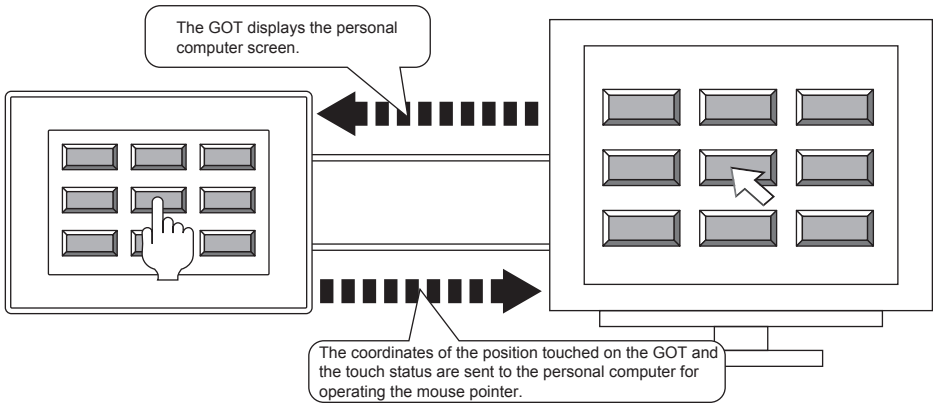
Not available to GT2705-V.

10.4.1 Overview of the remote personal computer operation function (Serial)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The remote personal computer operation (Serial) enables you to remotely operate the mouse pointer of a personal computer by touching the personal computer screen displayed on the GOT.
To display the personal computer screen on the GOT, use one of the following functions.

- Video/RGB display object
- RGB display function



Using the USB mouse and keyboard function enables you to use the USB mouse and keyboard, for the remote personal computer operation (Serial).
For the details of the USB mouse/keyboard function, refer to the following.

➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

10.4.2 Specifications of the remote personal computer operation (Serial)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the remote personal computer operation (Serial), a system application (extended function) of [PC Remote Operation(Serial)] is required.
To display the personal computer screen on the GOT, a system application (extended function) of [Video/RGB (Object)] or [Video/RGB] is required.
Configuring the following settings incorporates the applications into the package data automatically.

• [PC Remote Operation(Serial)]
Select [Destination I/F] in the [PC Remote Operation] dialog.
➟10.4.4 [PC Remote Operation] dialog

• [Video/RGB (Object)]
Select [Use Video/RGB Input] and select [GT27-R2 (RGB Screen only)] for [Unit Type Name] in the [Video/RGB Input] dialog.
➟10.6.5 [Video/RGB Input] dialog

• [Video/RGB]
Select [Use Video/RGB Input] and select [GT27-R2-Z (RGB Screen only)] or [GT27-V4-Z/GT27-V4R1-Z] for [Unit Type Name] in the [Video/RGB Input] dialog.
➟10.6.5 [Video/RGB Input] dialog

■2 Required version of BootOS

To use GT27-R2, install version N or later of BootOS on the GOT.
➟4.3.2 Transferring data

■3 Remote personal computer operation (Serial) to be set for one project

One remote personal computer operation function is available for one project.

■4 Required software to be installed

(1) Remote Personal Computer Operation Driver (DMT-DD, TSC-DD, or MES_2X)

This is a mouse emulation software for use in operating the mouse pointer on the personal computer according to the device data of the X-coordinate, Y-coordinate, and touch status sent by the GOT.
Select the driver according to the OS of the personal computer used.

• Windows 10, Windows 8.1, or Windows 8: DMT-DD
• Windows 7 or Windows Vista: TSC-DD
• Windows XP: MES_2X

For the details, refer to the following.
➟(2) Operating environment

The copyright of the software belongs to DMC Co., Ltd.
Use the software under the license agreement displayed when installing the software.
For information on how to download this software, contact your local distributor.

(2) Operating environment

The following shows the operating environment of the personal computer and the drivers for the remote personal computer operation.

Item	Driver	Description
Model	-	Personal computer that Windows runs on. Equipped with the RS-232 serial port (9-pin).
OS (English)	DMT-DD *4*5*6*7	• Microsoft Windows 10 Enterprise (32 bit, 64 bit) • Microsoft Windows 10 Pro (32 bit, 64 bit) • Microsoft Windows 10 Home (32 bit, 64 bit) • Microsoft Windows 8.1 Enterprise (32 bit, 64 bit) • Microsoft Windows 8.1 Pro (32 bit, 64 bit) • Microsoft Windows 8.1 (32 bit, 64 bit) • Microsoft Windows 8 Enterprise (32 bit, 64 bit) • Microsoft Windows 8 Pro (32 bit, 64 bit) • Microsoft Windows 8 (32 bit, 64 bit)
	TSC-DD *1*2	• Microsoft Windows 7 Ultimate (32 bit) Service Pack1 • Microsoft Windows 7 Enterprise (32 bit) Service Pack1 • Microsoft Windows 7 Professional (32 bit) Service Pack1 • Microsoft Windows 7 Home Premium (32 bit) Service Pack1 • Microsoft Windows 7 Starter (32 bit) Service Pack1 • Microsoft Windows Vista Ultimate (32 bit) Service Pack2 or later • Microsoft Windows Vista Enterprise (32 bit) Service Pack2 or later • Microsoft Windows Vista Business (32 bit) Service Pack2 or later • Microsoft Windows Vista Home Premium (32 bit) Service Pack2 or later • Microsoft Windows Vista Home Basic (32 bit) Service Pack2 or later • Microsoft Windows XP Professional (32 bit) Service Pack3 or later *3 • Microsoft Windows XP Home Edition (32 bit) Service Pack3 or later *3
	MES_2X	• Microsoft Windows XP Professional (32 bit) Service Pack2 or later • Microsoft Windows XP Home Edition (32 bit) Service Pack2 or later • Microsoft Windows 2000 Professional Service Pack4 or later

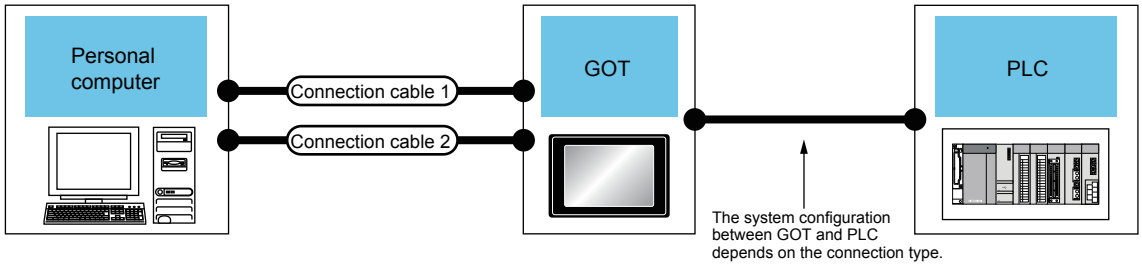
*1 Version 1.00.27 or later is supported.
*2 Compatible with GT Designer3 Version 1.108N or later.
*3 Microsoft .NET Framework 2.0, 3.0, or 3.5 must be installed.
*4 Compatible with GT Designer3 Version 1.200J or later.
*5 Microsoft .NET Framework 3.5 must be installed.
*6 The system builder version is not applicable.
*7 For installation, the administrator authority is required.

10.4.3 How to use the remote personal computer operation (Serial)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

The following shows the system configuration of the personal computer.



Personal computer	Connection cable*1		GOT		PLC	Number of connectable multimedia controllers
	Cable model	Maximum length	Option	GOT model		
Select by each user	Connection cable 1: GT01-C30R2-9S or Preparing connection cables by each user*3	15m	- (Built into GOT)	GT27*4	For the system configuration between the GOT and the PLC, refer to each connection manual.	One personal computer for one GOT
			GT15-RS2-9P			
	Connection cable 2: GT15-C50VG or Preparing connection cables by each user*3	*2	GT27-R2 *5			
			GT27-R2-Z *5			
			GT27-V4R1-Z			

*1 Between the personal computer and the GOT, the connecting connection cable 1 (RS-232 cable) and connection cable 2 (analog cable) is required.

*2 The cable length depends on the specifications of the personal computer to be used.
Prepare a cable with a length suitable for the specifications of the personal computer to be used.

*3 The cable length depends on the specifications of the personal computer to be used.
For details, refer to the following.
➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*4 Not available to GT2705-V.

*5 Usable for channel 1 only.

■2 Setting procedure

Step 1 Connect the personal computer to the GOT.

➟■1 System configuration

Step 2 Set one of the following functions to display the personal computer screen on the GOT.

- Video/RGB display object
  To use the remote personal computer operation (Serial), select [PC Remote Operation (Serial)] for [Touch Mode] in the [Video/RGB Display] dialog.

➟8.27.2 ■2 Setting procedure

- RGB display function

➟10.7.3 ■2 Setting procedure

Step 3 Configure the settings for the remote personal computer operation (Serial) in the [PC Remote Operation] dialog.

➟10.4.4 [PC Remote Operation] dialog

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Install Remote Personal Computer Operation Driver (DMT-DD, TSC-DD, or MES_2X) on the personal computer.

➟10.4.5 Settings of Remote Personal Computer Operation Driver

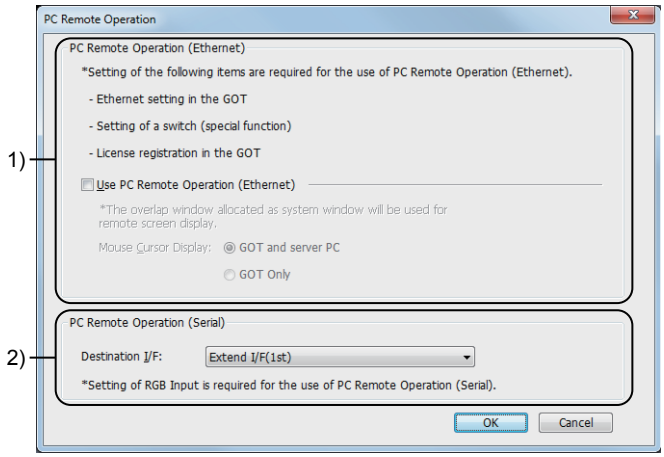
Step 6 Operate the GOT.

➟10.4.6 Action of the remote personal computer operation (Serial)

10.4.4 [PC Remote Operation] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [Peripheral Setting] → [PC Remote Operation] from the menu to display the setting dialog.



1) **Remote personal computer operation (Ethernet)**
No setting is required.

2) **Remote personal computer operation (Serial)**
Set the interface of the GOT.
The following shows the items to be selected.
- [Standard I/F(RS232)]
- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

Point

Device setting

To send the touch status of the GOT screen to the personal computer, turn on the Touch Status Communication Control signal (GS511.b0).
For details of the Touch Status Communication Control signal (GS511.b0), refer to the following.

➟12.1.3 GOT special register (GS)

10.4.5 Settings of Remote Personal Computer Operation Driver

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Before installation

Before installing Remote Personal Computer Operation Driver, check the following.

- The personal computer is properly connected to the GOT.

  ➟10.4.3 How to use the remote personal computer operation (Serial)

- Settings are properly made in the project.

  ➟10.4.4 [PC Remote Operation] dialog

■2 When using Remote Personal Computer Operation Driver (DMT-DD)

Remote Personal Computer Operation Driver calibrates the difference between the coordinates of a touch on the GOT screen and the coordinates of a click on the personal computer screen.
The following shows how to install and set Remote Personal Computer Operation Driver.

Step 1 Run setup.exe.

Step 2 Follow the on-screen instructions to install.

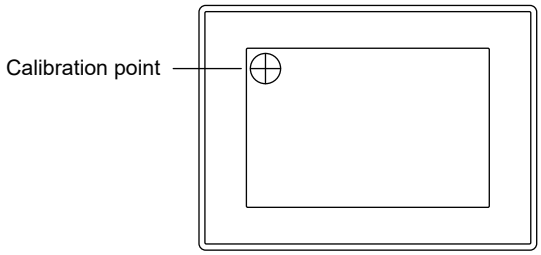
Step 3 After the message [Installation Complete] appears, click the [Close] button to exit the setup wizard.

Step 4 From the Windows start menu, select [DMC] → [DMT-DD] to display the [Touch Screen Properties] screen. *1

*1 How to open the start menu differs depending on the Windows version. Check how to operate Windows.

Step 5 On the [Software Setting] tab of [Basic Setting], click the [4Point] button.

Step 6 On the GOT screen, touch the calibration point four times.



Step 7 Click the [OK] button.

Step 8 Click the [Exit] button to exit the [Touch Screen Properties] screen.

■3 When using Remote Personal Computer Operation Driver (TSC-DD)

Remote Personal Computer Operation Driver calibrates the difference between the coordinates of a touch on the GOT screen and the coordinates of a click on the personal computer screen.
The following shows how to install and set Remote Personal Computer Operation Driver.

Step 1 Run Installer.exe.

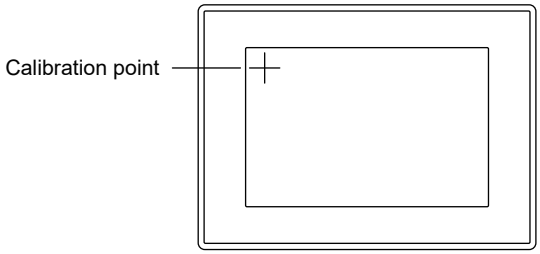
Step 2 Follow the on-screen instructions to install.

Step 3 After the message [Installation Complete] appears, click the [Close] button to exit the setup wizard.

Step 4 Select [Start] → [All Programs] → [DMC] → [DMC Touch Panel Configuration] from the menu to display the [Touch Panel Driver Properties] screen.

Step 5 Select [5p] for [Calibration Point], and click the [Calibration] button.

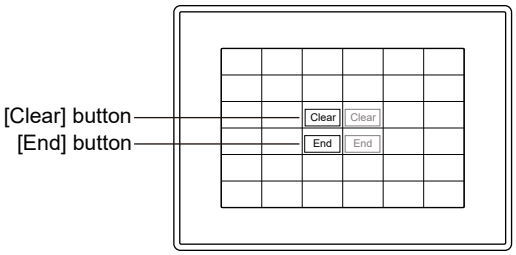
Step 6 On the GOT screen, touch the calibration point five times.



Step 7 Click the [OK] button.

Step 8 On the [Touch Panel Driver Properties] screen, click the [Test] button to display the test screen in the RGB display area on the GOT screen.

Step 9 On the GOT screen, touch the left [Clear] button and then the right [Clear] button to check for proper operation.



Step 10 On the GOT screen, touch the left [End] button and then the right [End] button to exit the test screen.

Step 11 Click the [Close] button to exit the [Touch Panel Driver Properties] screen.

■4 When using Remote Personal Computer Operation Driver (MES_2X)

Remote Personal Computer Operation Driver calibrates the difference between the coordinates of a touch on the GOT screen and the coordinates of a click on the personal computer screen.
The following shows how to install and set Remote Personal Computer Operation Driver.

Step 1 Run Install.exe.

Step 2 Configure the settings as shown below, and follow the on-screen instructions to install.

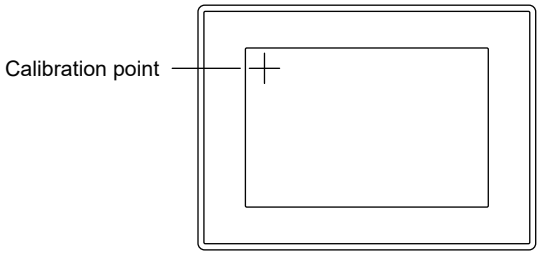
- On the [MES_2X Driver Select] screen, select [RS232C] and a communication port.
- On the [MES_2X Driver EEPROM] screen, select [DO NOT USE].

Step 3 After the message [Installation Complete] appears, click the [Close] button to exit the setup wizard.

Step 4 Select [Start] → [All Programs] → [Touch Panel Driver MES_2X] → [TP Control] from the menu to display the setting screen.

Step 5 Select [5p] for [Calibration Point], and click the [Calibration] button.

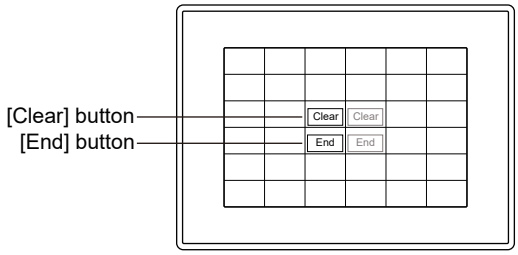
Step 6 On the GOT screen, touch the calibration point five times.



Step 7 Click the [OK] button.

Step 8 On the [Touch Panel Driver Properties] screen, click the [Test] button to display the test screen in the RGB display area on the GOT screen.

Step 9 On the GOT screen, touch the left [Clear] button and then the right [Clear] button to check for proper operation.



Step 10 On the GOT screen, touch the left [End] button and then the right [End] button to exit the test screen.

Step 11 Click the [OK] button to exit the [Touch Panel Driver Properties] screen.

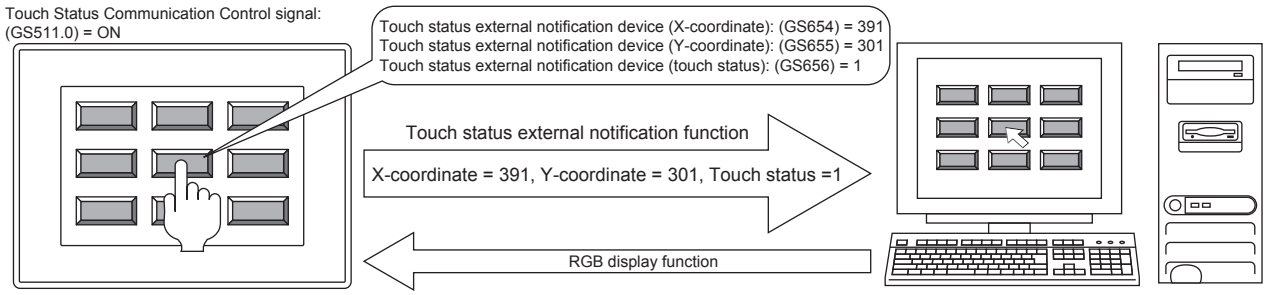
10.4.6 Action of the remote personal computer operation (Serial)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Action of the GOT with the RGB display

When the GOT displays the personal computer screen using the RGB display, turning on the Touch Status Communication Control signal (GS511.b0) of the touch status communication control function sends the data in the touch status external notification function (X-coordinate (GS654), Y-coordinate (GS655), touch status (GS656)) to the personal computer.
The following shows the action according to the touch status.
For the GOT internal devices, refer to the following.

➟12.1.3 GOT special register (GS)



■2 Action of the mouse pointer

The following explains the action of the mouse pointer according to the touch status.

(1) Touching the GOT screen

When the GOT screen is touched while the Touch Status Communication Control signal is on, the data in the touch status external notification function (X-coordinate (GS654), Y-coordinate (GS655)) is sent to the personal computer and the mouse pointer moves to the corresponding position.
The device value 1 is sent to the personal computer as the touch status (GS656) in the touch status external notification function while the GOT is touched.
As a result, the mouse pointer moves on the personal computer screen.

(2) Stopping the touch operation on the GOT

When the touch operation is stopped while the Touch Status Communication Control signal is on, the device value 0 is sent to the personal computer only one time as the touch status (GS656) in the touch status external notification function.
As a result, the mouse pointer clicks the personal computer screen one time.

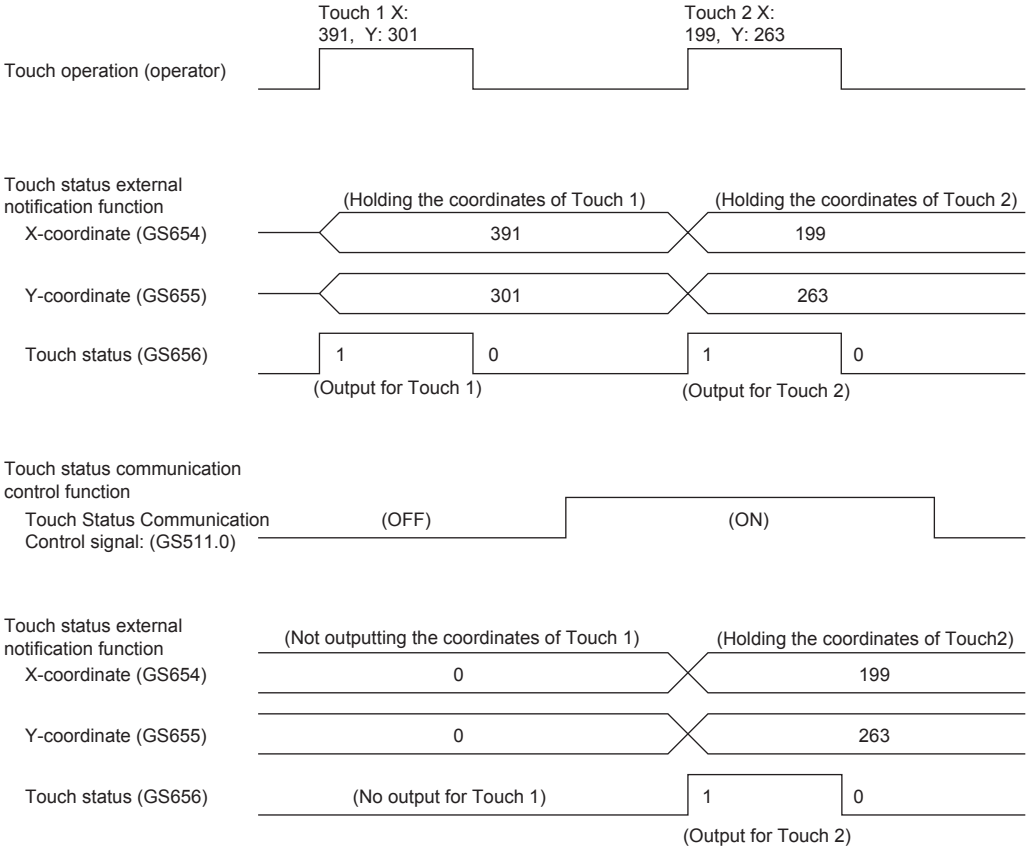
(3) Turning off the Touch Status Communication Control signal during the GOT screen touch

When the Touch Status Communication Control signal turns off during the GOT screen touch due to cable disconnection, GOT power disconnection, and others, the touch status external notification function (X-coordinate (GS654), Y-coordinate (GS655)) holds the values right before the signal turns off.

The device value 0 is sent to the personal computer only one time as the touch status (GS656) in the touch status external notification function while the GOT is touched.

As a result, the mouse pointer clicks the personal computer screen one time.

The following shows the action timing.



10.4.7 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains the precautions for using the remote personal computer operation (Serial).

■1 Precautions for installation

(1) TSC-DD-compatible mode

If Remote Personal Computer Operation Driver (DMT-DD) is installed successfully, TSC-DD-compatible mode is enabled and the title bar of the [Touch Screen Properties] screen displays [Touch Screen Properties [TSC-DD] Mode].
Otherwise, the installation may have failed.
Reinstall the driver with administrator privileges.

■2 Precautions for use

(1) Drag operation

As a drag operation on the GOT screen is performed, the touch status data is not correctly sent to the personal computer, the mouse pointer operation may stop.
For the remote personal computer operation (Serial), do not perform the drag operation.

(2) USB mouse and keyboard function

The USB keyboard is not available for the remote personal computer operation (Serial) .
The left button is only available for the USB mouse.
For details on the USB mouse and keyboard function, refer to the following.

➟5.3.4 Configuring the settings for a mouse and a keyboard used with the GOT ([USB Host])

(3) Precautions for the video/RGB display object

For the precautions for the video/RGB display object, refer to the following.

➟8.27.3 Precautions for a video/RGB display object

(4) Precautions for RGB display function

For the precautions for the RGB display function, refer to the following.

➟10.7.6 Precautions

10.4.8 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the remote personal computer operation (Serial) as required. The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Controlling whether to send or not the touch status to the personal computer. (Read device)	GS511.b0
Notifying the position touched (X-coordinate, Y-coordinate) on the GOT. (Write device)	GS654,GS655
Notifying whether the screen is touched or not. (Write device)	GS656

(1) Action at a simultaneous 2-point press

When two points are touched simultaneously on the GOT, or when one point on the GOT is touched and the GOT remote screen is clicked simultaneously by the remote personal computer operation, the devices of GS654, GS655, and GS656 notify the GOT as the priority below.

If some screens have the same priority, the devices of GS654, GS655, and GS656 notify the GOT of the screen which is placed on the leftmost and uppermost position in priority to the other screens.

(The left position has higher priority than the upper position.)

Screen	Priority
Popup window screen	High
Comment window screen	
Key window	
Video window	
Overlap window 5 screen (area of a touchable object)	
Overlap window 5 screen (area out of a touchable object)	
Overlap window 4 screen (area of a touchable object)	
Overlap window 4 screen (area out of a touchable object)	
Overlap window 3 screen (area of a touchable object)	
Overlap window 3 screen (area out of a touchable object)	
Overlap window 2 screen (area of a touchable object)	
Overlap window 2 screen (area out of a touchable object)	
Overlap window 1 screen (area of a touchable object)	
Overlap window 1 screen (area out of a touchable object)	
Base screen (area of a touchable object)	
Base screen (area out of a touchable object)	Low

10.5 Viewing the GOT from a Personal Computer (VNC Server Function)

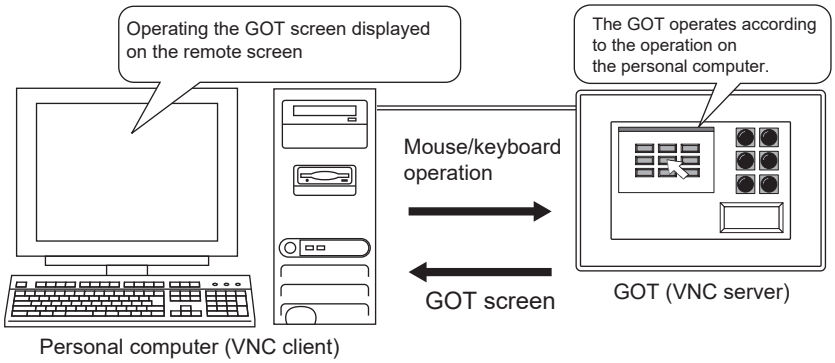
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

10.5.1 Overview of the VNC server function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
The VNC server function enables you to remotely operate the GOT from the personal computer at a distant location via Ethernet by using Virtual Network Computing (VNC).



10.5.2 Specifications of the VNC server function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

■1 System application (extended function)

To use the VNC server function, a system application (extended function) of [VNC Server] is required.
Selecting [Use VNC Server] in the [VNC Server] dialog incorporates the application into the package data automatically.

➟10.5.4 [VNC Server] dialog

■2 Number of VNC server function settings for one project

One VNC server function setting is available for one project.

■3 Specifications of VNC server and VNC client

The GOT and the personal computer are used as a VNC server and a VNC client, respectively.

• VNC server

The VNC server is the GOT that is remotely operated from the personal computer by using this function.

➟10.5.5 ■3 Remote screen

• VNC client

The VNC client is the personal computer or other equipment that is used to remotely operate the GOT by using this function.
VNC client software must be installed on the personal computer.
For the installation instructions, refer to the following.

➟10.5.5 Personal computer setting

■4 License number registration

To use the VNC server function, register a license number on the GOT.
For how to register the license number, refer to the following.

➟GOT2000 Series User's Manual (Utility)

If the license number is not registered, the function can be used up to 30 times (a maximum of 30 minutes per use).
To start a trail again after one session ends, turn off and then on the GOT.
After 30 trials, you must register the license number to use the function.

■5 Required software for the equipment that is used to remotely operate the GOT

When the GOT is used as the VNC server, the VNC client software must be installed on the equipment that is used to remotely operate the GOT.
Install the either of the following VNC client software according to the equipment that is used to remotely operate the GOT.

(1) For personal computer

• Applicable VNC client software

Name	Manufacturer	Version
UltraVNC (32 bit)	UltraVNC team	1.4.3.1, 1.3.8.1, 1.1.9.6, 1.0.9.6.2, 1.0.8.2 recommended

• Operating environment

For the operating environment of the software, refer to the following website.

➟http://www.uvnc.com/

(2) For smartphone or tablet

• Applicable VNC client software

For the VNC client software whose operations have been validated, refer to the following Technical News.

➟VNC client software that can be used with the GOT2000 series VNC server function (GOT-A-0069)

• Operating environment

The operating environment depends on the smartphone or tablet you use.
Refer to the website of the smartphone or tablet.

• How to obtain the software

How to obtain the software depends on the software which is applicable to the smartphone or tablet you use.

Point

(1) **Precautions for using the VNC client software**

The VNC client software may not operate properly depending on the OS on a smartphone or tablet, VNC client software version, and usage environment. Before using the software, fully validate its operations in a usage environment.

■6 Authorization control

Enabling the authorization control disables the simultaneous operation from the personal computer and the GOT.
To enable the authorization control, select [Restrict simultaneous operations of PC and GOT] in the [VNC Server] dialog.

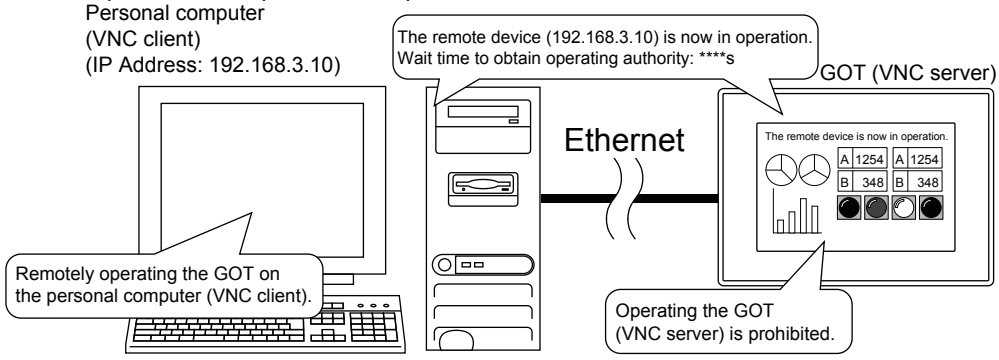
➟10.5.4 [VNC Server] dialog

(1) Obtaining the authorization

Enabling the authorization control allows you to operate the GOT on only the equipment (personal computer or GOT) that holds the authorization.
The equipment, whose popup display is clicked or touched when the authorization guarantee time is 0, obtains the authorization.
Once the personal computer or the GOT obtains the authorization, the authorized equipment holds the authorization until the authorization guarantee time is passed.
While the personal computer holds the authorization, [The remote device (###.###.###.###) is now in operation.] and [Wait time to obtain operating authority: ****s)] are alternately displayed on the screens of both equipment.
While the GOT holds the authorization, [The GOT is now in operation.] and [Wait time to obtain operating authority: ****s] are alternately displayed on the screens of both equipment.
###.###.###.### indicates the IP address of the personal computer as the VNC client.
The asterisks **** indicate the authorization guarantee time (second).
Set the authorization guarantee time on the GOT utility.
For how to set the authorization guarantee time on the GOT utility, refer to the following.

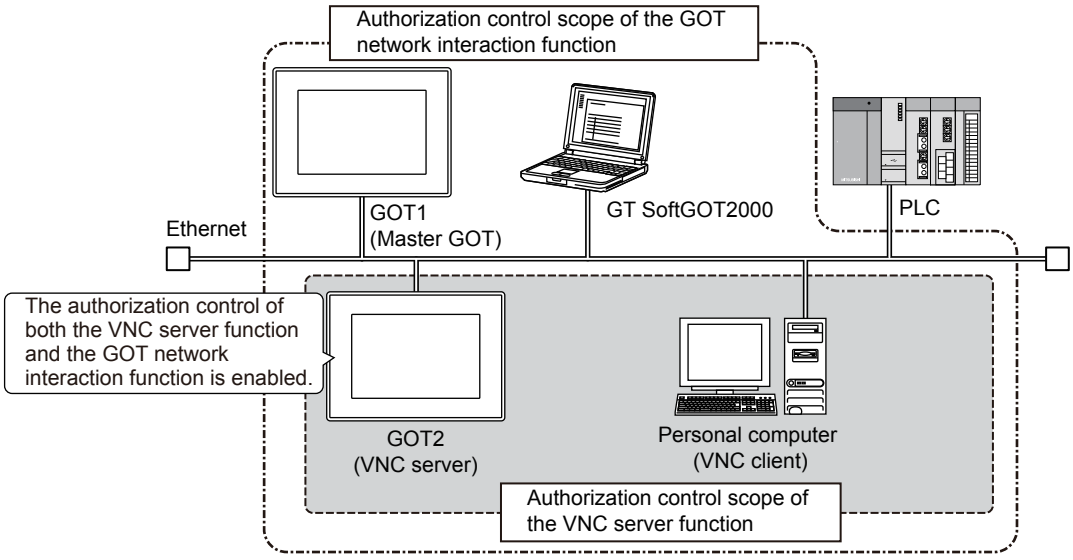
➟GOT2000 Series User's Manual (Utility)

Example: When the personal computer holds the authorization



(2) Controlling the authorization among pieces of equipment

To control the authorization among pieces of equipment, use the VNC server function in combination with the GOT network interaction function.



The following shows the differences when the two functions are used in combination.

- To perform operations on the VNC server or VNC client, the authorization of both the VNC server function and the GOT network interaction funciton is required.
- The setting of [Guaranteed time of operational authority after the last operation] in the [GOT Setup] window becomes invalid. The authorization guarantee time set in the [GOT Network Interaction] dialog becomes valid.
- The popup display of the GOT network interaction function is applied to the VNC server or VNC client screen.

For the details of the GOT network interaction function, refer to the following.

➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

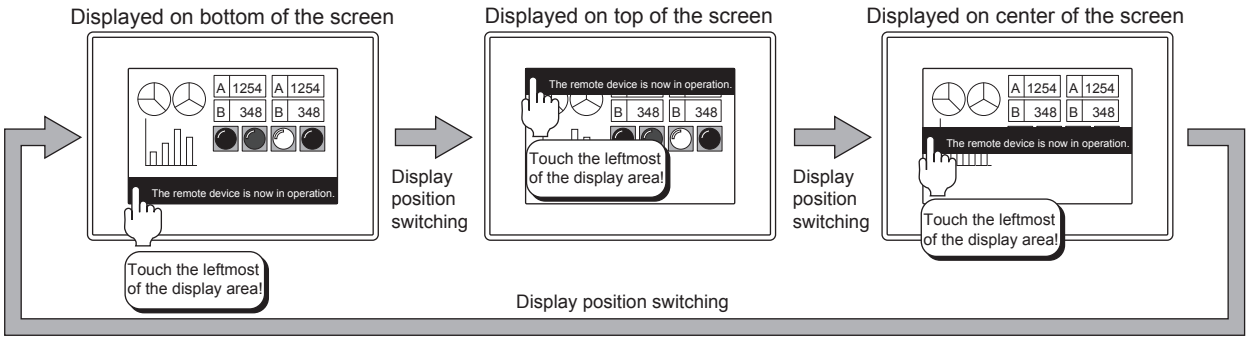
(3) How to identify the authorized equipment

Check the GOT internal device to identify the authorized equipment. (Authorized Equipment Notification signal, GS1230.b2)

➟10.5.7 ■1 GOT Internal Device

(4) Operation status popup notification function

This function notifies, with a popup display, the authorized equipment and the waiting time for the unauthorized equipment to obtain the authorization.
The display position of the operation status popup display is the same as that of the alarm popup display.
(To set the display position, select [Display alarms as popups] in the [Screen Property] dialog.)
The operation status popup display appears on the bottom, center, or top of the screen.
When the base screen is switched while the operation status popup display is performed, the operation status popup display appears at the display position of the alarm popup display which is set for the destination base screen.
Each touch of the leftmost portion of the operation status popup display switches its display position to the top, center,or bottom, in that order.



Configure the display settings in GT Designer3.
For how to configure the setting in GT Designer3, refer to the following.

➟2.7.1 ■1 [Basic] tab

■7 Differences between the functions to remotely operate the GOT

When the GOT is connected to equipment such as a personal computer by Ethernet, you can operate the GOT from the equipment by using the following functions.

- SoftGOT-GOT link function
- VNC server function
- GOT Mobile function

The following shows the differences between these functions.

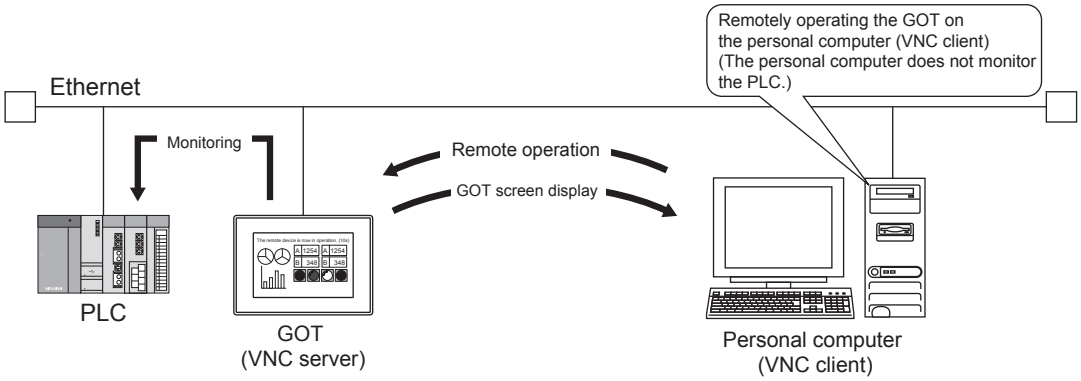
Item	Function		
	SoftGOT-GOT link function	VNC server function	GOT Mobile function
Equipment	Personal computer or PC CPU module on which GT SoftGOT2000 is installed	Information device (such as a tablet and personal computer) on which an applicable VNC client is installed	Information device (such as a tablet and personal computer) on which an applicable browser is installed
Number of modules or clients connectable to one GOT	One GT SoftGOT2000 module is connectable. Up to seven GT SoftGOT2000 modules are connectable when the GOT network interaction function is enabled.	One VNC client is connectable.	When one browser is one client. GOT: 5 clients GT SoftGOT2000: 15 clients
Required number of licenses	One license key is required for one personal computer.	One license is required for one GOT.	One license is required for one GOT.
Screen display contents	The GOT and a GT SoftGOT2000 module can display different contents.	The GOT and the remote screen on the personal computer display the same contents.	The GOT and each client display different contents. (The client displays the dedicated mobile screens.)
Screen targeted for the exclusive authorization control	All screens	All screens	Screen in which the exclusive authorization control is enabled (This control can be enabled for each screen.)
Creation of dedicated screens (project data setting)	Not needed	Not needed	Mobile screens must be created.
Storage location of project data	The GOT and a GT SoftGOT2000 module each store project data. (The GT SoftGOT2000 module reads project data from the GOT.)	Only the GOT stores project data.	The GOT or GT SoftGOT2000 stores project data.

Item	Function		
	SoftGOT-GOT link function	VNC server function	GOT Mobile function
Storage location of resource data	When a GT SoftGOT2000 module reads project data from the GOT, the module also reads resource data. Accordingly, the GOT and the GT SoftGOT2000 module each store the resource data.	Only the GOT stores resource data.	The GOT or GT SoftGOT2000 stores project data.
Availability of extended functions for equipment	Limited ➟GT SoftGOT2000 Version1 Operating Manual	Not limited	Limited ➟(a) Screen security (level authentication and operator authentication)

The following shows the details and references of each function.

(1) VNC server function

With the VNC server function, the remote screen of the personal computer displays the GOT screen.
You can view the data collected by the GOT, including alarm data and logging data, on the personal computer in real time.
Even while an extended function is used, you can also remotely operate the GOT from the personal computer.

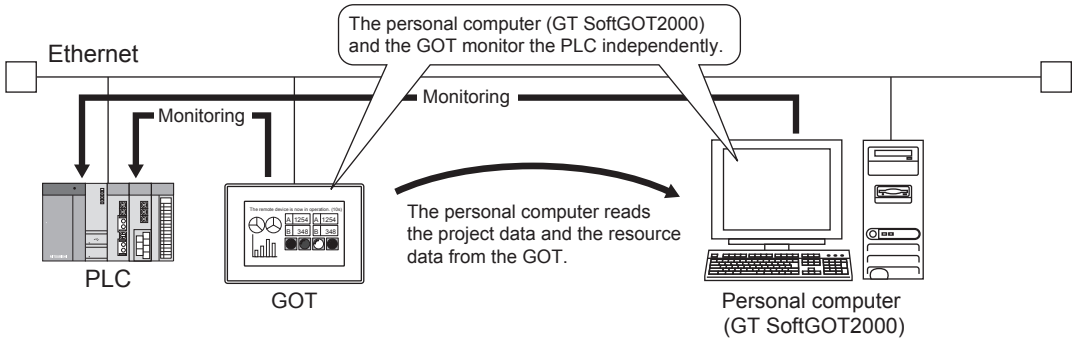


Since the VNC server function increases the processing load on the GOT, the GOT may delay displaying a screen or collecting data, including alarm data and logging data.
The GOT may also delay responding to an operation from the VNC client (personal computer).
Set the load balance between processing of the VNC server function and processing of the other functions in the GOT as necessary.
The processing load balance can be set in the [VNC Server] dialog or using GS1798.

➟10.5.2 Specifications of the VNC server function
10.5.7 Relevant settings

(2) SoftGOT-GOT link function

With the SoftGOT-GOT link function, GT SoftGOT2000 and the GOT each have the project data and monitor the controller.
Since GT SoftGOT2000 displays the GOT screen on the personal computer, the processing load on the GOT is reduced.
By using a GOT internal device for the screen switching device, GT SoftGOT2000 and the GOT can display different screens.

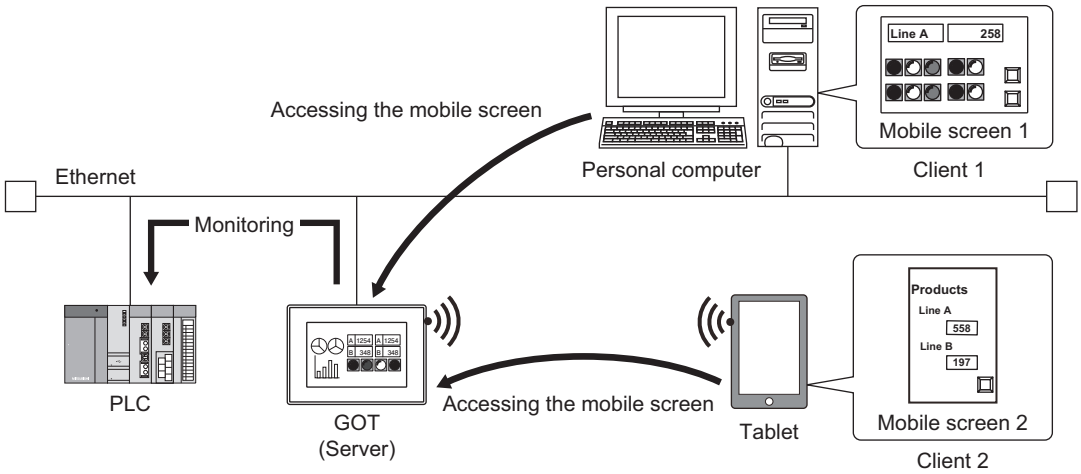


The GOT and GT SoftGOT2000 each operate independently, which may cause the difference in the collected data including the alarm data and logging data between the GOT and the personal computer.
The extended functions which are unavailable for GT SoftGOT2000 cannot be used with the SoftGOT-GOT link function.
For the details of the SoftGOT-GOT link function, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(3) GOT Mobile function

The GOT Mobile function allows an information device, such as a tablet, to display the mobile screens stored in the server (GOT).
One browser is handled as one client to access the GOT, and up to five clients (GOTs) and up to 15 clients (GT SoftGOT2000 modules) can make access simultaneously.
Each client can display different mobile screens.
The information device does not store project data and resource data, and the server (GOT) stores the data for management.

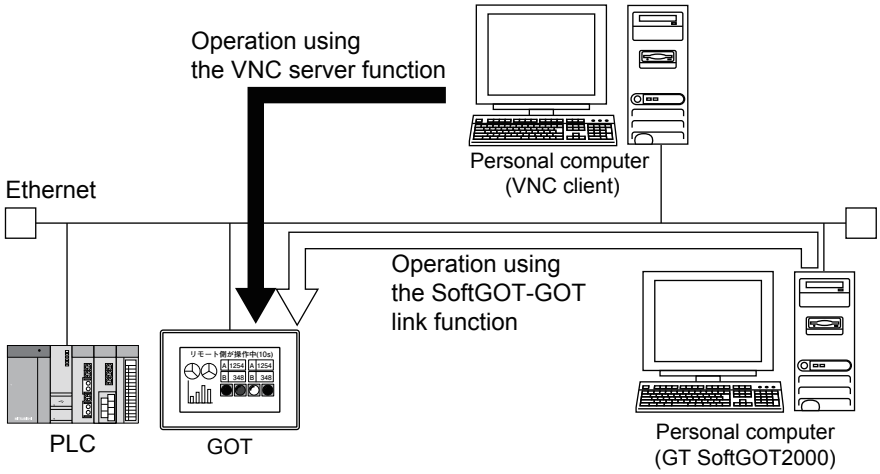


You cannot use the functions that are incompatible with the GOT Mobile function, such as objects incapable of being placed on mobile screens.
For the details of the GOT Mobile function, refer to the following.

➟10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

■8 Authorization control when the SoftGOT-GOT link function is used

When the GOT network interaction function is not used, the VNC server function and the SoftGOT-GOT link function control the authorization independently of each other.
(The authorization control of the SoftGOT-GOT link function is always enabled.)
The following shows the authorization control when the VNC server function and the SoftGOT-GOT link function are used in combination.



○: Available ×: Not available

Authorization control setting of the VNC server function	Authorized equipment	Operating the GOT		
		From GOT	From VNC client	From GT SoftGOT2000
Enabled	GOT (VNC server)	○	×	×
	Personal computer (VNC client)	×	○	×
	Personal computer (GT SoftGOT2000)	×	×	○
Disabled	GOT (VNC server)	○	○	×
	Personal computer (VNC client)	○	○	×
	Personal computer (GT SoftGOT2000)	×	×	○

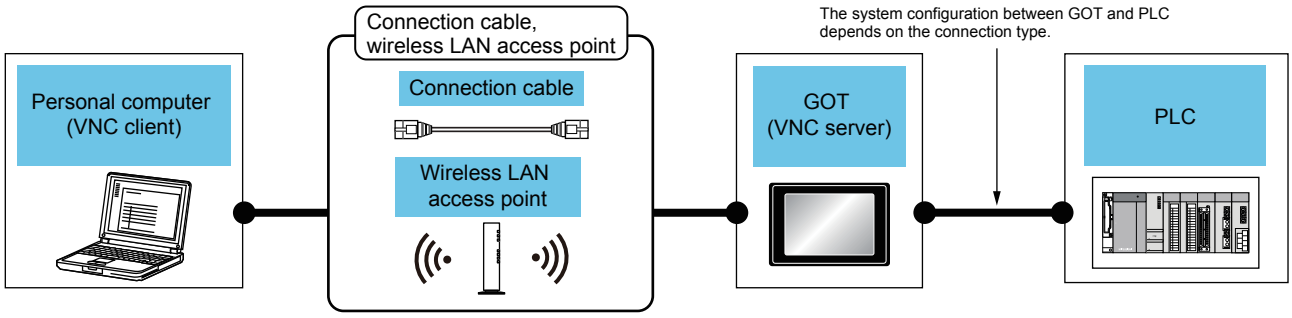
10.5.3 How to use the VNC server function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

■1 System configuration

The following shows the system configuration of the personal computer.



Personal computer (VNC client)	Connection cable *1*2, wireless LAN access point	Maximum segment length *3	GOT (VNC server)		PLC	Number of connectable personal computers
			Option	GOT model		
Select by each user	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GT21 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One personal computer for one GOT
			GT25-J71E71-100	GT27 GT25 *6		
	-	-	GT25-WLAN	GT27 *4 GT25 *4*6 GS25 *4		
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*6 GS25 *5		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 for a cascade connection (within 500 m)
• 100BASE-TX: Up to 2 for a cascade connection (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Not available to GT2505-V and GT25HS-V.

■2 Setting procedure

The following shows how to configure the settings for the VNC server function.

Step 1 Connect the personal computer to the GOT.

➟■1 System configuration

Step 2 Configure the settings for the VNC server function in the [VNC Server] dialog.

➟10.5.4 [VNC Server] dialog

Step 3 Set the GOT Ethernet interface.

➟5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

Step 4 To control the authorization among pieces of equipment on a network, set the GOT network interaction function.

➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

Step 5 Write the package data to the GOT.

Make sure to set [GOT IP Address] and [Peripheral S/W Communication Port No.] for the GOT in the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 6 Register the license number on the GOT.

For how to register the license number, refer to the following.

➟GOT2000 Series User's Manual (Utility)

Step 7 Install the VNC client software on the personal computer or others, and configure the setting.

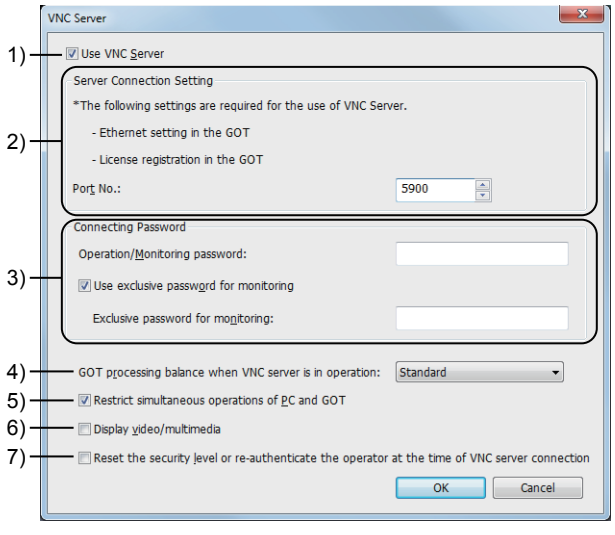
After the setting is completed, operate the GOT on the remote screen.

➟10.5.5 Personal computer setting

10.5.4 [VNC Server] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Select [Common] → [Peripheral Setting] → [VNC Server] from the menu to display the setting dialog.



1) **[Use VNC Server]**
Select this item to enable the VNC server function.

2) **[Server Connection Setting]**

Configure the GOT connection settings.

Item	Description
[Port No.]	Set the port number for the GOT to communicate with a VNC client. The setting range is [1024] to [65534]. Do not set the port number used for the other settings. Duplication of the port number disables communication.

3) **[Connecting Password]**

Up to 31 characters can be set for a connecting password.

Note that only the first eight characters are used for the password verification. The other characters are not used for the verification.

To use the multiple passwords, set the passwords so that the first eight characters are different.

One-byte alphanumeric characters, one-byte space, and the following symbols are available for the password. ! " # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

Item	Description
[Operation/Monitoring password]	Set the password to remotely operate and display the GOT on the personal computer.
[Use exclusive password for monitoring]	Select this item to only remotely display the GOT on the personal computer.
[Exclusive password for monitoring]	Set the password to only remotely display the GOT on the personal computer.

4) **[GOT processing balance when VNC server is in operation]**

Set the GOT load balance between the VNC server function processing and the other processing (including displaying the screens, and collecting the alarm data and logging data).

- [Standard]
  Select this item to set the standard balance for the balance between the VNC server function processing and the other processing.
- [VNC Server Priority]:
  Assigns a higher priority to the VNC server function processing.
  The update rate of the remote screen increases.
  Select this item when the amount of the other processing is small.
  When the number of monitoring objects is large or the background processing (including the alarm function and logging function) is performed, the delay in GOT behavior may be caused.
  Consider the number of monitoring objects, alarm function settings, logging function settings, and others, and then set the GOT processing load balance.
- [GOT Monitoring Priority]:
  Assigns a higher priority to the other processing.
  The number of the other processing delays caused by the VNC server function decreases.
  Select this item when the amount of the other processing is large.

5) **[Restrict simultaneous operations of PC and GOT]**

Select this item to disable the simultaneous operation from the GOT and the remote screen of the personal computer. Selecting the item enables the authorization control.

➟10.5.2 ■6 Authorization control

6) **[Display video/multimedia]**

Available to GT27 models excluding GT2705-V.

Set whether to display a video image displayed on the GOT on the remote screen of the personal computer.

Select this item to display the video image displayed on the GOT on the remote screen of the personal computer.

Deselect this item not to display the video image displayed on the GOT on the remote screen of the personal computer.

The display area of the video image displays the object, figure, or others that is placed behind the video image.

When the remote screen of the personal computer displays the video image displayed on the GOT, the update rate of the remote screen decreases.

7) **[Reset the security level or re-authenticate the operator at the time of VNC server connection]**

Resets the security level or performs a forced logout of the GOT at the time of connection between the GOT (VNC server) and the VNC client.

10.5.5 Personal computer setting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

■1 How to install the UltraVNC

Step 1 Download the Win32 Full version of UltraVNC (English only) from the following website.

http://www.uvnc.com/

Note that the above website may be changed without notification.

Step 2 Execute the downloaded file, and start the installer.

Step 3 The setup window appears.

Click the [Next] button until the [License Agreement] screen is displayed.
Confirm the description in the screen, and then select [I accept the agreement].

Step 4 Click the [Next] button until the [Select Destination Location] screen is displayed.

In the screen, select the location where the software is installed.

Step 5 The [Select Components] screen appears.

Select [Full installation] or [UltraVNC Viewer Only], and click the [Next] button.

Step 6 The [Select Start Menu Folder] screen appears.

Select the start menu folder to create a shortcut, and click the [Next] button..

Step 7 The confirmation window appears to confirm whether to download the following software. (Not displayed when [UltraVNC Viewer Only] is selected in the [Select Components] screen)

- Optional non-GPL addons recommended for Vista
  Download this software only when you use Windows Vista.
- Optional non-GPL Mirror Driver
  Make sure to download this software.

Step 8 The [Select Additional Tasks] screen appears.

- To create the shortcut icon on the desktop, enable [Create UltraVNC desktop icons].
- To open the file with the extension of .vnc by using UltraVNC Viewer, select [Associate UltraVNC Viewer with the .vnc file extension].

When [Full installation] is selected in the [Select Components] screen, setting items other than the above are also displayed.
Since the additional setting items depend on the personal computer you use, configure the settings as required.

Step 9 The confirmation screen for installation appears.

Confirm the description in the screen, and then click the [Install] button.
Installation of UltraVNC starts.

■2 Settings

After UltraVNC Viewer is started, set the GOT IP address.

➟■3 Remote screen

Point

(1) **Using the GOT as a VNC client**

With the remote personal computer operation (Ethernet), the GOT as the VNC client can be connected to the VNC server.
For the setting of the remote personal computer operation (Ethernet), refer to the following.

➟10.3 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Ethernet))

■3 Remote screen

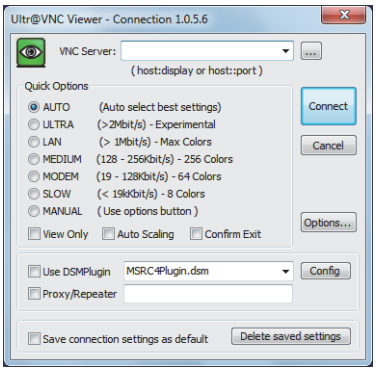
The remote screen of the personal computer is used to display and operate the GOT screen.

(1) How to display the remote screen

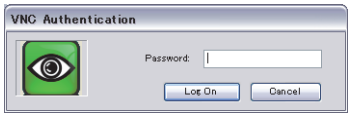
Display the remote screen by using the VNC client software installed on the personal computer.

Step 1 Select [UltraVNC] → [UltraVNC Viewer] from the start menu to start UltraVNC Viewer.

Step 2 In the setting dialog, set the GOT IP address in the [VNC Server] field and click the [Connect] button.



Step 3 Enter the password,which is set in the [VNC Server] dialog, in the [Password] field, and click the [Log On] button.



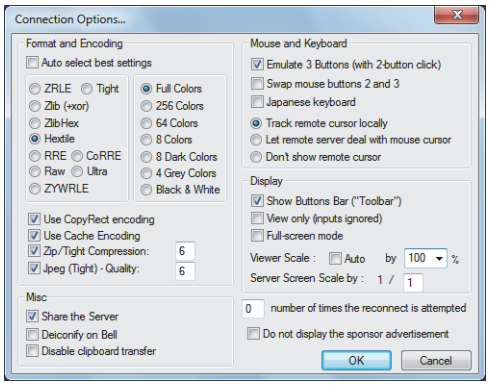
Step 4 The remote screen appears.

(a) **When the remote screen does not display the GOT screen**

Even though the VNC client is connected to the VNC server by using the VNC client software, if the remote screen does not display the GOT screen, make sure to configure the setting as shown below.

Start UltraVNC Viewer, and click the [Options] button.

The [Connection Options] window appears.



Check that [Full Colors] is selected in [Format and Encoding].

When [Full Colors] is not selected, deselect [Auto select best settings] and select [Full Colors].

(b) **Compression format of the transferred image**

The VNC server function supports the following image compression formats.

Select the image compression format in [Format and Encoding].

Usually select [Hextile].

- Raw
- Hextile
- ZRLE

ZRLE provides a high compression rate for the images with many repeated patterns.

However, for the images with few repeated patterns, such as photos, ZRLE provides a low compression rate and a high processing load.

Select the image compression format according to the communication speed and the transferred screen layout.

(2) Operating procedure

Clicking the remote screen of the personal computer is recognized as touching the corresponding position on the GOT.

The keyboard operation on the remote screen of the personal computer is also recognized as the key input on the GOT.

10.5.6 Precautions

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.

■1 Precautions for drawing

(1) Password setting

If the operation/monitoring password and the exclusive password for monitoring are the same, the password is valid as the operation/monitoring password.

(2) Restrictions for the operation status popup display

When the GOT uses the operation status popup display of the VNC server function, the alarm popup display cannot be used.
When the SoftGOT-GOT link function and the VNC server function are simultaneously used, the GOT uses the operation status popup display of the VNC server function and GT SoftGOT2000 uses that of the SoftGOT-GOT link function, respectively.

(3) GOT internal device setting

When placing the touch switch that turns on the VNC Client Communication Control signal (GS1792.b0) or the VNC Client Operation Control signal (GS1792.b1) on the screen, set the touch switch not to be operated from the personal computer. (Example: Set the trigger condition so that the touch switch is disabled while the GOT communicates with the personal computer.)
If the signals are turned on while the GOT communicates with the personal computer, the following status is caused.

- When the VNC Client Communication Control signal is turned on
  The communication with the personal computer is disconnected, and the GOT cannot communicate with the personal computer until the signal is turned off on the GOT.
- When the VNC Client Operation Control signal is turned on
  Though the communication with the personal computer is not disconnected, the personal computer cannot remotely operate the GOT.

For the GOT internal devices, refer to the following.

➟10.5.7 ■1 GOT Internal Device

(4) RGB screen display

The RGB screen cannot be displayed on the remote screen of the personal computer.
To use the RGB display function, configure the settings, such as arranging a touch switch for returning to another object.
Do not create a screen for displaying the RGB screen only.
(For example, a screen on which the RGB screen and a touch switch having no shape are arranged)
In such a case, no content is displayed on the remote screen.
To avoid no contents displayed on the remote screen, configure the settings, such as arranging the RGB screen together with an object having a shape.

■2 Precautions for use

(1) Authorization control setting

Without the authorization control setting, do not operate the GOT and the remote screen of the personal computer simultaneously.
Doing so causes a malfunction, resulting in an accident.

(2) Use of USB mouse

Even while the USB mouse is used on the GOT with the USB mouse/keyboard function, the mouse cursor is not displayed on the remote screen of the personal computer.

(3) Setting the load balance

Although processing of the VNC server function is prioritized, the processing speed of the function may not change.
In this case, disconnect and reconnect the communication with the personal computer.

10.5.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2107-W for GT21.
Only available to GS21-W-N for GS21.
Set the relevant settings other than the specific settings for the VNC server function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

➡12.1.3 GOT special register (GS)

(1) VNC Server Function Control (GS1792)

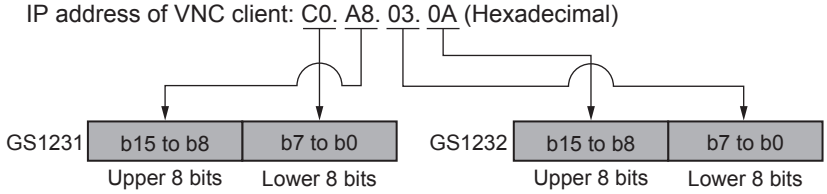
Bit number	Signal name	Description
b0	VNC Client Communication Control signal	Enables/disables the communication from the VNC client. • 0: Communication from the VNC client enabled • 1: Communication from the VNC client disabled
b1	VNC Client Operation Control signal	Enables/disables the operation from the VNC client. • 0: Operation from the VNC client enabled • 1: Operation from the VNC client disabled
b2 to b7	Use prohibited	-
b8	Authorization Guarantee Time Cancel signal	Cancels the authorization guarantee time setting of the equipment which last operated the GOT, and enables the other equipment to operate. • 0: Authorization guarantee time valid • 1: Authorization guarantee time invalid
b9 to b15	Use prohibited	-

(2) VNC Server Operation Status Notification (GS1230)

Bit number	Signal name	Description
b0	VNC Client Communication Status Notification signal	Notifies the communication status of the VNC client. • 0: VNC client communication suspended • 1: VNC client communication in operation
b1	VNC Client Operation Mode Notification signal	Notifies the operation mode of the VNC client. • 0: Only remote display enabled • 1: Remote display and operation enabled
b2	Authorized Equipment Notification signal	Notifies the equipment that holds the authorization. • 0: VNC server authorized • 1: VNC client authorized
b3 to b14	Use prohibited	-
b15	VNC Server Authorized Notification signal	Notifies the equipment that holds the authorization. • 0: VNC server authorized • 1: VNC client authorized

(3) Communicating VNC Client Information Notification (GS1231 to GS1232)

The IP address of the communicating VNC client is stored in hexadecimal.
0 is stored when the VNC client does not communicate with the VNC server.
Example) When the IP address of the VNC client is 192.168.3.10, the devices of GS1231 to GS1232 store C0.A8.03.0A.
The IP address is stored as shown below.



(4) VNC Server Authorization Guarantee Status Notification (GS1233)

This device notifies the remaining authorization guarantee time (second).
When the device stores 0, the unauthorized equipment can obtain the authorization.
When the authorization control is set to [Disabled], the device stores 0.

(5) VNC Server GOT Processing Balance Control (GS1798)

Not available to GT21 and GS21.

Set the load balance between processing of the VNC server function and processing of the other functions in the GOT, whether or not the GOT is connected with the VNC client.

When multiple bits are turned on, the bit having the smallest number is prioritized.

When all the bits are off, the GOT operates according to the setting of [GOT processing balance when VNC server is in operation].

➟10.5.4 [VNC Server] dialog

10.6 Displaying an Image Taken by a Video Camera on the GOT (Video Display Function)

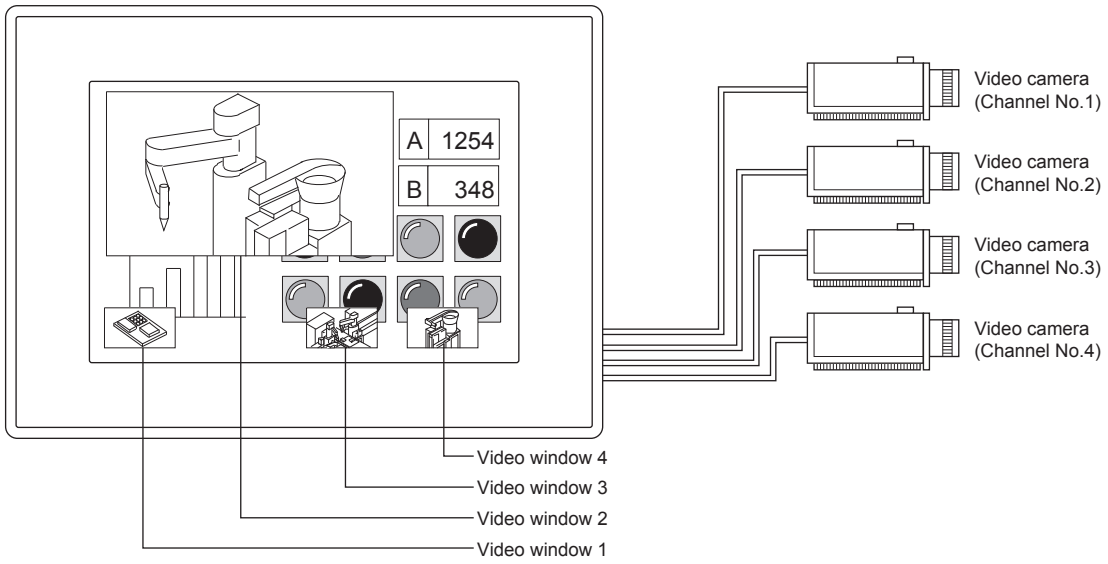
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

10.6.1 Overview of the video display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
The video display function displays video images taken by a video camera on the video window.
As the video window operates independently of other screens, the base screen can be switched while leaving the video window open.



10.6.2 Specifications of the video display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 System application (extended function)

To use the video display function, a system application (extended function) of [Video/RGB] is required.
To incorporate the application into the package data automatically, select [Use Video/RGB Input] and select [GT27-V4-Z/GT27-V4R1-Z] for [Unit Type Name] in the [Video/RGB Input] dialog.

➟10.6.5 [Video/RGB Input] dialog

■2 Number of video display function settings for one project

One video display function is available for one project.

■3 Specifications of the video display

For the video display function, the full mode and clip mode are provided.
For the details of each display mode, refer to the following.

➟10.6.4 ■5 Displaying in the full mode
10.6.4 ■6 Displaying in the clip mode

The following shows the differences between the full mode and clip mode.

Item	Full mode	Clip mode
Overview	Displays the total image.	Displays a part of the image in its original size.
Video window resolution	640×480, 720×480, 768×576 (dots)	64×64 to 768×576(dots)
Display size change	100%, 50%, or 25% of the original size	Unchangeable (fixed at 100%)
Number of screens	4	1 (video window 1 only)

10.6.3 Basic use of the video display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

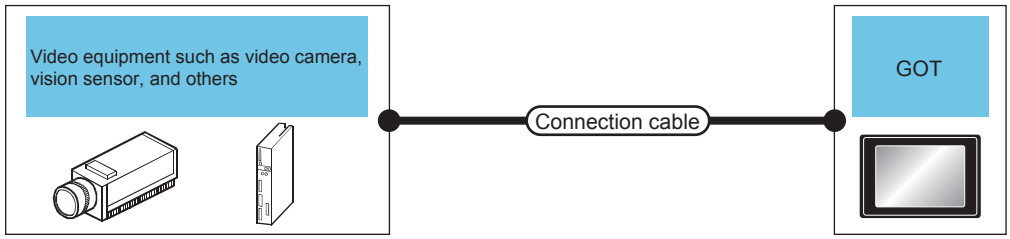
The video display function enables various types of displays by using the [Video/RGB Input Common] device.

For the details of the settings, refer to the following.

➟10.6.4 Applicative use of the video display function

■1 System configuration

The following shows the system configuration of the video display function.



Signal type	Video equipment	Connection cable*3	GOT		Number of connectable video equipment
			Option	GOT model	
NTSC, PAL	Video equipment, such as a video camera*1 and vision sensor*2, from which images can be output by NTSC or PAL system.	Preparing connection cables by each user*4	GT27-V4-Z GT27-V4R1-Z	GT27*5	Four sets of video equipment for one GOT

*1 For the types of the connectable video camera, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

*2 Select the vision sensor by each user.

*3 Cable length depends on the specifications of video equipment you use.

*4 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*5 Not available to GT2705-V.

■2 Setting procedure

Step 1 Connect the GT and video equipment.

➟■1 System configuration

Step 2 Select [Common] → [Peripheral Setting] → [Video/RGB Input] from the menu to display the [Video/RGB Input] dialog.

➟10.6.5 [Video/RGB Input] dialog

Step 3 In the [Video/RGB Input] dialog, set the items as shown below and click the [OK] button.

- [Destination I/F]: [Extend I/F(1st)]
- [Use Video/RGB Input]: Selected
- [Unit Type Name]: [GT27-V4-Z/GT27-V4R1-Z]
- [Video Window]: The number of video windows used (1 to 4)
- [First Device]: Device to control the video display function

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Display the video image on the GOT.

10.6.4 Applicative use of the video display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

The following shows the setting for applicative display by using the video display function.

■1 Displaying the video window

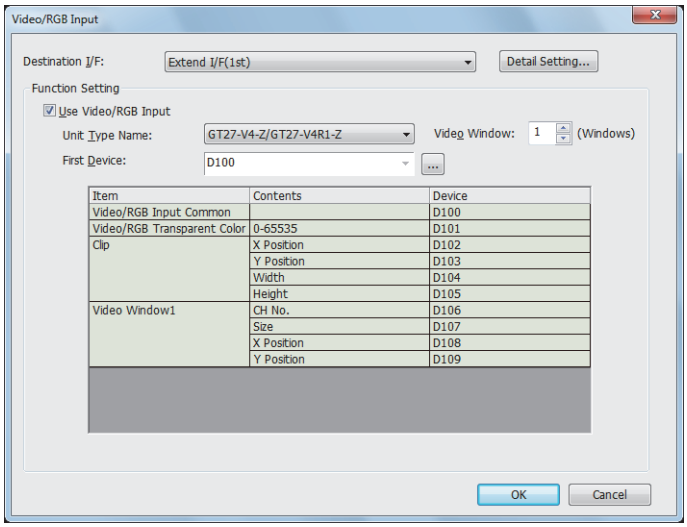
Video windows are displayed when any numbers of 1 to 4 are stored in the video window-channel No. devices. (The video window does not have the close button)

The [Video/RGB Input Common] device controls the full and clip mode, the transparent processing, and others.

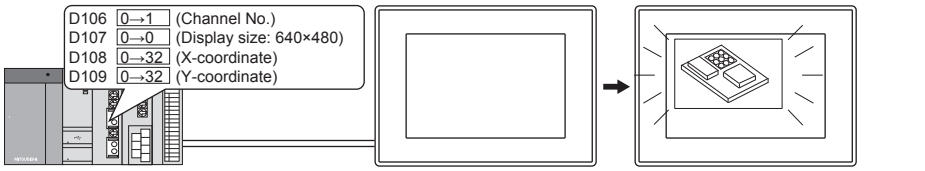
Size and position of the video window can be controlled according to the values set at the corresponding devices (video window-size device, video window-X and Y coordinates devices).

Example) Displaying the image of channel number 1 on the video window 1

Setting on GT Designer3



Operation

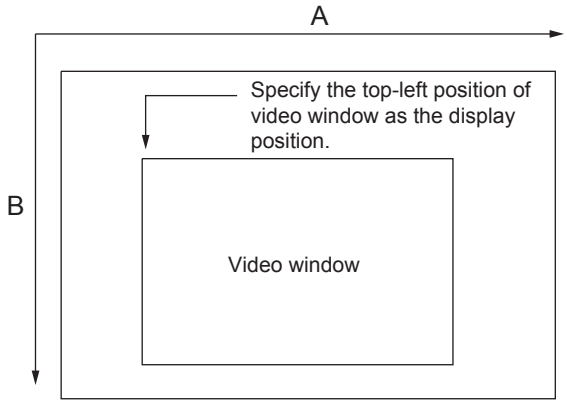


Video window 1 is displayed according to the setting for channel No., size, X and Y coordinates.

■2 Display position of the video window

The video window is placed on the base screen or overlap window 1.

The position of the video window can be specified within the range indicated below.



Model	Screen type	A (dots)	B (dots)
GT2712-S, GT2710-S, GT2708-S	Base screen Overlap window 1	0 to 736	0 to 528
GT2710-V, GT2708-V		0 to 576	0 to 416

(1) Setting the display position

Set the display position with a multiple of 2 (dots).
Even if the display position is set with a value other than a multiple of 2 (dots), the position is automatically adjusted to a multiple of 2 (dots).

(2) Video window placed beyond the screen

If the video window is placed beyond the screen, display position of the video window is automatically adjusted to fit to the screen.

(3) Order of displaying the video window

The video window is displayed over or behind the overlap window according to the setting for the [Video/RGB Input Common] device.

➟10.6.5 [Video/RGB Input] dialog

However, the following items are displayed over the video window.

- Alarm popup display
- Key window
- Comment window
- Confirmation or similar message displayed on the GOT

■3 Moving the video window

The video window does not have the move button.
To move the video window, change the device values set for the display position (X and Y coordinates).
If multiple video windows are moved frequently, the overlap window may not be moved even when the window is touched.
In this case, move the overlap window by changing the device values or move it after moving the video window is completed.

■4 Placing the video window on the overlap window

The video window can be placed on the overlap window 1 only.
Each window displayed on the front of the overlap window 1 is displayed over the video window.
For the display order of each window, refer to the following.

➟1.2.3 Screen types and the specifications

When the video window is placed on the overlap window 1, transparent processing will be automatically executed for the video window.

➟■9 Transparent processing

If figures or objects are set on the overlap window, figures or objects may be visible in the background of the video window.
If the display position (base screen or overlap window 1) is switched while the video window is displayed, the video window is closed temporarily and then opened at the specified position (base screen or overlap window 1).
The size of the video window placed on the overlap window is not changed even when the video window is touched.
To change the size of the video window, change the value of the device set for window size change.

➟10.6.5 [Video/RGB Input] dialog

■5 Displaying in the full mode

In the full mode, an image taken by a video camera is displayed on the GOT in the actual size.
When the full mode is used, up to four video windows can be displayed simultaneously.
It is also possible to display images taken by different video cameras in one video window by switching the channel No.

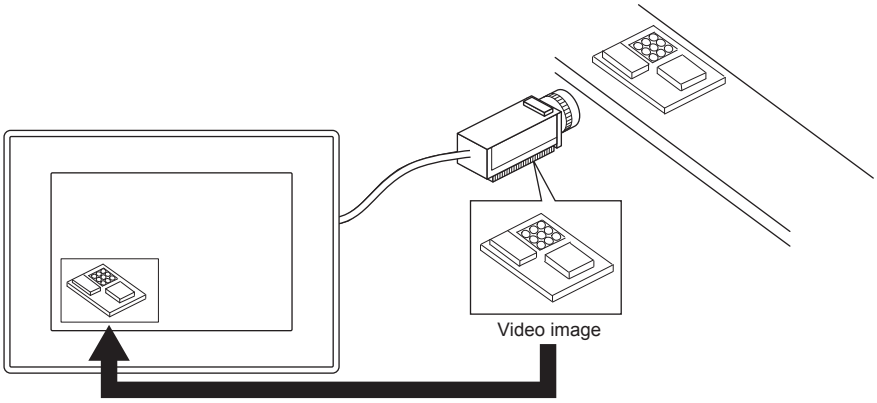


Image taken by a video camera is displayed in the actual size.

(1) Resolution and display size of the video window

The following shows the resolution of video windows that can be displayed in the full mode.
640×480 dots, 720×480 dots, 768×576 dots
The display size of each video window can be changed in three levels (100%, 50%, or 25%).

Display size	Resolution of video windows (dots)*1		
	640×480	720×480	768×576
100%	640×480	720×480	768×576
50%	320×240	360×240	384×288
25%	160×120	180×120	192×144

*1 The same resolution is set for 4 channels.

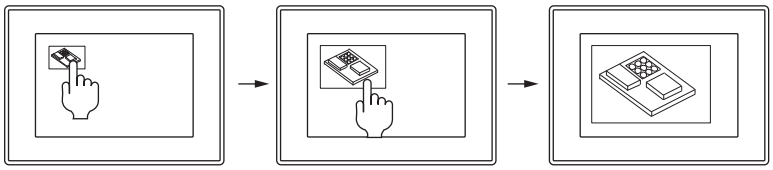
(2) Changing the display size

The following shows changing the display size of the video window.

(a) Changing the size by touching the video window

(Changing the size by touching can be disabled by turning on b4 of the [Video/RGB Input Common] device.)

➟■9 Transparent processing



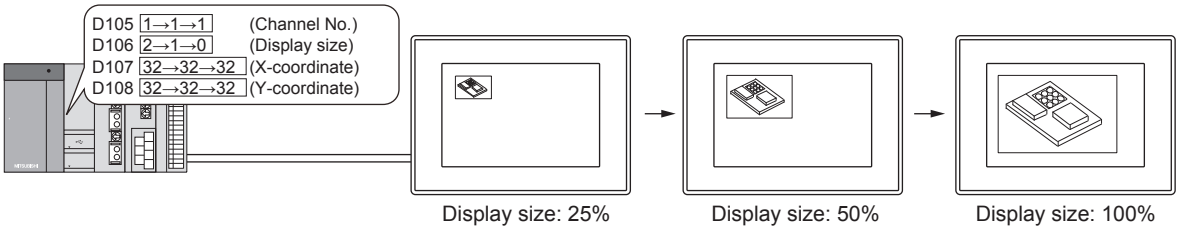
When the video window display size is changed by touching, the window size changes as follows.

- Display size change
  Display size: 25% → Display size: 50% → Display size: 100% → Display size: 50% → Display size: 25%
  When the video window is displayed at 25% magnification of the first touch changes the magnification of display size to 50%. When the video window is displayed at 50% magnification, the first touch changes the magnification to 100%.

(b) **Changing the size by writing a value to the display size setting device**

The following shows the window display sizes corresponding to values to be written.

- 0: 100%
- 1: 50%
- 2: 25%



(3) Displaying the multiple video windows

(a) **The last displayed video window is located at the topmost position.**

(b) **The video window, of which the display position or size is changed, is displayed in the topmost position.**

(c) **When video windows are superimposed, the hidden video window is displayed in the topmost position when it is touched.**

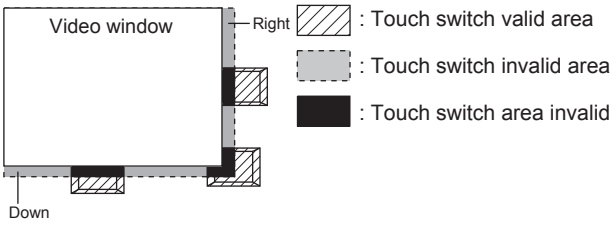
If transparent processing is executed, video windows do not operate as above.

(d) **Do not display the same image (taken by the same channel) in multiple video windows.**

If you display the same image in multiple video windows, the image is displayed only in the video window assigned with the smallest number and not displayed in other video windows.

(4) Invalid area of a touch switch around the video window

Depending on the size of displayed video window, the following areas are invalid for the touch switch.



Display size	Resolution of video windows (dots)		
	768×576	720×480	640×480
100%	768×576 (No invalid area)	720×480 (No invalid area)	640×480 (No invalid area)
50%	384×288 (No invalid area)	360×240 (Invalid area: Right 8 dots)	320×240 (No invalid area)
25%	192×144 (No invalid area)	180×120 (Invalid area: Right 12 dots, Lower 8 dots)	160×120 (Invalid area: Lower 8 dots)

Point

Precautions for using the full mode

- When the display size of the video window is returned to the previous display size by touch operation, the display position is also returned to the position when the video screen was displayed.
- If the resolution of a video image is higher than that of the video window displayed on the GOT, a part of the image is not displayed in the video window.

  The image display position can be adjusted by changing the setting for the video display setting items of the utility.
- If the resolution of the video window displayed on the GOT is higher than that of the video image, an indefinite image is displayed in the window area where the video image is not displayed.

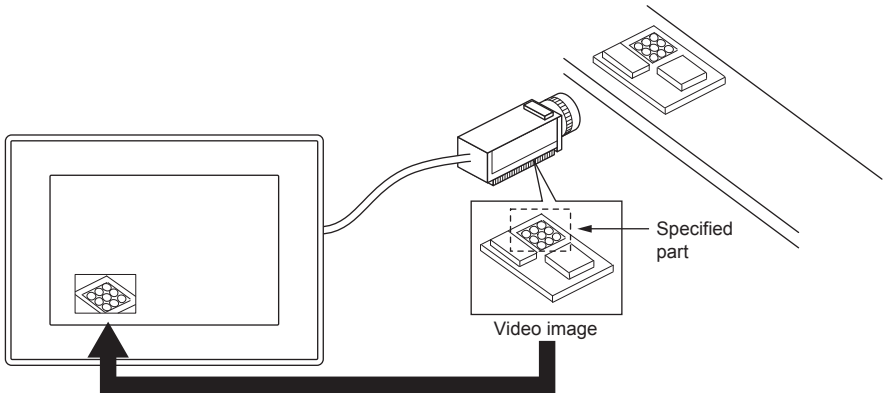
■6 Displaying in the clip mode

This mode is used to specify a part (clip area) of the image taken by a video camera and display it in the original size on the GOT.

With this mode, the video window display area can be reduced without reducing the size of the image to be displayed.

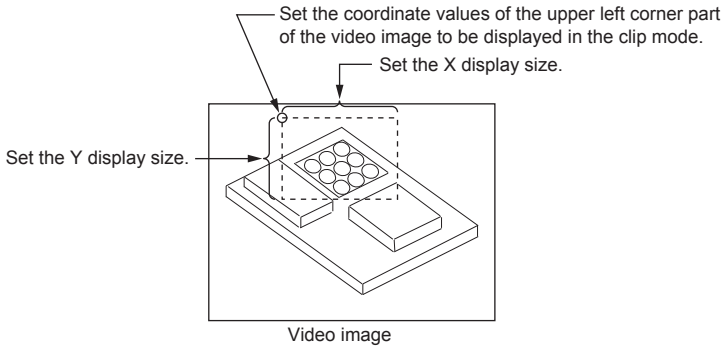
The clip mode can be used only in video window 1.

The clip mode cannot be used in video window 2 to 4.



(1) Selecting a clip area

To set a clip area, specify the upper left corner of the part of the video image to be displayed by its coordinate values and specify the vertical size (Y: 64 to 768 dots) and the horizontal size (X: 64 to 576 dots).



(2) Operations of video windows 2 to 4 in the clip mode

(a) **When switched from the full mode to the clip mode**

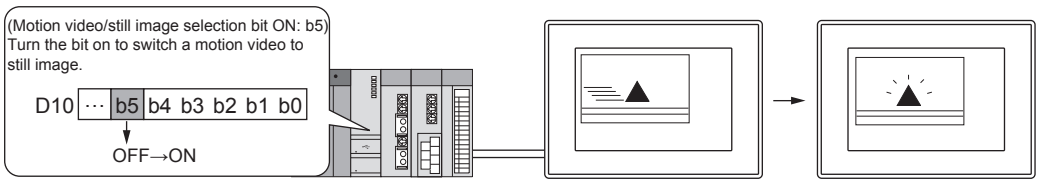
If the mode is switched from the full mode to the clip mode while any or all of video windows 2 to 4 are open, these video windows are erased forcibly.

(b) **When switched from the clip mode to the full mode**

When the mode is switched back from the clip mode to the full mode, any or all of video windows 2 to 4 are displayed according to the channel number, display position, and display size specified at that timing.

■7 Displaying a still image

The video image displayed in the full or clip mode can be switched to a still image.
When multiple video windows are displayed in the full mode, the video images displayed on the multiple video windows are all switched to still images.



Point

Precautions for using a still image

(1) **Operations that are invalid during still image display**

The operations indicated below are disabled during still image display.
To enable these operations, switch the mode back to the motion video mode.

- Changing the video window channel
- Changing the display size
- Changing the display position
- Erasing the video window
- Displaying the video window

(2) **Video window on the overlap window**

When the image in the video window placed on the overlap window is switched to a still image, do not move the overlap window.
If the overlap window is moved, the still image is not displayed.

(3) **Turning the GOT ON**

When a still image is displayed (motion video/still image selection bit: ON), do not power on the GOT.
If the GOT is powered on while the bit is on, the video window cannot be displayed.

■8 Setting items of [Video/RGB Input Common] device

The device specified for the [Video/RGB Input Common] stores the data as indicated below.
Turning on/off the bit devices controls the operation of the video window and RGB screen.
The settings for the video window are used in common to video windows 1 to 4.

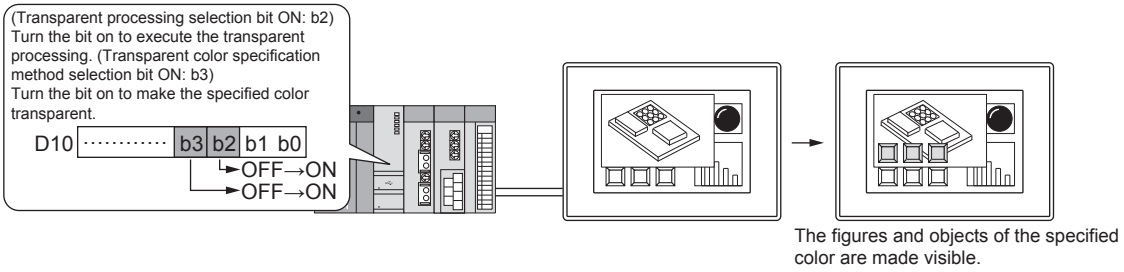
Bit number	Description	Bit status	Remarks
b0*1	Selecting the full mode or clip mode	ON: Selects the clip mode. OFF: Selects the full mode.	Valid when the video window is displayed. Bit status can be changed while the video window is displayed.
b1	Selecting the screen for placing the video window	ON: Selects the overlap window 1. OFF: Selects the base screen.	Transparent processing is executed automatically when b1 is ON.
b2	Selecting the transparent processing	ON: Executes the transparent processing. OFF: Does not execute the transparent processing.	➟■9 Transparent processing
b3	Selecting how to specify the transparent color	ON: Makes colors other than the specified color transparent. OFF: Makes the specified color transparent.	
b4	Selecting whether the display size of the video window is changed or not when the video window is touched	ON: Does not change the size. OFF: Changes the size.	Valid when the video window is opened. Bit status can be changed while the video window is displayed.
b5	Selecting a motion video or still image*2	ON: Selects a still image. OFF: Selects a motion video.	➟■9 Transparent processing
b6*3	Selecting display priority for video windows (When b2 (selecting transparent processing) is OFF.)	ON: Displays the video window over the overlap window. OFF: Displays the video window behind the overlap window.	Valid when the video window is opened. Bit status can be changed while the video window is displayed.
	Selecting transparent processing target screen (When b2 (selecting transparent processing) is ON.)	ON: Base screen only OFF: Base screen and overlap window 1 and 2	-
b7*4	Extended control	ON: Extended control enabled OFF: Extended control disabled	➟■11 Video window or RGB screen when the extended control is enabled
b8 to b9	Use prohibited	-	-
b10	Selecting the number of transparent color	ON: 65536 colors mode OFF: 256 colors mode	➟■9 Transparent processing
b11 to b12	Use prohibited	-	-
b13*4	Display position of the RGB screen	ON: Displays on the middle side. OFF: Displays on the upper left side.	➟■9 Transparent processing
b14	Selecting displaying or hiding the RGB screen (CH2)*5*6	ON: Displays the RGB screen. OFF: Displays the GOT monitor screen.	Valid when mounting GT27-R2-Z ➟■9 Transparent processing
b15	Selecting displaying or hiding the RGB screen (CH1)*5*6	ON: Displays the RGB screen. OFF: Displays the GOT monitor screen.	➟■9 Transparent processing

*1 When b7 is on, b0 is disabled and the mode is fixed to the clip mode.
*2 When this bit is turned on with other bits at the same time, the contents of other bits are disregarded. (b5 has priority.)
*3 The contents of control depend on the setting values for selecting transparent processing (b2).
*4 When b7 is off and GS449.b0 is on, an RGB screen is displayed on the middle side.
When b7 is off and GS449.b0 is off, the value set in b13 is enabled.
When b7 is on, the values set in GS449.b0 and b13 are disabled and the Extended Control signal determines the display position of the video window.
➟■11 Video window or RGB screen when the extended control is enabled
*5 When a user-created screen is displayed on the GOT, an RGB screen is displayed with bit on.
*6 When both b14 and b15 turn on, b15 has priority.

■9 Transparent processing

(1) Displaying transparent processing

Specify the transparent color to display objects or figures located behind the video window.
Select the transparent color from the specified color or the colors other than the specified color.
When multiple video windows are displayed, transparent processing is performed on all windows.



Example)

Transparent color specification method selection bit: b3	Transparent color	Display
OFF (makes the specified color transparent)	0(black)	Figures or objects of colors other than black are visible on the video window.
ON (makes colors other than the specified color transparent)	0(black)	Figures or objects in black color are visible on the video window.

(a) **Placing the video window on the overlap window**

When the video window is placed on the overlap window 1, the transparent processing is automatically executed even if the transparent processing selection bit (b2) is OFF.

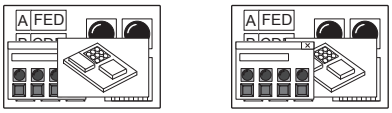
(b) **Touch switches, numerical input, and text input behind the video window**

By executing the transparent processing, objects such as touch switches, numerical input, and text input functions behind the video window are made visible.
(While the transparent processing is applied, the video window size does not change even if the video window is touched.)

(2) Display examples (with and without transparent processing)

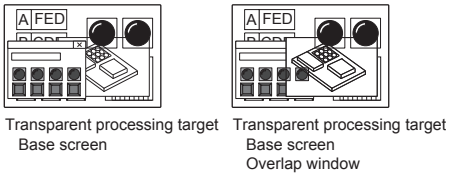
(a) **When transparent processing is not executed**

The video window is displayed over the base screen.
For overlap windows, displaying over or behind an overlap window is selectable.



(b) **When transparent processing is executed**

The video window is displayed behind the base screen.
If the target of transparent processing is only the base screen, the overlap window is not made visible.
If both the base screen and the overlap window are set as the target of transparent processing, both of them are made visible.

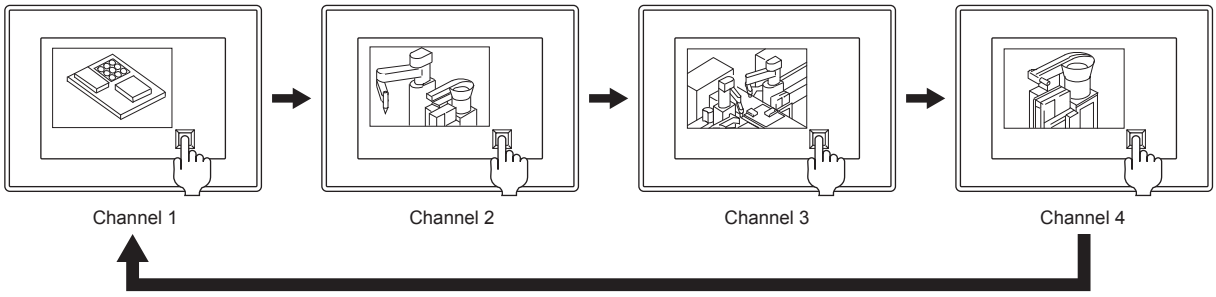


■10 Usage examples of the video window

The following shows the usage examples of video window.

(1) Switching the channels by the touch switch

The channel displayed on the video window 1 is switched each time the touch switch is touched.

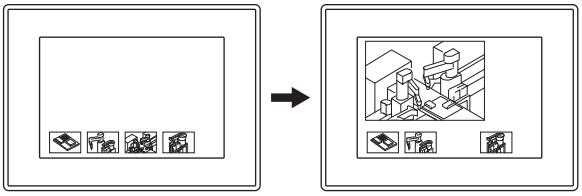


The following shows the example of the setting when D100 is set in the start device.

Item		Device	Setting
[Video Window1]	[CH No.]	D106	1 → 2 → 3 → 4 → 1···Repeated
	[Size]	D107	0
	[X Position]	D108	32
	[Y Position]	D109	32

(2) Enlarging the screen as necessary

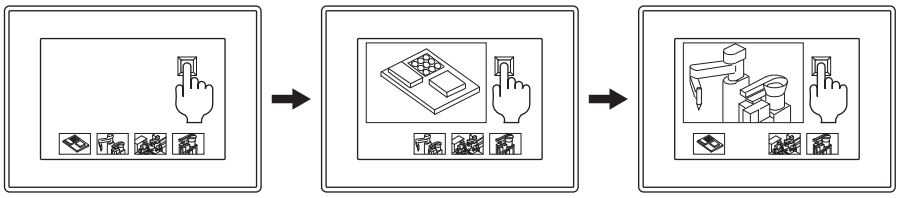
(a) In a normal state, small-size video windows are displayed at the bottom of the screen and the video windows are enlarged as necessary. (The size is changed by the sequence program or the touch switch.)



The following shows the example of the setting when D100 is set in the start device.

Item		Device	Setting
[Video Window1]	[CH No.]	D106	1
	[Size]	D107	2
	[X Position]	D108	32
	[Y Position]	D109	480
[Video Window2]	[CH No.]	D110	2
	[Size]	D111	2
	[X Position]	D112	208
	[Y Position]	D113	480
[Video Window3]	[CH No.]	D114	3
	[Size]	D115	2 → 0
	[X Position]	D116	384 → 32
	[Y Position]	D117	480 → 0
[Video Window4]	[CH No.]	D118	4
	[Size]	D119	2
	[X Position]	D120	560
	[Y Position]	D121	480

(b) **In a normal state, small-size video windows are displayed at the bottom of the screen and the video windows are enlarged one by one as necessary. (The size is changed by the touch switch and script.)**



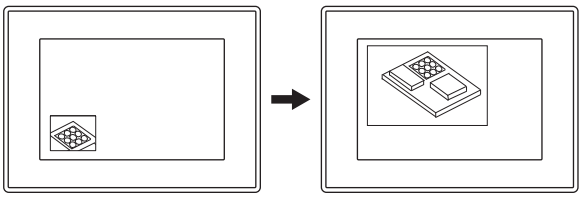
The following shows the example of the setting when D100 is set in the start device.

Item		Device	Setting
[Video Window1]	[CH No.]	D106	1
	[Size]	D107	2 → 0 → 2
	[X Position]	D108	32 → 32 → 32
	[Y Position]	D109	480 → 0 → 480
[Video Window2]	[CH No.]	D110	2
	[Size]	D111	2 → 2 → 0
	[X Position]	D112	208 → 208 → 32
	[Y Position]	D113	480 → 480 → 0
[Video Window3]	[CH No.]	D114	3
	[Size]	D115	2
	[X Position]	D116	384
	[Y Position]	D117	480
[Video Window4]	[CH No.]	D118	4
	[Size]	D119	2
	[X Position]	D120	560
	[Y Position]	D121	480

Write a script that repeats the following operations each time the touch switch is touched.

- Window 1: Small → Large
- Window 1: Large → Small
  Window 2: Small → Large
- Window 2: Large → Small
  Window 3: Small → Large

(c) **In a normal state, a part of the video image is displayed at the bottom of the screen, and the video image is switched to the display of the full size as necessary. (The video display mode is switched between the full mode and clip mode by the sequence program or the touch switch.)**



The following shows the example of the setting when D100 is set in the start device.

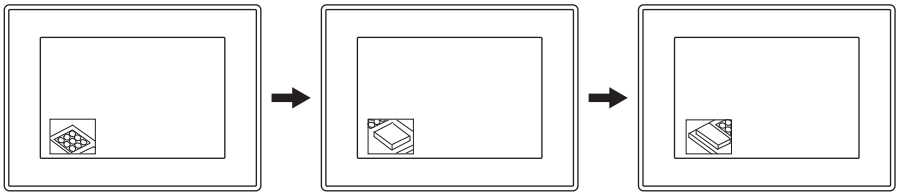
Item		Device	Setting
[Video/RGB Input Common]		D100	Selecting the full mode or clip mode D100.b0: ON → OFF
[Video/RGB Transparent Color]	[0 to 65535] or [0(Black) to 255(White)] *1	D101	Selecting a transparent color

Item		Device	Setting
[Clip]	[X Position]	D102	70
	[Y Position]	D103	50
	[Width]	D104	256
	[Height]	D105	256
[Video Window1]	[CH No.]	D106	1
	[Size]	D107	0
	[X Position]	D108	32
	[Y Position]	D109	400 → 32

*1 When b10 is turned on by the [Video/RGB Input Common] device, [0 to 65535] is applied, and when turned off, [0(Black) to 255(White)] is applied, respectively.

(3) Changing the display position of video image

A part of a video image is displayed at the bottom of the screen and the display position is switched as necessary. (The X and Y coordinates of the area to be clipped are switched by the sequence program or the touch switch.)



The following shows the example of the setting when D100 is set in the start device.

Item		Device	Setting
[Video/RGB Input Common]		D100	Selects the clip mode.
[Video/RGB Transparent Color]	[0 to 65535] or [0(Black) to 255(White)]*1	D101	Selecting a transparent color
[Clip]	[X Position]	D102	70 → 90 → 80
	[Y Position]	D103	50 → 60 → 20
	[Width]	D104	256
	[Height]	D105	256
[Video Window1]	[CH No.]	D106	1
	[Size]	D107	0
	[X Position]	D108	112
	[Y Position]	D109	112

*1 When b10 is turned on by the [Video/RGB Input Common] device, [0 to 65535] is applied, and when turned off, [0(Black) to 255(White)] is applied, respectively.

■11 Video window or RGB screen when the extended control is enabled

When b7 (Extended Control signal) of the video and RGB input common device is on, the video window is always displayed in the clip mode.

The value of b0 (selecting the full and clip mode) of the video and RGB input common device is disabled.

To disable the extended control function, refer to the following.

➟■8 Setting items of [Video/RGB Input Common] device

When the extended control is enabled, the following functions are available.

(1) Full-screen display

To display the video window or RGB screen in full-screen size, specify the video window or RGB screen to the Full-screen Display Control signal (GS1998).

When a value other than the following is specified, the video window or RGB screen operates in the same way as 0.

0: Does not display the video window in full-screen size. (The window display size corresponds to the setting of each video window or RGB screen.)

1 to 4: Displays the specified number of video window in full-screen size.

5: Displays the RGB screen in full-screen size.

(2) Display setting of the video window

To display the video window or RGB screen on the GOT in the full-screen display or the clip display, configure the following setting.

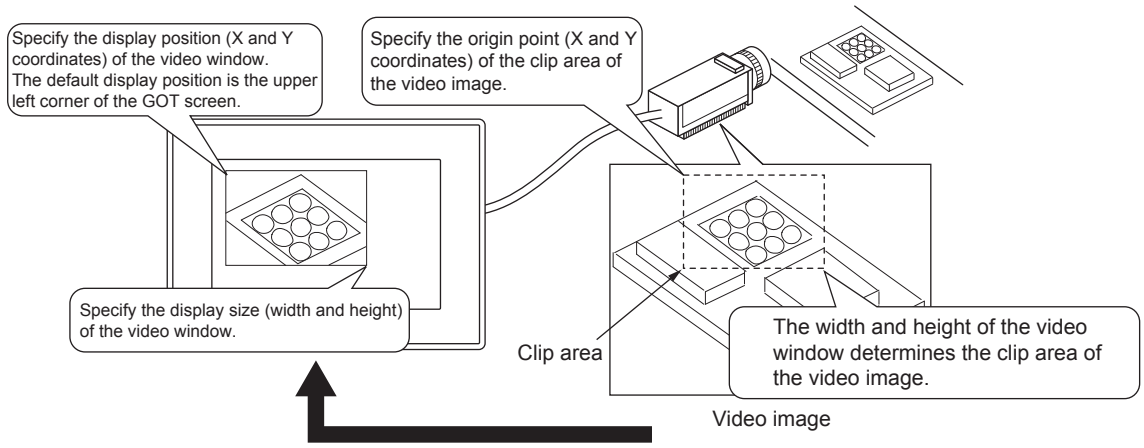
The display position of the video window or RGB screen is specified by using the upper left corner of the GOT screen as the origin point of coordinates.

Device					Function
Video window 1	Video window 2	Video window 3	Video window 4	RGB window	
GS1999	GS2009	GS2019	GS2029	*1	Specify the channel No. of the video window.
GS2000	GS2010	GS2020	GS2030	GS2039	Specify the display magnification of the video window or RGB screen. The display size, which is specified in the display size setting (width and height) for the video window or RGB screen, is used as the reference. • 7: 400% • 8: 200% • 0: 100% • 1: 87.5% • 2: 75% • 3: 62.5% • 4: 50% • 5: 37.5% • 6: 25% • Other than the above: 100%
GS2001	GS2011	GS2021	GS2031	GS2040	Specify the display size (width) of the video window or RGB screen in dots by using the size at 100% magnification as the reference. The actual display size (width) of the video window or RGB screen is enlarged or reduced according to the set display magnification. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2002	GS2012	GS2022	GS2032	GS2041	Specify the display size (height) of the video window or RGB screen in dots by using the size at 100% magnification as the reference. The actual display size (height) of the video window or RGB screen is enlarged or reduced according to the set display magnification. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2003	GS2013	GS2023	GS2033	GS2042	Using the upper left corner of the GOT screen as the origin point of coordinates, specify the display position (X coordinate) of the video window or RGB screen in dots. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2004	GS2014	GS2024	GS2034	GS2043	Using the upper left corner of the GOT screen as the origin point of coordinates, specify the display position (Y coordinate) of the video window or RGB screen in dots. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2005	GS2015	GS2025	GS2035	GS2044	Specify the origin point (X coordinate) of the clip area of the video image. Specify the display magnification within a range of the resolution of the video image.
GS2006	GS2016	GS2026	GS2036	GS2045	Specify the origin point (Y coordinate) of the clip area of the video image Specify the display magnification within a range of the resolution of the video image.

*1 Specify a channel number with b14 and b15 of the device specified for [Video/RGB Input Common].

➟10.6.4 ■8 Setting items of [Video/RGB Input Common] device

(a) **Displaying the video image with the clip display by controlling the devices**

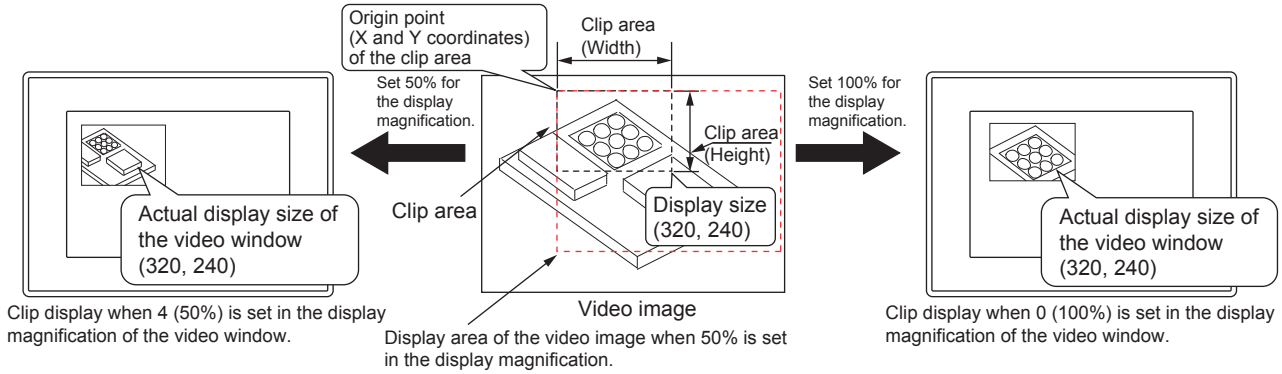


Displaying the video image controlled with the GOT internal devices

(b) **Clip display when the display magnification is changed**

If any other than 100% is set for the display magnification, the size of the video window displayed on the GOT is enlarged or reduced according to the set display magnification.

• Display example when the display magnification is 100% or 50%

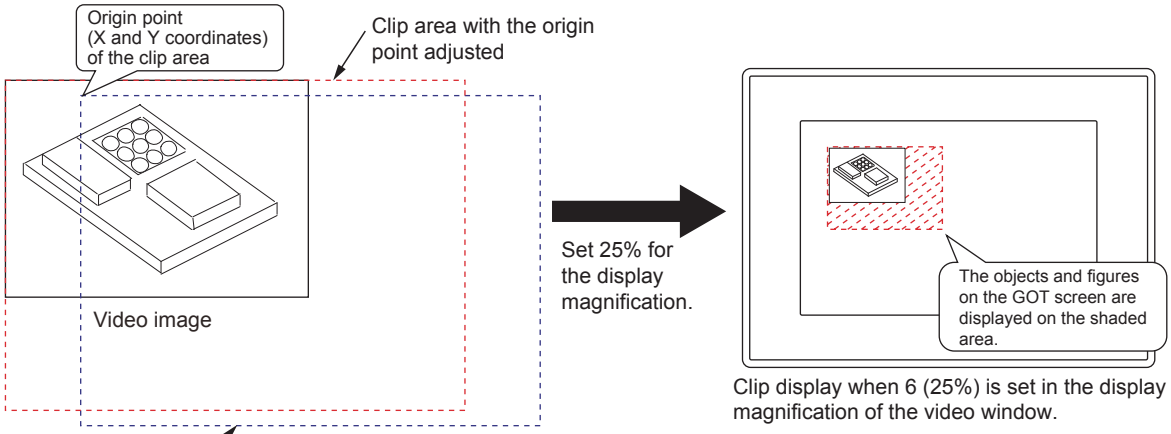


Clip display when 4 (50%) is set in the display magnification of the video window.

Display area of the video image when 50% is set in the display magnification.

Clip display when 0 (100%) is set in the display magnification of the video window.

• Display example when the display magnification is 25%



Display area of the video image when 25% is set in the display magnification.

Clip display when 6 (25%) is set in the display magnification of the video window.

10.6.5 [Video/RGB Input] dialog

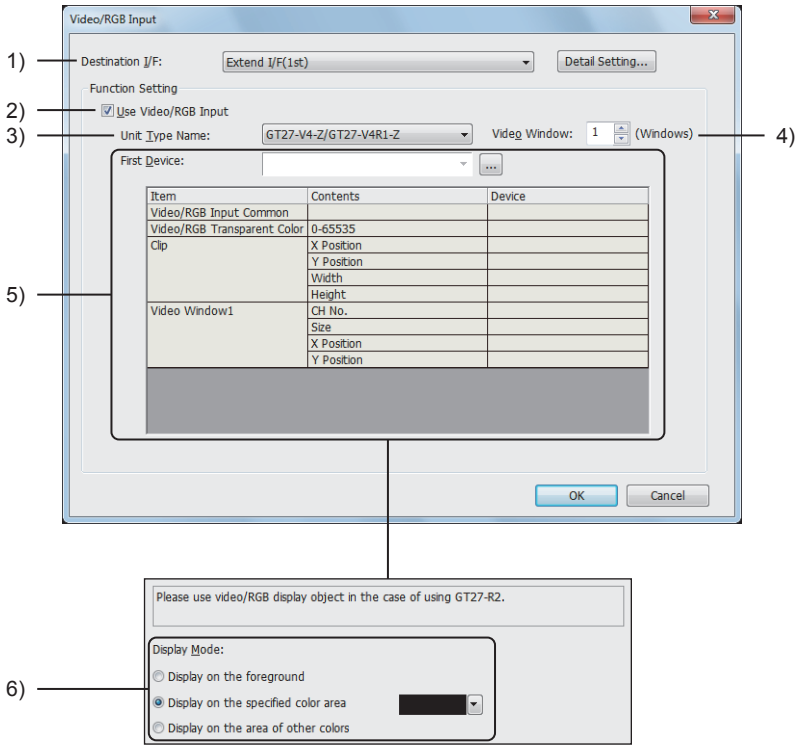
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

Select [Common] → [Peripheral Setting] → [Video/RGB Input] from the menu to display the setting dialog.

This dialog is common to the following functions.

- Video/RGB display object
- Video display function
- RGB display function



When [Unit Type Name] is set to [GT27-R2 (RGB Screen only)]

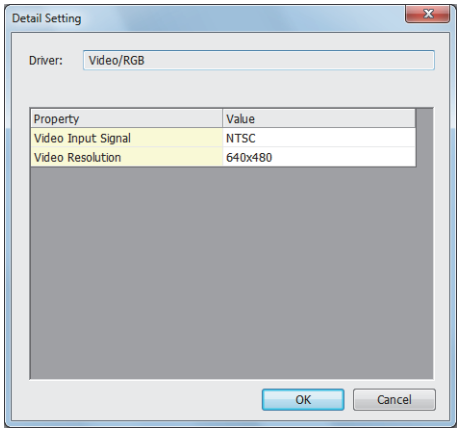
1) **[Destination I/F]**

Set the interface of the GOT.

The following shows the items to be selected.

- [Extend I/F(1st)]
- [Not connected]

Click the [Detail Setting] button to display the detail setting dialog for the video and RGB input.



- **[Video Input Signal]**

  Select the video input signal

  The following shows the items to be selected.

  - [NTSC]
  - [PAL]

- **[Video Resolution]**

  Select the video resolution.

  The following shows the items to be selected.

  - [640×480]
  - [720×480]
  - [768×576]

  This item is fixed to [640×480] when [NTSC] is selected for [Video Input Signal].

2) **[Use Video/RGB Input]**

Enables the following functions.

• Video/RGB display object
• Video display function
• RGB display function

3) **[Unit Type Name]**

Select an option unit model according to the function used.
The following shows the items to be selected.

• [GT27-V4-Z/GT27-V4R1-Z]
• [GT27-R2-Z (RGB Screen only)]
• [GT27-R2 (RGB Screen only)]

4) **[Video Window]**

This item appears when [Unit Type Name] is set to [GT27-V4-Z/GT27-V4R1-Z].
Set the number of video windows displayed.
The setting range is [1] to [4].

5) **[First Device]**

This item appears when [Unit Type Name] is set to [GT27-V4-Z/GT27-V4R1-Z] or [GT27-R2-Z (RGB Screen only)].
Set the first device to be used.
By setting the first device, consecutive devices are automatically assigned to the following items.

Item	Description
[Video/RGB Input Common]	Device to display a video window or the RGB screen The device value is handled as a 16-bit binary. ➟10.6.4 ■8 Setting items of [Video/RGB Input Common] device
[Video/RGB Transparent Color]	This item appears when [Unit Type Name] is set to [GT27-V4-Z/GT27-V4R1-Z]. Specify the transparent color for the transparent processing. Transparent color depends on the bit device set by b10 of [Video/RGB Input Common]. • When b10 is on: 0 to 65535 • When b10 is off: 0 (Black) to 255 (White) ➟10.6.4 ■8 Setting items of [Video/RGB Input Common] device
[Clip]	This item appears when [Unit Type Name] is set to [GT27-V4-Z/GT27-V4R1-Z]. • [X Position]: Specify the X coordinate to display a video image when the clip mode is used. • [Y Position]: Specify the Y coordinate to display a video image when the clip mode is used. • [Width]: Specify the width of a clipped image. • [Height]: Specify the height of a clipped image.
[Video Window1], [Video Window2], [Video Window3], [Video Window4]	This item appears when [Unit Type Name] is set to [GT27-V4-Z/GT27-V4R1-Z]. The related setting items appear for each video window according to the set value of [Video Window]. • [CH No.]: Specify the channel number displayed on a video window. The setting range is [1] to [4]. • [Size]: Specify the display size of the video window. The following shows the setting range for the display size. · 0: 100% · 1: 50% · 2: 25% When the display size of the video window is changed by touching the window, the value of the set device remains unchanged. • [X Position]: Specify the X coordinate of the video window. • [Y Position]: Specify the Y coordinate of the video window.

6) **[Display Mode]**

This item appears when [Unit Type Name] is set to [GT27-R2 (RGB Screen only)].
Set the GOT display mode for the video/RGB display object.
For the details of [Display Mode], refer to the following.

➟8.27.1 ■9 Display mode

The following shows the items to be selected.

• [Display on the foreground]:
Displays a video/RGB display object in front of the other figures and objects on the same screen.
Overlapping figures and objects are hidden under the video/RGB display object.
The transparent function is disabled.

• [Display on the specified color area]:
Displays a video/RGB display object behind the other figures and objects on the same screen.
The transparent function is enabled.
Select a color to become transparent.

➟6.4.2 Color settings

If [Set screen background color] is enabled in the [Screen Property] dialog for a target screen, set the same color for [Front Layer Transparent Color].
Otherwise, the video/RGB display object is hidden under the background color.

• [Display on the area of other colors]:
Displays a video/RGB display object behind the other figures and objects on the same screen.
The transparent function is enabled.
Select a color not to become transparent so that other colors become transparent.

➟6.4.2 Color settings

If [Set screen background color] is enabled in the [Screen Property] dialog for a target screen, set the same color for [Front Layer Transparent Color].
Otherwise, the video/RGB display object is hidden under the background color.

10.6.6 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
This section explains the precautions for using the video display function.

■1 Precautions for drawing

(1) Placing the object on the video window

Objects cannot be placed on the video window.

(2) Displaying the video window, RGB screen, and multimedia screen

The simultaneous display of the video window, RGB screen, and multimedia screen is not available.

(3) Displaying a window with transparency

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If a window with transparency is placed on a video window, the video window is invisible.

■2 Precautions for use

(1) Display of a video image

(a) **When no video signal is input from a video camera**

If a video signal is not input to the specified channel due to cable disconnection or power-off of a video camera, a video image is not displayed.

(b) **Restrictions when the video display is used with the hard copy or other functions**

A video image may be given in still image or disappear temporarily when the hard copy function is executed or when a system message is displayed or cleared.

(c) **Function unavailable in full screen mode**

The hard copy function is not available with the full-screen display.

(d) **Precautions for the utility setting**

A video image may be disturbed or stopped depending on the setting for [Horizontal] or [Vertical] for the utility (video display setting).
(In this case, the normal display will be restored by changing the settings to default values.)
Whether or not such a problem occurs depends on equipment such as a video camera.
Use setting values that allow normal video display
For the operating procedure for the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(e) **Restrictions when the video window lies off the GOT screen**

The video window may not display a video image properly, if the window lies off the GOT screen.
Make sure that the video window does not lie off the GOT screen.

(2) Output format of a video camera and video input signal setting

Set a video input signal according to an output format of the video camera to be connected as shown below.
If the setting is different, some video images may not be displayed correctly.

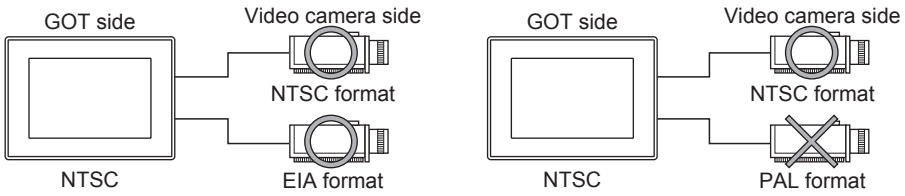
Output format of video camera	Video input signal setting
NTSC format	NTSC
PAL format	PAL
EIA format	NTSC
CCIR format	PAL

(a) **When using multiple video cameras**

When you use multiple video cameras, refer to the above table. Select a video cameras with output formats that correspond to the video input signal setting of the GOT.

One type of video input signal can be set for each project.

When the output format of the video camera does not correspond to the video input signal setting of the GOT, some video images may not be displayed correctly.



10.6.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

Set the relevant settings other than the specific settings for the video display function as required. The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

Enabling b7 of the device specified by [Video/RGB Input Common] enables the extended control.

Use the extended control to display the video window with the full-screen display or the clip display on the GOT.

For the details of the devices, refer to the following.

➟12.1.3 GOT special register (GS)

10.6.4 ■11 Video window or RGB screen when the extended control is enabled

Function	Setting item
Checking if the input status of the video signal for CH1 is recognized	GS252.b8
Checking if the input status of the video signal for CH2 is recognized	GS252.b9
Checking if the input status of the video signal for CH3 is recognized	GS252.b10
Checking if the input status of the video signal for CH4 is recognized	GS252.b11
Controlling the display position for the RGB screen	GS449.b0
Specifying the video window or the RGB screen to be enlarged to full screen when the extended control is enabled	GS1998
Controlling the video window 1 with the GOT internal devices when the extended control is enabled	GS1999 to GS2006
Controlling the video window 2 with the GOT internal devices when the extended control is enabled	GS2009 to GS2016
Controlling the video window 3 with the GOT internal devices when the extended control is enabled	GS2019 to GS2026
Controlling the video window 4 with the GOT internal devices when the extended control is enabled	GS2029 to GS2036
Controlling the RGB display with the GOT internal devices when the extended control is enabled	GS2039 to GS2045

10.7 Displaying Image from a Personal Computer on the GOT (RGB Display Function)

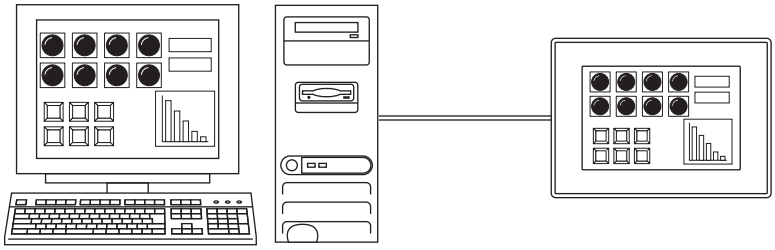
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

10.7.1 Overview of the RGB display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
The RGB display function enables screens of the personal computer or others to be displayed on the GOT.



Point

RGB input unit applicable to the RGB display function
Use GT27-R2-Z or GT27-V4R1-Z for the RGB display function.
GT27-R2 is not applicable.
When using GT27-R2, use a video/RGB display object.
➟8.27 Placing a Video/RGB Display Object

10.7.2 Specifications of the RGB display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 System application (extended function)

To use the RGB display function, a system application (extended function) of [Video/RGB] is required.
To incorporate the application into the package data automatically, select [Use Video/RGB Input] and select [GT27-R2-Z (RGB Screen only)] or [GT27-V4-Z/GT27-V4R1-Z] for [Unit Type Name] in the [Video/RGB Input] dialog.

➟10.6.5 [Video/RGB Input] dialog

■2 Number of RGB display function settings for one project

One RGB display function setting is available for one project.

■3 Specifications of the RGB display

The following resolutions and refresh rates are applicable to the RGB display function.

Resolution	Refresh rate (Hz)
XGA (1024 × 768 dots)	60
SVGA (800 × 600 dots)	60/72/75
VGA (640 × 480 dots)	60/72/75/85

10.7.3 Basic use of the RGB display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

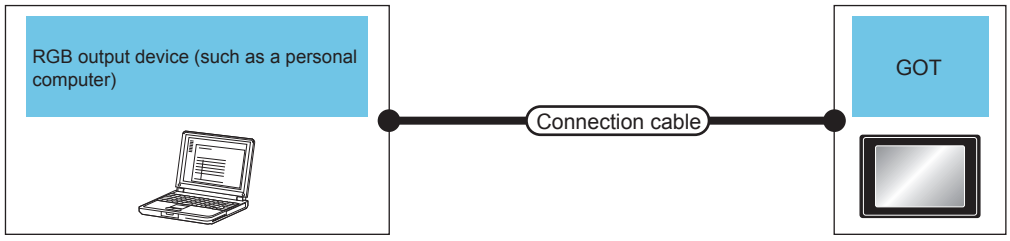
The RGB display function enables various types of displays by using the [Video/RGB Input Common] device.

For the details of the settings, refer to the following.

➟10.7.4 Advanced use of the RGB display function

■1 System configuration

The following shows the system configuration of the RGB display function.



Signal type	RGB output device	Connection cable*1	GOT		Number of connectable RGB devices
			Option	GOT model	
Analog RGB	For the connectable RGB output devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT15-C50VG (5m) or Preparing connection cables by each user*2	GT27-R2-Z*3	GT27*4	Two RGB output devices for one GOT
			GT27-V4R1-Z		One RGB output device for one GOT

*1 The cable length depends on the specifications of the RGB output device used.

*2 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*3 Two channels (CH1 and CH2) can be set as an input source for the RGB screen. For channel switching, refer to the following.

➟10.6.5 [Video/RGB Input] dialog

*4 Not available to GT2705-V.

■2 Setting procedure

Step 1 Connect the GOT and the RGB output device.

➟■1 System configuration

Step 2 Select [Common] → [Peripheral Setting] → [Video/RGB Input] from the menu to display the [Video/RGB Input] dialog.

➟10.6.5 [Video/RGB Input] dialog

Step 3 In the [Video/RGB Input] dialog, set the items as shown below and click the [OK] button.

- [Destination I/F]: [Extend I/F(1st)]
- [Use Video/RGB Input]: Selected
- [Unit Type Name]: [GT27-R2-Z (RGB Screen only)] or [GT27-V4-Z/GT27-V4R1-Z] according to the unit used
- [First Device]: Device to control the RGB display function

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 5 Display the RGB screen on the GOT.

10.7.4 Advanced use of the RGB display function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

The following shows the settings for applicative display by using the RGB display function.

■1 How to display the RGB screen

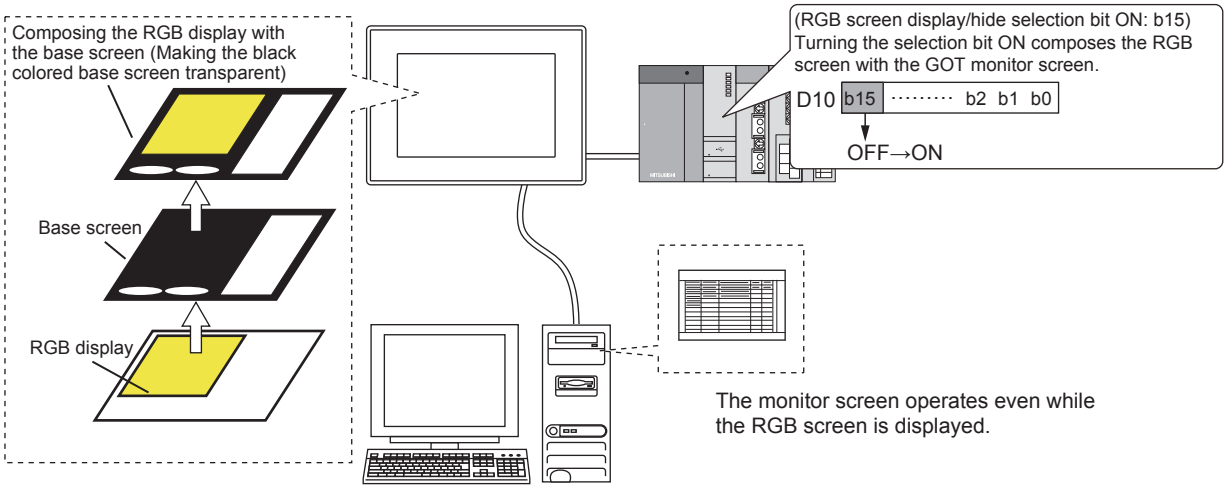
The RGB screen is displayed on the monitor screen of the GOT according to the on/off setting of the RGB screen display/hide selection bit (the bit device in the word device).

The RGB screen is displayed through a black colored base screen by making the base screen transparent.

Set the screen color of the base screen to black.

For how to set the screen color, refer to the following.

➟2.7 Changing Screen Property



(1) Display setting

(a) **When the resolution of the RGB screen is lower than that of the GOT screen, the RGB display position can be changed to the upper left side or the middle side of the GOT.**

The display size can also be changed.

Set the RGB display position and size in [Video/RGB Input Common] in the [Video/RGB Input] dialog.

For the setting procedure, refer to the following.

➟10.7.5 [Video/RGB Input] dialog

(b) **The RGB display can be performed on the user-created screen only.**

For the screens other than the user-created screen (such as the utility and device monitor screen), the RGB display cannot be performed.

(c) **The display position may be misaligned depending on the RGB output device.**

If the display position is misaligned, adjust the position in the utility ([Display Position] in [RGB Display Settings]) of the GOT.

For the details of the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(2) Displaying a window screen

Overlap windows are displayed over the composed screen.

A superimpose window is displayed as a part of the base screen.

(3) Displaying in the clip mode

Specify a part of the RGB screen (clip area) to display it on the GOT in actual size.

To display the RGB screen in the clip mode, configure the settings in [Video/RGB Input Common] in the [Video/RGB Input] dialog.

For the setting procedure, refer to the following.

➟10.7.5 [Video/RGB Input] dialog

(4) Channel switching for the RGB screen

When the GOT with the GT27-R2-Z is used, select the input source for the RGB screen from CH1 or CH2.
Set the input source channel in [Video/RGB Input Common] in the [Video/RGB Input] dialog.
For the setting procedure, refer to the following.

➟10.7.5 [Video/RGB Input] dialog

(5) Efficient use of the RGB screen

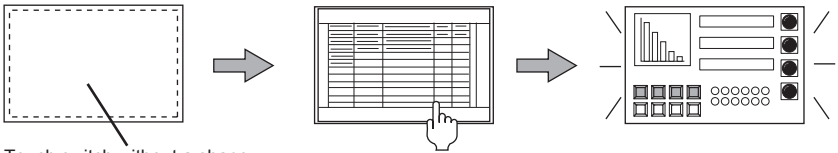
It provides the convenience to place a touch switch without a shape at the position where the RGB screen is displayed, and to configure the settings for the touch switch so that the RGB screen is hidden and then the monitor screen is displayed.

(a) Hiding the RGB screen

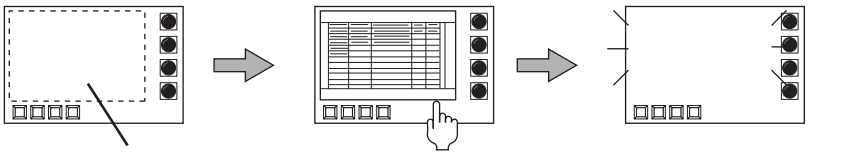
Configure the setting for the touch switch so that the RGB screen display/hide selection bit turns off.

(b) Displaying the monitor screen after hiding the RGB screen

Configure the settings for the touch switch so that the RGB screen display/hide selection bit turns off and the monitor screen is displayed.
Example: Hiding the RGB screen

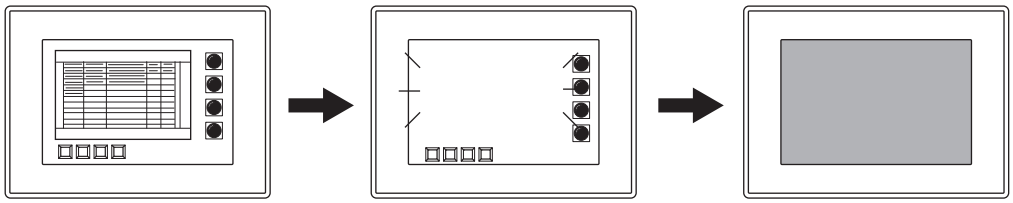


Example: Displaying the monitor screen after hiding the RGB screen



■2 Screen save function of the RGB screen

While the RGB screen is displayed, the power saving function of the personal computer display becomes active, followed by the GOT screen save function.
When the power saving function of the personal computer display is not active, the GOT screen save function is disabled even if it is set on the GOT.
The RGB screen save is performed as shown below.



Relation between the personal computer status and the validity of the GOT screen save function

Personal computer status	Validity of GOT screen save function
Personal computer screen displayed	Invalid (Personal computer screen displayed)
Screen saver operating	
Display power saving function operating	Valid (Personal computer screen → Monitor screen → GOT screen save mode)

(1) Screen save operation while monitoring

While the RGB screen is not displayed, the GOT screen save function operates independently of the power saving function of the personal computer display.
For the details of the GOT screen save function, refer to the following manual.

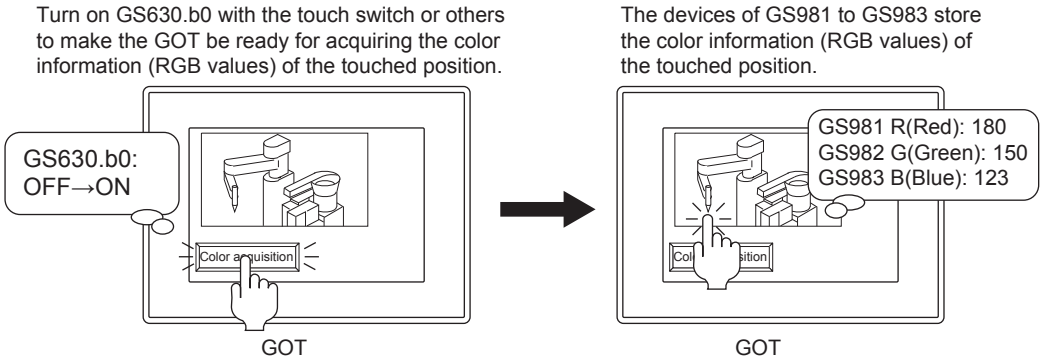
➟GOT2000 Series User's Manual (Utility)

(2) When no RGB signal is input to the GOT

When no RGB signal is input to the GOT due to cable disconnection and others, the GOT internal device (GS252.b15) turns on as when the GOT detects the power saving state of the personal computer display.

■3 Acquiring the color information of the touched position

By using the GOT special registers (GS devices), the color information of the touched position can be acquired.



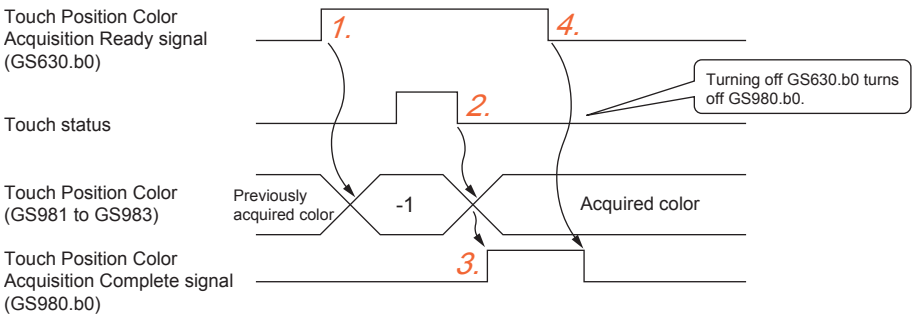
The following shows the procedure to acquire the color information of the touched position.

Step 1 Use the touch switch or others to turn on the Touched Position Color Acquisition Ready signal (GS630.b0).
Turning on the signal makes the GOT be ready for acquiring the color information of the touched position.
The Touch Position Color (GS981 to GS983) stores -1.

Step 2 Touch the position where you acquire the color information.
The Touch Position Color (GS981 to GS983) stores the color information of the touched position.

Step 3 After the acquisition of the color information of the touched position, the Touch Position Color Acquisition Complete signal (GS980.b0) turns on.
Then, the GOT stops to acquire the color information.

Step 4 Use the touch switch or others to turn off the Touch Position Color Acquisition Ready signal (GS630.b0).
Turning off the signal also turns off the Touched Position Color Acquisition Complete signal.



(1) Color information that can be acquired

Depending on the liquid crystal display, camera, or others, the acquired color information may not be exactly the same as the color of the real image.

(2) Timing when the color information cannot be acquired

The color information cannot be stored in the Touch Position Color (GS981 to GS983) during the following processes.

- Displaying a dialog window
- Moving a window screen
- Returning from the screen save mode
- Screen switching with the operation timing of [When a finger is touched (ON synchronous)]
- Touch operation
- Executing the hard copy function
- The Key-in Disable signal (System signal 1-1.b9) ON

• Acquiring the color information of the touched position
Short touch of the screen may cause the GOT not to recognize the touch operation.
Use the Touch Position Color Acquisition Complete signal (GS980.b0) to check whether the color information has been acquired.
When the signal does not turn on, the GOT has not acquired the color information.
Touch the screen again to acquire the color information.

(3) Effect on other functions

Acquiring the color information of the touched position may require a maximum of three seconds.
Therefore, it may cause delay in the processes of the other functions.
The hard copy function is also unavailable while the color information of the touched position is acquired.

10.7.5 [Video/RGB Input] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
For the details of the [Video/RGB Input] dialog, refer to the following.

➟10.6.5 [Video/RGB Input] dialog

10.7.6 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
This section explains the precautions for using the RGB display function.

■1 Precautions for drawing

(1) Displaying the video window, RGB screen, and multimedia screen

The simultaneous display of the video window, RGB screen, and multimedia screen is not available.

(2) Displaying a window with transparency

GOT Graphic Ver.2

If a window with transparency is placed on the RGB screen, the RGB screen is invisible.

■2 Precautions for use

(1) Object function while the RGB screen is displayed

Each object operates even while the RGB screen is displayed.

(2) Personal computers on which the RGB display is not available

Use the personal computer which meets the resolution requirements indicated in the following reference page.
The personal computer which does not meet the resolution requirements disables the RGB display on the GOT.

➟10.7.2 ■3 Specifications of the RGB display

(3) RGB screen display

(a) **Restrictions when the video display is used with the hard copy or other functions**

The RGB screen may be displayed as a still image or disappear temporarily when the hard copy function is executed or when a system message is displayed or cleared.

(b) **Function unavailable in full screen mode**

The hard copy function is not available with the full-screen display.

(c) **Precautions for the utility setting**

The RGB display may be disabled, disturbed, or stopped depending on the setting for [Horizontal] or [Vertical] of the utility (RGB display setting).
In this case, change the set values to the default values, and then configure the setting within the range that enables the RGB display.
For the operating procedure for the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(d) **Restrictions when the RGB screen lies off the GOT screen**

The RGB screen may not display an RGB image properly, if the screen lies off the GOT screen.

Make sure that the RGB screen does not lie off the GOT screen.

(4) Setting of the resolution and refresh rate for the RGB output device

When the RGB input image is not displayed properly, refer to the following.

➥10.7.2 ■3 Specifications of the RGB display

When the resolution and refresh rate are set outside the range for the RGB output device, the RGB input image is not displayed properly.

(5) Resolution of the RGB input image

Set the resolution of the RGB input image to be lower than that of the GOT.

When the resolution of the RGB input image is higher than that of the GOT, only the image which can be displayed within the resolution of the GOT is displayed.

To use the RGB input image whose resolution is higher than that of the GOT, take corresponding measures including the following.

• Place the display target within the location that can be displayed on the GOT.

• Use the extended control to reduce the display size of the RGB screen.

10.7.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

Set the relevant settings other than the specific settings for the RGB display function as required. The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

Enabling b7 of the device specified by [Video/RGB Input Common] enables the extended control.

Use the extended control to display the RGB screen with the full-screen display or the clip display on the GOT.

For the details of the devices, refer to the following.

➥12.1.3 GOT special register (GS)

10.6.4 ■11 Video window or RGB screen when the extended control is enabled

Function	Setting item
Checking if the input status of the RGB signal for CH1 is recognized	GS252.b15
Checking if the input status of the RGB signal for CH2 is recognized (when an RGB input unit, GT27-R2 or GT27-R2-Z, is used)	GS252.b14
Controlling the display position for the RGB screen	GS449.b0
Making the GOT be ready for acquiring the color information of the touched position	GS630.b0
Checking if the acquisition of the color information of the touched position is completed	GS980.b0
Acquiring the color information of the touched position	GS981 to GS983
Checking the input status of the RGB signal	GS1025
Checking the horizontal resolution of the RGB signal	GS1026
Checking the vertical resolution of the RGB signal	GS1027
Checking the refresh rate of the RGB signal	GS1028
Specifying the video window or the RGB screen to be enlarged to full screen when the extended control is enabled	GS1998
Controlling the RGB display with the GOT internal devices when the extended control is enabled	GS2039 to GS2045

10.8 Recording or Playing Images Taken by a Video Camera on the GOT (Multimedia Function)

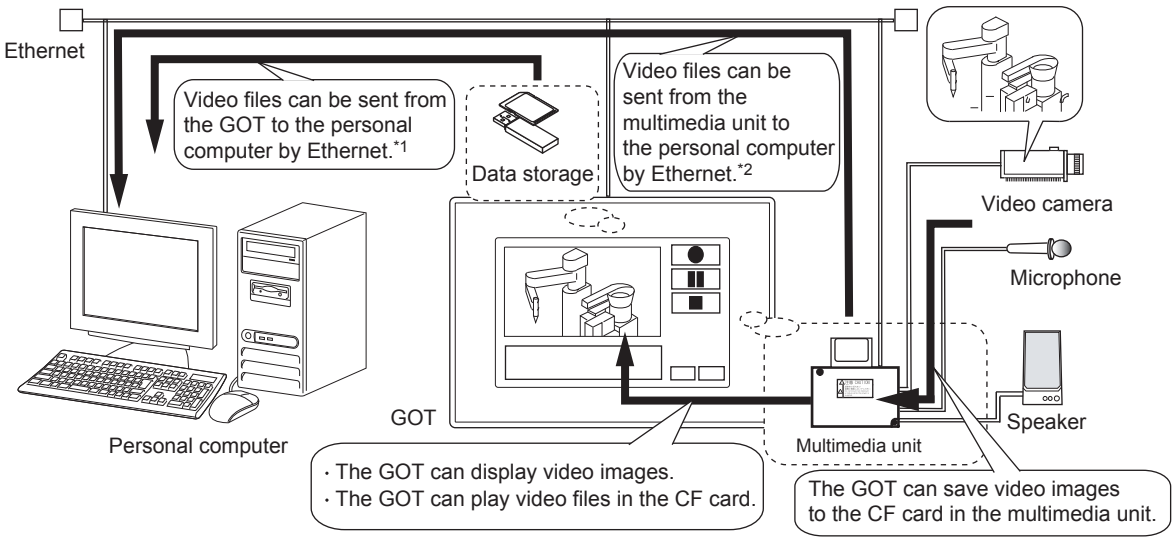
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

10.8.1 Overview of the multimedia function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
The multimedia function enables you to display and record the images taken by the video camera connected to the multimedia unit and to play the video files saved in the data storage.
The recorded video images are saved to the CF card installed in the multimedia unit.
The video files recorded in standard mode can be sent to a personal computer by Ethernet.



*1 Only the video files recorded in standard mode can be sent.
For the details of the recording modes, refer to the following.
➟10.8.2 ■4 Specifications of the video display and the recording mode

10.8.2 Specifications of the multimedia function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 Required data storage

A multimedia unit requires one CF card.
The GOT also requires a data storage in the following cases.
- Sending a video file from the GOT to the personal computer
- Sending a video file and the log file of a user alarm to a personal computer

■2 System application (extended function)

(1) Required system application (extended function)

To use the multimedia function, a system application (extended function) of [Multimedia] is required.
Selecting [Enable the setting of Multimedia] in the [Multimedia] dialog incorporates the application into the package data automatically.

➟10.8.6 [Multimedia] dialog

(2) Additional system application (extended function) as needed

To send video files from the GOT to the personal computer, a system application (extended function) of [Gateway(FTP Server)] is also required.
Selecting [Use the function of FTP Server] in the [Controller Setting] window incorporates the application into the package data automatically.

➟10.16.4 [FTP Server]

However, to send video files from the multimedia unit to the personal computer, the application is not required.

■3 Number of multimedia function settings for one project

One multimedia function setting is available for one project.

■4 Specifications of the video display and the recording mode

The following shows the specifications of displaying and recording video images.

(1) Specifications of the display

GOT	Video input signal	Display size on the GOT
GT27-X, GT27-S	NTSC format	640 × 480 dots (100% magnification)
	PAL format	672 × 504 dots (scale-down display at 87.5%)
GT27-V	NTSC format	480 × 360 dots (scale-down display at 75%)
	PAL format	480 × 360 dots (scale-down display at 62.5%)

(2) Specifications of the recording

(a) When the recording mode is [Standard]

Record size of the video image	Video input signal	Available frame rate (fps)	Bit rate for recording
VGA (640 × 480)	NTSC format	15	1 Mbps
	PAL format	12.5	
QVGA (320 × 240)	NTSC format	15	384 Kbps
		30	768 Kbps
	PAL format	12.5	384 Kbps
		25	768 Kbps

(b) When the recording mode is [Extended]

Record size of the video image	Video input signal	Available frame rate (fps)	Bit rate for recording
QVGA (320 × 240)	PAL format	15	384 Kbps
	NTSC format	12.5	

(c) Destination to save video files

The recorded video files are saved in the 3GPP format to the CF card inserted in the multimedia unit.
When [Save to File Server] in the [Multimedia] dialog is selected, video files are sent to the personal computer by Ethernet at the same time when they are saved to the CF card.
(Only the video files recorded in standard mode can be sent.)
For how to send video images to the personal computer by Ethernet, refer to the following.

➟10.8.4 ■6 Interaction method with a personal computer

■5 Required software to be installed

(1) Multimedia Interaction Tool

To send video files from the GOT to the personal computer, Multimedia Interaction Tool must be installed to the personal computer.

Multimedia Interaction Tool is for receiving and managing video files and alarm log files that are sent from the GOT or the multimedia unit by Ethernet on the personal computer.

For information on how to download this software, contact your local distributor.

(a) Operating environment

The following shows the operating environment.

Item	Description
Model	Personal computer that Windows runs on.
OS(English version)	• Microsoft Windows 7 Ultimate (32 bit, 64 bit)*1*2*3*4 • Microsoft Windows 7 Enterprise (32 bit, 64 bit)*1*2*3*4 • Microsoft Windows 7 Professional (32 bit, 64 bit)*1*2*3*4 • Microsoft Windows 7 Home Premium (32 bit, 64 bit)*1*2*4 • Microsoft Windows 7 Starter (32 bit, 64 bit)*1*2 • Microsoft Windows Vista Ultimate (32 bit) Service Pack1 or later*1*2 • Microsoft Windows Vista Enterprise (32 bit) Service Pack1 or later*1*2 • Microsoft Windows Vista Business (32 bit) Service Pack1 or later*1*2 • Microsoft Windows Vista Home Premium (32 bit) Service Pack1 or later*1*2 • Microsoft Windows Vista Home Basic (32 bit) Service Pack1 or later*1*2 • Microsoft Windows XP Professional (32 bit) Service Pack2 or later*1*2 • Microsoft Windows XP Home Edition (32 bit) Service Pack2 or later*1*2 • Microsoft Windows 2000 Professional Service Pack4 or later*1
CPU	The system requirements for the above OSs must be met.*7
Memory	The system requirements for the above OSs must be met.*7
Display	Resolution XGA (1024 × 768 dots) or higher
Hard disk space	• For installation: For installation: 1 MB or more (excluding setting information, alarm logs, and video files) • For execution: 500 MB or more (when receiving 10 video files that have the QVGA size, 15 fps, 900 seconds, and approximately 42.2 MB per file)*5
Display color	High Color (16 bits) or higher
Network connection	Ethernet 100Base-TX
Video file	3GPP file, MP4 file (only video available)
Other software	To display Help, the following software must be installed. • Internet Explorer7 or later recommended
	To play and edit a video, the following software must be installed. • Quick Time Player*6or QuickTime 7 Pro
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD drive • For execution: mouse, keyboard Use the following hardware when required. • For outputting the sound: Sound card, speaker

*1 For installation, the administrator authority is required.
For Windows 7 and Windows Vista, the standard user or administrator account is required.
To interact GT Designer3 with other MELSOFT applications which are used under the administrator authority, use GT Designer3 under the administrator authority.

*2 The following functions are not supported.
- Application start in Windows compatibility mode
- Fast user switching
- Changing your desktop themes (fonts)
- Remote desktop
- DPI setting other than the normal size (For Windows XP and Windows Vista)
- Setting the size of texts and illustrations on the screen to any size other than [Small-100%] (For Windows 7)

*3 Windows XP Mode is not supported.

*4 Windows Touch is not supported.

*5 The available disk space depends on the data size of alarm logs and video files.

*6 The required version depends on the OS.
- For Windows XP, Windows Vista, and Windows 7: QuickTime 7.4.5 or later

• For Windows 2000: QuickTime 7.1.6 (final version)

*7 For the system requirements for the OSs, refer to the following.

➟Microsoft official website

(b) **How to install**

To send video images from the multimedia unit to the personal computer, Multimedia Interaction Tool and Multimedia Interaction FTP Service must be installed.

➟10.8.5 Multimedia Interaction Tool

(2) Software for playing and editing video files

To play and edit the files collected in the personal computer by using Multimedia Interaction Tool, QuickTime Player or QuickTime 7 Pro must be installed.

The software is the copyright of APPLE Inc.

Use the software under the license agreement that appears when installing the software.

(a) **Video files that can be played on the GOT**

You can play the following saved video files on the GOT.

- 3GPP file
- MP4 file (only video available)

(b) **Profile of the MP4 file**

To play a MP4 file, use the MP4 file created with MPEG-4 Simple Profile.

MP4 files created with profiles other than the above are unavailable.

(c) **How to obtain the software**

- QuickTime Player is a software application for playing video.
  It is available for free from the website of APPLE Inc.
- QuickTime 7 Pro is a software application for editing video.
  It is available for a fee from the website of APPLE Inc.

(d) **Playing video files**

Set 3GPP- and MP4-format video files to be played by QuickTime Player on the personal computer.

Multimedia Interaction Tool starts the video player that is set on the personal computer to play video files.

(e) **Editing video files**

Multimedia Interaction Tool has no editing functions for video files.

Edit the video file using QuickTime 7 Pro.

The video files edited by using the software other than the above may not be played.

10.8.3 Basic use of the multimedia function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

The multimedia function enables you to display, play, and record various types of video images by using the [Multimedia] dialog.

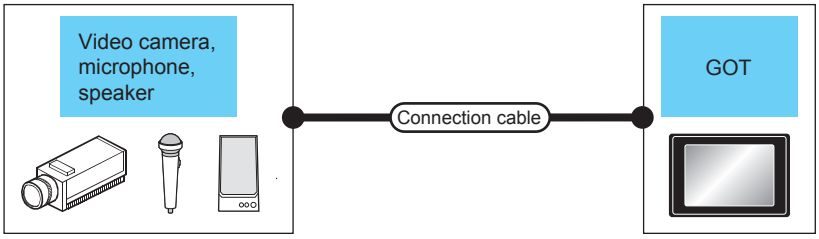
For the details of the settings, refer to the following.

➟10.8.4 Advanced use of the multimedia function

■1 System configuration

The following shows the system configuration of the multimedia function.

(1) Saving and displaying video images on the GOT



Multimedia controller	Signal type	Connection cable	Maximum length	GOT		Number of connectable multimedia controllers
				Option	GOT model	
*1	NTSC, PAL	Preparing connection cables by each user*2	*3	GT27-MMR-Z*4	GT27*5	One multimedia controller for one GOT

*1 For the types of the connectable video camera, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

*2 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*3 Cable length depends on the specifications of the video camera you use.

*4 For the CF card installed in the multimedia unit, refer to the following.

• Types of usable CF cards

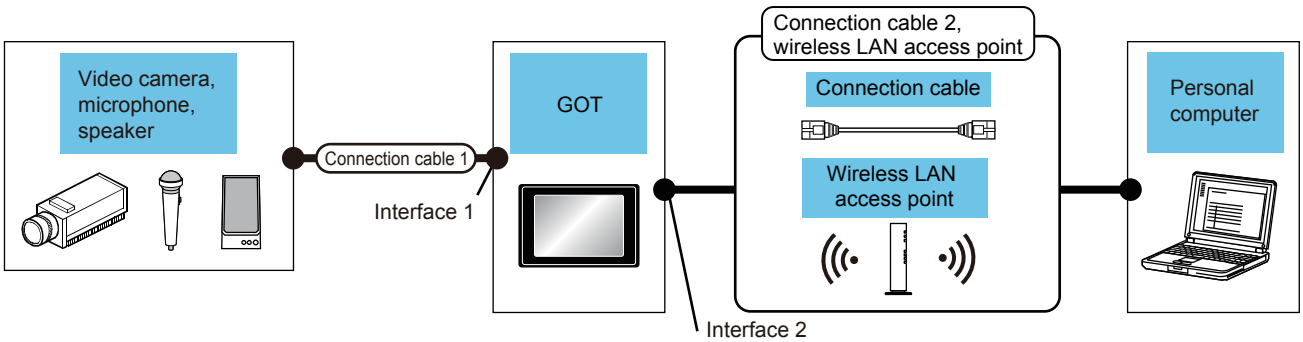
➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

• Precautions for using the CF card

➟10.8.7 Precautions

*5 Not available to GT2705-V.

(2) Sending video images to the personal computer



Multimedia controller	Signal type	Connection cable 1		GOT*5			Connection cable 2, wireless LAN access point		Personal computer*7	Number of connectable multimedia controllers
		Model	Maximum length	Option (Interface 1)	GOT model	Option (Interface 2)	Model	Maximum segment length*6		
*1	NTSC, PAL	Preparing connection cables by each user*2	*3	GT27-MMR-Z*4	GT27*8	Ethernet interface (built into GOT)	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	Select by each user	One multimedia controller for one GOT
						GT27-MMR-Z				
					GT27*9	GT25-WLAN	-	-		
					GT27*10	GT25-WLAN	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-		

*1 For the types of the connectable video camera, refer to the following Technical News.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

*2 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*3 Cable length depends on the specifications of the video camera you use.

*4 For the CF card installed in the multimedia unit, refer to the following.

• Types of usable CF cards

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

• Precautions for using the CF card

➟10.8.7 Precautions

*5 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*6 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use.
When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 for a cascade connection (within 500 m)
• 100BASE-TX: Up to 2 for a cascade connection (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*7 To use the personal computer, install Multimedia Interaction Tool.
For Multimedia Interaction Tool, refer to the following.

➟10.8.5 Multimedia Interaction Tool

*8 Not available to GT2705-V.

*9 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*10 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

■2 Setting procedure

Step 1 Connect the GOT and video equipment.

➟■1 System configuration

Step 2 Configure the settings for the multimedia function in the [Multimedia] dialog.

➟10.8.6 [Multimedia] dialog

Step 3 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 4 Display the multimedia screen on the GOT.

10.8.4 Advanced use of the multimedia function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 Display of a video image on the user-created screen

Setting the items in the [Display Setting] tab in the multimedia setting dialog enables the user-created screen to display a video image.

For the details of the settings, refer to the following.

➟10.8.6 ■4 [Display Setting] tab

Functions equivalent to the video display function are available for the video images displayed on the user-created screen.

Only one channel can be used for the multimedia function.

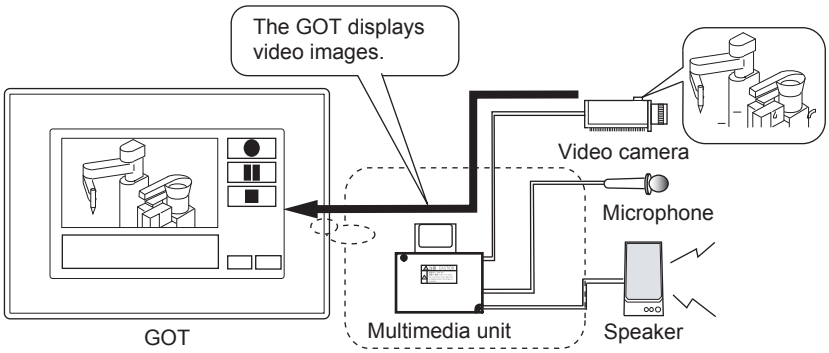
➟10.6.5 [Video/RGB Input] dialog

Recording and playing video images are unavailable when a video image is displayed on the user-created screen.

Only displaying video images is available.

■2 Display of a video image

Connecting a video camera, a microphone, and a speaker to the multimedia unit enables the multimedia screen on the GOT to display a video image with sound.



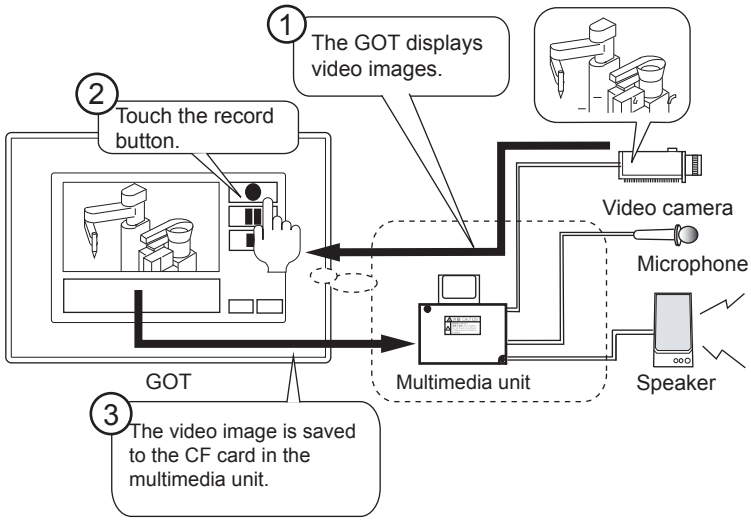
■3 Recording of a video image

Connecting a video camera and a microphone to the multimedia unit enables the GOT to record a video image with sound.

The following methods are provided for recording.

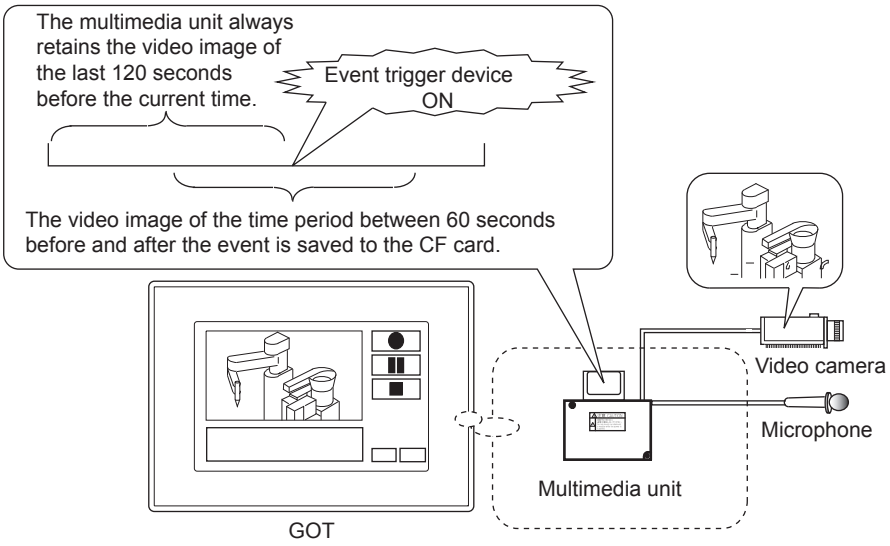
(1) Recording images currently displayed

The GOT records the video image displayed on the multimedia screen of the GOT by the user operation.



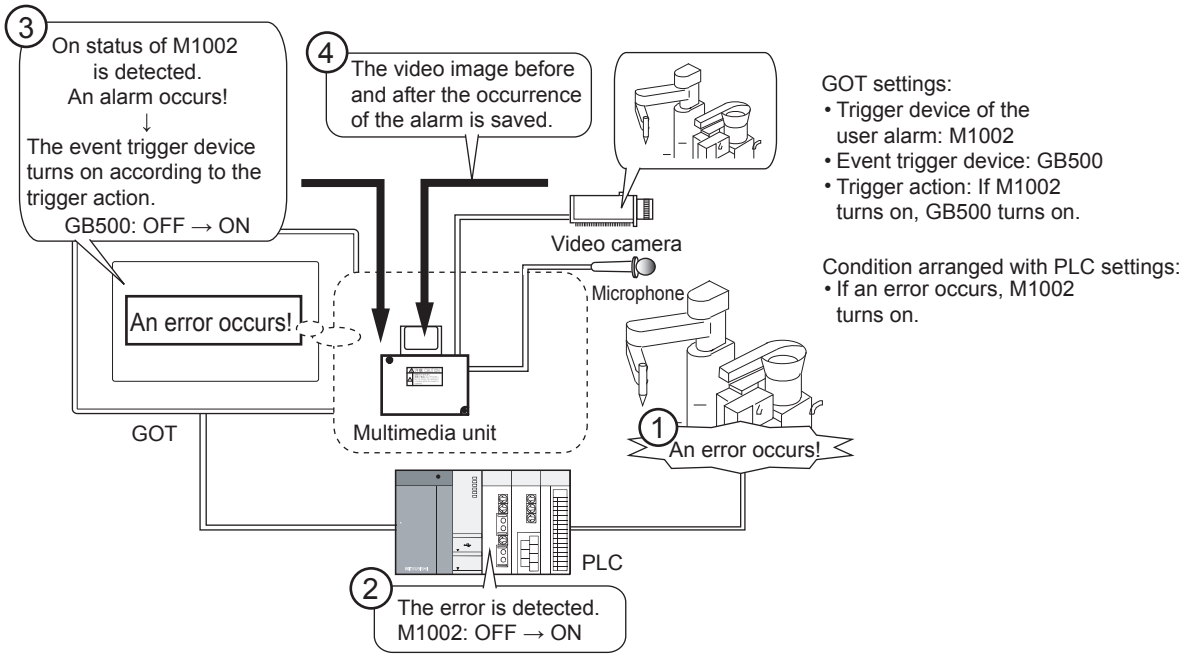
(2) Recording before and after the event

The GOT records a video image of before and after an event trigger device turns on for up to 120 seconds.
When the setting for recording before and after the event is enabled, the multimedia unit always holds a video image of before 120 seconds.
When an event trigger device turns on, a video image recorded before and after the device turns on is stored in the CF card.
Example) Saving a video image 60 seconds before and after an event trigger device turns on



• Use with the user alarm

Using the multimedia function with the user alarm enables the GOT to record a video image before and after an alarm occurs.
Use the trigger action and script to set an event trigger device to turn on when a user alarm is detected.
Example) Saving a video image before and after a user-specified alarm occurs

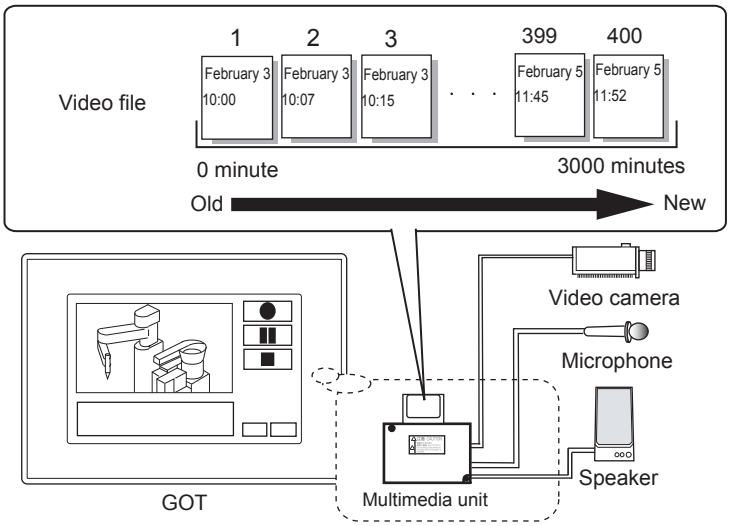


(3) Long time recording

Setting [Extended] for the recording mode enables the GOT to record a video image for up to approximately 3000 minutes.

In the long time recording mode, a video file is divided into multiple files, and files are separately saved in the specified folder. (A video file is created per recording of approximately 7.5 minutes. Up to 400 video files can be saved.)

If the name of a video file is the same as that of a video file in the CF card when the recording starts, all the files in the CF card are deleted, and then the GOT starts recording.



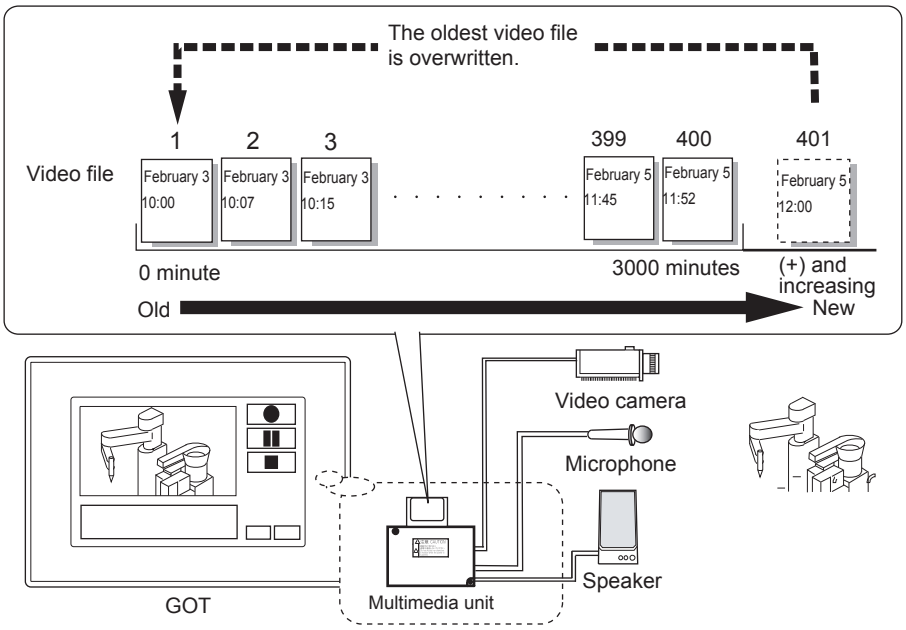
For how to set the long time recording, refer to the following.

➟10.8.6 ■1 [Recording Setting] tab

(a) Recording loop

When [Recording Loop] is selected in the recording setting, the GOT can continue recording after recording 400 files (approximately 3000 minutes) by overwriting the existing files from the oldest one.

In the recording loop, the GOT continues recording until the user stops recording.



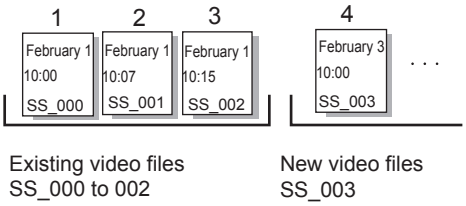
For how to set the recording loop, refer to the following.

➟10.8.6 ■1 [Recording Setting] tab

(b) **Continuous recording (Enabled only when the recording loop is set)**

When continuous recording is enabled, the GOT starts recording creating a new file that follows the latest existing file.
In this case, the existing video files are not deleted.

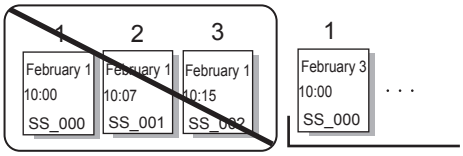
· When the long time recording is enabled
Recording starts with a new file following the latest existing video file.



Existing video files
SS_000 to 002

New video files
SS_003

· When the long time recording is disabled
After existing video files are deleted, recording starts.



Existing video files
SS_000 to 002

New video files
SS_000

Configure the settings for continuous recording on the GOT utility.
For the setting procedure, refer to the following.

➟GOT2000 Series User's Manual (Utility)

- Recording time and data size per file

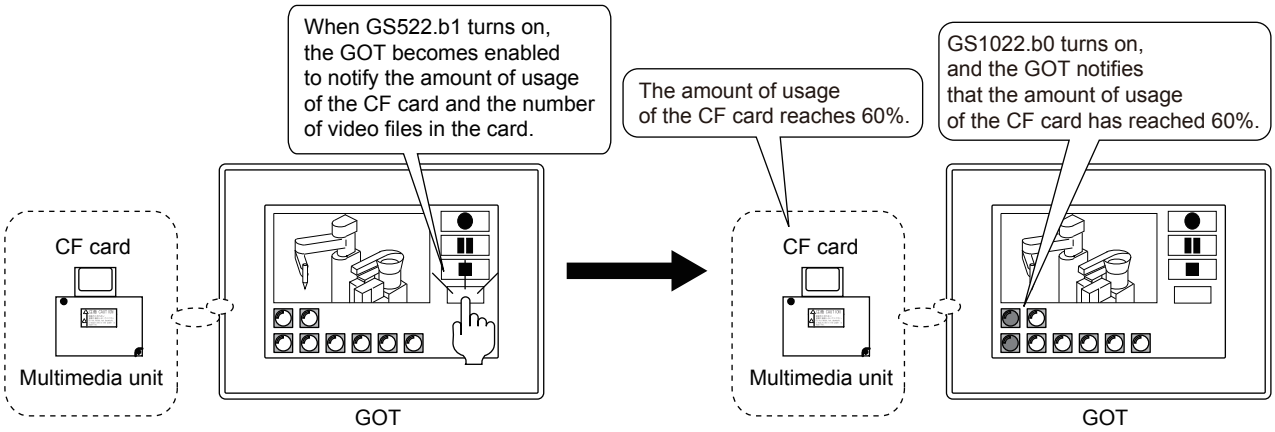
  In the long time recording, the available recording time of a video file is up to approximately 7 minutes and 30 seconds per video file (approximately 20 MB).
  The GOT records a video file for a minimum of 7 minutes and 30 seconds.
  Even for recording more than 7 minutes and 30 seconds, the data size of the file does not change.
  The GOT may stop recording before the recording time reaches 3000 minutes depending on the data size of the CF card.
  For the long time recording, reserve sufficient available space in the data storage.

(4) Notifying the amount of usage of the CF card or the number of video files in the card in the multimedia unit

You can use specific GOT special registers (GS) to receive notification that the amount of usage of the CF card or the number of video files in the card in the multimedia unit reaches a certain amount.

➡12.1.3 GOT special register (GS)

This function is usable only when [Enable] is selected and [Event Trigger Device] is set in [Before-After Event Recording Setting] on the [Recording Setting] tab of the [Multimedia] dialog.



The Memory Card Usage signal (GS1022.b0 to GS1022.b1) or the Number of Memory Card Files signal (GS1022.b2 to GS1022.b7) turns on according to the amount of usage of the CF card or the number of video files in the card.

Device	Description
GS1022.b0	The amount of usage of the CF card reaches 60%.
GS1022.b1	The amount of usage of the CF card reaches 80%.
GS1022.b2	The number of video files in the CF card reaches 80.
GS1022.b3	The number of video files in the CF card reaches 110.
GS1022.b4	The number of video files in the CF card reaches 150.
GS1022.b5	The number of video files in the CF card reaches 400.
GS1022.b6	The number of video files in the CF card reaches 450.
GS1022.b7	The number of video files in the CF card reaches 500.

The following shows the procedure to notify the amount of usage of the CF card and the number of video files in the card.

Step 1 Turn on the Start Video File Information Notification signal (GS522.b1) by using functions such as a touch switch.

Accordingly, the GOT becomes enabled to notify the amount of usage of the CF card and the number of video files in the card.

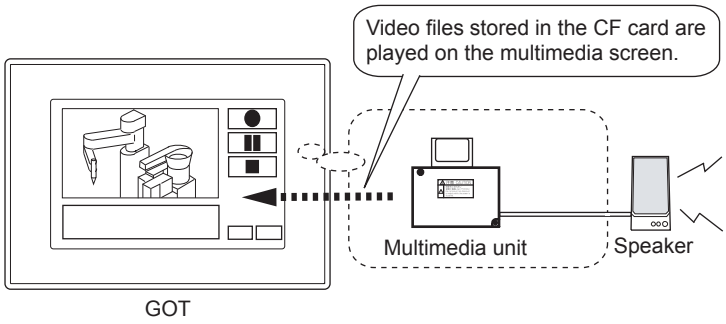
Step 2 The Memory Card Usage signal (GS1022.b0 to GS1022.b1) or the Number of Memory Card Files signal (GS1022.b2 to GS1022.b7) turns on according to the amount of usage of the CF card or the number of video files in the card.

Step 3 To disable the notification, turn off the Start Video File Information Notification signal (GS522.b1) by using functions such as a touch switch.

Accordingly, the Memory Card Usage signal (GS1022.b0 to GS1022.b1) and the Number of Memory Card Files signal (GS1022.b2 to GS1022.b7) turn off.

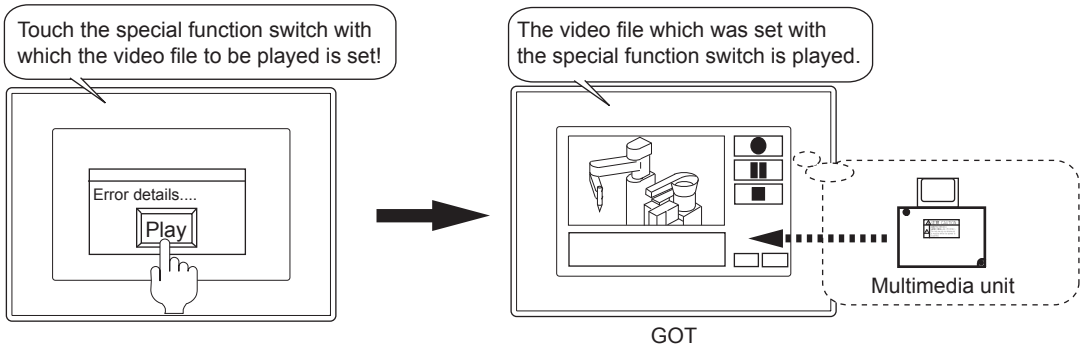
(5) Playing video files

Video files saved in the CF card in the multimedia unit can be played on the multimedia screen on the GOT.
The speaker connected to the multimedia unit outputs the sound of a video file.



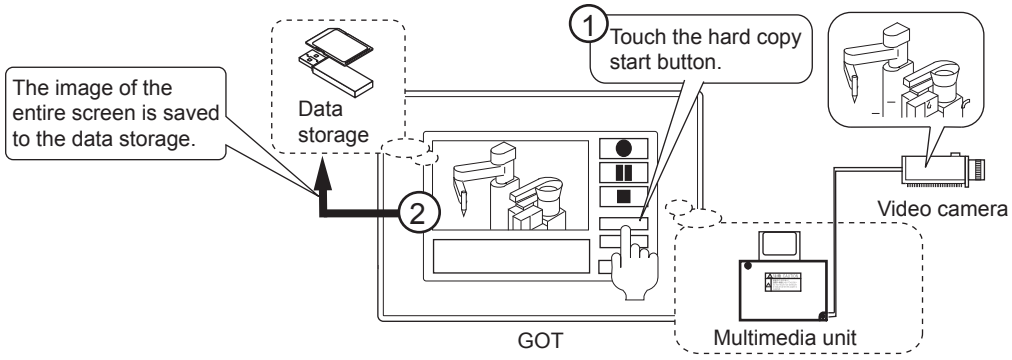
• Playing a video file from the monitor screen

Setting the name of a video file to be played by using the special function switch enables the GOT to play the file directly with the touch switch on the monitor screen.



(6) Hard copy

You can save the image of the entire screen including the image currently displayed to the data storage as a BMP or JPEG file.



(7) Interaction with a personal computer

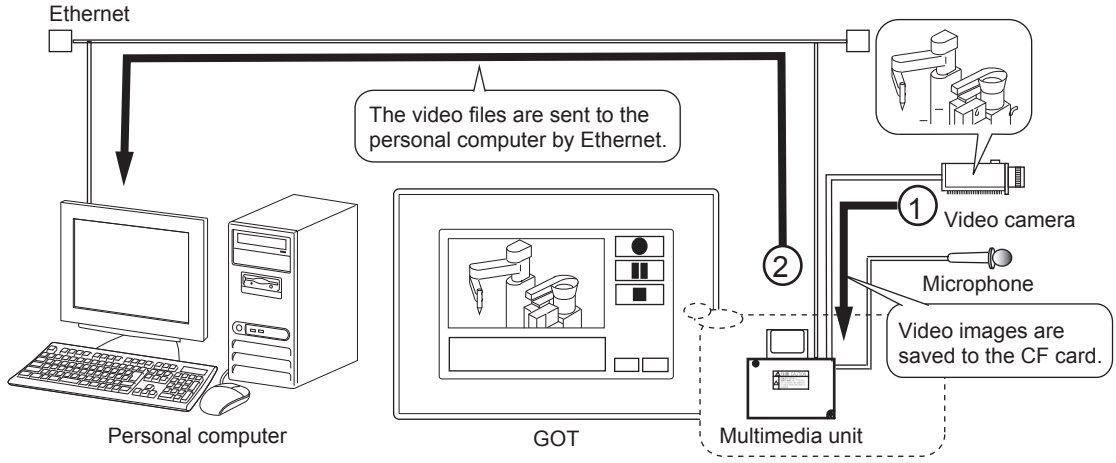
Using Multimedia Interaction Tool enables the personal computer to receive video files and alarm log files that are sent from the GOT or the multimedia unit.
(Only the video files recorded in standard mode can be sent.)
The received video files and alarm log files can be combined for list display and search.

(a) Sending a video file ([Recording Mode]: [Standard])

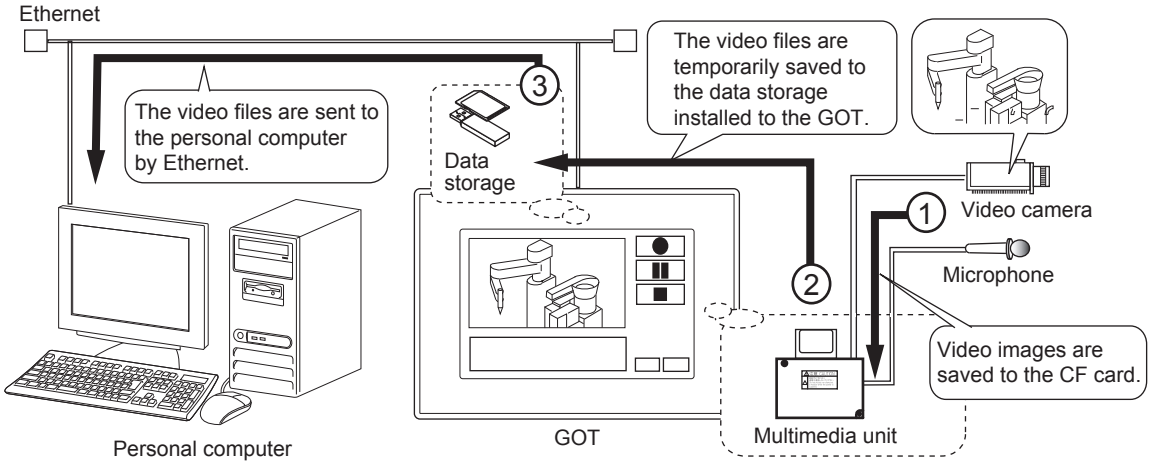
Video files can be sent from the GOT or the multimedia unit to the personal computer by Ethernet.
With the video files created using the recording before and after the event function, the alarm log files of user alarms can be sent simultaneously.

• Sending a video file from the multimedia unit to a personal computer

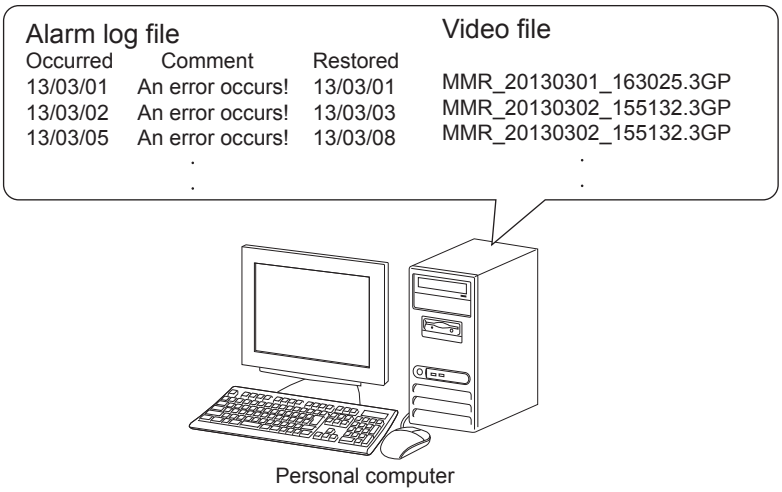
Connect the multimedia unit to a personal computer by Ethernet to send a video file to the personal computer.
To send alarm log files to the personal computer, a data storage must be installed on the GOT.



• Sending a video file from the GOT to a personal computer
Connect the GOT to a personal computer by Ethernet to send a video file to the personal computer.
To send a video file to the personal computer, install a data storage on the GOT.
The sent video file is temporarily stored in the data storage.



(b) **Displaying the video file list and searching for video files**
By using Multimedia Interaction Tool, the received video files and the alarm log files can be combined for list display and search.



■4 Multimedia screen

The multimedia screen is for using the multimedia function on the GOT.
The following operations are available on the multimedia screen.

• Displaying and recording images taken by a video camera connected to the multimedia unit

• Playing video files
• Displaying and deleting a video file list

For the operating procedure for the multimedia screen, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(1) How to open the multimedia screen

Open the multimedia screen by using the special function switch.
For the special function switch settings, refer to the following.

➟8.2.9 [Special Function Switch] dialog

■5 Hard copy

To print the hard copy of the multimedia screen, prepare the following beforehand.

(1) Output destination setting for hard copy

To set the output destination for hard copy (data storage), select [Common], and configure the setting in [Hard Copy].
For the setting procedure, refer to the following.

➟9.7.6 [Hard Copy] dialog

■6 Interaction method with a personal computer

For interaction with the personal computer, prepare the following beforehand.

(1) Preparation on the personal computer

(a) Installing and setting the software

Install Multimedia Interaction Tool on the personal computer.
To connect the multimedia unit to Ethernet, also install Multimedia Interaction FTP Service.
After installation, configure the settings for Multimedia Interaction Tool.
For the installation instructions and setting procedure, refer to the following.

➟10.8.5 Multimedia Interaction Tool

(b) Connecting the personal computer to Ethernet

Connect the personal computer to Ethernet.
For the connection method, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

(2) Preparation on GT Designer3

(a) Configuring the settings for the multimedia function

Configure the settings in the [Multimedia] dialog.
To send video files to the personal computer, enable the following items.

- [Enable the setting of Multimedia]
- [Recording Setting] in the [Recording Setting] tab
  [Save to File Server]
- [Before-After Event Recording Setting] in the [Recording Setting] tab
  [Enable]

For the setting procedure, refer to the following.

➟10.8.6 [Multimedia] dialog

(b) Communication settings

Configure the communication settings to connect the personal computer to the GOT and the multimedia unit. For the setting procedure, refer to the following.

➟10.8.6 [Multimedia] dialog
5.5.4 Configuring the settings for switching the target station No. for monitoring

(c) Setting the user alarm

To send alarm log files of user alarms with recording before and after the event, set the following beforehand.

- Specify the alarm ID set in the [Multimedia] dialog for [Alarm ID] in [User Alarm Observation].
- Select [Save the alarm logs and convert them into Unicode Text/CSV (project common)] in [Alarm Common Setting].
- Select [Save alarm log files] in the [File Save] tab in [User Alarm Observation].
  For interaction with the personal computer, Unicode text must be specified as the output format of the user alarm log file in [File Save] in [User Alarm Observation].
  For how to set the user alarm, refer to the following.

➟9.1.5 Viewing alarm events (Alarm display)

(d) **Enabling the FTP server function**

To connect the GOT to Ethernet, enable the FTP server function.

For the setting procedure, refer to the following.

➟10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)

(3) Preparing a data storage

(a) **Preparing a data storage**

In the following cases, install the data storage on the GOT.

- Sending a video file from the GOT to the personal computer

  When a video file is sent, the G2MMR folder is created in the root folder of the data storage installed on the GOT, and the video file is saved in the folder temporarily.

  Temporary save is unavailable when no data storage is installed on the GOT. Thus, the video file cannot be sent to the personal computer.
- Sending a video file and user alarm data simultaneously from the multimedia unit to the personal computer

  User alarm data is stored to the data storage installed on the GOT.

  The user alarm data cannot be sent to the personal computer when no data storage is installed.

(b) **Connecting the GOT to Ethernet**

To send a video file from the GOT to a personal computer, connect the GOT to Ethernet.

To send a video file from the multimedia unit to the personal computer, connect the multimedia unit to Ethernet.

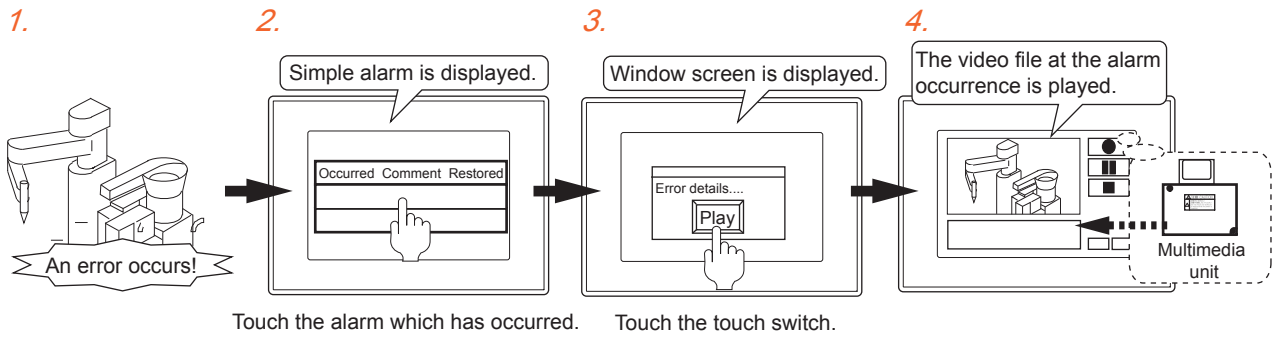
For the connection method, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

■7 Setting example of recording before and after the event

Combining the recording before and after the event function and the user alarm enables the GOT to record a video image of before and after an alarm and play the video image from the simple alarm display.

The following shows the setting and usage examples for playing the video file recorded when an alarm occurs in simple alarm display.



(1) Setting

The following shows the setting for each item.

Item	Description		Reference
[Multimedia]	[Before-After Event Recording Setting]	Enabled	➡10.8.6 [Multimedia] dialog
	[File Name]	ER_MMR	
	[Event Trigger Device]	X1000	
	[Playback File Time Specification Device]	GD501 to GD504	
[User Alarm Observation]	[Alarm ID]	5	➡9.1.2 Collecting alarms by monitoring devices
	[Trigger device]	X1000	
[Simple Alarm Display]	[Alarm ID]	5	➡9.1.5 Viewing alarm events (Alarm display)
	Display setting for [External Notification Information]	Alarm ID: GD500 Date: GD501 to GD502 Time: GD503 to GD504	
[Screen switching device(Overlap window 1)]	GD500		➡5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/ Window])
[Window Screen]	Placing the special function switch Special function switch settings • [Action]: [Multimedia] • [Initial display screen]: [Multimedia] • [File Name]: [Multimedia] • [Add date to playback files]: [Multimedia]		➡8.2.9 [Special Function Switch] dialog
	[Screen No.]	5	
	[Screen Type]	Window screen	

(a) **Synchronizing trigger devices**

Set the same device for the following setting items to synchronize occurrence of an alarm with the start of recording before and after the event. (X1000)

- [Event Trigger Device] in [Multimedia]
- [Trigger Device] in [User Alarm]

(b) **Adding date and time of occurrence**

To add the date and the time when an alarm occurs to the name of the video file to be played by using the special function switch, set the same device for the following setting items.
(GD501 to GD504)

- [Playback File Time Specification Device] in Multimedia
- [Occurred Date] and [Occurred Time] in [External Notification Information]

(c) **Setting for [Screen switching device]**

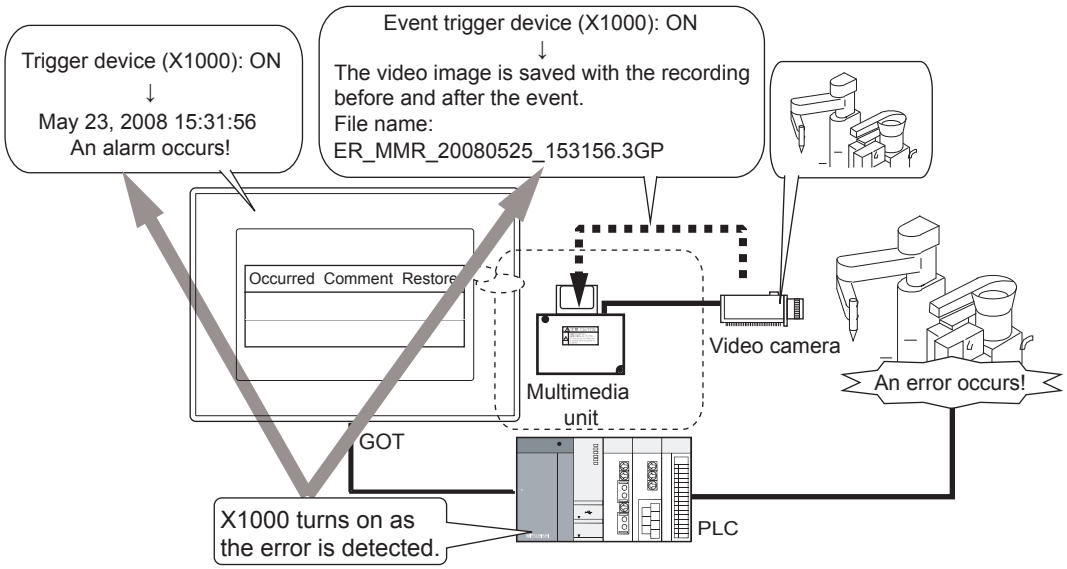
To display the window screen with the same number as [Alarm ID] of a generated alarm when touching the simple alarm display, set the same device for the following setting items. (GD500)

- Screen switching device
- [Alarm ID] in [External Notification Information]

(2) Description about the action

Step 1 The PLC detects an error and turns on X1000.

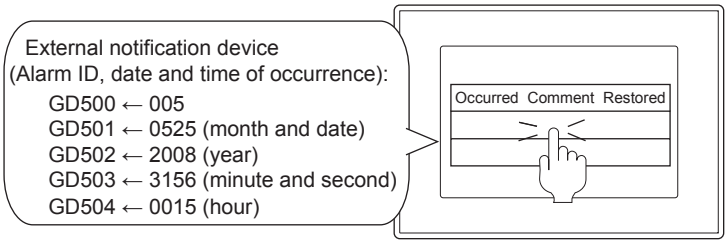
The GOT detects that the trigger device of the user alarm and the event trigger device are on. (An alarm occurs, and a video image is saved with recording before and after the event.)



Step 2 When an alarm occurs, a user alarm is displayed.

Touching the information of the generated alarm starts writing the following values to the external notification device.

- Alarm ID
- Occurrence date
- Occurrence time

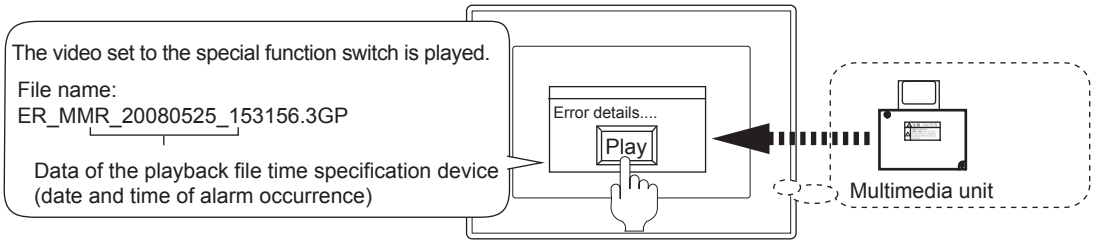


Step 3 The value of the alarm ID is written to the screen switching device, and the window screen appears.

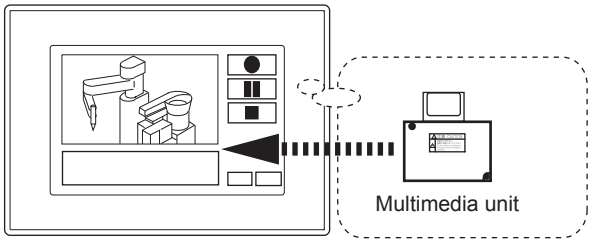
Touch the special function switch placed on the window screen.

Touching the special function switch plays the set video file.

The details of the playback file time specification device (date and time of an alarm) are added to the name of the video file to be played.



Step 4 The GOT plays the video file of when an alarm occurs on the multimedia screen.



10.8.5 Multimedia Interaction Tool

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 How to install the software

(1) Installing procedure

Software to be installed depends on the connection type to Ethernet.

(a) **When connecting with the Ethernet interface of the GOT**

Install Multimedia Interaction Tool.

(b) **When connecting with the Ethernet interface of the multimedia unit**

Install Multimedia Interaction Tool and Multimedia Interaction FTP Service.

(c) **When one system has the GOT connected by using the Ethernet interface of the GOT and the GOT connected by using the Ethernet interface of the multimedia unit**

Install Multimedia Interaction Tool and Multimedia Interaction FTP Service.

Point

(1) **Software version**

Use the same version of Multimedia Interaction Tool and Multimedia Interaction FTP Service.
If the versions are different, Multimedia Interaction Tool does not operate properly.

(2) **Precautions for installing and uninstalling the software**

Do not install or uninstall Multimedia Interaction FTP Service while Multimedia Interaction Tool is running.
Multimedia Interaction Tool may end abnormally or the data may be damaged.

(2) Firewall setting

After installation, set the following software as exceptions in the Windows firewall setting.
Failure to do so prevents video files from being sent to the personal computer.

(a) **When sending a video file from the GOT to the personal computer**

Set GTMMDataConnector.exe as an exception.

(b) **When sending a video file from the multimedia unit to the personal computer**

Set GTMMFtpService.exe as an exception.

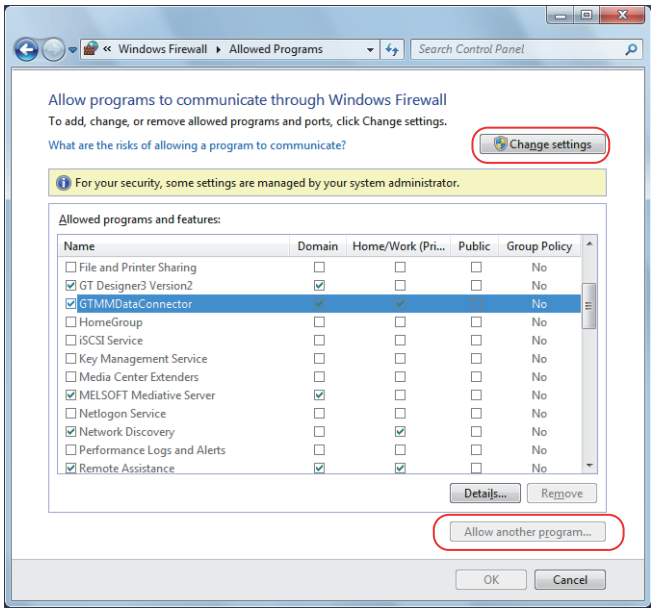
(c) **When sending a video file from the GOT and the multimedia unit to the personal computer**

Set GTMMDataConnector.exe and GTMMFtpService.exe as exceptions.
The following shows the setting procedure.

Step 1 Display Windows Firewall by the following operation.

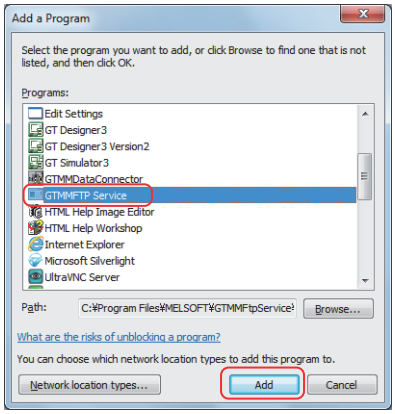
- Microsoft Windows XP: Select [Control Panel] → [Security Center] → [Windows Firewall].
- Microsoft Windows Vista and 7: Select [Control Panel] → [Security] → [Windows Firewall].

The following shows an example of the screen of Microsoft Windows 7. Click the [Change settings] button on the displayed dialog and click the [Allow another program…] button.



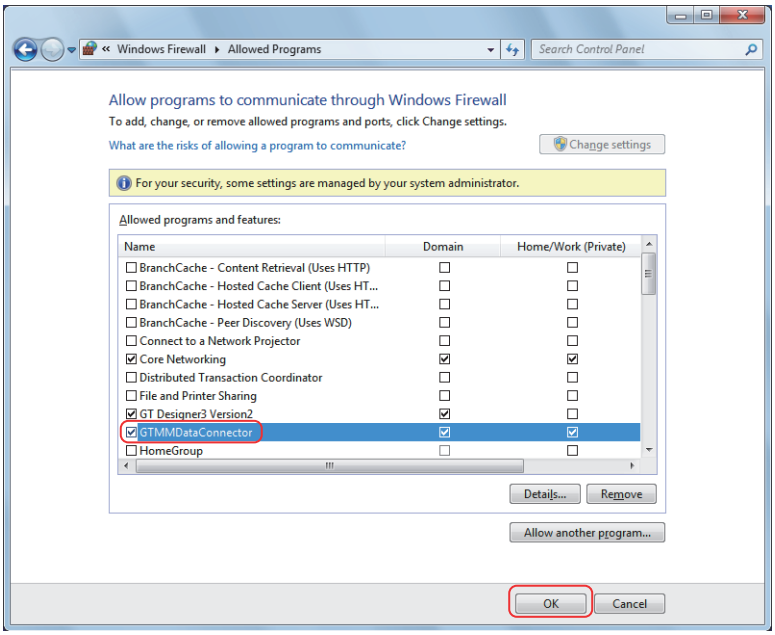
Step 2 Select the software from the program list.

When [GTMMDataConnector.exe] or [GTMMFtpService.exe] is not in the program list, click the [Browse] button to specify the path of the program directly.
After selecting, click the [OK] button.



Step 3 The screen returns to the [Windows Firewall] window.

Check that [GTMMDataConnector.exe] or [GTMMFtpService.exe] is selected in [Allowed programs and features] and click the [OK] button.



■2 How to start Multimedia Interaction Tool

Start Multimedia Interaction Tool by the following procedure.

Step 1 From the Windows start menu, select [MELSOFT Application] → [GT MMDataConnector]. *1

*1 Select [All Programs] on the [Start] screen, or select [Start] → [All Programs].

Step 2 Multimedia Interaction Tool starts.

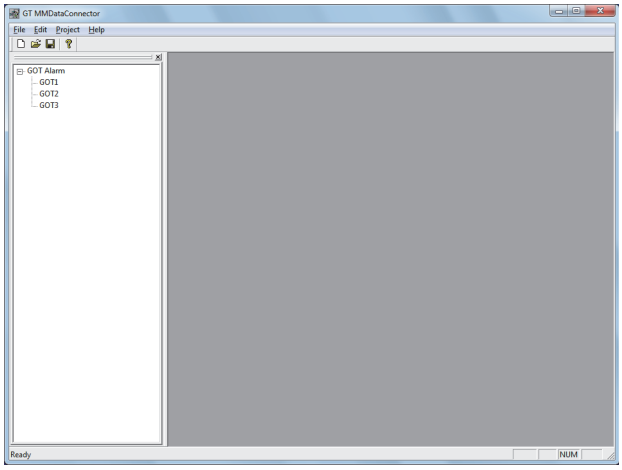
■3 Screen configuration

Multimedia Interaction Tool consists of the following screens.

(1) Main window

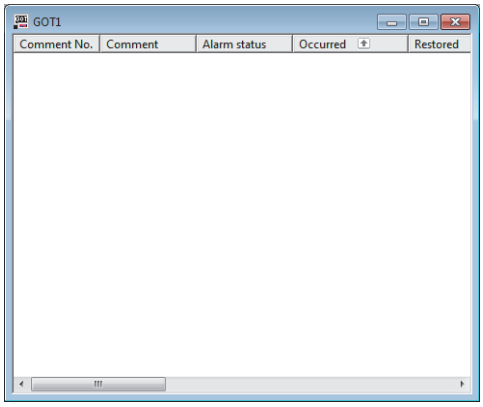
In the main window, you can select or display the menu for executing each function of Multimedia Interaction Tool or the GOT alarm list.

This screen appears first after Multimedia Interaction Tool is started.



(2) GOT alarm list window

This window displays alarm data and video files sent from the GOT.
You can play the video file by selecting it from the GOT alarm list.



To display the GOT alarm list window, double-click the GOT alarm list, which is on the left side of the main window.

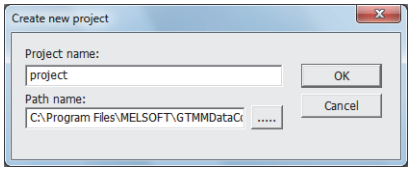
■4 Settings

To receive the alarm data and video files from the GOT, the setting must be configured in advance.
The following shows the setting instructions.

Step 1 Start Multimedia Interaction Tool and select [File] → [Create new project].

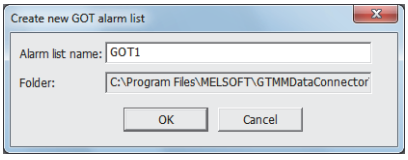
Step 2 The following dialog appears.

Enter the project name to be saved in [Project name] and the path of the folder that saves the project in [Path name].
Click the [OK] button to complete the creation of a new project file.



Step 3 Select [Project] → [Create new GOT alarm list].

The following dialog appears.
Enter the name of the GOT alarm list in [Alarm list name] and the path of the folder that saves the list in [Folder].
Click the [OK] button to complete the creation of the GOT alarm list.



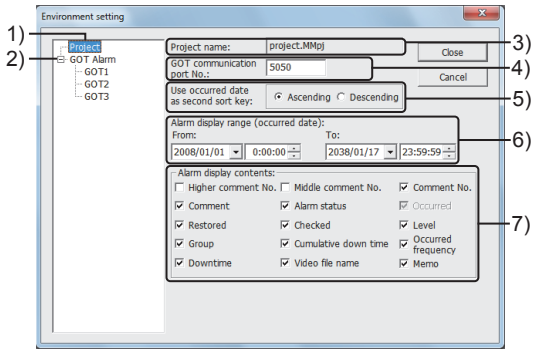
Step 4 Select [Edit] → [Environment setting].

The following dialog appears.
Enter the setting item, and click the [Close] button.
Before setting, check the following information.

- IP address of the GOT
- FTP user name
- FTP password
- Communication port number of the GOT

For the checking procedure of the FTP user name and the FTP password, refer to the following.

➥10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)



1) **[Project]**
Click this item to set the display condition of the project.

2) **[GOT Alarm]**
Displays the GOT alarm list in the tree structure.
Click a GOT alarm list in the tree view to configure the GOT connection setting.
For the details of the setting procedure, refer to the following.

➟(1) Connection setting with GOTs

3) **[Project name]**
Displays the name of the project file whose environmental settings are to be configured.

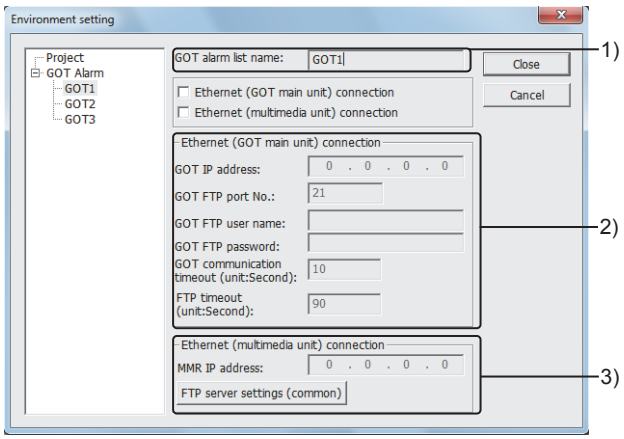
4) **[GOT communication port No.]**
Set the communication port number of the GOT.
The setting range is [0] to [65534].

5) **[Use occurred date as second sort key]**
When sorting the GOT alarm list by items other than the occurrence date, select ascending or descending order for the secondary sort key (occurrence date and time).

6) **[Alarm display range (occurred date)]**
Set the alarm display range (occurrence date and time) to be displayed in the GOT alarm list.

7) **[Alarm display contents]**
Select the item to be displayed in the GOT alarm list.

(1) Connection setting with GOTs



1) **[GOT alarm list name]**
Displays the name of the GOT alarm list that is being set.

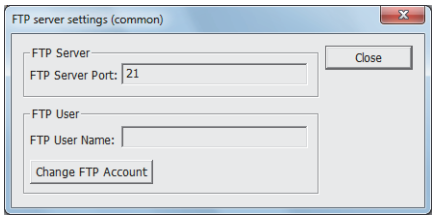
2) **[Ethernet (GOT main unit) connection]**
Enable the connection setting with GOTs.

Item	Description
[GOT IP Address]	Set the IP address of the GOT. The setting range is [0.0.0.0] to [255.255.255.255].
[FTP user name]	Set an FTP user name. Up to 12 alphanumeric characters (a to z, A to Z, 0 to 9) can be set.
[FTP Password]	Set an FTP password. Up to 8 alphanumeric characters (a to z, A to Z, 0 to 9) can be set.
[GOT communication timeout (unit: Second)]	Set the time required for the communication with the GOT to time out. The setting range is [1] to [65535].
[FTP timeout (unit: Second)]	Set the time required for the communication by the FTP server function to time out. The setting range is [1] to [65535].

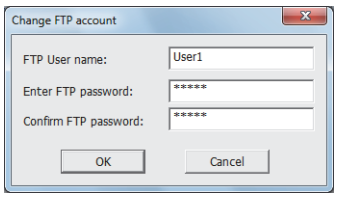
3) **[Ethernet (multimedia unit) connection]**
Enable the connection setting with the multimedia unit.

Item	Description
[MMR IP address]	Set the IP address of the multimedia unit.

4) **[FTP server settings (common)]**
Click this button to check the FTP server setting of Multimedia Interaction FTP Service.
Clicking this button displays the following dialog.



To change the FTP account, click the [Change FTP Account] button.
Clicking the button displays the [Change FTP Account] dialog.



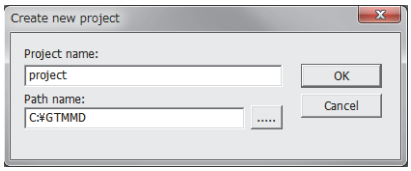
Enter a new FTP user name in [FTP user name] and the password in [Enter FTP password].
Enter the same password as entered in [Enter FTP password] into [Confirm FTP password].
Click the [OK] button to complete the FTP account change.

■5 Operating procedure

(1) Project file operation

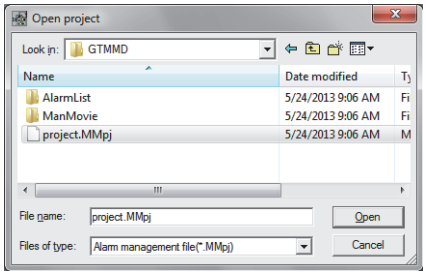
(a) Creating a new project file

To create a new project file, select [File] → [Create new project].
The following dialog appears.
Enter the project name to be saved in [Project name] and the path of the folder that saves the project in [Path name].
Click the [OK] button to complete the creation of a new project file.



(b) Opening a project file

To open a project file, select [File] → [Open project].
The following dialog appears.
Select a program to be opened and click the [Open] button.
The selected project file is opened.



(c) Saving a project file

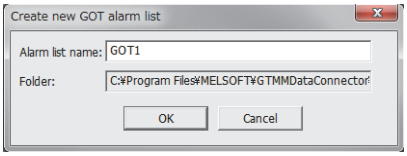
To save a project file, select [File] → [Save project].
The project file is overwritten.

(2) GOT alarm list operation

The alarm data sent from each GOT is displayed in the GOT alarm list.
Create GOT alarm lists for the number of GOTs connected to the personal computer.

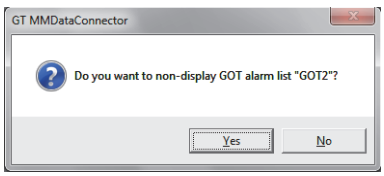
(a) Creating a new GOT alarm list

Select [Project] → [Create new GOT alarm list].
The following dialog appears.
Enter the GOT alarm list name in [Alarm list name] and the path of the folder that saves the list in [Folder].
Click the [OK] button to complete the creation of the GOT alarm list.



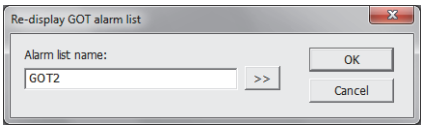
(b) Hiding the GOT alarm list

Select the GOT alarm list to be hidden from the GOT alarm tree, and then select [Project] → [Non-display GOT alarm list].
The following confirmation dialog appears.
Click the [Yes] button to hide the GOT alarm list from the GOT alarm tree.



(c) **Redisplaying the GOT alarm list**

Select [Project] → [Re-display GOT alarm list].
The following dialog appears.
Enter the hidden GOT alarm list name in [Alarm list name], and click the [OK] button.
The GOT alarm list appears again in the GOT alarm tree.



(d) **Deleting the GOT alarm list**

Select [Project] → [Delete GOT alarm list].
The confirmation dialog for the GOT alarm list deletion appears.
Click the [OK] button to delete the GOT alarm list.
The deleted GOT alarm list cannot be restored.
Check that deleting the GOT alarm list causes no problem in advance.

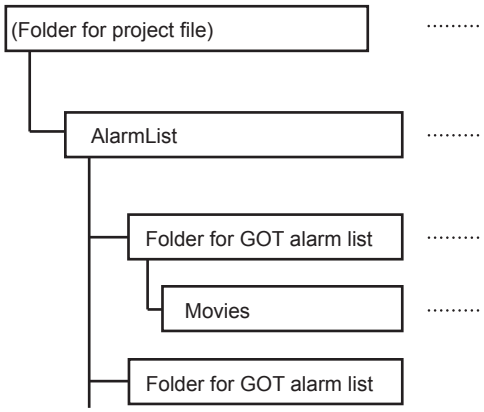
(3) Receiving alarm data and video files

Multimedia Interaction Tool can receive alarm data and video files from multiple GOTs connected by Ethernet.
The received alarm data and video files are saved in the personal computer automatically.
You can check the saved data in the GOT alarm list or the distributed video list.

Point

Directory configuration of the project file

The following shows the folder configuration of the project file of Multimedia Interaction Tool.

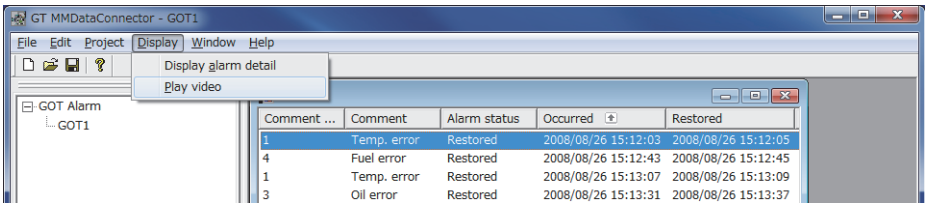


(4) Playing video files

Play the video file in the GOT alarm list by the following procedure.

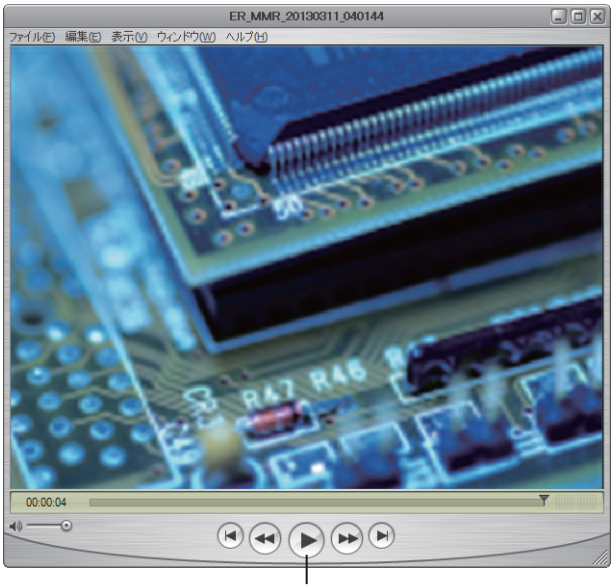
Step 1 Select the video file to play in the GOT alarm list.

Step 2 Select [Display] → [Play video].



Step 3 QuickTime Player starts.

Click the play button to play the video file.



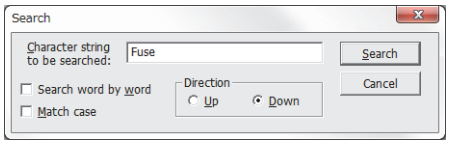
(5) Searching the alarm data

You can search the alarm data in the GOT alarm list.

Display the GOT alarm list, and select [Edit] → [Search]. The following dialog appears.

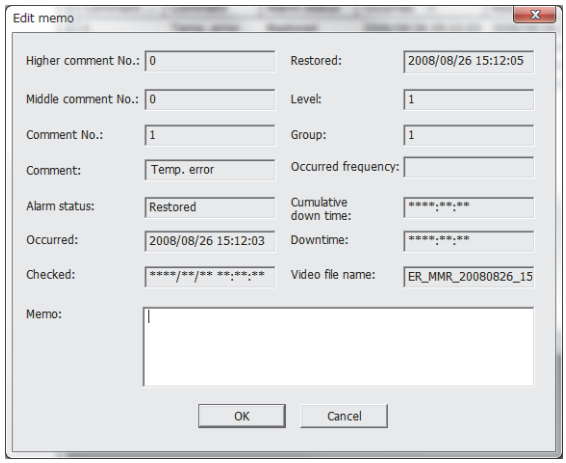
Enter the conditions and click the [Search] button. All the displayed items become searching targets.

Selecting [Edit] → [Search next] searches the next alarm data.



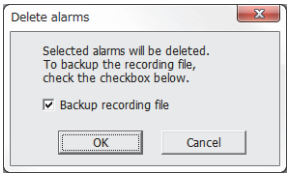
(6) Editing memos

You can edit memos of the alarm data.
Click the alarm data with the memo to be edited in the GOT alarm list, and select [Edit] → [Edit memo].
The following dialog appears.
Enter texts in [Memo], and click the [OK] button. The entered contents are reflected.



(7) Deleting alarms

You can delete the alarm selected in the GOT alarm list.
Select the alarm in the GOT alarm list, and select [Edit] → [Delete alarms].
The confirmation dialog for the alarm deletion appears.

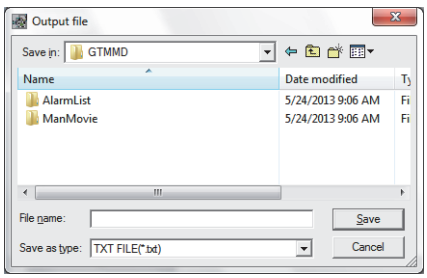


Select [Backup recording file] when backing up the video files that are associated with the alarms.
At the alarm deletion, video files are saved in the backup folder in the project folder.
Click the [OK] button to delete the alarm.
The deleted alarm cannot be restored.
Check that deleting the alarm causes no problem in advance.

(8) Exporting the GOT alarm list

You can export the GOT alarm list in a CSV file format.
Export the GOT alarm list by the following procedure.

Step 1 Select the GOT alarm list to be exported in the GOT alarm tree.
Step 2 Select [File] → [Export].
Step 3 The following dialog appears.
Step 4 Select the saving destination, and click the [Save] button to start the export of the GOT alarm list.



■6 Error message

The following shows the error messages of Multimedia Interaction Tool.

Message	Cause	Measure
Failed to initialize Windows sockets.	Initializing the communication processing has failed.	• Check that the network cables are connected securely. • Check that the network setting is correct.
Failed to open project "******".	Any of the project file (*.Mpj), the distributed video definition file (*.Mmd), or the alarm information file (*.Mai) has been write-protected or deleted.	• Check that writing data to the folders and the files in the target project is allowed. • Check that the folders and the files in the target project are not deleted.
Failed to create project "******".	A new project is not created in the folder specified by the user due to the following causes. • The available space of the hard disk is not sufficient. • The folder specified by the user is write-protected.	• Check that the hard disk of the personal computer has the sufficient available space. • Check that the folder specified by the user is write-protected.
Failed to save project "******".	The project cannot be saved due to the following causes. • The available space of the hard disk is not sufficient. • The folder specified by the user is write-protected.	• Check that the hard disk of the personal computer has the sufficient available space. • Check that writing data to the folders and the files in the existing project is prohibited.
Failed to create GOT alarm list "******".	A new GOT alarm list cannot be created due to the following causes. • The available space of the hard disk is not sufficient. • The folder specified by the user is write-protected.	• Check that the hard disk of the personal computer has the sufficient available space. • Check that writing data to the folders and the files in the existing project is prohibited.
Failed to re-display GOT alarm list "******".	The GOT alarm list cannot be created due to a creation error of the alarm information file (*.Mai).	• Check that the hard disk of the personal computer has the sufficient available space. • Check that writing data to the folders and the files in the existing project is prohibited.
Failed to upload video file "******" in GOT alarm list "******".	The video file cannot be uploaded because the format of the user alarm log file is incorrect at the recording before and after the event.	Set the output format of the user alarm log file to the Unicode text file.
Project "******" already exists.	The existing project name is entered in the project name when a new project is created.	Enter another project name.
GOT alarm list "******" already exists.	The existing GOT alarm list name is entered when a new GOT alarm list is created.	Enter another GOT alarm list name.
GOT alarm list "******" is already displayed.	The displayed GOT alarm list is entered in [Re-display GOT alarm list].	Select a hidden GOT alarm list.
Invalid path. Please enter again.	An invalid path is specified when a new project is created.	Enter a valid path.
Invalid project name. Please enter again.	A project name is entered when a new project is created.	Enter a project name.
Invalid FTP user name. Please enter user name again.	When the FTP account is changed in the environmental setting, the FTP user name is not entered or 13 or more characters are entered.	Set the FTP user name within 12 characters.
Invalid FTP user password. Please enter password again.	When the FTP account is changed in the environmental setting, the FTP password is not entered or 9 or more characters are entered.	Set the FTP password within 8 characters.
Password entry does not match confirmation entry. Please enter password again.	When the FTP account is changed in the environmental setting, different passwords are entered in [Enter FTP password] and [Confirm FTP password].	Enter the same password in [Enter FTP password] and [Confirm FTP password].
Cannot connect to GTMMFtpService. Ethernet (multimedia unit) connection settings are disabled.	The Multimedia Interaction FTP service is not installed.	Uninstall or invalidate another FTP server software from the personal computer, and install Multimedia Interaction FTP Service again.
"******" could not be deleted. Check if the file is in use.	The alarm cannot be deleted due to the following causes. • A video file associated with the alarm is being played.	Close QuickTime Player.

Message	Cause	Measure
"*****" could not be backed up.	The video file cannot be backed up due to the following causes. • The video file is being played. • The destination folder does not have sufficient available space. • You do not have a writing authority for the destination folder.	• Close QuickTime Player. • Prepare sufficient available space in the destination folder. • Acquire the writing authority for the destination folder.
The GOT alarm list "*****" cannot be deleted. Check if the file or folder is in use.	The GOT alarm list folder cannot be deleted due to the following causes. • The file in the GOT alarm list folder is being executed. • You do not have the authority to write into the GOT alarm list folder.	• Check that the file in the target GOT alarm list folder is not being used. • Acquire the writing authority for the GOT alarm list folder.
The version of GTMMFtpService is old. GTMMDataConnector is shutting down. Install GTMMFtpService version "**" or later.	Failed to start Multimedia Interaction Tool because the versions of Multimedia Interaction Tool and Multimedia Interaction FTP Service were different.	Install Multimedia Interaction FTP Service with the same version as Multimedia Interaction Tool.

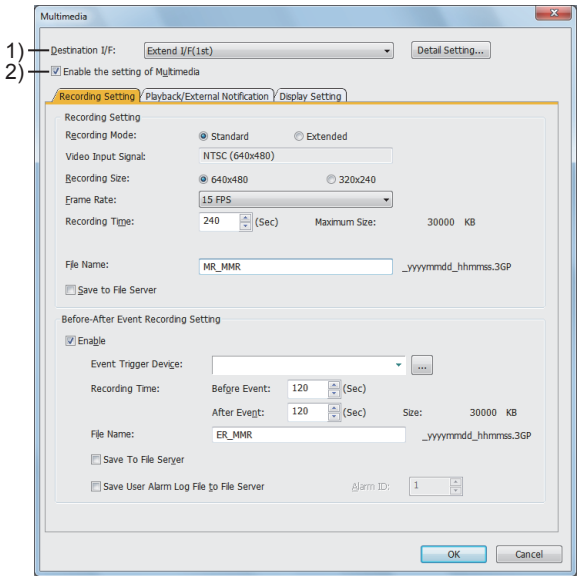
10.8.6 [Multimedia] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

Select [Common] → [Peripheral Setting] → [Multimedia] from the menu to display the setting dialog.

➟■1 [Recording Setting] tab
■2 [Playback/External Notification] tab
■3 [File Server Setting] tab
■4 [Display Setting] tab



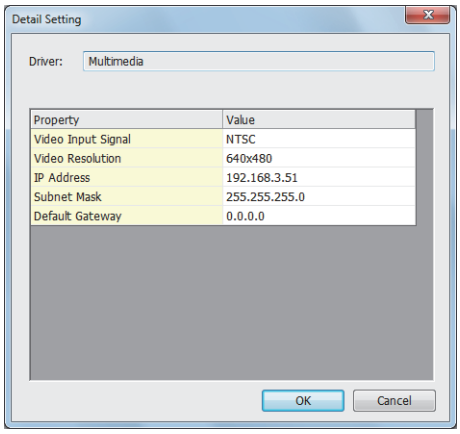
1) **[Destination I/F]**

Set the interface of the GOT.

The following shows the items to be selected.

- [Extend I/F(1st)]
- [Not connected]

Click the [Detail Setting] button to display the detail setting dialog for the multimedia function.



- **[Video Input Signal]**
  Select the video input signal
  The following shows the items to be selected.
  - [NTSC]
  - [PAL]
- **[Video Resolution]**
  Select the video resolution.
  The following shows the items to be selected.
  - [640×480]
  - [768×576]
- **[IP Address]**
  Set the IP address of the multimedia unit.
  The setting range is [0.0.0.0] to [255.255.255.255].
- **[Subnet Mask]**
  Set the subnet mask.
  The setting range is [0.0.0.0] to [255.255.255.255].
- **[Default Gateway]**
  Set the default gateway.
  The setting range is [0.0.0.0] to [255.255.255.255].

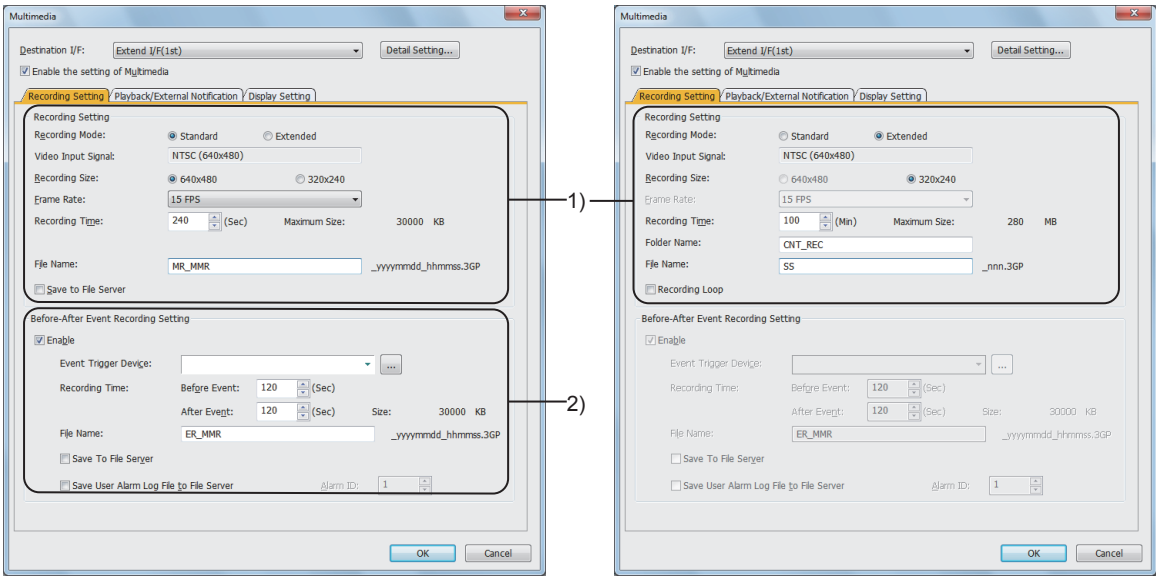
2) **[Enable the setting of Multimedia]**

Select this item to enable the multimedia function setting.

■1 [Recording Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.



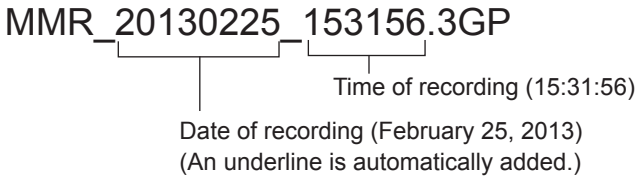
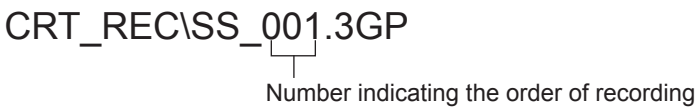
When the recording mode is [Standard]

When the recording mode is [Extended]

1) [Recording Setting]

Configure the setting regarding the video recording.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>[Recording Mode]</td><td>
Select the recording mode.
• [Standard]:
Select this item to use the standard mode.
In the standard mode, the record size and the frame rate can be selected.
<table>
<tr><th>Recording size</th><th>Video input signal</th><th>Frame rate (fps)</th><th>Available recording time (minute)</th></tr>
<tr><td rowspan="2">VGA (640 × 480)</td><td>NTSC format</td><td>15</td><td rowspan="2">10 to 240</td></tr>
<tr><td>PAL format</td><td>12.5</td></tr>
<tr><td rowspan="4">QVGA (320 × 240)</td><td rowspan="2">NTSC format</td><td>15</td><td>10 to 900</td></tr>
<tr><td>30</td><td>10 to 450</td></tr>
<tr><td rowspan="2">PAL format</td><td>12.5</td><td>10 to 900</td></tr>
<tr><td>25</td><td>10 to 450</td></tr>
</table>
• [Extended]:
Select this item to use the long-time mode.
In the long-time mode, the record size and the frame rate is fixed.
<table>
<tr><th>Recording size</th><th>Video input signal</th><th>Frame rate (fps)</th><th>Available recording time (sec.)</th></tr>
<tr><td rowspan="2">QVGA (320 × 240)</td><td>NTSC format</td><td>15</td><td rowspan="2">15 to 3000</td></tr>
<tr><td>PAL format</td><td>12.5</td></tr>
</table>
</td></tr>
<tr><td>[Video Input Signal]</td><td>Display the current format of the video input signal.
Set the video input signal in the detail setting dialog for the multimedia function.
For the setting procedure, refer to the following.
➟10.8.6 [Multimedia] dialog</td></tr>
<tr><td>[Recording Size]</td><td>Select the resolution for recording.
Setting range
When the recording mode is [Standard]: 640×480, 320×240
When the recording mode is [Extended]: 320×240</td></tr>
</table>

Item	Description
[Frame Rate]	Select the frame rate for recording. This item can be selected only when the recording mode is [Standard]. The setting range differs depending on the video input signal and the record size.
[Recording Time]	Set the recording time. Setting range When the recording mode is [Standard]: The setting range differs depending on the video input signal, the recording size, and the frame rate. When the recording mode is [Extended]: 15 minutes to 3000 minutes
[Folder Name]	Set the name of the folder that stores the recorded video file. The folder name can be set only when the recording mode is [Extended]. Use alphanumeric characters and symbols (#$%&'()+-.=@[]^_{}.) for the folder name. Up to 56 characters (total of the folder name and the file name) are available.
[File Name]	Set the file name when saving the recorded video image as a video file. • When the recording mode is [Standard]: MR_MMR (Default) Use up to 44 alphanumeric characters and symbols (#$%&'()+-.=@[]^_{}.) for the file name. For a video file recorded on the multimedia screen, the date and the time of recording are added to the end of the file name. For the video file recorded by the recording before and after the event, the event occurence date and time are added to the end of the file name. Example) When MMR is set to [File Name] and the video file is recorded on 15:31:56 February 25, 2013  • When the recording mode is [Extended]: SS (Default) Use alphanumeric characters and some symbols (#$%&'()+-.=@[]^_{}.) for the file name. Up to 56 characters (total of the folder name and the file name) are available. When a file is saved, the serial number that indicates the recording order is added to the end of the file name automatically. 
[Save to File Server]	Sends the recorded video image to a personal computer. When this item is selected, the [File Server Setting] tab is displayed. This item can be set only when the recording mode is [Standard]. Configure the connection setting for the personal computer with the GOT and the multimedia unit.
[Recording Loop]	When the recording mode is set to [Extended], select this item to continue recording by overwriting old files after the recording time.

2) **[Before-After Event Recording Setting]**

Configure the setting of the recording before and after the event.

This item can be set only when the recording mode is [Standard].

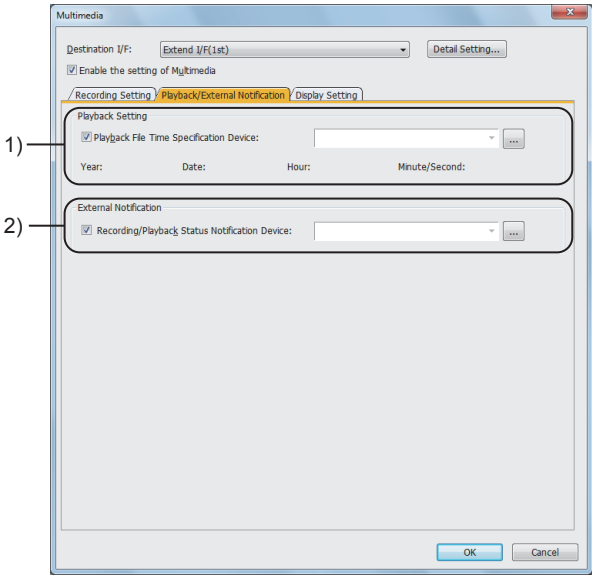
Item	Description
[Enable]	Select this item to enable the recording before and after the event.
[Event Trigger Device]	Set the trigger device for starting the recording before and after the event. ➟6.1 Device Settings
[Recording Time]	Set a recording time before and after the event. • The setting range for a recording time of before the event is [10] seconds to [120] seconds. • The setting range for a recording time of after the event is [10] seconds to [120] seconds.
[File Name]	Set a name of the file created by the recording before and after the event. For the restrictions on the file name, refer to the following. ➟■1 [Recording Setting] tab
[Save to File Server]	Select this item to send the recorded video image to a personal computer. When this item is selected, the [File Server Setting] tab is displayed. This item can be set only when the recording mode is [Standard]. Configure the connection setting for the personal computer with the GOT and the multimedia unit.

Item	Description
[Save User Alarm Log File to File Server]	Select this item to send an alarm log file to a personal computer at the same time of recording. Set the alarm ID of the user alarm observation to be stored in [Alarm ID]. When this item is selected, the [File Server Setting] tab is displayed. This item can be set only when the recording mode is [Standard]. Configure the connection setting for the personal computer with the GOT and the multimedia unit.

■2 [Playback/External Notification] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

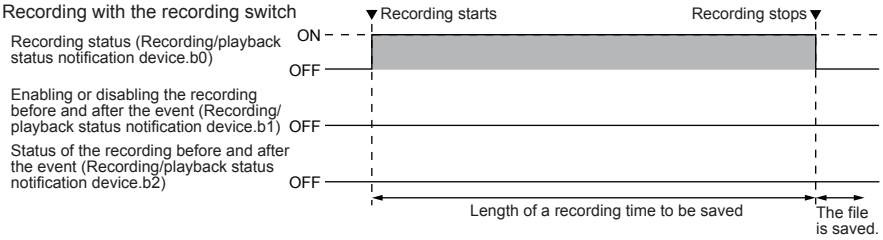
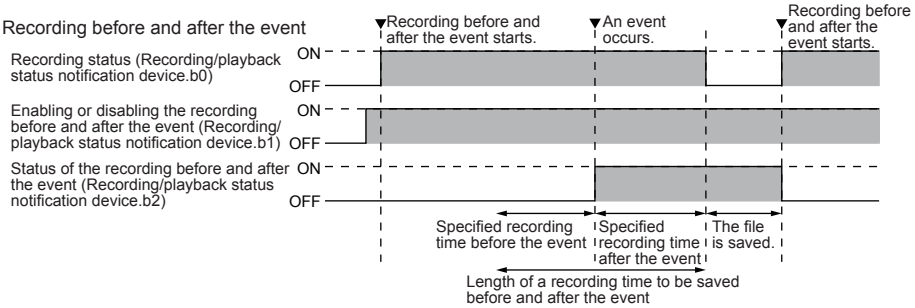
Not available to GT2705-V.



1) [Playback Setting]

Item	Description
[Playback File Time Specification Device]	Set the device for storing a recording date and time of a video file to be played. ➟6.1 Device Settings Set a word device of 16-bit unsigned BIN for the playback file time specification device. Contiguous devices for 4 points from the device selected by the user are set. Year: Second device, Month and date: First device, Hour: Fourth device, Minutes and seconds: Third device. The device value of the device is added to the file name when playing video files on the special function switch directly. Only when [Add date to playback files] is selected in the special function switch setting, the device value is added to a file name to be played. Example) File name of when MMR is set in [File Name] for the video file to be played MMR_20130225_153156.3GP The device value of the playback file time specification device is added. (An underline is automatically added.) For the special function switch settings, refer to the following. ➟8.2.9 [Special Function Switch] dialog

2) **[External Notification]**

Item	Description
[Recording/Playback Status Notification Device]	Set devices for notifying the status during the playback for video files. ➡6.1 Device Settings Applicable device: Word device of 16-bit unsigned BIN*1 The following shows the difference between the recording by the recording switch and the recording before and after the event. · Recording with the recording switch  · Recording before and after the event 

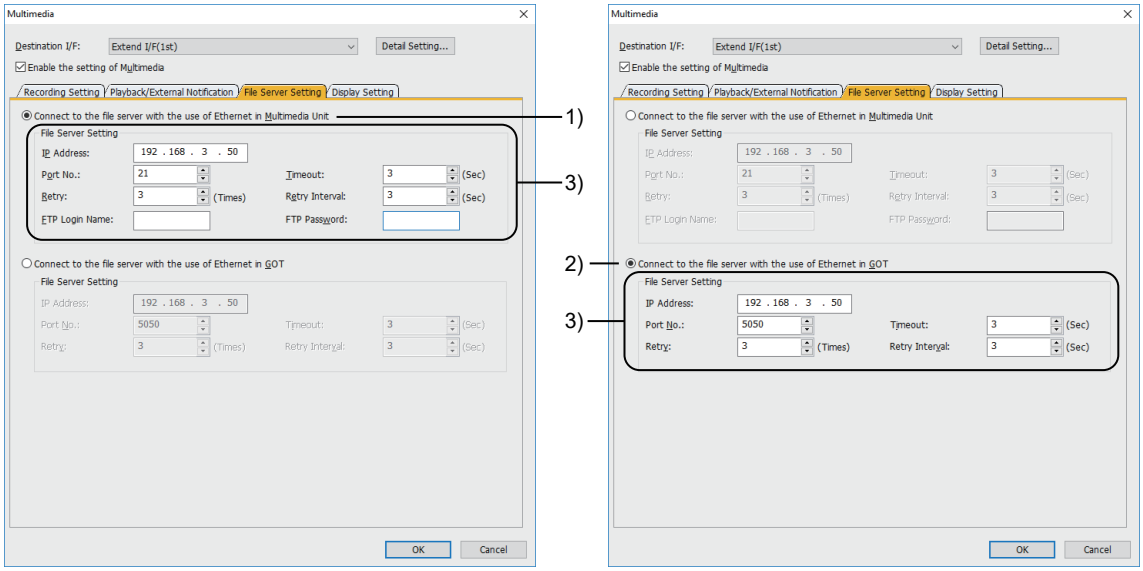
*1 The following table lists the functions of each bit of the word device.

Bit	Item	Description
b0	Recording status	ON: Recording OFF: Recording is stopped
b1	Enabling or disabling the recording before and after the event	ON: Enabling the recording before and after the event OFF: Disabling the recording before and after the event
b2	Status of the recording before and after the event	ON: Recording after the event OFF: Recording before the event
b3	-	Use prohibited
b4 to b6	Video playback status	000: Stopping 001: Playing 010: Pausing Other than the above: Invalid
b7 to b15	-	Use prohibited

■3 [File Server Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.



When connecting the multimedia unit to Ethernet

When connecting the GOT to Ethernet

1) **[Connect to the file server with the use of Ethernet in Multimedia Unit]**
Select this item to send the video file to the file server by Ethernet from the Ethernet interface built in the multimedia unit.

2) **[Connect to the file server with the use of Ethernet in GOT]**
Select this item to send the video file to the file server by Ethernet from the Ethernet interface built in the GOT.

3) **[File Server Setting]**

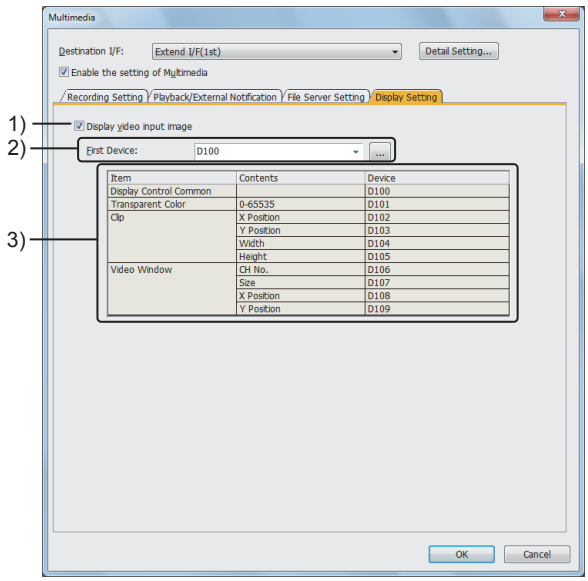
Item	Description
[IP Address]	Set the IP address of the personal computer. The setting range is [0.0.0.0] to [255.255.255.255].
[Port No.]	Set the port number used by the GOT or the multimedia unit. • For the access to the file server from the multimedia unit, the setting range is [0] to [1024]. • For the access to the file server from the GOT, the setting range is [1024] to [5010] or [5014] to [65534].
[Timeout]	Set the interval for communication to time out. The setting range is [3] to [120] seconds.
[Retry]	Set the number of retries to be performed when a communication error occurs. When no response is received after the retries, the communication times out. The setting range is [0] time to [10] times.
[Retry Interval]	Set the interval of retries to be performed when a communication error occurs. The setting range is [0] to [300] second(s).
[FTP Login Name]	Set the login name for the file server. This item can be set only when [Connect to the file server with the use of Ethernet in Multimedia Unit] is selected.
[FTP Password]	Set the password for the file server. This item can be set only when [Connect to the file server with the use of Ethernet in Multimedia Unit] is selected.

■4 [Display Setting] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

Configure the setting to display the image taken by a video camera on the user-created screen.



1) **[Display video input image]**

Select this item to display the video image on the user-created screen.

2) **[First Device]**

Set a start device of the devices to be used.

When the first device is set, the subsequent devices are automatically set in the [Device] row in the video setting list.

3) **Video setting list**

Item	Description
[Display Control Common]	Set a device for the video window display. The values of the device for the video window display are processed as 16-bit binary values. The device specified for [Display Control Common] stores the data as indicated below. Turning on/off the bit devices controls the operation of the multimedia screen.*1
[Transparent Color]	• [0 to 65535], [0(Black) to 255(White)] Specify the transparent color for the transparent processing. ⇒10.6.4 ■8 Setting items of [Video/RGB Input Common] device
[Clip]	• [X Position] Specify the X coordinate to display a video image when the clip mode is used. • [Y Position] Specify the Y coordinate to display a video image when the clip mode is used. • [Width] Specify width of a clip video image. • [Height] Specify height of a clip video image.
[Video Window]	• [CH No.] Specify the channel No. for a video image to be displayed on the video window. Only one channel can be used for the multimedia function. • [Size] Specify the display size of the video window. The following shows the setting range for the display size. 0: 100%, 1: 50%, 2: 25% When the display size of the video window is changed by touching the window, the value of the set device remains unchanged. • [X Position] Specify the X coordinate of the video window. • [Y Position] Specify the Y coordinate of the video window.

*1 The following table lists the functions of each bit of the word device.

Bit number	Description	Bit status	Remarks
b0	Selecting the full mode or clip mode	ON: Selects the clip mode. OFF: Selects the full mode.	Valid when the video window is displayed. Bit status can be changed while the video window is displayed.
b1	Selecting the screen for placing the video window	ON: Selects the overlap window 1. OFF: Selects the base screen.	Transparent processing is executed automatically when b1 is ON.
b2	Selecting the transparent processing	ON: Executes the transparent processing. OFF: Does not execute the transparent processing.	➟10.6.4 ■9 Transparent processing
b3	Selecting how to specify the transparent color	ON: Makes colors other than the specified color transparent. OFF: Makes the specified color transparent.	
b4	Selecting whether the display size of the video window is changed or not when the video window is touched	ON: Does not change the size. OFF: Changes the size.	Valid when the video window is opened. Bit status can be changed while the video window is displayed.
b5	Selecting a motion video or still image	ON: Selects a still image. OFF: Selects a motion video.	When this bit is turned on with other bits at the same time, the contents of other bits are disregarded. (b5 has priority.) ➟10.6.4 ■7 Displaying a still image
b6	Selecting display priority for video windows (When b2 (selecting transparent processing) is OFF.)	ON: Displays the video window over the overlap window. OFF: Displays the video window behind the overlap window.	Valid when the video window is opened. Bit status can be changed while the video window is displayed.
	Selecting transparent processing target screen (When b2 (selecting transparent processing) is ON.)	ON: Base screen only OFF: Base screen and overlap window 1 and 2	-
b7 to b15	Use prohibited	-	-

10.8.7 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

This section explains the precautions for using the multimedia function.

■1 Precautions for hardware

(1) Data storage of the GOT

To interact the GOT with a personal computer, reserve sufficient available space of the data storage of the GOT.

Video files are stored in the data storage of the GOT temporarily.

If the available space of the data storage is insufficient, the video files cannot be sent to the personal computer.

(2) CF card of the multimedia unit

(a) **Format type**

A CF card to be installed in the multimedia unit should be formatted in FAT32.

Installing a FAT16 formatted CF card may cause the following problems.

- Reading, writing, or saving a video file reqiures time.
- A video file temporarily looks as if it is stopped while being played.

(b) **Operation during access to a CF card**

After the CF card access switch of the multimedia unit is turned on, the multimedia unit checks the CF card status.

Operations on the multimedia screen may not be performed properly during the check.

Perform the operations on the multimedia screen after the CF card access LED turns off.

(c) **Number of video files**

Up to 512 video files can be stored in the CF card.

When 512 or more video files are stored, some video files are not displayed on the multimedia screen.

In addition, in the following cases, some video files may not be displayed on the multimedia screen even when 512 or less video files are stored.

- A video file with a long file name exists.
- A video file in which two-byte characters are used for the file name exists.
- Data other than video files exists in the CF card.

(d) **Unavailable character strings**

Do not use two-byte characters for the path and the file name.

Failure to do so may operate the multimedia unit incorrectly.

(3) Software version of the multimedia unit

The software version must be 03.02.00.** or later.

The functions described in this manual are compatible with the multimedia unit having software version 03.02.00.** or later.

For how to check and update the software version of the multimedia unit, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(4) Ethernet interface of the multimedia unit

The Ethernet interface of the multimedia unit is only for the communication with Multimedia Interaction Tool.

To connect the GOT to Ethernet, use the Ethernet interface built in the GOT.

■2 Precautions for drawing

(1) Displaying the video window, RGB screen, and multimedia screen

The simultaneous display of the video window, RGB screen, and multimedia screen is not available.

(2) Displaying a window with transparency

GOT Graphic Ver.2

If a window with transparency is placed on the multimedia screen, the multimedia screen is invisible.

■3 Precautions for use

(1) Display of a video image

(a) **If a video signal is not input to the specified channel due to cable disconnection or power-off of a video camera, a video image is not displayed.**

(b) **A video image may be given in still image or disappear temporarily when the hard copy function is executed or when a system message is displayed or cleared.**

(c) **A video image may be disturbed or stopped depending on the setting for [Horizontal] or [Vertical] for the utility (video display setting).**
(In this case, the normal display will be restored by changing the settings to default values.)
Whether or not such a problem occurs depends on equipment such as a video camera.
Use setting values that allow normal video display
For the operating procedure for the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(2) Video input signal setting

Set a video input signal according to an output format of the video camera to be connected as shown below.
If the setting is different, some video images may not be displayed correctly.

Output format of video camera	Video input signal setting
NTSC format	NTSC
PAL format	PAL
EIA format	NTSC
CCIR format	PAL

(3) Playing video files during the recording

A video file cannot be played while a video image is being recorded.
Play the video file after the recording is finished.

(4) Installing Multimedia Interaction FTP Service

To connect the GOT to a personal computer from the multimedia unit, Multimedia Interaction Tool and Multimedia Interaction FTP Service must be installed.
For how to install Multimedia Interaction FTP Service, refer to the following.

➟10.8.5 Multimedia Interaction Tool

10.8.8 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
Set the relevant settings other than the specific settings for the multimedia function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Enabling or disabling notification of the amount of usage of the CF card and the number of video files in the card in the multimedia unit	GS522.b1
Notifying the amount of usage of the CF card or the number of video files in the card in the multimedia unit	GS1022.b0 to GS1022.b7

10.9 Using an External I/O Device on the GOT (External I/O Function and Operation Panel Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

10.9.1 Overview of the external I/O function and the operation panel function

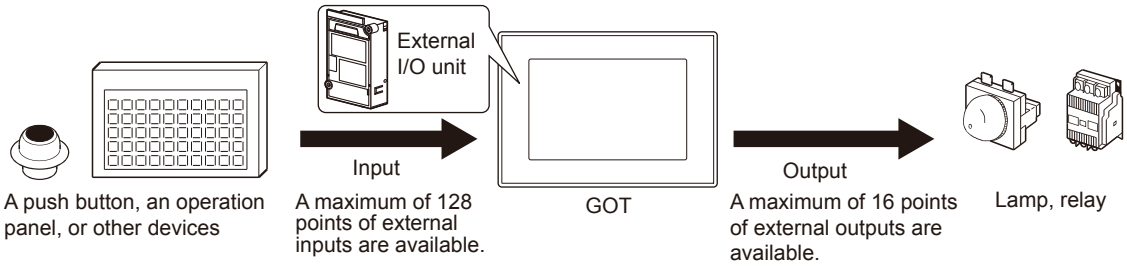
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

■1 External I/O function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.
This function enables you to input/output signals from/to an external device.

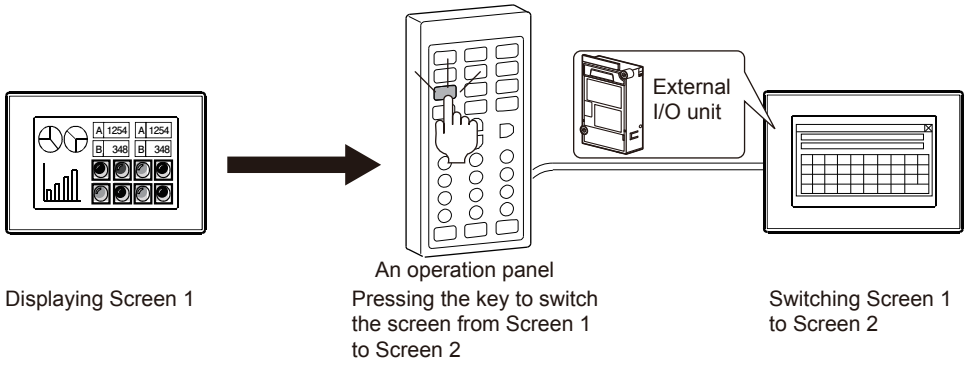


■2 Operation panel function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.
This function enables you to input data by using an operation panel. (For example, the touch input, numerical input, and screen switching.)
When you use GT SoftGOT2000, use the keyboard of the personal computer.
For the operations with the keyboard on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual



10.9.2 Specifications of the external I/O function and the operation panel function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

■1 System application (extended function)

To use the external I/O function and the operation panel function, a system application (extended function) of [External I/O / Operation Panel] is required.

Selecting [Destination I/F] in the [External I/O / Operation Panel] dialog incorporates the application into the package data automatically.

➥10.9.4 [External I/O / Operation Panel] dialog

■2 Number of external I/O function settings for one project

One external I/O function setting is available for one project.

■3 Specifications of the external I/O

Externally input signals are stored in the GOT internal devices.

The values in the GOT internal devices are output to the outside as output signals.

➥5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])
12.1.1 GOT bit register (GB)
12.1.3 GOT special register (GS)

The external I/O function supports the GOT internal devices and the System signals as shown below.

Item	GOT internal device	System Information
Input signal (X0 to X7)	GB30 to GB37	[External I/O Function Input Information1] The signals correspond to the bit numbers (b0 to b7) of the devices.
Input signal (X8 to XF)	GB50 to GB57	[External I/O Function Input Information2] The signals correspond to the bit numbers (b0 to b7) of the devices.
Input signal (X0 to XF) when the 128-point input is enabled*1	GS658 to GS665 The signals correspond to the bit numbers (b0 to b15) of the devices.	-
Output signal (Y0 to YF)	GB10 to GB25	[External I/O Function Output Information] The signals correspond to the bit numbers (b0 to b15) of the devices.

*1 To enable the 128-point input, turn on GS517.b0 (External I/O Function Notification/External I/O Control Function).

(1) When the 128-point input is used for the external I/O function

If input signals X0 to XF turn on, the corresponding GOT internal devices (GB30 to GB37 and GB50 to GB57) also turn on. (The 128-point input is disabled, and GS517.b0 turns off.)

(2) When the external signal output is controlled with the external I/O function

Do not simultaneously perform the following two operations: specifying the device for [External I/O Function Output Information] and writing the output value into GB10 to GB25. If doing so, the signals may not be output properly to the external device.

■4 Specifications of the operation panel

(1) Screens operable with the operation panel function

The operation panel function is usable for the following screens.

- User-created screen
- Log-in screen (Operator authentication)
- Password change screen (Operator authentication)

For the key codes for the operation panel keys, which are usable on the log-in screen (operator authentication) and the password change screen (operator authentication), refer to the following.

➥10.9.3 How to use the external I/O function and the operation panel function

The [OK] button and the [Cancel] button, which are in the messages on the GOT, operate with the following operation panel keys.

- [OK] button: [Enter] key, [Y] key, and [y] key
- [Cancel] button: [ESC] key, [N] key, and [n] key

For using the operation panel function on GT SoftGOT2000, use the function keys on the keyboard of the personal computer.

(2) Operation of the operation panel function

The keys operate according to the set actions on any screens displayed on the GOT.
When you press any touch switch on the GOT and any operation panel key/function key simultaneously, the operations are executed in order of detection.

10.9.3 How to use the external I/O function and the operation panel function

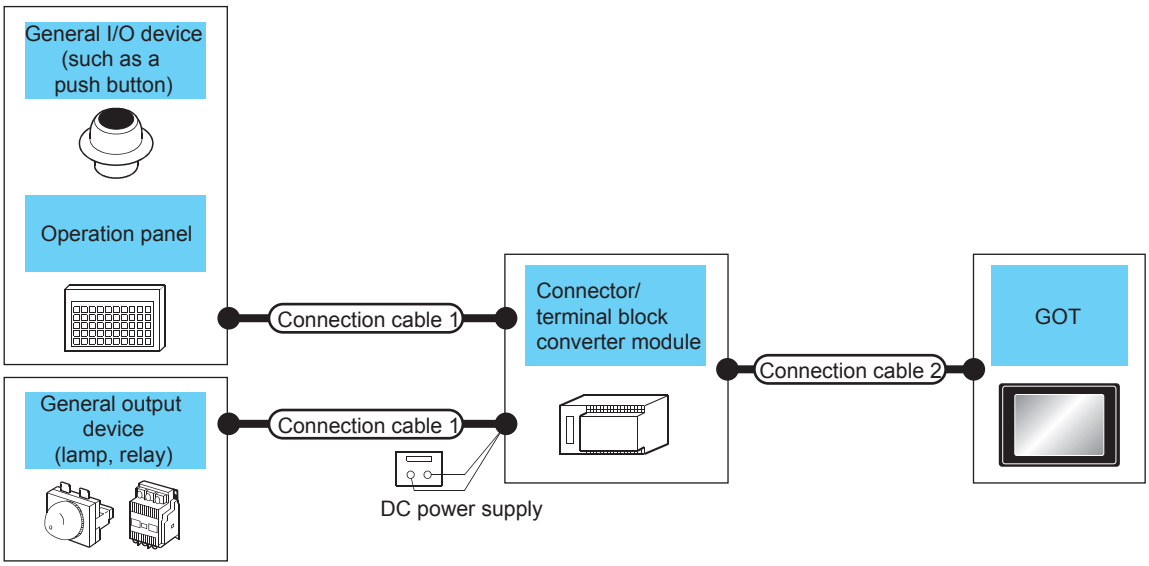
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

■1 System configuration

(1) System configuration of the external I/O device

The following shows the system configuration of the external I/O device.



Name	Connection cable 1	Connector/terminal block converter module*2*3	Connection cable 2	GOT*5	
				Option	GOT model
General input device (such as a push button) Operation panel General output device (lamp, relay)	Preparing connection cables by each user*1	*4	Preparing connection cables by each user*1	GT15-DIO	GT27, GT25
				GT15-DIOR	

*1 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*2 The 24 V DC power must be supplied for the external I/O unit.
When the power supplied to the external I/O unit cuts off in the operation, the operation panel becomes disabled.
To use the operation panel again, supply the power to the external I/O unit and reset the GOT.

*3 When using the connector/terminal block converter module, you can input signals of up to 64 points.

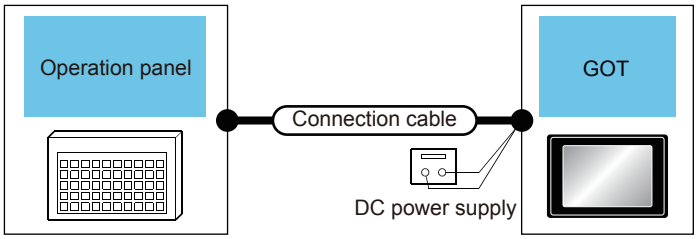
*4 The model of the connector/terminal block converter module depends on the I/O equipment and the operation panel you use.
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*5 To start the GOT, turn on the external power supply for the external I/O unit, then power on the GOT.
When the external power supply is shut off, a system alarm occurs.
When a system alarm occurs, signals cannot be input or output.
Turn off and then on the GOT or reset the GOT.
(The GOT reset switch does not operate when the bus connection is used.)

(2) System configuration of the operation panel

Since GT SoftGOT2000 uses a keyboard, GT SoftGOT2000 requires no connection to an operation panel.
The following shows the system configuration of the operation panel.



Name	Connection cable	GOT*3	
		Option	GOT model
Operation panel	Preparing connection cables by each user*1*2	GT15-DIO	GT27, GT25
		GT15-DIOR	

*1 For how to create a cable, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*2 The 24 V DC power must be supplied for the external I/O unit.
When the power supplied to the external I/O unit cuts off in the operation, the operation panel becomes disabled.
To use the operation panel again, supply the power to the external I/O unit and reset the GOT.

*3 To start the GOT, turn on the external power supply for the external I/O unit, and then turn on the GOT.
When the external power supply is shut off, a system alarm occurs.
When a system alarm occurs, signals cannot be input or output.
Turn off and then turn on the GOT, or reset the GOT.
(The GOT reset switch does not operate when the bus connection is used.)

■2 Settings of the operation panel keys and the function keys

You can assign actions and key codes to the operation panel keys and the function keys.

(1) Operation setting

One or more actions can be assigned to each operation panel key or function key as shown below.

GT27,GT25, GT SoftGOT2000		Order of action excution priority for multiple actions*1
Data change	: 1	High priority
Key code	: 16	
Word set	: 20	
Set	: 20	
Reset	: 20	
Alternate	: 20	
Momentary	: 20	
Base screen switching	: 1	
Overlap window1	: 1	
Overlap window2	: 1	
Overlap window3	: 1	
Overlap window4	: 1	
Overlap window5	: 1	
Superimpose window1	: 1	
Superimpose window2	: 1	
Station No. switching	: 9	
Dialog window	: 1	Low priority
Total	: 135	

*1 he order of the actions, excluding the data change and the key code, can be changed on the [Action] tab.

(2) Key code

You can assign the key codes used for the objects. (Up to 16 key codes are settable for one operation panel key or function key.)

• Key codes for inputting alphanumeric characters (Numerical input, text input)

• Key codes for operating the object function

➟8.2 Placing a Touch Switch

(3) Other key codes

You can operate the following screens by assigning the key codes to the operation panel keys or function keys.

• Log-in screen (Operator authentication)

• Password change screen (Operator authentication)

The following shows the key codes usable on the screens.

(a) Log-in screen and password change screen

Key code(h)	Specifications
0008h	Delete the rightmost character and shift the entire characters to the right by one character.
000Dh	Input the password.
001Bh	Cancel
0030h to 0039h, 0041h to 005Ah, 0061h to 007Ah	Input a numerical value and a character.*1
0088h	Delete a numerical value and a character being input.
0090h	Move cursor to the right inside object.
0091h	Move cursor to the left inside object.
0092h	Switch character input mode (Value).
0093h	Switch character input mode (Capital letter).
0094h	Switch character input mode (Small letter).

*1 For the key codes for numerical values and characters, refer to the following.

➟8.2 Placing a Touch Switch

■3 Setting procedure

Step 1 Connect the GOT to the external I/O device or the operation panel.

➟■1 System configuration

Step 2 In the [External I/O / Operation Panel] dialog, configure the settings for the external I/O function and the operation panel function.

➟10.9.4 [External I/O / Operation Panel] dialog

Step 3 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 4 Operate the external I/O device or the operation panel.

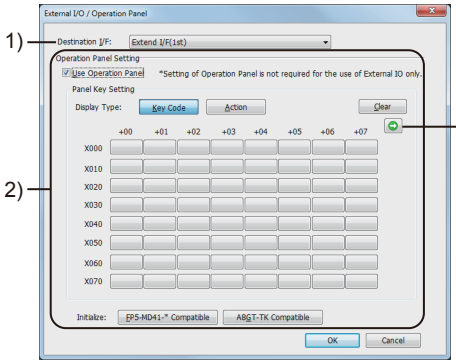
10.9.4 [External I/O / Operation Panel] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

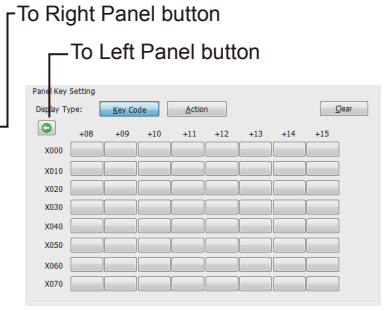
Not available to GT25-W, GT2505-V, and GT25HS-V.

Select [Common] → [Peripheral Setting] → [External I/O /Operation Panel] from the menu to display the setting dialog.

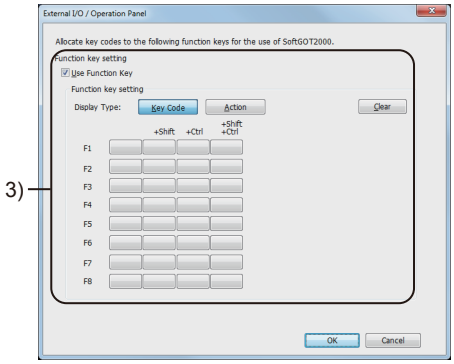
Set the actions and key codes to the operation panel keys or function keys.



Screen showing the left panel when GT27 is selected in the GOT type setting



Screen showing the right panel when GT27 is selected in the GOT type setting



Screen showing the panel when GT SoftGOT2000 is selected in the GOT type setting

1) **[Destination I/F]**

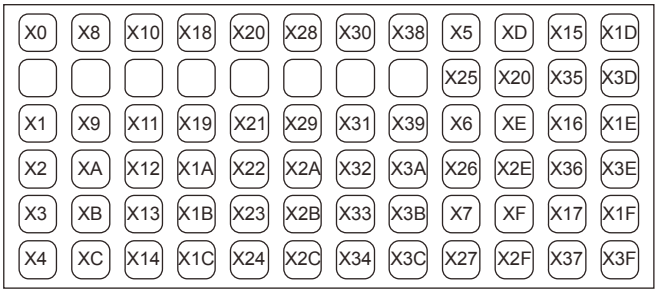
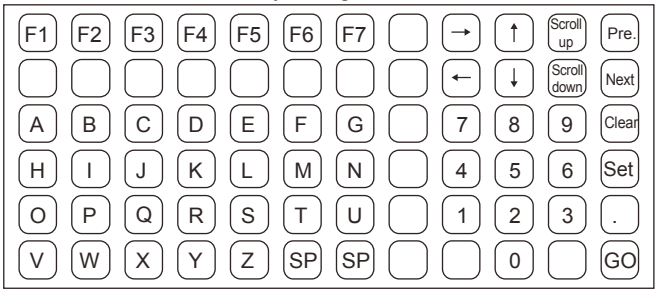
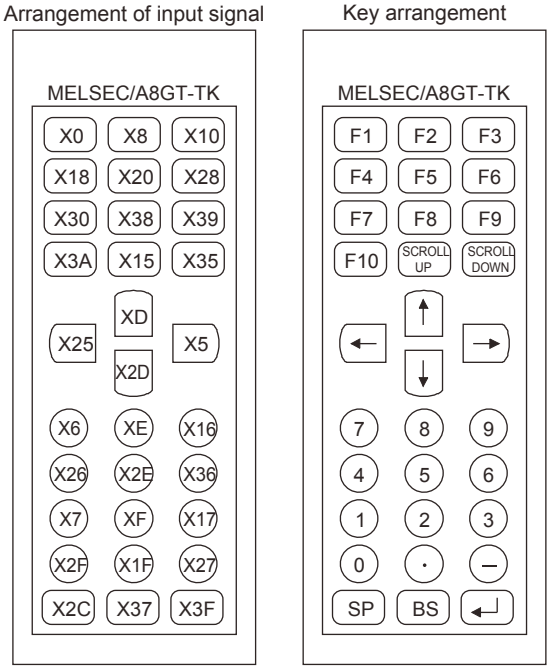
Select a destination interface.

The following shows the items to be selected.

- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

2) **[Operation Panel Setting]**

Item	Description
[Use Operation Panel]	Enables the operation panel function setting.
[Display Type]	Select the display type. • [Key Code] button Displays the key codes on the key buttons where the key codes are assigned. Example) [0042] • [Action] button Displays [*] on the key buttons where the actions are assigned. • [Clear] button Clears the setting.
[Panel Key Setting]	To the input signals, assign the actions when the signals turn on and the key codes. Clicking the input signal button displays the [Action/Key Code Setting] dialog. Set the actions, trigger conditions, and key code. The key buttons correspond to the operation panel input signals (X000 to X07F) respectively. Make sure to configure the proper action setting for each operation panel key button. ➟10.9.5 [Action/Key Code Setting] dialog Clicking the To Right Panel button or the To Left Panel button switches the input signals (+00 to +07 ←→ +08 to +15). The setting is configured for input signal X010. The setting is configured for input signal X005.

Item	Description
[Initialize]	Select the operation panel setting according to the key arrangements of the KANADEN CORPORATION operation panel and A8GT-TK. • [FP5-MD41-* Compatible] button Sets the key arrangement and key settings of the KANADEN CORPORATION operation panel. • [A8GT-TK Compatible] button Sets the key arrangement and key settings of the A8GT-TK. The operation panel setting is initialized according to the key arrangements of the KANADEN CORPORATION operation panel and the A8GT-TK numeric keypad panel. KANADEN operation panel Arrangement of input signal  Key arrangement  A8GT-TK numeric keypad panel Arrangement of input signal Key arrangement 

3) **[Function Key Setting]**

Appears when GT SoftGOT2000 is selected in the GOT type setting.

Item	Description
[Use Function Key]	Enables the setting of the function keys used for GT SoftGOT2000.

Item	Description
[Display Type]	Select the display type. • [Key Code] button Displays the key codes on the key buttons where the key codes are assigned. Example) [0042] • [Action] button Displays [*] on the key buttons where the actions are assigned. • [Clear] button Clears the setting.
[Function Key Setting]	To the function keys, assign the actions when the keys turn on and the key codes. Clicking the function key button displays the [Action/Key Code Setting] dialog. Set the actions, trigger conditions, and key code. The buttons correspond to keys F1 to F8 of the keyboard. In combination with the Shift key and the Ctrl key, up to 32 patterns are available. Make sure to configure the proper action setting for each function key. ➟10.9.5 [Action/Key Code Setting] dialog

10.9.5 [Action/Key Code Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

Configure the operation setting and the trigger conditions for the operation panel keys or function keys.

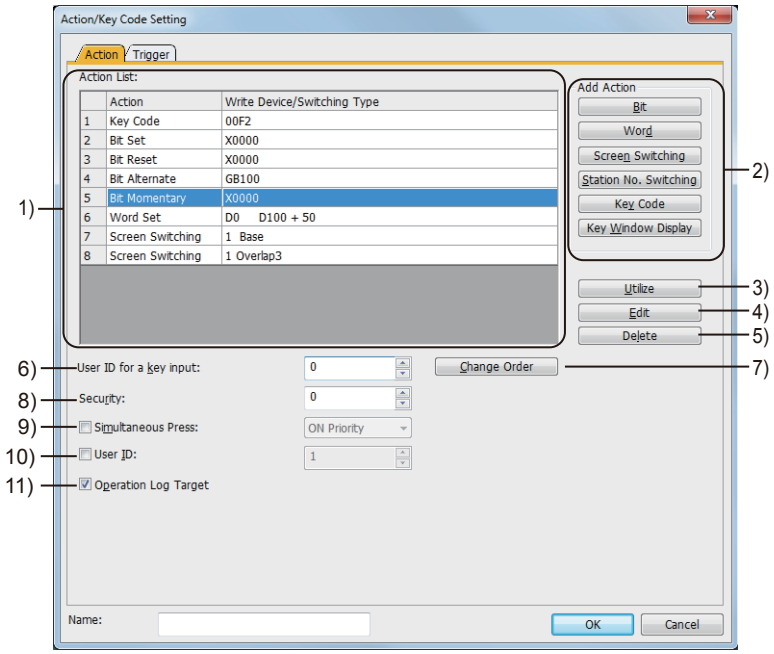
➟■1 [Action] tab
■2 [Trigger] tab

■1 [Action] tab

Configure the operation setting (actions and key codes).

For the details of the operation setting, refer to the following.

➟8.2 Placing a Touch Switch



1) **[Action List]**

Assign the actions to the operation panel key or function key.

The set action details are listed.

The setting method and action details (including bit and word) are the same as those for the touch switch.

2) **[Add Action]**

Item	Description
[Bit] button	Set the ON and OFF operations of the bit device.
[Word] button	Change the word device value.

Item	Description
[Screen Switching] button	Configure the setting of switching base screens and window screens for the operation panel key or function key.
[Station No. Switching] button	Configure the setting of the station No. switching function for the operation panel key or function key.
[Key Code] button	Configure the setting of the key code for the operation panel key or function key.
[Key Window Display] button	Set the display position of the key window.

3) **[Utilize] button**
Select an action from [Action List] and then click the [Utilize] button to copy the action to [Action List].

4) **[Edit] button**
Select an action from [Action List] and then click the [Edit] button to enable you to edit the action setting.

5) **[Delete] button**
Select an action from [Action List] and click the [Delete] button to delete the action.

6) **[User ID for a key input]**
Set the ID to specify the object for the key code input.
The setting range is [0] to [65535].

7) **[Change Order] button**
Change the order of the actions.

8) **[Security]**
When using the security function, set the security level.
The setting range is [1] to [15].
When not using the security level, set the level to 0.
➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

9) **[Simultaneous Press]**
Select this item to disable the simultaneous press and to set the key status having a higher priority.
The following shows the setting items to be selected.
- [ON Priority]
- [OFF Priority]

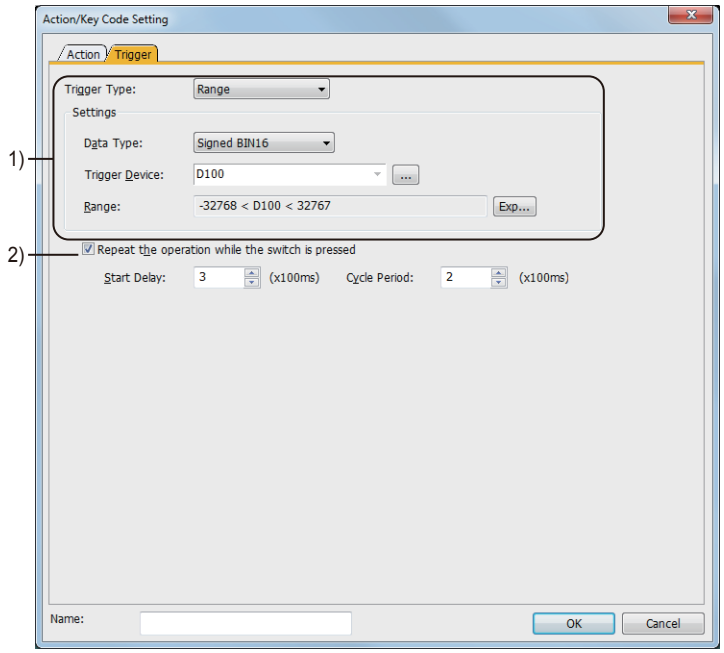
10) **[User ID]**
Enables the user ID setting.
The setting range is [0] to [65535].
When the user ID is set, you can identify the used operation panel key with the operation log.
➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])
When multiple objects are set on the same screen editor, the target object may not operate.
To make sure that the target object operates, match the user ID with the user ID of the target object.

11) **[Operation Log Target]**
Targets the object for the operation log.
➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

■2 [Trigger] tab

Set the trigger conditions so that the operation panel keys or the function keys operate.
For the details of the trigger conditions, refer to the following.

➟5.3Setting the Utility Function ([GOT Setup])



1) **[Trigger Type]**

Select a trigger condition for the operation panel key or function key.
The following shows the items to be selected.

- [Ordinary]
- [ON]
- [OFF]
- [Range]
- [Bit Trigger]

For the details of each item, refer to the following.

➟6.2.2 Setting Trigger Types

2) **[Repeat the operation while the switch is pressed]**

Repeats the set actions while the operation panel key or the function key is pressed.

10.9.6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

Set the relevant settings other than the specific settings for the external I/O function and the operation panel function as required.

The following shows the functions that are available by the relevant settings.

■1 GOT environmental settings [Screen Switching/Windows]

Select [Common] → [GOT Environmental Setting] → [Screen Switching/Windows] from the menu.

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

Function	Setting item
Setting the screen switching timing when touching the Go To Screen switch (OFF synchronous, ON synchronous)	[Operation Timing]

■2 GOT environmental settings (System information)

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Outputting signals to the external device when the external I/O function is used. (Read device)	[External I/O Function Output Information]
Notifying the input signals from the external device or no power supply when the external I/O function is used. (Write device)	[External I/O Function Input Information1], [External I/O Function Input Information2]

■3 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying the input signals from the external device or outputting the signals to the external device when the external I/O function is used.	GB10 to GB25, GB30 to GB37, GB50 to GB57
Notifying the input status when 128 signals are enabled to be input with the external I/O function	GS658 to GS665
Enabling or disabling 128 signals to be input with the external I/O function.	GS517

10.10 Displaying the GOT Screen on an External Display (Video Output Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

10.10.1 Overview of the video output function

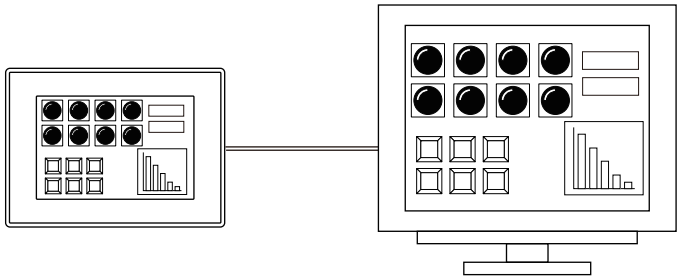
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

This function enables you to output the GOT screen to a commercially available display.

- Outputting the screen displayed on the GOT

  You can monitor the PLC status on the GOT and display the monitoring result on a big screen in a factory.

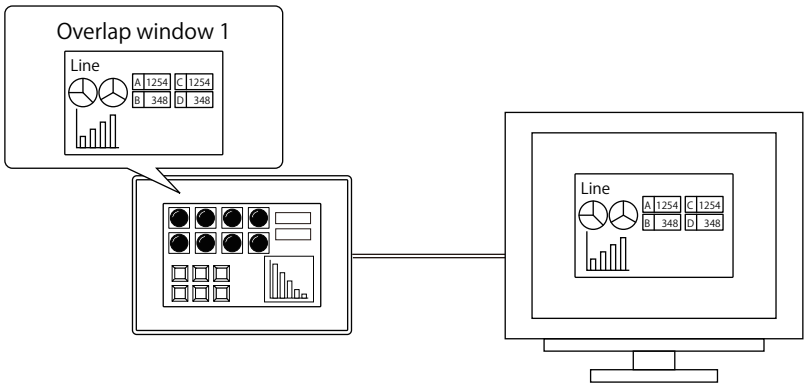


Outputting the screen on the GOT to a commercially available display

- Outputting an overlap window

  The specified overlap window can be output to the display and used for the ANDON function.

  When an overlap window is output to the display, the window is not displayed on the GOT.



Outputting overlap window 1 to the display

10.10.2 Specifications of the video output function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 Required version of BootOS

The BootOS version depends on the option to be used and the screen to be output to the display.
For information on how to install the BootOS, refer to the following.

➟4.3.2 Transferring data

(1) Option to be used

To use GT27-ROUT, install BootOS version N or later on the GOT.
To use GT27-VHOUT, install BootOS version AK or later on the GOT.

(2) Screen to be output to the display

To output an overlap window, install version AW or later of BootOS on the GOT.

■2 Required version of the standard system application

To output an overlap window to the display, install a standard system application version 01.39.*** or later to the GOT.
For how to check the version of the standard system application, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■3 Overlap window to be output to the display

Select an overlap window to be output to the display in the [Environmental Setting] window ([Screen Switching/Windows]).

➟5.2.1 ■5 [Screen Switching/Window]

The selected overlap window is not displayed on the GOT.

(1) Disabled functions

The following functions set for the selected overlap window will be disabled.

- Assignment to a system window
- Display position specification
- Display order specification
- Touch operation on the screens behind the overlap window
- Title bar display
- Automatic closing of the overlap window when the base screen is switched

(2) Switching the screen

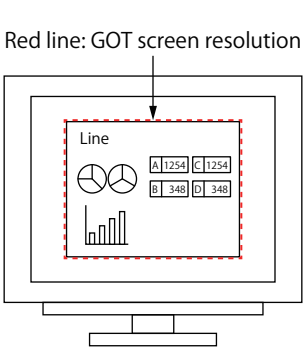
To switch the screen displayed on the overlap window, use a screen switching device or Go To Screen switch.

➟5.2.1 ■5 [Screen Switching/Window]
8.2.7 [Go To Screen Switch] dialog

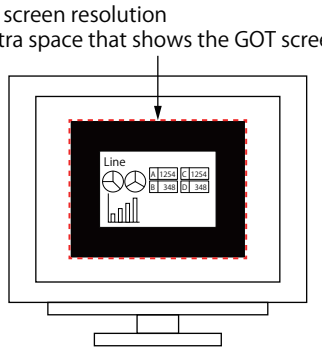
When 0 is set to the screen number, a black screen is output to the display.

■4 Resolution of the screen to be output to the display

The screen is output to the display in the GOT (output source) screen resolution.
If an overlap window smaller than the GOT screen is output, space (black area) appears around the overlap window.

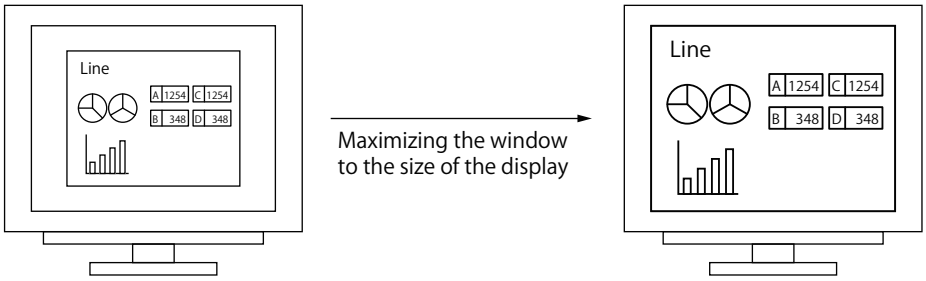


Displaying an overlap window created in the same size as the GOT screen



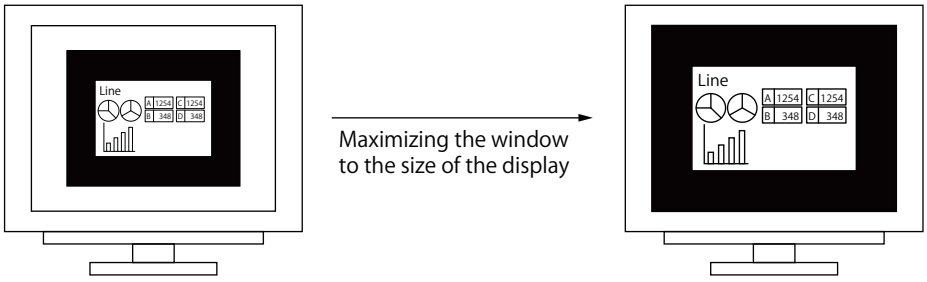
Displaying an overlap window created smaller than the GOT screen

When the screen is changed on the display, the screen, is resized according to the GOT screen resolution.
Since the window has extra space in some cases, the screen may not be resized as intended.
Example) Maximizing the screen on the display to the size of the display



Displaying an overlap window created in the same size as the GOT screen

The window without extra space will be expanded to full-screen.



Displaying an overlap window created smaller than the GOT screen

The window with extra space will not be expanded to full-screen.

You are recommended to create an overlap window to be output according to the GOT screen resolution.

■5 Display on the external display showing a dialog window when the GOT is in screen saver mode

When the GOT is in screen saver mode, the external display will not enter screen saver mode.
When the GOT displays a dialog window, the display on the external display differs depending on what screen is output to the display.

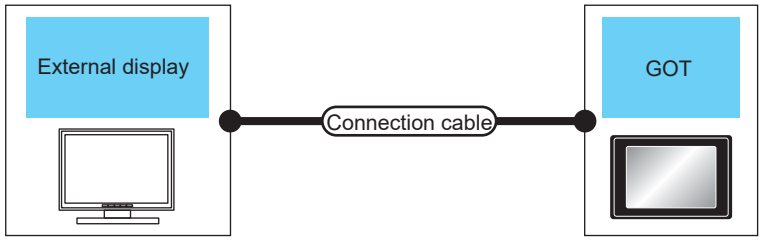
- Screen displayed on the GOT
  The external display displays the screen showing a dialog window.
- Overlap window
  The external display displays the specified overlap window only.

10.10.3 How to use the video output function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.

■1 System configuration



Signal type	External display	Connection cable	Maximum cable length	GOT		Number of connectable monitors
	Model	Model		Option	GOT model	
TMDS	HDMI-certified display	HDMI-certified cable	*3	GT27-VHOUT	GT27*2	One display for one GOT
Analog RGB	Display that supports VESA-compliant GOT screen resolution For the supported scanning frequency, refer to the following. ➟GOT2000 Series RGB Output Unit User's Manual	GT15-C50VG (5m) or Preparing connection cables by each user*1	*1	GT27-ROUT, GT27-ROUT-Z		

*1 The cable and its maximum length vary depending on the external display specifications.
For details, refer to the following.
➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

*2 Not available to GT2705-V.

*3 The maximum cable length varies depending on the cable specifications.

■2 Setting procedure

Step 1 Connect an external display to the GOT.

➟■1 System configuration

Step 2 In the [HDMI/RGB Output] dialog, set [Destination I/F].

➟10.10.4 [HDMI/RGB Output] dialog

Step 3 To output an overlap window to the external display, select the overlap window in the [Environmental Setting] window ([Screen Switching/Window]).

➟5.2.1 ■5 [Screen Switching/Window]

Step 4 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

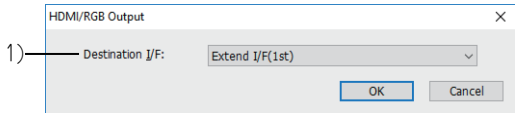
➟4. COMMUNICATING WITH GOT

Step 5 Display the GOT screen on the external display.

10.10.4 [HDMI/RGB Output] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
Select [Common] → [Peripheral Setting] → [HDMI/RGB Output] from the menu to display the setting dialog.



1) **[Destination I/F]**
Set the interface of the GOT.
The following shows the items to be selected.
- [Extend I/F(1st)]
- [Not connected]

10.10.5 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
This section explains the precautions for using the video output function.

■1 Precautions for use

(1) Changing the screen to be output to the display
When selecting or deselecting [Output a window screen via HDMI/RGB] in the [Environmental Setting] window ([Screen Switching/Window]) for a project and writing the project data to the GOT, the GOT restarts.

(2) Operation on the display
Even if the display supports touch operation, the objects on the display are inoperable.

(3) Vertical display
If you set vertical installation to the GOT and create a screen, use the display vertically.

■2 Precautions when outputting an overlap window

(1) Display when transitioning a GOT screen to a screen other than a user-created screen
In this case, [Monitoring has been stopped.] appears on the display.
The screen to be displayed on the display at screen transition can be changed using GS633.

➟12.1.3 GOT special register (GS)

(2) Display when restarting monitoring
When transitioning the GOT screen from a screen other than used-created screen to a user-created screen and restarting monitoring, the following objects will be deleted.
The display before transitioning the screen will not be retained.
- Scatter Graph
  When [Store Memory] is deselected and [Graph Type] is [Sample]
  When [Store Memory] is deselected, [Graph Type] is [Batch], and [Display Mode] is [Locus]
- Parts Display
  When [Display Mode] is [Overwrite]
- Parts Movement
  When [Display Mode] is [Locus]
- Figures freely drawn using the object script

(3) Overlap window when GT Simulator3 is used
An overlap window to be output to the display appears as a normal overlap window in GT Simulator3.
However, the title bar is not displayed. Configure a method to close the window.

(4) Overlap window when the SoftGOT-GOT link function is used

The overlap window on the display is not displayed when the SoftGOT-GOT link function is used.
Also, the background function set for the overlap window does not run.

10.10.6 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2705-V.
Set the relevant settings other than the specific settings for the video output function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Internal Device

➡12.1.3 GOT special register (GS)

Function	Setting item
Available only when an overlap window is output to the display. Setting a screen to be displayed on the display at transition of a GOT screen to a screen other than a user-created screen	GS633
Setting the screen number of a screen other than an overlap window to be output to the display by setting 1 to GS633	GS634

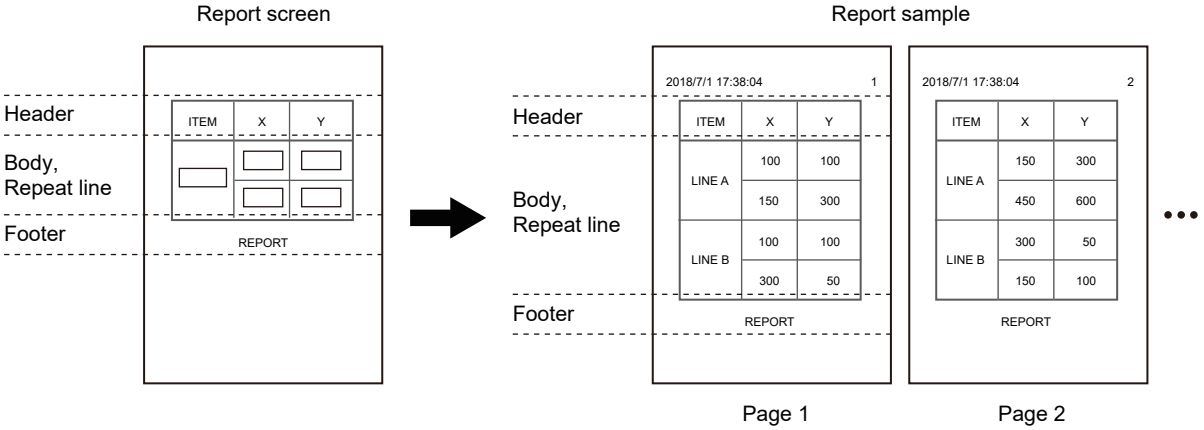
10.11 Outputting the Collected Data as a Report (Report Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

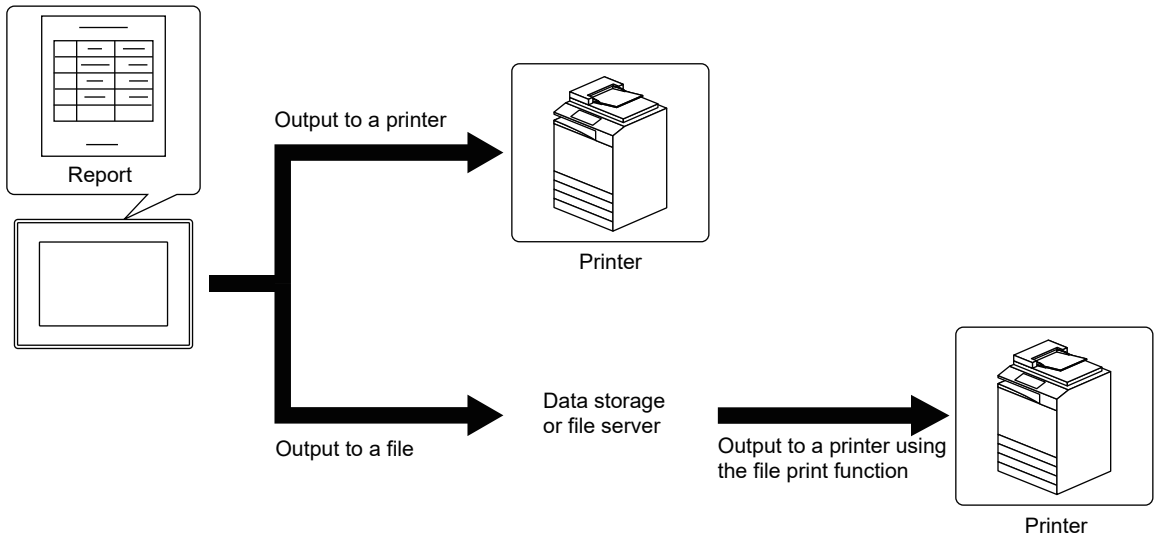
10.11.1 Overview of the report function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The report function outputs the collected data as a report.
The settings of a report screen determine the data to be collected and the page layout of a report.



A report is output to a printer or file.



➟10.11.2 Specifications of the report function
10.11.3 How to use the report function
10.11.4 Precautions
10.11.5 [Report Setting] dialog
10.11.6 [Edit Page Header/Page Footer] dialog
10.11.7 [Header/Footer/Repeat] dialog
10.11.8 [Printer] dialog
10.11.9 Relevant settings

10.11.2 Specifications of the report function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the report function, the following system applications are required.

System application (extended function)	Description
[Report]	This system application will be incorporated into the package data automatically if a report screen is created.
[Printer(PictBridge)] [Printer(Serial)] [Printer(ESC/P-R)] [Printer(PCL5)]	One of the system applications will be incorporated into the package data automatically according to the setting of [Printer Type] in the [Printer] dialog.
[File Print]	This system application is required to perform the following operations. • Printing a report file with the file print function • Outputting a report to a file • Outputting operation log lines When the following settings are configured, [File Print] of the system application (extended function) will be incorporated into the package data automatically. • [File Print] is selected for [Switch Action] on the [SP Function] tab in the [Special Function Switch] dialog. • [Output operation logs to a report screen] is selected on the [Report Setting] tab in [Operation Log] in the [Environmental Setting] window. If you do not configure the above settings but only execute a report file output or perform other operations, you need to install [File Print] of the system application (extended function) manually. For the installation, refer to the following. ➟4.8.4 [Application Selection] dialog

To use the function on GT21, GT SoftGOT2000, or GS21, the applications are not required.

■2 Required version of BootOS

To use an Ethernet printer (ESC/P-R), install version AJ or later of BootOS on the GOT.

➟4.3.2 Transferring data

■3 Hardware

Whether a data storage or file server must be connected to the GOT depends on the settings made in the [Screen Property] dialog for a report screen.

➟2.7.3 ■2 [Action] tab

○: Required, ×: Not required

[Output Destination] in the [Action] tab	[Output Timing] in the [Action] tab	Data storage or file server
[Printer]	[At the time of data collection]	×
	[When trigger condition is satisfied]	○ *1
	[When one page's worth of data is collected]	×
[File]	[At the time of data collection]	○
	[When trigger condition is satisfied]	○ *1

*1 A temporary file is saved only into the data storage.

■4 Specifications of a report screen

The following shows the specifications of a report screen.

For report samples and the items to be output, refer to the following.

➟10.11.2 ■5 Report samples and the items to be output to a report

(1) Maximum number of report screens in one project

Up to 99 report screens are settable for one project.

(2) Maximum number of devices specified for one report screen

Up to 260 devices can be specified for one report screen.

The object devices, collection trigger device, output trigger device, and other devices set for a report screen are included.

(3) Figures and objects on a report screen

The following shows the figures and objects that can be placed on a report screen.

Item	Description
Figure	Line, text
Object	Numerical print, text print, bit comment print, word comment print

(4) KANJI region for a report screen

The KANJI region of the figure, object, or header at the top leftmost corner of a report screen applies to the text on the screen.

If a report screen does not have any figure or object with a KANJI region setting, the KANJI region will be set to [Japan].

If an alarm line is output ahead of a repeat line, the KANJI region of the basic alarm comment in the alarm line will apply to the text on the screen.

For printer output, a KANJI region applies to a page.

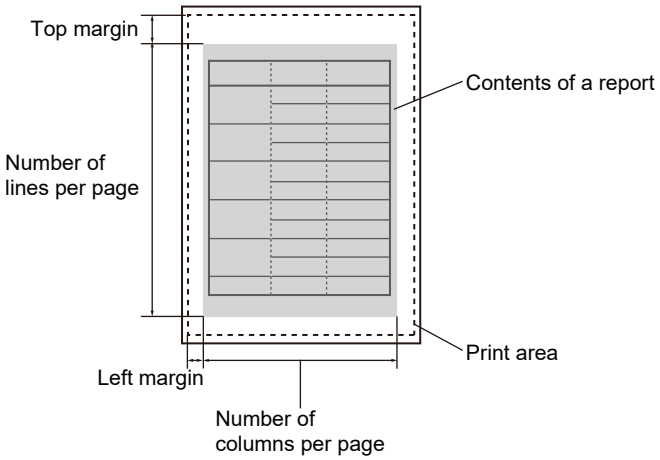
For file output, a KANJI region applies to a report file.

(5) Page layout

The margins of a page and the maximum numbers of lines and columns per page are common to all report screens.

For serial printers, the print area varies by printer model.

Set the page layout according to the size of the print area.



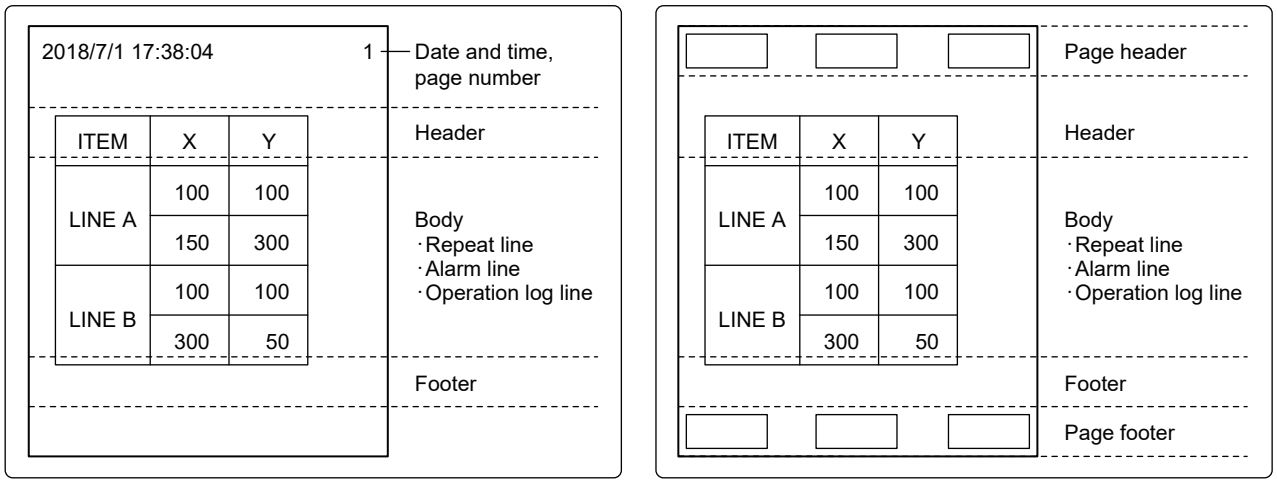
Item	PictBridge-compatible printer	Serial printer	Ethernet printer
Paper size *1	A4 (portrait)	Depending on the printer specifications	A4 (portrait) or letter
Top margin *2	0 lines to 31 lines	0 lines to 31 lines	0 lines to 31 lines
Number of lines per page *2	1 line to 70 lines	1 line to 127 lines	1 line to 70 lines
Left margin *2	0 columns to 123 columns	0 columns to 254 columns	0 columns to 123 columns
Number of columns per page *2	1 column to 124 columns	1 column to 255 columns	1 column to 124 columns

*1 As GT SoftGOT2000 outputs a report to a CSV file in a virtual drive instead of to a printer, the paper size setting is nonexistent accordingly.

*2 The setting range for PictBridge-compatible printers applies to GT SoftGOT2000.

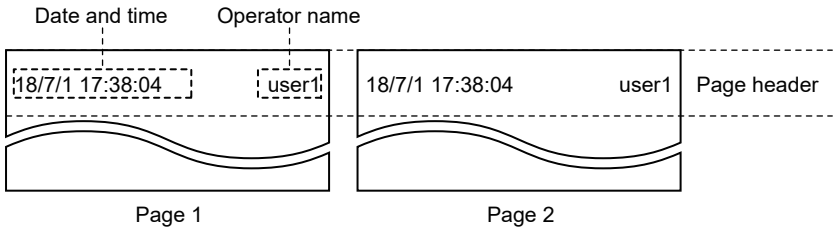
■5 Report samples and the items to be output to a report

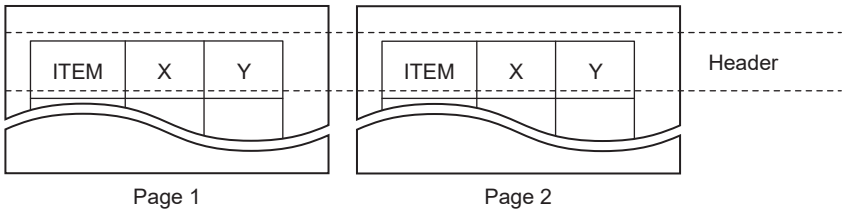
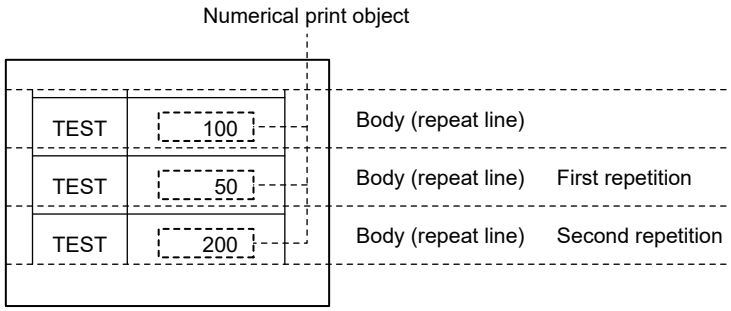
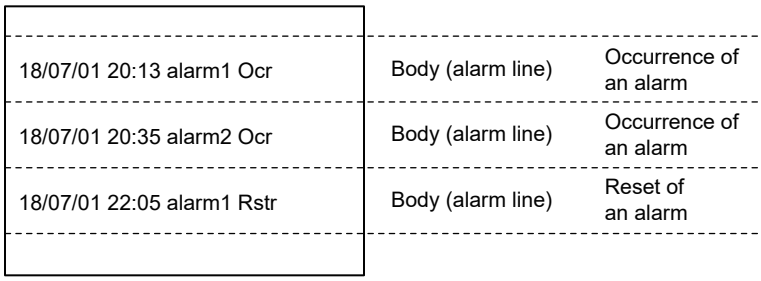
The following shows report samples and the items to be output to a report.

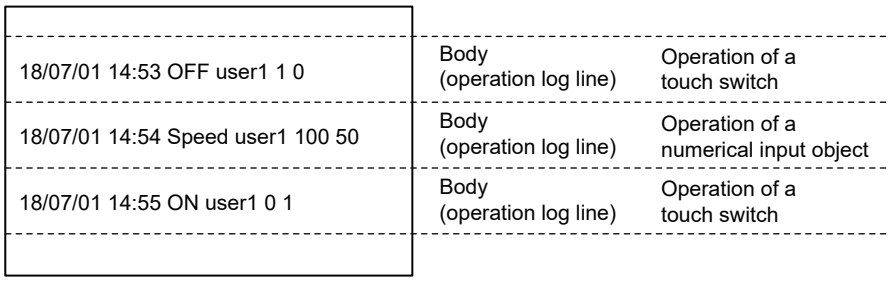
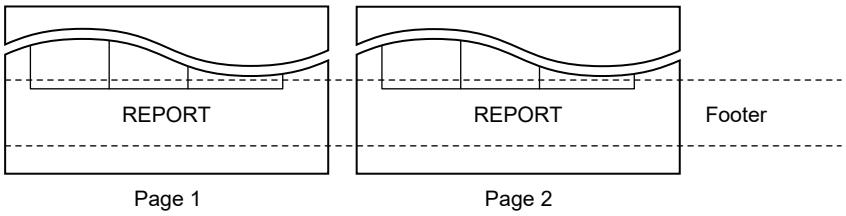
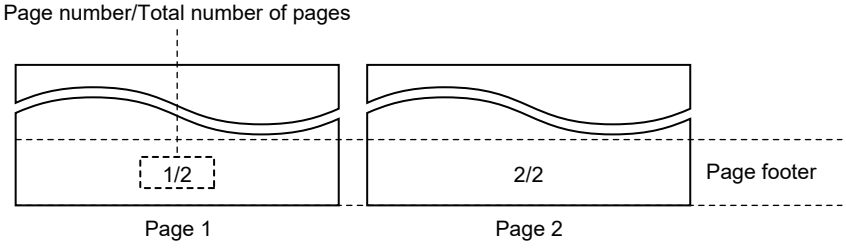


Sample of a printed report

Sample of a report file to be printed

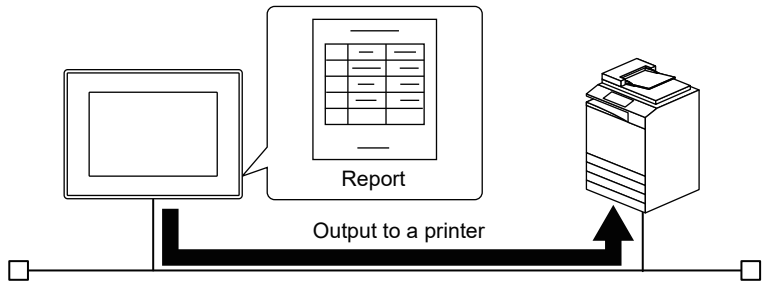
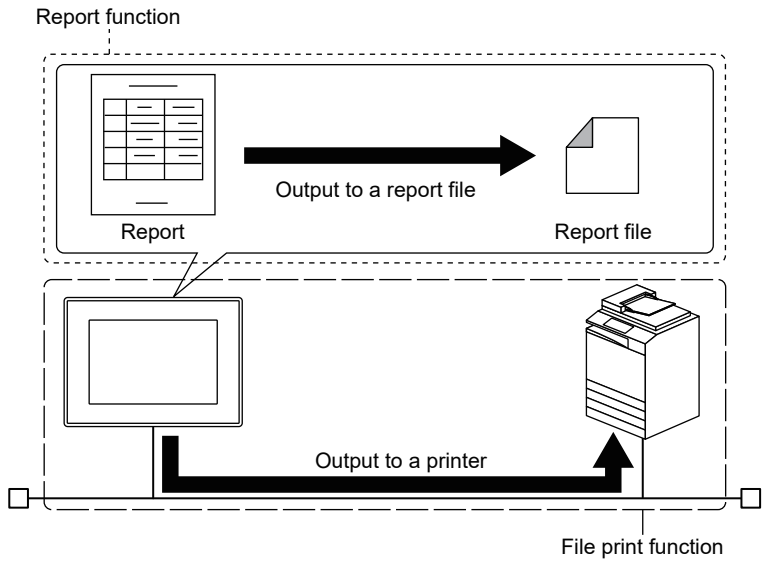
Item	Description
Date and time, page number	These items are available for printer output. The printing date and time and page numbers are printed. They are printed in one line above the header of each page. Configure the settings in the [Screen Property] dialog of a report screen. ➟2.7.3 Property of report screens • Date and time Select [Output date/time] in the [Format] tab. Specify 4 or more for [Page Columns] in the [Report Setting] dialog. • Page number Select [Output page No.] in the [Format] tab. Specify 17 or more for [Page Columns] in the [Report Setting] dialog.
Page header	This item is available for file output. When a report file is printed using the file print function, the printing date and time and the operator name are printed. They are printed in one line per page. They appear at the top line of the area that is specified with [Page Lines] in the [Report Setting] dialog. Set the contents of the page header in the [Edit Page Header/Page Footer] dialog. ➟10.11.6 [Edit Page Header/Page Footer] dialog Enable the output of the page header in the [Screen Property] dialog of each report screen. ➟2.7.3 Property of report screens The following shows an example of the page header that has the date and time on the left and the operator name on the right. 

Item	Description
Header	The header is output above the body. The header lines specified in a report screen are output. For the setting method, refer to the following. ➟10.11.3 ■3 Creating a report screen The following shows an example of the header in a report. 
Body (repeat line)	A repeat line specified in a report screen is output. The following shows the output timing. • When the output trigger condition is satisfied The line is output the specified number of times. Number of outputs: Number of repeats + 1 • When data are collected The line is output simultaneously with data collection. If the number of lines of all types exceeds the set value of [Page Lines] in the [Report Setting] dialog, a page break will be inserted between iterations of repeat lines. For specifying a repeat line, refer to the following. ➟10.11.3 ■3 Creating a report screen The following shows an example of the report where a repeat line having a numerical print object is output three times. 
Body (alarm line)	The set items are output at occurrence, check, or reset of the alarms to be collected by the user alarm observation function. For the items to be output, refer to the following. ➟9.1.2 ■7 (2) [Device] tab The following shows the output timing. • When the output trigger condition is satisfied The line is output the specified number of times. Number of outputs: Number of repeats + 1 • When data are collected The line is output at occurrence, check, or reset of an alarm. Specify the alarms to be output with [Print Target] in the [Alarm Print Detail Setting] dialog. Each alarm event is output in one line. If the number of digits output in an alarm line exceeds the set value of [Page Columns] in the [Report Setting] dialog, only the digits within the limit will be output. For the settings to output an alarm line, refer to the following. ➟10.11.3 ■4 Settings to output alarm lines The following shows an example of alarm lines in a report.  For the user alarm observation, refer to the following. ➟9.1.2 Collecting alarms by monitoring devices

Item	Description
Body (operation log line)	The set items are output when the operation log function records an operation event. For the items to be output, refer to the following. ➥5.2.11 ■5 (4) [Report Setting] tab The following shows the output timing. • When the output trigger condition is satisfied The line is output the specified number of times. Number of outputs: Number of repeats + 1 • When data are collected The line is output when an operation event is recorded. Each operation event is output in the specified number of lines. For the settings to output an operation log line, refer to the following. ➥10.11.3 ■5 Settings to output operation log lines The following shows an example of operation log lines in a report.  For the operation log function, refer to the following. ➥5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])
Footer	The footer is output below the body. The footer lines specified in a report screen are output. For the setting method, refer to the following. ➥10.11.3 ■3 Creating a report screen The following shows an example of the footer in a report. 
Page footer	This item is available for file output. When a report file is printed using the file print function, the printing date and time and the operator name are printed. They are printed in one line per page. They appear at the bottom line of the area that is specified with [Page Lines] in the [Report Setting] dialog. Set the contents of the page footer in the [Edit Page Header/Page Footer] dialog. ➥10.11.6 [Edit Page Header/Page Footer] dialog Enable the output of the page footer in the [Screen Property] dialog of each report screen. ➥2.7.3 Property of report screens The following shows an example of the page footer that has a page number and the total number of pages in the center. 

■6 Output destination of a report

The following shows the output destinations selectable for a report.

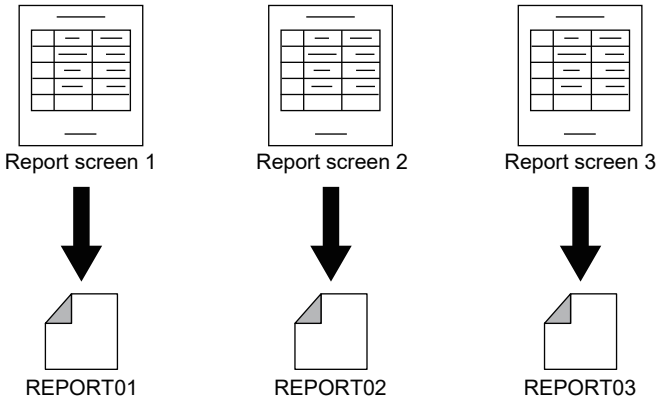
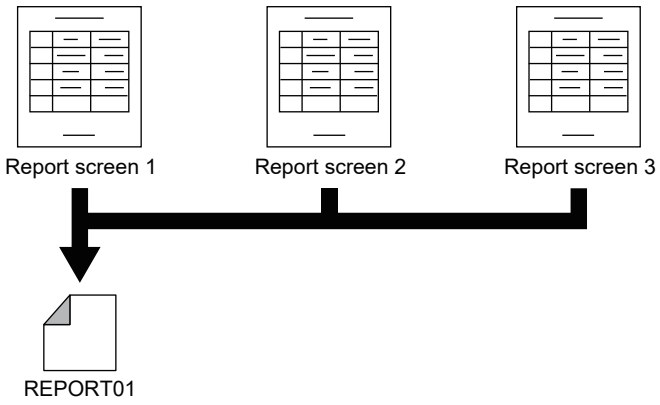
Output destination	Description	Supported models
Printer	A report is output to a printer.  GT SoftGOT2000 outputs a report to a CSV file in a virtual drive instead of to a printer. Output the CSV file to a printer from the personal computer. For the specifications of the report function on GT SoftGOT2000, refer to the following. ➟GT SoftGOT2000 Version1 Operating Manual	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
File	A report is output to a report file. To output the report file to a printer, use the file print function. For the file print function, refer to the following. ➟GOT2000 Series User's Manual (Utility)  For the specifications related to a report file, refer to the following. ➟10.11.2 ■7 Specifications related to a report file	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■7 Specifications related to a report file

The following shows the specifications related to a report file.

(1) Specifying a report file

The following shows how to specify a report file to which a report will be output.
Specify a destination report file per report screen.

Item	Description
Outputting screen data to a new report file	The data of a report screen is output to a new report file. Example) Outputting the data of report screens 1 to 3 to new report files respectively 
Adding screen data to the report file created for another report screen	The data of a report screen is added to the report file created for another report screen. You can output the data of multiple report screens to one report file. Example) Adding the data of report screens 2 and 3 to the report file created for report screen 1 

(2) Switching report files

You can switch a destination report file to a new one at your preferred timing.
Once the destination report file is switched, the file will be write-protected.
The destination report file is switched under the following conditions.

- The data of a report screen is output when [Switch files after an output] is enabled for the screen.
- The screen data is output while bit 0 of the notification device is turned off by turning on bit 0 of the control device.
- In the case where a destination report file is specified with devices, the screen data is output to another new report file.

Note that restarting the GOT write-protects all report files.

When you specify a destination report file directly, a sequential number is appended to the report file name.
Example) REPORT01_0000.G2R
The sequential number starts from 0000. When REPORT01_0000.G2R is switched to a new report file, the new file is named REPORT01_0001.G2R.
After sequential number 9999 is used, sequential number 0000 will be used.

(3) Report file's sequential number and management file

The sequential number of a report file is managed with a management file (*.G2G).
When a report file is created in a folder, its management file with the same name (excluding the sequential number) is also created in the folder.
Example) For REPORT01_****.G2R, its management file is REPORT01.G2G.
To change the sequential number of a report file, perform one of the following operations.

- Change the setting of [File Name] on the [File Save] tab in the [Screen Property] dialog for a report screen.
- Delete the report file and its management file.

■8 Report output timing

The following shows the timing for outputting data as a report.

- When the output trigger condition is satisfied
- When data are collected
- When one page's worth of data is collected

Set the output timing per report screen.

(1) When the output trigger condition is satisfied

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

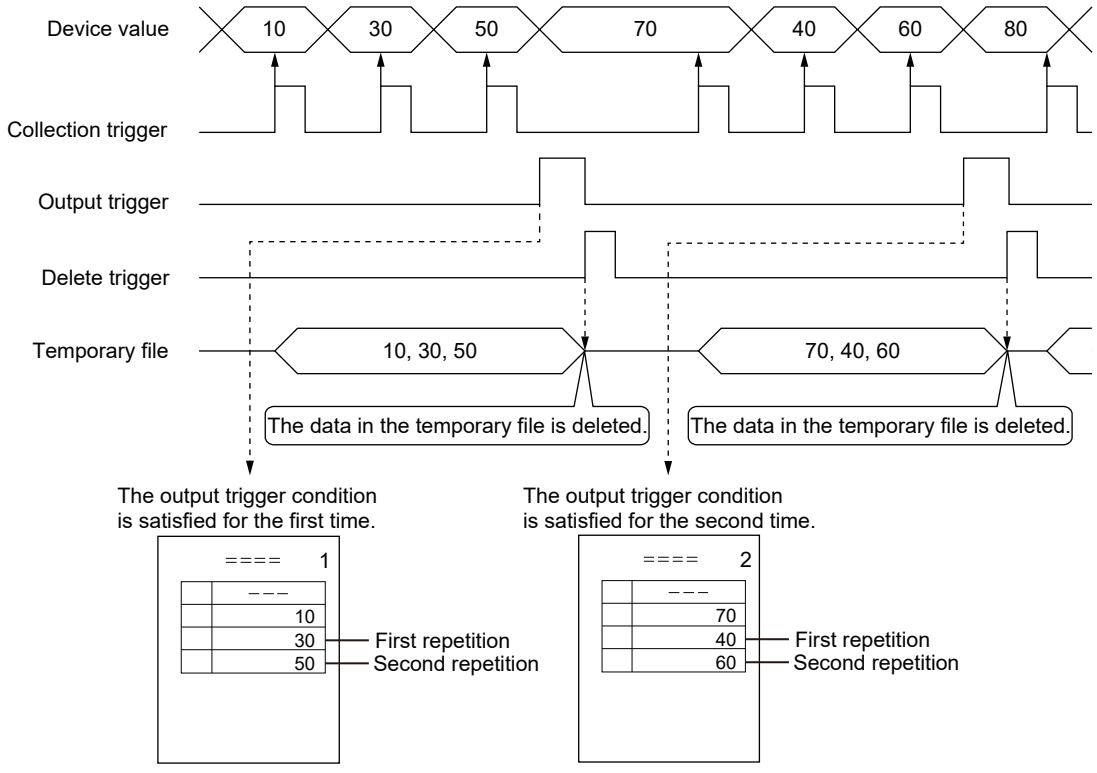
The collected data is stored into a temporary file, and is collectively output as a report when the output trigger condition is satisfied.
The data in the temporary file is deleted when the delete trigger condition is satisfied.
Set the following items per report screen: the data collection trigger, the data output trigger, the maximum number of collections of data to be stored into a temporary file, and the number of collections of data to be output when the output trigger condition is satisfied.

➟2.7.3 Property of report screens

Example) Outputting three collections of data when the output trigger condition is satisfied
The following shows how the data is output when the following settings are configured in the [Screen Property] dialog of a report screen.

- [Limit of Collection] in the [Action] tab: 3
- [Number of repeats] in the [Format] tab: 2

When the collection trigger condition is satisfied, data is stored into a temporary file.
Up to three collections of data are stored into the temporary file.
When the output trigger condition is satisfied, the stored data is output. (Number of collections of output data: Number of repeats + 1).



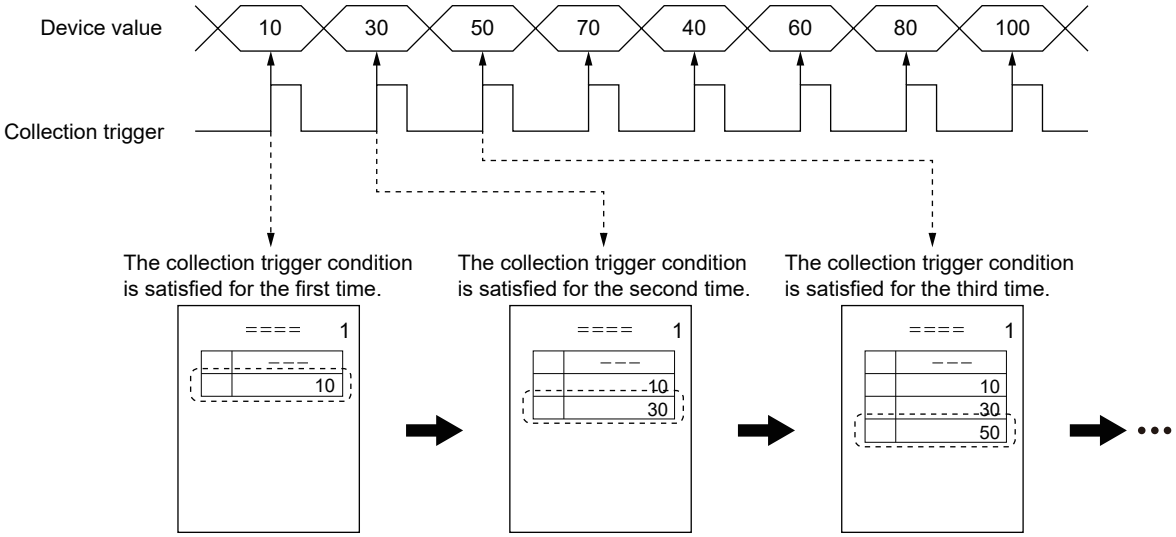
(2) When data are collected

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

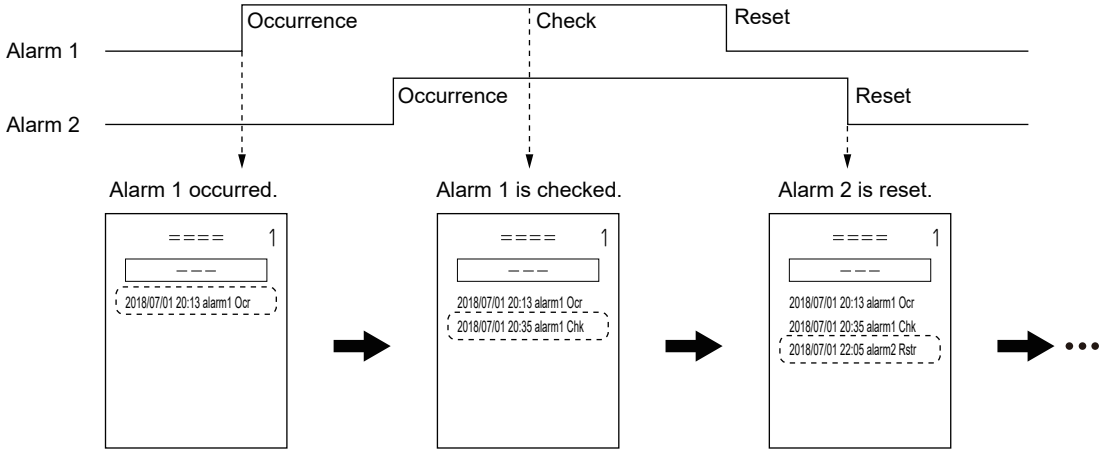
The collected data is output simultaneously with data collection.
This is available only when a serial printer is used.
The data collection timing depends on the item to be output.

Item to be output	Data collection timing
Repeat line	When the collection trigger condition is satisfied
Alarm line	At occurrence, check, or reset of the alarms to be collected by the user alarm observation function
Operation log line	When an operation event is recorded

Example) Repeat lines in a report



Example) Alarm lines in a report
Alarm 1: Output at occurrence or check
Alarm 2: Output at reset



(3) When the output trigger condition is satisfied

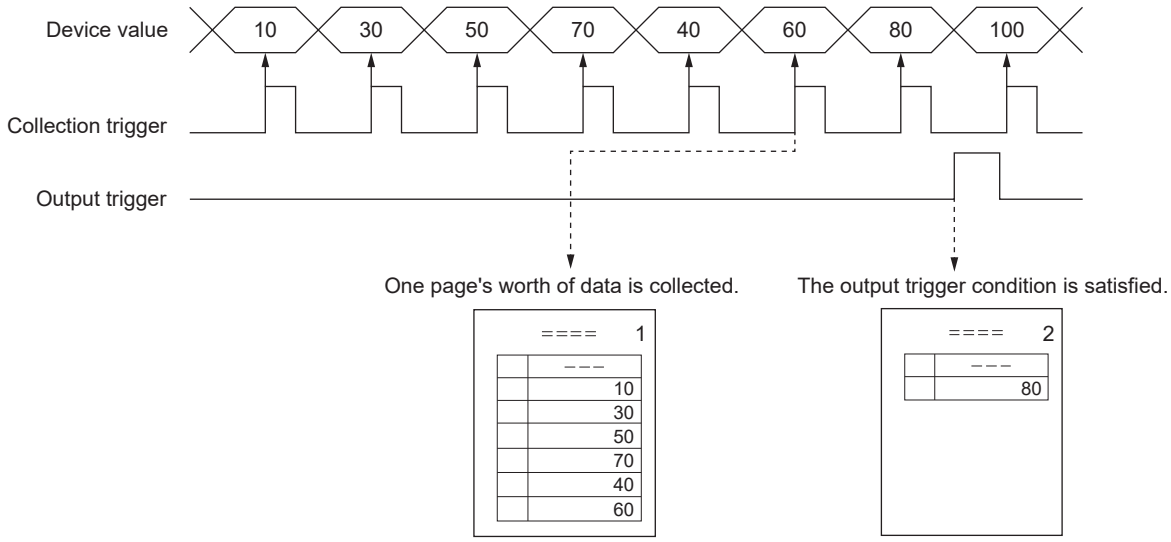
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.
Available when [Printer Type] is set to [PCL5].
Data is output when one page's worth of data is collected.
Set the data collection and output triggers per report screen.

➟10.11.5 [Report Setting] dialog

When the data output trigger condition is satisfied before one page's worth of data is collected, the data is output.

Example) Setting repeat lines to be output when one page's worth of repeat lines are collected



10.11.3 How to use the report function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

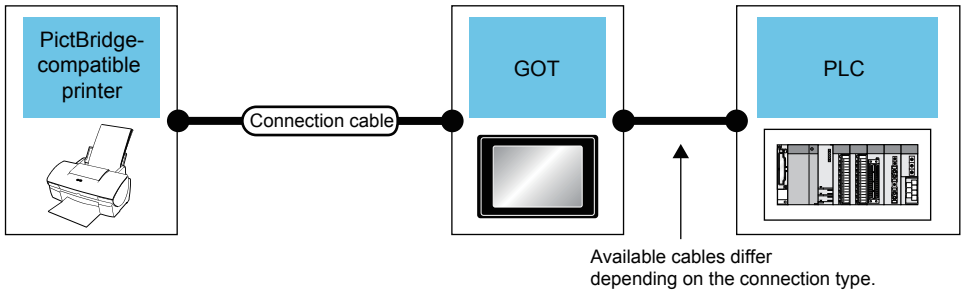
The following shows the system configuration when a printer is used.
For connecting a printer to the GOT, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

GT SoftGOT2000 outputs a report to a CSV file in a virtual drive instead of to a printer.
For the specifications of the report function on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(1) When connecting with a PictBridge-compatible printer

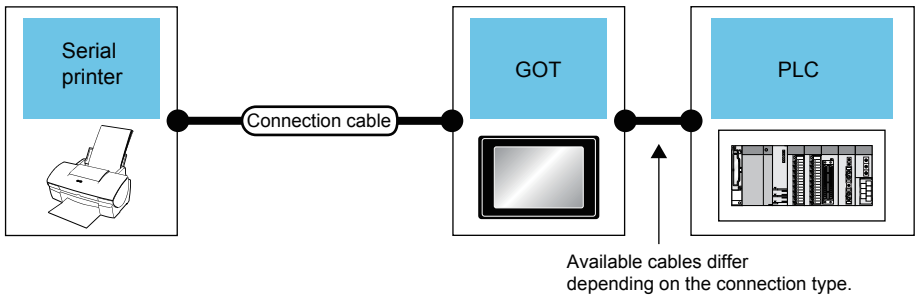


Printer	Connection cable	GOT		PLC	Number of connectable printers
Model	Model	Option	GOT model		
For the connectable printers and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT09-C30USB-5P (3m) (included in the printer unit)	GT15-PRN*1	GT27, GT25*2	For the system configuration between the GOT and the PLC, refer to each connection manual.	One printer for one GOT

*1 The unit for the communication between the GOT and the PictBridge-compatible printer.
Some PictBridge-compatible printers may not be able to print data properly.
For the precautions of the printer connection, refer to the following Technical News.
➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

*2 GT25-W, GT2505-V, and GT25HS-V are excluded.

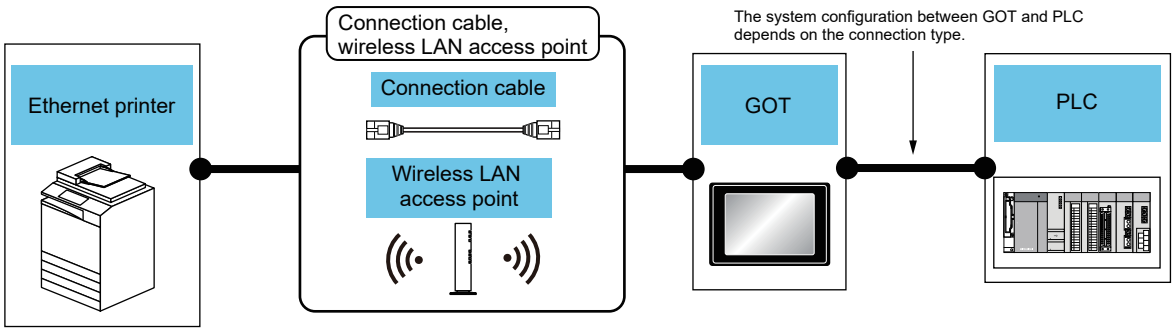
(2) When connecting with a serial printer



Printer	Connection cable	GOT		PLC	Number of connectable printers
Model	Model	Option	GOT model		
For the connectable printers and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	RS-232 cable *1	-(Built into GOT)	GT27 GT25 *2 GT23 GT21 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One printer for one GOT
		GT15-RS2-9P	GT27 GT25 *3		

*1 Available RS-232 cables differ according to the printer used.
Prepare a RS-232 cable that is suitable for the specifications of the printer to be used.
*2 GT25HS-V is excluded.
*3 GT25-W, GT2505-V, and GT25HS-V are excluded.

(3) When connecting with an Ethernet printer



Printer	Connection cable *1*2, wireless LAN access point	Maximum segment length *3	GOT		PLC	Number of connectable personal computers
			Option	GOT model		
Select by each user ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	• 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher	100m	- (Built into GOT)	GT27 GT25 *8 GT23 GT21 *9 GS25 GS21	For the system configuration between the GOT and the PLC, refer to each connection manual.	One personal computer for one GOT
			GT25-J71E71-100	GT27 GT25 *6		
	-	-	GT25-WLAN	GT27 *4 GT25 *4*7 GS25 *4		
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➡List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*7 GS25 *5		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 When a hub is used, use a straight cable.
To connect the GOT and the printer directly with an Ethernet cable, use a straight or cross cable.
For the cables usable for your printer, check the printer specifications.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 for a cascade connection (500m)
• 100BASE-TX: Up to 2 for a cascade connection (205m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➡5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➡5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 GT25-W, GT2505-V, and GT25HS-V are excluded.

*7 GT2505-V and GT25HS-V are excluded.

*8 For GT2505HS-V, one built-in interface is usable.
An Ethernet printer is connectable only when the GOT is connected to a controller by Ethernet.

*9 GT2105-Q is excluded.

■2 Setting procedure

(1) For GT27, GT25, GT23, GT21, GS25, and GS21

Step 1 Connect the GOT and a printer.

➟GOT2000 Series Connection Manual (Microcomputer, MODBUS/Fieldbus Products, Peripherals) for GT Works3 Version1

Step 2 Select [Common] → [Peripheral Setting] → [Printer] from the menu to display the [Printer] dialog.

Step 3 In the [Printer] dialog, set a printer to be connected to the GOT.

➟10.11.8 [Printer] dialog

Step 4 Create a report screen.

➟■3 Creating a report screen

To output alarm lines, configure the output settings of the user alarm observation function.

➟■4 Settings to output alarm lines

To output operation log lines, configure the output settings of the operation log function.

➟■5 Settings to output operation log lines

Step 5 In the [Report Setting] dialog, set the cycle of monitoring trigger devices and set the page layout of a report.

➟■6 Settings common to report screens

(2) For GT SoftGOT2000

Step 1 Create a report screen.

➟■3 Creating a report screen

To output alarm lines, configure the output settings of the user alarm observation function.

➟■4 Settings to output alarm lines

To output operation log lines, configure the output settings of the operation log function.

➟■5 Settings to output operation log lines

Step 2 In the [Report Setting] dialog, set the cycle of monitoring trigger devices and set the page layout of a report.

➟■6 Settings common to report screens

Step 3 On GT SoftGOT2000, select the [Project] menu and configure the print settings.

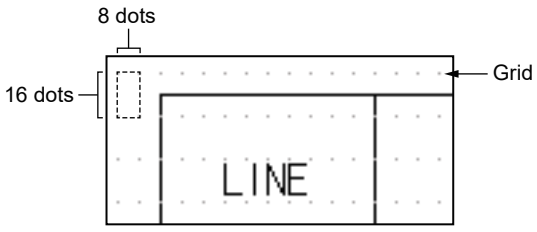
➟GT SoftGOT2000 Version1 Operating Manual

■3 Creating a report screen

For the procedure for creating a report screen, refer to the following.

➟2.5.1 ■3 Creating a report screen

The following shows the space between figures or objects when they are placed or moved.

<table>
<tr><th colspan="2">Item</th><th>Space between figures or objects</th></tr>
<tr><td rowspan="2">Figure</td><td>Line</td><td>Place or move this item in units of 16 dots vertically or horizontally.</td></tr>
<tr><td>Text</td><td rowspan="2">Place or move this item in units of 16 dots vertically or in units of 8 dots horizontally.
Use the grid as a reference.
The vertical and horizontal spacing between dots in the grid on a report screen are fixed to 16 dots and 8 dots respectively.
 
</td></tr>
<tr><td colspan="2">Object</td></tr>
</table>

The grid color can be changed in the [View] tab of the [Options] tab.

➟11.10.5 Customizing the display

(1) Drawing lines and squares

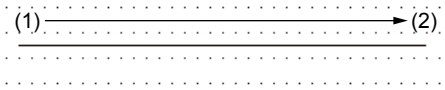
(a) How to draw

Place each line and square not to overlap each other.

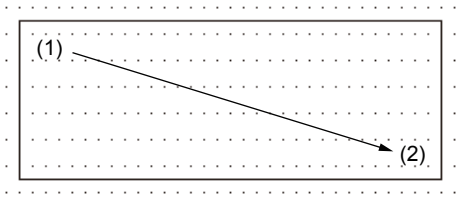
Step 1 Select [Figure] → [Line] from the menu.

Step 2 Drag the pointer from the start point to the end point and release the left button on the mouse to draw a line or a square.

• Drawing a line Drag the pointer from the start point horizontally or vertically to draw a line.



• Drawing a square Drag the pointer from the start point diagonally to draw a square.



(b) Precautions

The property of the line is fixed as follows.

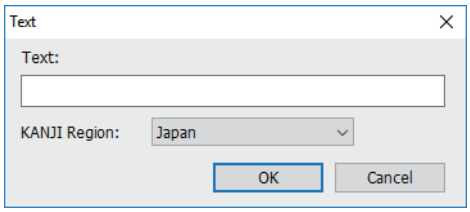
• Line style: Solid line
• Line width: 1 dot
• Line color: Black

(2) Placing text

(a) How to place text

Step 1 Select [Figure] → [Text] from the menu.

Step 2 Click the position where you place the text. The [Text] dialog appears.

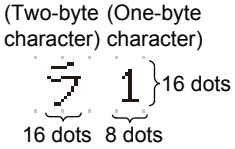


Step 3 Input character strings you want to display and then click the [OK] button.
Set the KANJI region as required.

Step 4 The input text is displayed on the screen.

(b) Precautions

• Line feeds cannot be inserted to the text on the report screen.
• The character property (character effect, character color, and others) cannot be changed.
• Two-byte characters are placed by 16 dots × 16 dots. One-byte characters are places by 16 dots × 8 dots.



• For PictBridge-compatible printers or Ethernet printers, up to 62 two-byte or 124 one-byte characters can be output.
• For serial printers, up to 127 two-byte or 255 one-byte characters can be output.

(3) Placing an object

For the object placement and setting on a report screen, refer to the following.

➟8.32 Placing a Print Object on a Report Screen

(4) Setting the header, footer, and repeat lines

Set the items (header, footer, and repeat lines) to be output to a report on a report screen.
If repeat lines are set to be output, specify them.
Make sure that the number of lines to be output to a report does not exceed the set value of [Page Lines] in the [Report Setting] dialog. The header lines, footer lines, repeat lines, page header lines, and alarm lines are included.
For the number of lines to be output to a report, refer to the following.

➟10.11.2 ■5 Report samples and the items to be output to a report

The following shows the setting procedure.

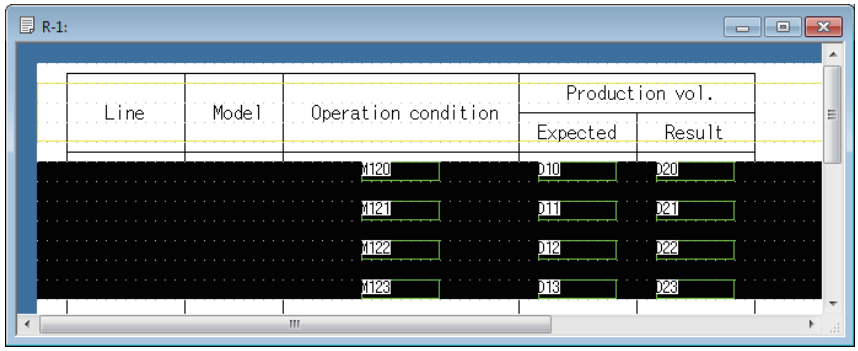
Step 1 Open a report screen, and perform one of the following operations.

- Select [Edit] → [Object of Selection] → [Report Line] from the menu.
- Click the [Object of Selection:Report Line] button on the [Report] toolbar.

➟2.2.2 ■14 [Report]

Step 2 On the report screen, select a line to be a header, footer, or repeat line.

To select multiple lines, drag the target lines.



Step 3 Click an appropriate button on the [Report] toolbar according to the target to be set.

Sets the selected line as a repeat line.
Sets the selected line as a footer line.
Sets the selected line as a header line.

Step 4 The selected line is set as a header, footer, or repeat line, and is enclosed in a colored frame.

- Header: Cyan frame
- Footer: Red frame
- Repeat row: Yellow frame

Point

Alternative setting methods

The header, footer, repeat lines are also settable in the following dialogs.

- [Format] tab in the [Screen Property] dialog of a report screen

➟2.7.3 ■3 [Format] tab

- [Header/Footer/Repeat] dialog

➟10.11.7 [Header/Footer/Repeat] dialog

■4 Settings to output alarm lines

To output the alarm events that are collected by the user alarm observation, configure the settings of a report screen and the user alarm observation as shown below.

(1) Setting of the report screen

Step 1 Perform one of the following operations to set a report screen so that alarm lines will be output to a report.

- Click the screen editor.
- Select a screen in the [Screen] window.

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog for the report screen.

Step 3 In the [Format] tab, select [Alarm] for [Output Target].

➟2.7.3 ■3 [Format] tab

Step 4 Click the [OK] button to apply the setting.

(2) Setting of the user alarm observation

For the specifications and settings of the user alarm observation, refer to the following.

➟9.1.2 Collecting alarms by monitoring devices

Step 1 Select [Common] → [Alarm] → [User Alarm Observation] from the menu to display the [User Alarm Observation List] dialog.

➟9.1.2 ■6 [User Alarm Observation List] dialog

Step 2 Perform one of the following operations to display the [User Alarm Observation] dialog.

- Click the [New] button.
- Select a user alarm observation setting and click the [Edit] button.

➟9.1.2 ■7 (2) [Device] tab

Step 3 Click the [Additional Setting] button in the [Device] tab to display the [Additional Setting] dialog.

Step 4 Select [Alarm Print] and click the [Alarm Print Detail Setting] button to display the [Alarm Print Detail Setting] dialog.

Step 5 Set necessary items and click the [OK] button.

Step 6 In the [Additional Setting] dialog, click the [OK] button.

Step 7 In the [User Alarm Observation] dialog, click the [OK] button to apply the setting.

Point

Outputting a reset alarm event

When selecting [Print the information of restored alarms] for [Print Target] in the [Alarm Print Detail Setting] dialog, do not configure the following setting.

- In the [User Alarm Observation] dialog, select [Only current alarm] for [Collection Mode] in the [Basic] tab.

Doing so disables the output of reset alarm events.

■5 Settings to output operation log lines

To output the operation events that are recorded by the operation log function, configure the settings of a report screen and the operation log function as shown below.

(1) Setting of the report screen

Step 1 Perform one of the following operations to set a report screen so that operation log lines will be output to a report.

- Click the screen editor.
- Select a screen in the [Screen] window.

Step 2 Select [Screen] → [Screen Property] from the menu to display the [Screen Property] dialog for the report screen.

Step 3 In the [Format] tab, select [Operation Log] for [Output Target].

➟2.7.3 ■3 [Format] tab

Step 4 Click the [OK] button to apply the setting.

(2) Settings of the operation log function

For the specifications and settings of the operation log function, refer to the following.

➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

Step 1 Select [Common] → [GOT Environmental Setting] → [Operation Log] from the menu to display [Operation Log] in the [Environmental Setting] window.

➟5.2.11 ■5 [Operation Log...]

Step 2 Select [Collect operation logs].

Step 3 In the [Report Setting] tab, select [Output operation logs to a report screen].

➟5.2.11 ■5 (4) [Report Setting] tab

Step 4 Configure the settings and click the [OK] button to apply the settings.

■6 Settings common to report screens

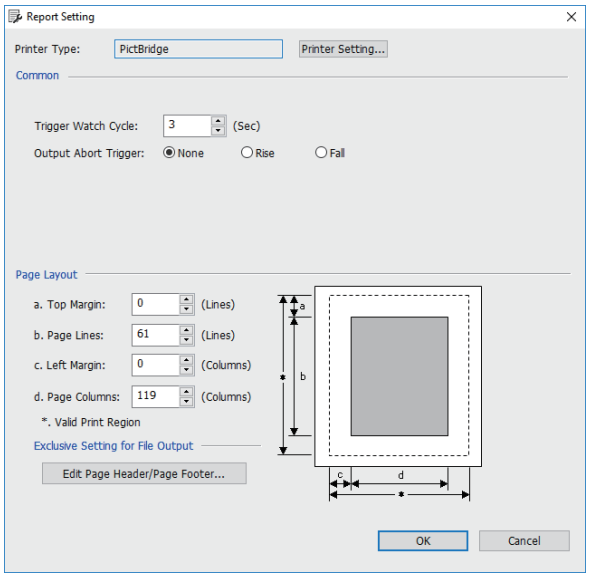
Set the numbers of lines and columns per page and the cycle of monitoring the relevant trigger devices. Create a report screen, and then configure the settings.

➟2.5.1 ■3 Creating a report screen

Step 1 Select [Screen] → [Report Setting] from the menu to display the [Report Setting] dialog.

Step 2 Configure the settings, and click the [OK] button.

➟10.11.5 [Report Setting] dialog



■7 Aborting a printer output

If the output destination is set to a printer, you can abort a printer output.
If a printer output is aborted, the paper will be ejected from the printer during printing.
The following shows how to abort an output.

Means of aborting an output	Description
Abort trigger	An abort trigger is set per report screen. Set the abort trigger in the [Screen Property] dialog of a report screen. ➟2.7.3 ■2 [Action] tab If the abort trigger condition is satisfied, the output of one collection of data will be aborted. When [Output Timing] is set to [At the time of data collection] for a report screen, if multiple alarms occur or are reset simultaneously, multiple printer outputs will occur successively. To abort the successive outputs, use system signal 1-2.b15. If the abort trigger condition is satisfied, the output of one alarm event will be aborted only. The outputs of the subsequent alarm events cannot be aborted.
Output abort trigger	The output abort trigger is common to all report screens. Set the output abort trigger in the [Report Setting] dialog. ➟10.11.5 [Report Setting] dialog If the abort trigger condition is satisfied, the output of one collection of data will be aborted. When [Output Timing] is set to [At the time of data collection] for a report screen, if multiple alarms occur or are reset simultaneously, multiple printer outputs will occur successively. To abort the successive outputs, use system signal 1-2.b15. If the output abort trigger condition is satisfied, the output of one alarm event will be aborted only. The outputs of the subsequent alarm events cannot be aborted.
System signal 1-2.b15	This signal is common to all report screens. Set the signal in [System Information] in the [Environmental Setting] window. ➟5.2.5 ■4 [System Information] While this signal is turned on, a printer output is aborted.

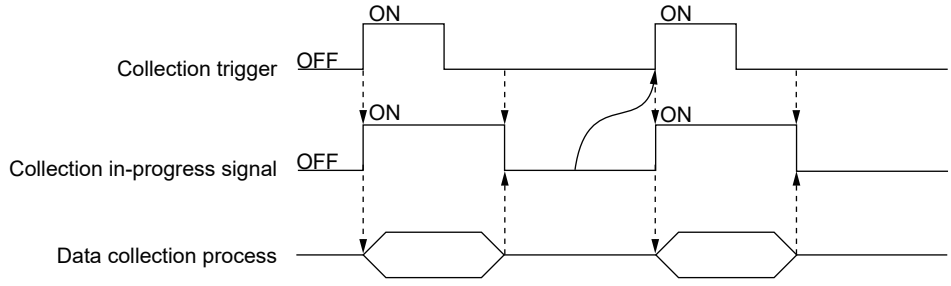
When [Output Timing] is set to [When trigger condition is satisfied] and [Delete Trigger] is set to [Output] for a report screen, the data of a temporary file will not be deleted after a printer output is aborted.

■8 Process notification device

The process notification device is used to notify that report data collection or output is in progress.
Collection in-progress or output in-progress is notified by b0 or b1 of the process notification device.

- b0: This bit is on while report data is being collected (Collection in-progress signal).
- b1: This bit is on while report data is being output (Output in-progress signal).

To ensure that data collection or output is performed, turn on the collection trigger or output trigger when the notification signal is off.



Set the process notification device per report screen.
To use the device, configure the settings in the screen property per report screen.
For details, refer to the following.

➟2.7.3 ■2 [Action] tab

When the GOT starts up or returns from offline, all the process notification devices set for the report screens are initialized and both the Collection in-progress signal and Output in-progress signal turn off.

Note that alarm output and operation log output are not the operations relevant to the collection trigger.
Therefore, the Collection in-progress signal is not applicable to those events.

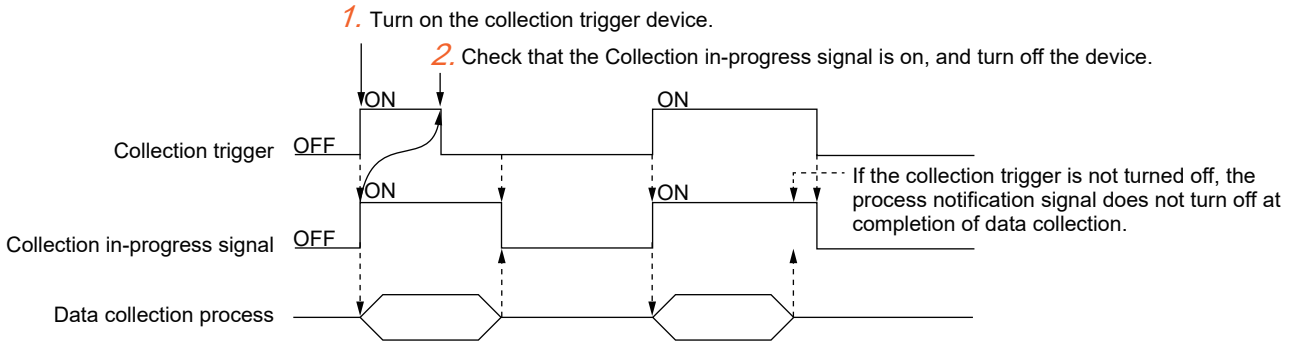
(1) Collection in-progress signal

Notifies that report data is being collected.
This can be used when [Rise] or [Fall] is selected for [Collection Trigger].
Notification is performed with b0 of the process notification device.

When the collection trigger condition is satisfied, the Collection in-progress signal (b0 of the process notification device) turns on.
The Collection in-progress signal turns off when all the following conditions are satisfied.

- Data collection process is completed.
- The collection trigger condition is unsatisfied.

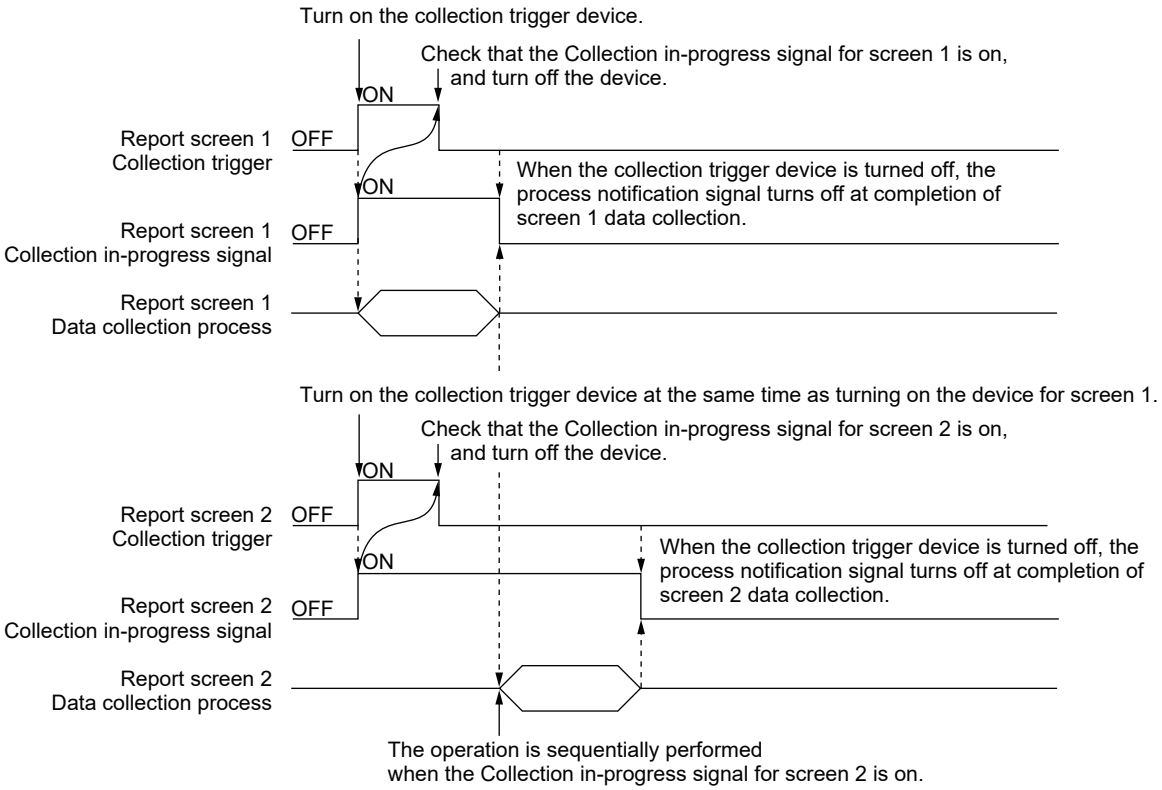
Example 1) Operation when [Rise] is selected for [Collection Trigger]
After checking that the Collection in-progress signal turns on, if you turn off the collection trigger device, the Collection in-progress signal turns off at completion of data collection.



Step 1 Turn on the collection trigger device.
The Collection in-progress signal turns on.

Step 2 Check that the Collection in-progress signal turns on, and turn off the collection trigger device.
When the collection trigger device is turned off, the Collection in-progress signal turns off at completion of data collection.

Example 2) Operation when multiple collection trigger devices are simultaneously turned on
The following shows the operation when multiple collection trigger devices are simultaneously turned on.
Detection of collection trigger and turning on of Collection in-progress signal occur sequentially per screen.



(2) Output in-progress signal

Notifies that report data is being output.
Notification is performed with b1 of the process notification device.

When the output trigger condition is satisfied, the Output in-progress signal (b1 of the process notification device) turns on.
The Output in-progress signal turns off when all the following conditions are satisfied.

- Data output process (including abnormal end and interruption) is completed.
- The output trigger condition is unsatisfied.

When [Serial] or [PCL5] is set for [Printer Type] in the [Printer] dialog, the GOT determines data output completion when data output from the GOT to a printer is completed, not when data output from the printer is completed.
The relationship between the output trigger, Output in-progress signal, and output process is the same as that described for the Collection in-progress process.
For details, refer to the following.

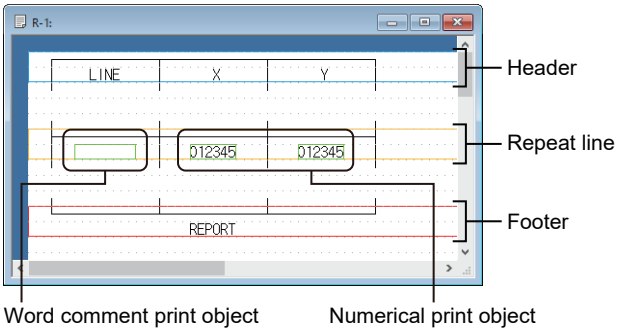
➟10.11.3 ■8 (1) Collection in-progress signal

■9 Examples of report screen settings

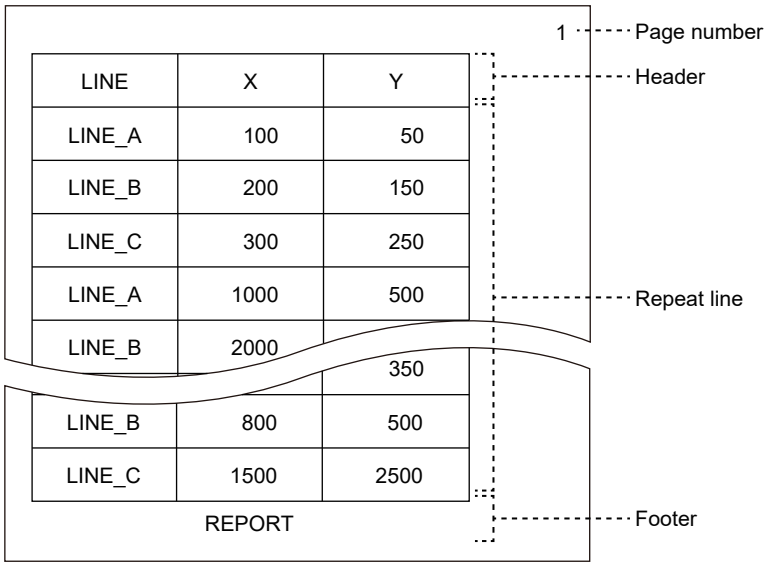
The following shows examples of report screen settings and reports.

(1) Outputting the page numbers, header, repeat lines, and footer (to a printer)

The following shows an example of report screen settings.
The setting items unmentioned below are assumed to be set to their defaults.

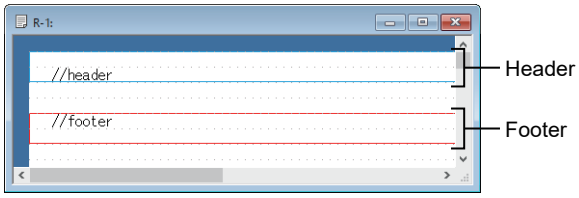
Setting location		Settings
[Printer] dialog		• [Use Printer]: Selected • [Connection Type]: [Ethernet]
[Screen Property] dialog (report screen)	[Action] tab	• [Output Destination]: [Printer] • [Output Timing]: [When trigger condition is satisfied] • [Collection Trigger]: [Rise], GB1000 • [Output Trigger]: [Rise], GB1001 • [Limit of Collection]: 3
	[Format] tab	• [Set header]: Selected • [Start] (header): 1 • [End] (header): 2 • [Repeat] of [Output Target]: Selected • [Start] (repeat line): 6 • [End] (repeat line): 7 • [Number of repeats]: 2 • [Set footer]: Selected • [Start] (footer): 11 • [End] (footer): 12 • [Output page No.]: Selected
	Screen editor	
[Report Setting] dialog		• All setting items are set to their defaults.

The following shows an example of a report.

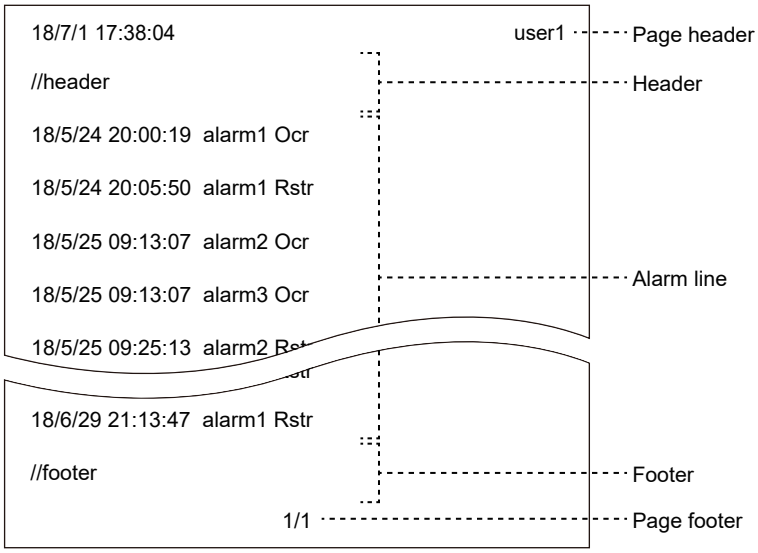


(2) Outputting the page header, header, alarm lines, footer, and page footer (to a file)

The following shows an example of report screen settings.
The setting items unmentioned below are assumed to be set to their defaults.

Setting location		Settings
[Printer] dialog		• [Use Printer]: Selected • [Connection Type]: [Ethernet]
[Screen Property] dialog (report screen)	[Action] tab	• [Output Destination]: [File] • [Output Timing]: [When trigger condition is satisfied] • [Output Trigger]: [Rise], GB1001 • [Limit of Collection]: 10000
	[Format] tab	• [Output page header]: Selected • [Set header]: Selected • [Start] (header): 1 • [End] (header): 2 • [Alarm] of [Output Target]: Selected • [Set footer]: Selected • [Start] (footer): 5 • [End] (footer): 6 • [Output page footer]: Selected
	[File Save] tab	• [Specification]: [Direct]
	Screen editor	
[Report Setting] dialog	[Edit Page Header/Page Footer] dialog	• [Left section] of [Page Header]: [Date + Time] • [Right section] of [Page Header]: [Operator Name] • [Center section] of [Page Footer]: [Page/Pages]
[User Alarm Observation] dialog	[Device] tab	• [Alarm Points]: 3 • [Device]: X1000
	[Additional Setting] dialog	• [Alarm Print]: Selected
	[Alarm Print Detail Setting] dialog	• All setting items are set to their defaults.

The following shows an example of a report.
The page header and page footer are not visible until the report file is printed using the file print function.



10.11.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions on the report screen settings

(1) Collection cycle and number of devices on the report screen for the monitor display

Note that it takes longer time than usual for the GOT to display the monitor screen when the number of set devices in the report screen is large.
When it takes longer, extend the data collection cycle or reduce the number of devices.

(2) Text to be printed when a serial printer is used

When [Serial] is selected for [Printer Type], text is converted into shift JIS code or ASCII code for printing.
If any language other than Japanese and English is used, the text will be printed improperly.
Use Japanese or English for the text to be printed.

(3) Page layout settings

Make sure that the number of lines to be output to a report does not exceed the set value of [Page Lines] in the [Report Setting] dialog. The header lines and repeat lines are included.
For the number of lines to be output to a report, refer to the following.

➥10.11.2 ■5 Report samples and the items to be output to a report

If report screen data is added to the report file created for another report screen, the number of lines will include the page header and footer lines of the screen for which the file is created.
The following shows an example where a report cannot be output.

Example 1) When outputting the date and time, page numbers, header, alarm lines, and footer to a report
When the settings are configured as shown below, the total number of lines to be output is 7.

- Date and time, page number: 1 line
- Header: 3 lines
- Alarm line: 1 line
- Footer: 2 lines

If [Page Lines] is set to 6 or less in the [Report Setting] dialog, no report will be output.

Example 2) When outputting the date and time, page numbers, header, operation log lines, and footer to a report
When the settings are configured as shown below, the total number of lines to be output is 9.

- Date and time, page number: 1 line
- Header: 3 lines
- Operation log line: 3 lines per event (when line feeds are inserted)
- Footer: 2 lines

If [Page Lines] is set to 8 or less in the [Report Setting] dialog, no operation log line will be output.

(4) Precautions for a report screen having an alarm line

There is a limit on the number of report screens where the following settings are configured in the [Screen Property] dialog.

- [Output Timing] is set to [At the time of data collection] in the [Action] tab.
- [Alarm] is selected in the [Format] tab.

The maximum number of such report screens differs depending on the report output destination setting.

- When [Output Destination] is set to [Printer]: 1 screen per project
- When [Output Destination] is set to [File]: 1 screen per report file

(5) Precautions for a report screen having an operation log line

There is a limit on the number of report screens where the following settings are configured in the [Screen Property] dialog.

- [Output Timing] is set to [At the time of data collection] in the [Action] tab.
- [Operation Log] is selected in the [Format] tab.

The maximum number of such report screens differs depending on the report output destination setting.

- When [Output Destination] is set to [Printer]: 1 screen per project
- When [Output Destination] is set to [File]: 1 screen per report file

(6) If an outputted report is blank

Check the following settings.

- Top margin

  The printable range may have exceeded.

  Adjust the top margin by adding about five lines to the current setting value or in other ways.

- Setting value of [Number of repeats] for a report

  To print all the collected data, set "999" to [Number of repeats] in the [Format] tab in the [Screen Property] dialog for a report screen.

  If "1" is set, only two pieces of collected data from the top are printed. The 3rd and subsequent pieces of data are not printed.

  Also, turn on GS524.b2.

  Turning on GS524.b2 can prevent empty lines of uncollected data from being output when the number of data collection is less than the number of repeats. (Only the collected data within the number of repeats can be printed.)

■2 Precautions for placing a figure or object on a report screen

(1) Placing a figure or object

Do not overlap figures and objects on a report screen.

Doing so cannot output the screen data properly.

If an object or figure is tangent to a line or any line of a rectangle, the screen data may not be output properly.

In such a case, make a space between a line and an object or figure.

(2) Precautions for the numerical print

In the [Numerical Print] dialog, when the print format is set to binary, 0 is always prepended to the value even though [Fill with 0] is deselected.

➟8.32.4 ■1 [Device/Style] tab

(3) Precautions for the text print

If the set text contains a line feed code, only the first line of the text will be output.

(4) Character code when a string-type label or tag is set for the device of a text print object

If you set a string-type label or tag for the device of a text print object, set the character code according to the type of the label or tag.

- System label Ver.1: ASCII code or Shift JIS code
- System label Ver.2 and global label: ASCII code, Unicode, or Shift JIS code
- OMRON NJ/NX tag: Unicode
- AB native tag: ASCII code
- OPC UA tag: Unicode

(5) Precautions for a comment print object

If the language switching device stores a nonexistent column number of the specified comment group, no comment will be output.

■3 Precautions for using the report function

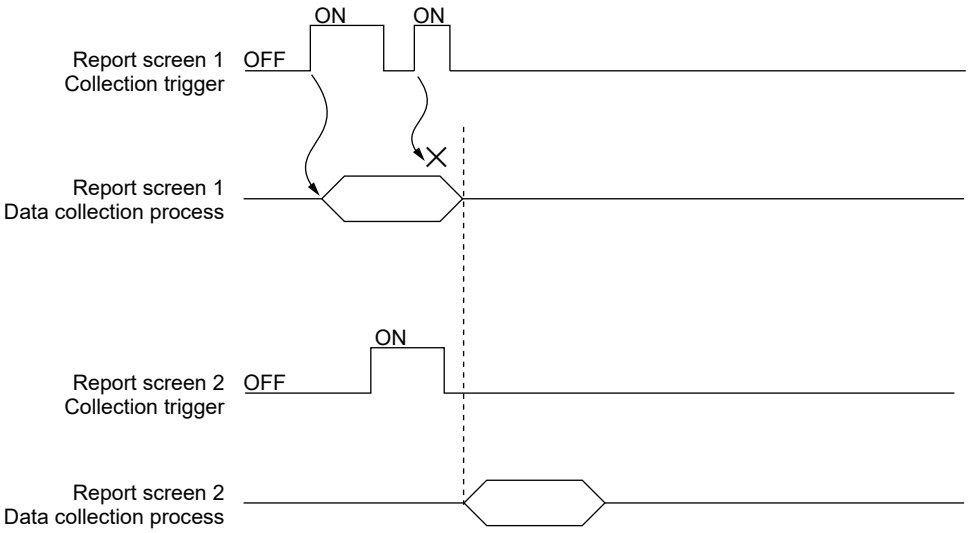
(1) When the collection trigger occurs during data collection

If the collection trigger for a report screen occurs again during data collection, the new collection trigger will be invalid and data will not be collected.

Use the Collection in-progress signal of the process notification device to check if collection is in progress per report screen.

➟10.11.3 ■8 (1) Collection in-progress signal

If the collection trigger for another report screen occurs during data collection, the new collection will be executed after the current collection is completed.



(2) When the output trigger occurs while output is in progress

If the output trigger for a report screen occurs again during output, the new output trigger will be invalid and data will not be output.

Use the Output in-progress signal of the process notification device to check if output is in progress per report screen.

➟10.11.3 ■8 (2) Output in-progress signal

If the output trigger for another report screen occurs during output, the new output will be executed after the current output is completed.

To check information on the report function (output status and the outputted screen numbers) in the project, use system signals.

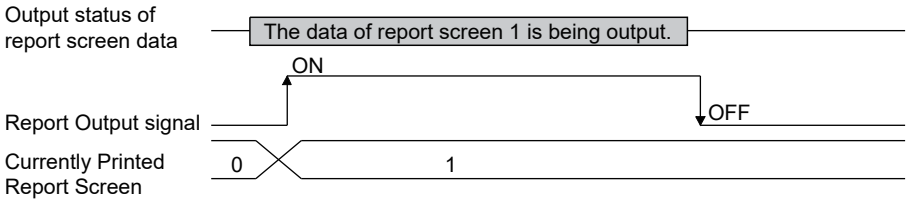
You can use a PLC CPU to control the system signals so that output triggers will not occur simultaneously.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

• Report Output signal (System signal 2-1.b8)
Turns on during output.

• Currently Printed Report Screen (Write device)
Stores the screen number of the report screen data being output.
The stored screen number will not be cleared upon completion of output and will be retained until the next report screen data is output.

The following shows how the above system signals work.



(3) Precautions for restarting the GOT

If the GOT is restarted, all report files created before the restart will be write-protected.

If you have specified a report file with devices before the restart, specify a new file after the restart for the next output.

(4) To maintain file access performance

You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

■4 Precautions for using serial printers

In the following cases, a serial printer may not print data and a system alarm may not occur even if the Print Output signal (System signal 2-2.b15) is turned off.

- A printer is powered off.
- The cable of a printer is unplugged.

■5 Precautions for using Ethernet printers

(1) Precautions for printing

When a printing job is executed under the following conditions, the Printer Error Detection signal (System signal 2-1.b15) is turned on, and the job is canceled.

- A printer is disconnected.
- A printer is powered off.

For a PCL5 printer, the Printer Error Detection signal (System signal 2-1.b15) is not turned off automatically.
Fix the error and turn off the signal.

(2) Precautions when an error occurs in a printer

For a PCL5 printer, when an error occurs in a printer, the Printer Error Detection signal (System signal 2-1.b15) is not turned on.
Check the printer status and fix the error.
The printer pauses the printing and resumes the job when the error is fixed.

(3) Precautions for system alarms

For a PCL5 printer, even if the printer is powered off or the network is disconnected during printing, no system alarm may occur.

(4) Precautions when the Printer Error Detection signal (System signal 2-1.b15) is turned on

The data output to a printer when this signal is on is printed when the signal is turned off.
If the data is faulty, the data is deleted and the printing is canceled.
For a PCL5 printer, all printing jobs are canceled when this signal is on.

■6 Precautions for using Ethernet printers (GT21 and GS21)

(1) Precautions for printing a report

If GT21 or GS21 outputs a report to an Ethernet printer, the report will be printed in any font supported by the printer.
The font of the GOT and that on the printed output appear different.
The following lists the fonts supported by the printers.

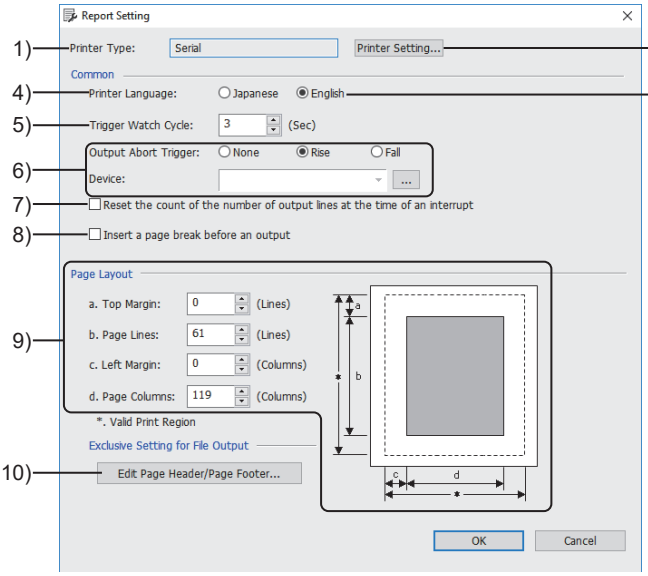
GOT setting		Printer font *1
Character Code	KANJI region	
ASCII	-	Courier
Unicode	Japan	Andale Mono WT J *2
	China(GB)-Mincho	Andale Mono WT S *2
	China(Big5)-Gothic	Andale Mono WT T *2
S-JIS	-	Andale Mono WT J *2
GB	-	Andale Mono WT S *2
Big5	-	Andale Mono WT T *2

*1 Characters may be printed incorrectly if the printer does not support the GOT's font.
*2 Alphanumerics are printed in Courier.

10.11.5 [Report Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Click [Screen] → [Report Setting] from the menu to display the [Report Setting] dialog.
When a report screen has not been created yet, the [Report Setting] dialog is not displayed.



When [Printer Type] is set to [ESC/P-R] or [PCL5]

When [Printer Type] is set to [Serial]

1) **[Printer Type]**
Not available to GT SoftGOT2000.
The type of the printer set in the [Printer] dialog

➟10.11.8 [Printer] dialog

2) **[Printer Setting] button**
Not available to GT SoftGOT2000.
Displays the [Printer] dialog.
Configure the settings to connect a printer to the GOT.

➟10.11.8 [Printer] dialog

3) **[Paper Size]**
Not available to GT SoftGOT2000.
This item appears when [Printer Type] is set to [ESC/P-R] or [PCL5].
Select a paper size.
The following shows selectable items.
- [A4 (210x297mm)]
- [Letter (8.5"x11")]

4) **[Printer Language]**
Not available to GT SoftGOT2000.
This item appears when [Printer Type] is set to [Serial].
Select the language supported by the printer.
The following shows the items to be selected.
- [Japanese]
- [English]

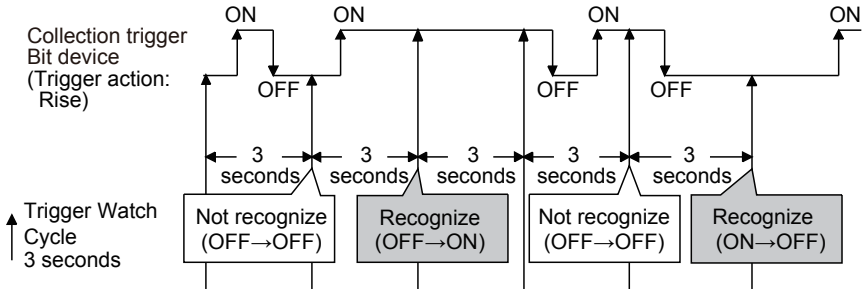
5) **[Trigger Watch Cycle]**

Specify the cycle of monitoring the trigger devices of the report function. The collection trigger device, abort trigger device, output trigger device, and delete trigger device are included.

The setting range is [1] second to [60] seconds.

The devices that are set to each trigger should be turned on or off longer than the cycle to be set here.

When the devices are turned on or off within the cycle to be set here, a trigger may not be satisfied.



6) **[Output Abort Trigger]**

Select a trigger to abort an output.

This setting is not applied to GT SoftGOT2000.

The following shows the items to be selected.

- [None]
  Does not use the abort trigger.
- [Rise]
  Aborts an output on the rising edge of a bit device.
  Specify a bit device.
- [Fall]
  Aborts an output on the falling edge of a bit device.
  Specify a bit device.

7) **[Reset the count of the number of output lines at the time of an interrupt]**

Not available to GT SoftGOT2000.

This item appears when [Printer Type] is set to [Serial].

Resets the count of output lines when an output is aborted.

A page break will be inserted upon resumption of output.

This setting is invalid under the following conditions.

- [Output Timing] is set to [When trigger condition is satisfied] in the [Action] tab in the [Screen Property] dialog.
- [Insert a page break before an output] is selected in the [Report Setting] dialog.

8) **[Insert a page break before an output]**

Not available to GT SoftGOT2000.

This item appears when [Printer Type] is set to [Serial].

This setting applies to the report screens where [Output Timing] is set to [At the time of data collection] in the [Action] tab of the [Screen Property] dialog.

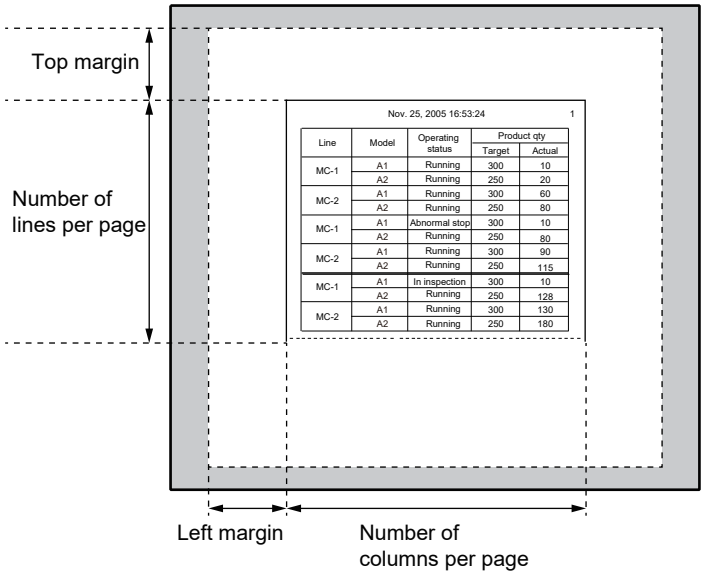
Inserts a page break before the output of the current report screen if the previous output was performed as shown below.

- The data of a different report screen was output.
- An item ([Alarm] or [Operation Log]), which is not set for the current report screen, was output.
- Any function other than the report function performed a printer output.

9) **[Page Layout]**

The setting range when [Printer Type] is set to [PictBridge], [ESC/P-R], or [PCL5] in the [Printer] dialog applies to GT SoftGOT2000.

Item	Description
[Top Margin]	Set the top margin. The setting range is [0] lines to [31] lines.
[Page Lines]	Set the number of lines per page. The setting range varies with the setting of [Printer Type] in the [Printer] dialog. • [PictBridge], [ESC/P-R], or [PCL5]: [1] line to [70] lines • [Serial]: [1] line to [127] lines
[Left Margin]	Set the left margin. The setting range varies with the setting of [Printer Type] in the [Printer] dialog. • [PictBridge], [ESC/P-R], or [PCL5]: [0] lines to [123] lines • [Serial]: [0] lines to [254] lines
[Page Columns]	Set the number of columns per page. The setting range varies with the setting of [Printer Type] in the [Printer] dialog. • [PictBridge], [ESC/P-R], or [PCL5]: [1] line to [124] lines • [Serial]: [1] line to [255] lines



Line	Model	Operating status	Product qty	
			Target	Actual
MC-1	A1	Running	300	10
	A2	Running	250	20
MC-2	A1	Running	300	60
	A2	Running	250	80
MC-1	A1	Abnormal stop	300	10
	A2	Running	250	80
MC-2	A1	Running	300	90
	A2	Running	250	115
MC-1	A1	In inspection	300	10
	A2	Running	250	128
MC-2	A1	Running	300	130
	A2	Running	250	180

10) **[Edit Page Header/Page Footer] button**

Not available to GT21, GT SoftGOT2000, and GS21.

Displays the [Edit Page Header/Page Footer] dialog.

Set the contents of the page header and page footer.

➟10.11.6 [Edit Page Header/Page Footer] dialog

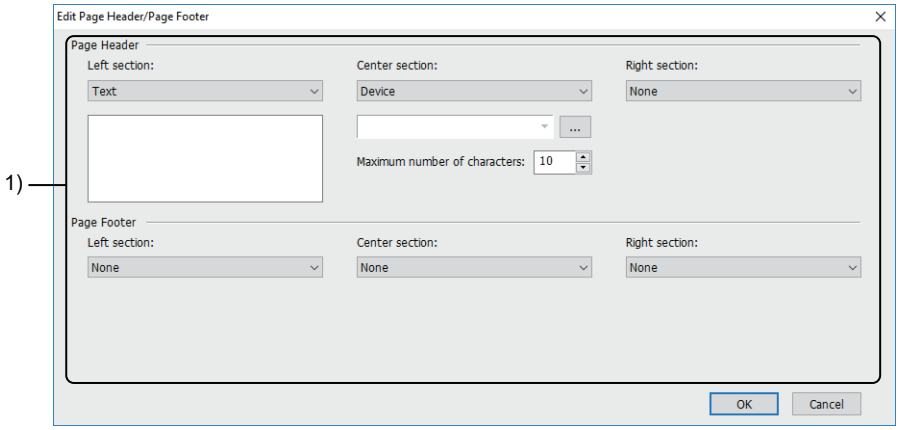
10.11.6 [Edit Page Header/Page Footer] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Report Setting] dialog, click the [Edit Page Header/Page Footer] button to display the [Edit Page Header/Page Footer] dialog.
For the page header and page footer, refer to the following.

➟10.11.2 ■5 Report samples and the items to be output to a report

The settings made in this dialog apply to the report screens where [Output Destination] is set to [File].



1) **[Page Header], [Page Footer]**

Select an item to be output in [Left section], [Center section], or [Right section] of the page header or page footer.
The following shows selectable items.

- [None]
- [Text]
  Outputs the entered text.
  Up to 255 characters can be entered.
- [Device]
  Outputs the text that is stored in as many consecutive devices as the set value of [Maximum number of characters].
  Specify the start device.
  The setting range of [Maximum number of characters] varies with the setting of [Printer Type] in the [Printer] dialog.
  For [PictBridge], [ESC/P-R], or [PCL5]: [1] character to [124] characters
  For [Serial]: [1] to [255]
  Unicode is supported.
  Data will be read from the specified devices starting from the lower-order bits.
  NULL is supported as the termination character.
  The KANJI region for the report screen applies.
- [Date + Time]
  Outputs the date and time on which a report file is printed using the file print function.
  Example) 18/7/1 17:38:04
  The date and time format varies with the display language.

  ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])
- [Date]
  Outputs the date on which a report file is printed using the file print function.
  Example) 18/7/1
  The date and time format varies with the display language.

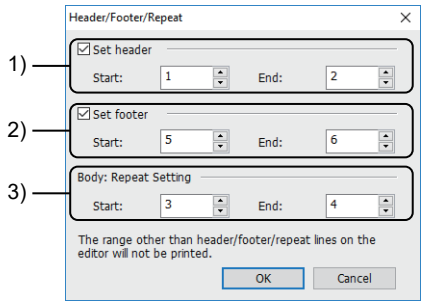
  ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])
- [Time]
  Outputs the time at which a report file is printed using the file print function.
  Example) 17:38:04
- [Page]
- [Page/Pages]
- [Operator Name]
  Outputs the name of the operator who has printed a report file using the file print function.

10.11.7 [Header/Footer/Repeat] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Open a report screen to set the header, footer, and repeat lines.

Step 2 Select [Screen] → [Header/Footer/Repeat] from the menu to display the [Header/Footer/Repeat] dialog.



1) **[Set header]**

Set the header on the current report screen.

Item	Description
[Start]	Specify the start line and the end line of the header. Specify a value that does not exceed the set value of the [Page Lines] in the [Report Setting] dialog. The header lines cannot be set as the footer or repeat lines.
[End]	

2) **[Set footer]**

Set the footer on the current report screen.

Item	Description
[Start]	Specify the start line and the end line of the footer. Specify a value that does not exceed the set value of the [Page Lines] in the [Report Setting] dialog. The footer lines cannot be set as the header or repeat lines.
[End]	

3) **[Body: Repeat Setting]**

Set lines to be output repeatedly on the current report screen.

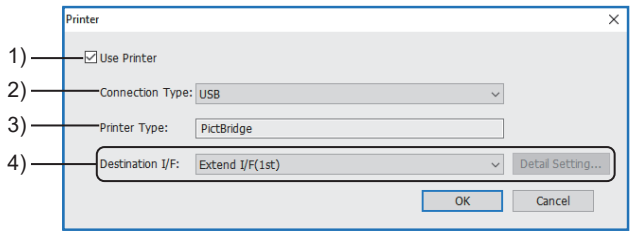
This item appears when [Repeat] is selected for [Output Target] in the [Format] tab in the [Screen Property] dialog of a report screen.

Item	Description
[Start]	Specify the start repeat line and the end repeat line. Specify a value that does not exceed the set value of the [Page Lines] in the [Report Setting] dialog. The repeat lines cannot be set as the header or footer lines.
[End]	

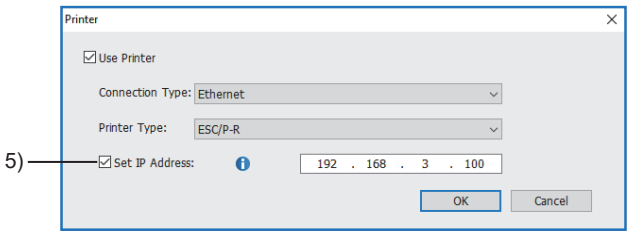
10.11.8 [Printer] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Common] → [Peripheral Setting] → [Printer] from the menu to display the [Printer] dialog.



When [Connection Type] is set to [USB]



When [Connection Type] is set to [Ethernet]

1) **[Use Printer]**
Enables the settings to connect a printer.

2) **[Connection Type]**
Select a connection type between the GOT and a printer.
The following shows selectable items.
- [USB] (GT27 and GT25 (excluding GT25-W, GT2505-V, and GT25HS-V))
- [Serial] (GT27, GT25 except GT25HS-V, GT23, GT21, GS25, and GS21)
- [Ethernet] (GT27, GT25, GT23, GT21 except GT2105-Q, GS25, and GS21)

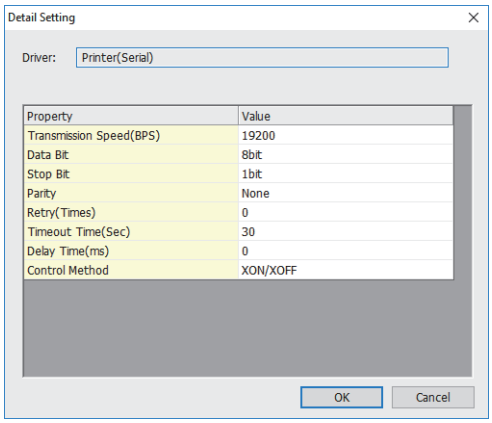
If [Ethernet] is selected, the GOT uses the following port numbers to communicate with a printer.
- [ESC/P-R]: 515
- [PCL5]: 9100

3) **[Printer Type]**
Printer type corresponding to the setting of [Connection Type].
Select a printer when [Ethernet] is selected for [Connection Type].
- [ESC/P-R] (GT27, GT25, GT23, and GS25)
- PCL5] (GT27, GT25, GT23, GT21 except GT2105-Q, GS25, and GS21)

4) **[Destination I/F]**
This item appears when [Connection Type] is set to [USB] or [Serial].
Select a GOT interface to be used.
The following shows selectable items.
- [Standard I/F(RS232)] (For GT21-P: [Standard I/F(RS232(Back))])
- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

[Extend I/F(1st)], [Extend I/F(2nd)], and [Ex-tend I/F(3rd)] are not available for GT25-W, GT2505-V, GT25HS-V,

GT23, GT21, GT Soft-GOT2000, GS25, and GS21.

Item	Description
[Detail Setting] button	This item appears when [Connection Type] is set to [Serial]. Displaying the [Detail Setting] dialog.  • [Transmission Speed(BPS)] Select the transmission speed. The following shows the items to be selected. · [4800] · [9600] · [19200] · [38400] · [57600] · [115200] • [Data Bit] Select the data length. The following shows the items to be selected. · [7bit] · [8bit] • [Stop Bit] Select the stop bit length. The following shows the items to be selected. · [1bit] · [2bit] • [Parity] Select the type for a parity check. The following shows the items to be selected. · [None] · [Even] · [Odd] • [Retry(Times)] Set the number of retries to be performed when a communication error occurs. When no response is received after the retries, the communication times out. The setting range is [0] to [5]. • [Timeout Time(Sec)] Set the interval for communication to time out. The setting range is [3] to [90]. • [Delay Time(ms)] Set the send delay time to lower the load of the network and the connected PLCs. The setting range is [0] to [300]. • [Control Method] Fixed to [XON/XOFF].

5) **[Set IP Address]**

This item appears when [Connection Type] is set to [Ethernet].
Set the IP address of the printer to be connected by Ethernet.
The setting range is [0].[0].[0].[0] to [255].[255].[255].[255].
The IP address of a printer is settable in the utility as well.

➟GOT2000 Series User's Manual (Utility)

10.11.9 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the report function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT Environmental Setting [System Information]

Select [Common] → [GOT Environmental Setting] → [System Information] from the menu.

➟5.2.5 Setting a device which controls the GOT operations or notifies the GOT status ([System Information])

Function	Setting item
Storing the screen number of the report screen data that is being printed.	[Currently Printed Report Screen]
Notifying that a report screen is being printed. (System signal 2-1.b8)	[System Signal 2-1]
Aborting the printing process. (System signal 1-2.b15)	[System Signal 1-2]
Notifying an error of the printer during printing. (System signal 2-1.b15)	[System Signal 2-1]
Notifying that printing is in progress. (System signal 2-2.b15)	[System Signal 2-2]

■2 GOT Internal Device

➟12.1.3 GOT special register (GS)

Function	Setting item
Notifying the connection status between the GOT and a printer. The following printers are supported: PictBridge-compatible printers.	GS258.b0 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying the occurrence of a warning-level error. The following printers are supported: PictBridge-compatible printers.	GS258.b1 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying the occurrence of a fatal-level error. The following printers are supported: PictBridge-compatible printers.	GS258.b2 (Not available to GT25-W, GT2505-V, GT25HS-V, GT23, GT21, GT SoftGOT2000, GS25, and GS21)
Notifying that the printer is ready or not. The following printers are supported: PictBridge-compatible printers, serial printers, and Ethernet printers.	GS258.b3 (Not available to GT SoftGOT2000.)
Notifying the error code of the latest error that has occurred in the printer. The following printers are supported: Ethernet printers.	GS259 (Not available to GT SoftGOT2000.)
Outputting page numbers with a numerical print.	GS278
Outputting the date (year) on which a report file has been printed using the file print function.	GS1271
Outputting the date (month) on which a report file has been printed using the file print function.	GS1272
Outputting the date (day) on which a report file has been printed using the file print function.	GS1273
Outputting the time (hour) at which a report file has been printed using the file print function.	GS1275
Outputting the time (minute) at which a report file has been printed using the file print function.	GS1276
Outputting the time (second) at which a report file is printed using the file print function.	GS1277
Outputting the total number of pages to a report file by using a numerical print object.	GS1278
Outputting the name of the operator who has printed a report file using the file print function.	GS1279
Changing the character code to Unicode when a CSV file is output to a virtual drive of GT SoftGOT2000.	GS522.b2 (Not available to GT27, GT25, GT23, GT21, GS25, and GS21)

Function	Setting item
Disabling automatic page breaks when the number of output lines reaches the set value of [Page Lines] in the [Report Setting] dialog.	GS524.b0 (Not available to GT SoftGOT2000.)
Inserting a page break when GS524.b0 is on.	GS524.b1 (Not available to GT SoftGOT2000.)
Disabling the setting of [Number of repeats] in the [Screen Property] dialog for a report screen.	GS524.b2
Changing the output destination for a report file to a Brightek's serial printer.	GS524.b15 (Not available to GT27, GT25, GT23, GT SoftGOT2000, and GS25)

10.12 Outputting Sound with the GOT (Sound Output Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

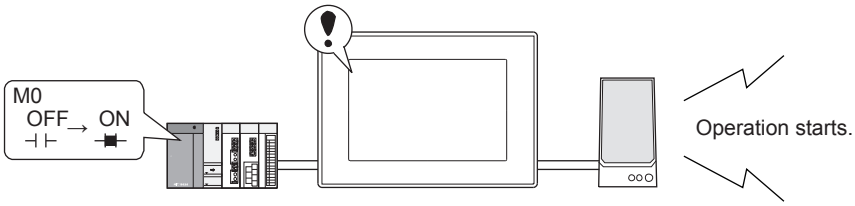
Not available to GT2505-V and GT25HS-V.

10.12.1 Overview of the sound output function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
The sound output function outputs sounds through the audio equipment (including loudspeakers) that is connected to the GOT.

Example) Playing a sound when the condition of a trigger action is satisfied



When the set condition is satisfied (M0 is turned on), a specified sound file plays.

■1 Playing a sound

A sound plays when the condition of a trigger action or time action is satisfied or when a relevant switch is touched.

■2 Stopping the playback

The current playback is stopped when the condition of a trigger action is satisfied or when a relevant switch is touched.

■3 Muting or unmuting the sound

The sound is muted or unmuted when the condition of a trigger action is satisfied or when a relevant switch is touched.

10.12.2 Specifications of the sound output function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

■1 System application (extended function)

To use the sound output function, a system application (extended function) of [Sound Output] is required.
Selecting [Destination I/F] in the [Sound Output] dialog incorporates the application into the package data automatically.

➟10.12.5 [Sound Output] dialog

To use the function on GT SoftGOT2000, the application is not required.

■2 Number of sound output function settings for one project

One sound output function setting is available for one project.

■3 Sound file specifications

The following shows the specifications of the sound files usable for the sound output function.

Item	Specifications
File format	WAV format (8.000 kHz or 16.000 kHz, 16 bits, mono)
Maximum number of registered sound files	500 files for one project
Maximum size of registered sound files in total	128 MB for one project
Maximum playback time	30 seconds for one file For a sound file with the playback time exceeding 30 seconds, the sound is cut off after 30 seconds. For GT SoftGOT2000, the playback time is unlimited.

■4 Registrable sound file types

(1) Message

The sound files of the message type are generated by converting the entered text into speech.
The speaker, speed, pitch, and volume of the voice are settable.
No sound file with the playback time exceeding 30 seconds is registrable.
To register or update the sound files of the message type, the speech synthesis license must be registered.
For registering the speech synthesis license, refer to the following.

➟10.12.4 Registration of the speech synthesis license

(2) Sound effect

The sound files of the sound effect type come with GT Designer3.

(3) Melody

The sound files of the melody type come with GT Designer3.

(4) File

User-specified WAV sound files are imported to use.
The WAV sound files (8.000 kHz or 16.000 kHz, 16 bits, mono) are imported as they are.
The WAV sound files in the following conditions are converted automatically at import.

- Sampling frequency: Any
- Number of bits: 8 bits or 16 bits
- Channel: Stereo or mono

The files are automatically converted into the WAV format (16.000 kHz, 16 bits, mono).
To import any WAV sound file other than the above, convert the file into an applicable WAV sound file by using general-purpose audio editing software.

■5 Playback specifications

One sound file plays at a time.
While a sound file is playing, if you specify another sound file to play, operation varies depending on the specified file number.

(1) When the specified sound file differs from the playing one

The specified sound file is held on standby and plays after the current file has finished playing.
If you specify multiple sound files to play, the specified files play in the order in which the files are held on standby.
Up to 16 sound files are held on standby.

(2) When the playing sound file or standby sound file is specified again

The sound file specified again does not play.

■6 Functions working together with the sound output function

The sound output function is usable for the relevant functions shown below.

- Trigger action
- Time action
- Action of the switch (Sound output)
- Touch key sound of the touch switch

The following shows the availability of the operations of the sound output function by relevant function.

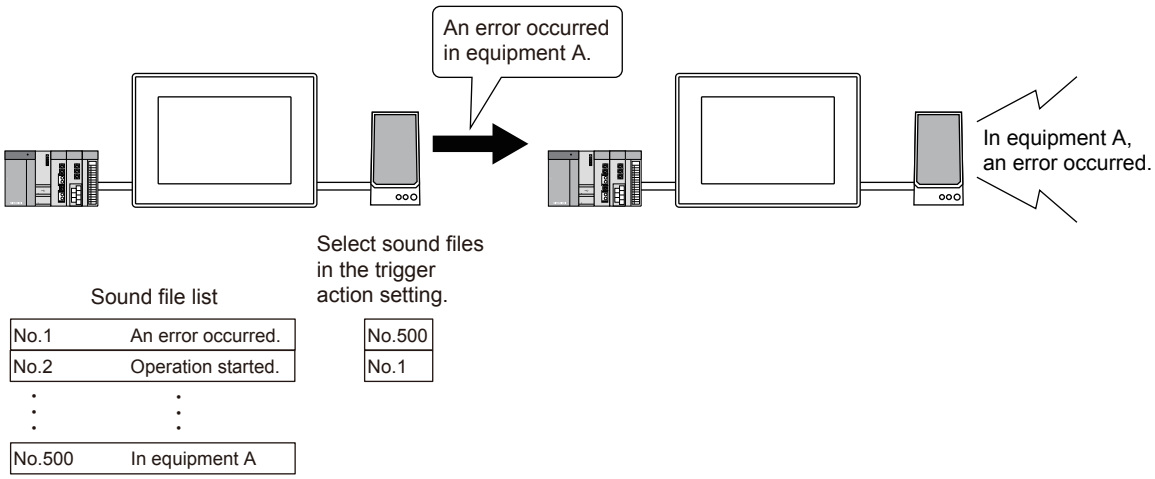
○: Available, -: Not available

Relevant function	Sound output function			
	Play	Stop	Mute or unmute	Continuous play of a playlist
Trigger action	○	○	○	○
Time action	○	-	-	-
Action of the switch (Sound output)	○	○	○	-*1

*1 To play the preselected sound files continuously with a corresponding switch, set the playlist in a trigger action setting and execute the trigger action with the switch.

■7 Playing the preselected sound files continuously

You can select multiple sound files to play them continuously with one trigger action.



Up to 16 sound files are selectable for one trigger action.
The same sound file numbers can be specified for one trigger action.
For the setting method, refer to the following.

➟9.5 Operating a Device as a Trigger ([Trigger Action])

Stopping the current playback cancels the other sound files that are selected for the same trigger action.

10.12.3 How to use the sound output function

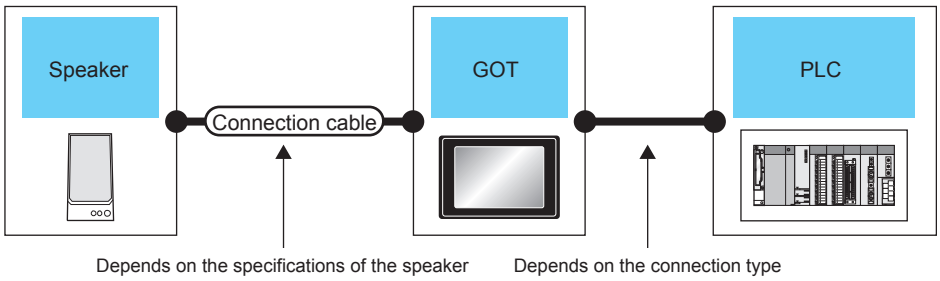
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.

■1 System configuration

The following shows the system configuration of sound output.
For information on how to use the sound output function on GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual



Speaker	Connection cable	GOT		PLC	Number of connectable speakers
Model		Option	GOT model		
For connectable speakers, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)		GT15-SOUT	GT27 GT25 (excluding GT25-W)	For the system configuration between the GOT and the PLC, refer to each connection manual.	One speaker for one GOT
		- (Built into GOT)	GT25-W GS25		

■2 Setting procedure

Step 1 Connect the GOT and the speaker.

➟■1 System configuration

Step 2 Configure the settings for the sound output function in the [Sound Output] dialog.

➟10.12.5 [Sound Output] dialog

This setting is not required for GT25-W, GT SoftGOT2000, and GS25.

Step 3 To import a sound file, convert the file as necessary.

To convert the file, use general-purpose audio editing software.

Step 4 Edit or register a sound file in the [Sound File List] dialog.

➟10.12.6 [Sound File List] dialog
10.12.7 [Create New Sound File] or [Edit Sound File] dialog

Step 5 Configure the setting of the relevant function to work with the sound output function.

- Trigger action
  Set the sound output for a target action.
  ➟9.5.6 [Trigger/Action] dialog
- Time action
  Set the sound output for a target action.
  ➟9.6.6 [Time Action Attribute] dialog
- Action of the switch (Sound output)
  Set the sound output for the action of a target switch.
  ➟8.2.4 [Switch] dialog
- Touch key sound of the touch switch
  Configure the setting to use a specified sound file for the touch key sound.
  ➟10.12.8 [Touch Key Sound Setting] dialog

Step 6 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

10.12.4 Registration of the speech synthesis license

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

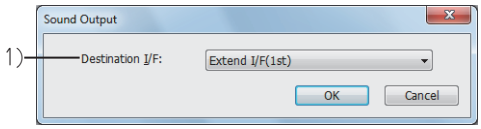
Not available to GT2505-V and GT25HS-V.
To register or update a sound file of the message type in the [Edit Sound File] dialog, purchase and register the speech synthesis license (SW1DND-GTVO-M).
If the speech synthesis license is unregistered, each file is playable only in the [Edit Sound File] dialog.
For purchasing the speech synthesis license, contact your local sales office.
For registering the speech synthesis license, refer to the following.

➟GT Works Text to Speech License Registration Instructions

10.12.5 [Sound Output] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
This setting is not required for GT25-W and GS25.
Select [Common] → [Peripheral Setting] → [Sound Output] from the menu to display the setting dialog.



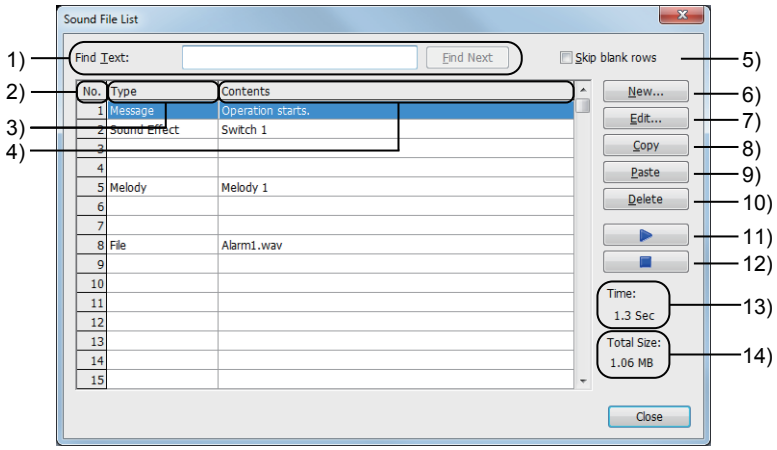
1) **[Destination I/F]**
Set the interface of the GOT.
- [Extend I/F(1st)]
- [Extend I/F(2nd)]
- [Extend I/F(3rd)]
- [Not connected]

For the details of the GOT interface settings, refer to the following.
➟5.7 Checking the Interface Settings of the GOT ([I/F Communication Setting])

10.12.6 [Sound File List] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
Select [Common] → [Sound] → [Sound File List] from the menu to display the setting dialog.
Register a sound file to play on the GOT.



1) **[Find Text]**
Search the sound file list for a sound file based on the search keyword.
The [Contents] column is searched.
Up to 512 characters can be entered as the search keyword.
Click the [Find Next] button to search for the next occurrence of the keyword.

2) **[No.]**
Registered sound file number.
Up to 500 sound files are registrable.

3) **[Type]**
Sound file type ([Message], [Sound Effect], [Melody], or [File]) that is set in the [Edit Sound File] dialog.

4) **[Contents]**
- When [Type] is set to [Message]
  The contents of a sound file (message) are displayed.
- When [Type] is set to [Sound Effect] or [Melody]

The title of a sound file is displayed.

• When [Type] is set to [File]

The file name of a sound file is displayed.

5) **[Skip blank rows]**

Displays only the rows where sound files are set.

6) **[New] button**

Displays the [Create New Sound File] dialog.

➡10.12.7 [Create New Sound File] or [Edit Sound File] dialog

Set a new sound file.

7) **[Edit] button**

Displays the [Edit Sound File] dialog.

➡10.12.7 [Create New Sound File] or [Edit Sound File] dialog

Edit a selected sound file.

8) **[Copy] button**

Copies a selected row.

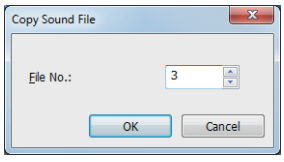
Multiple rows can be copied at once.

9) **[Paste] button**

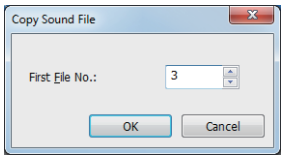
Pastes a copied row on a selected row.

Multiple rows are pasted on an equal number of consecutive rows, starting from a selected row.

When [Skip blank rows] is selected, clicking the [Paste] button displays the [Copy Sound File] dialog.



When one row is copied



When multiple rows are copied

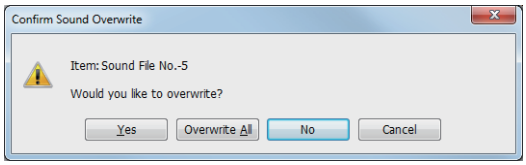
• **[File No.]**

Set the file number of the destination row.
The setting range is [1] to [500].

• **[First File No.]**

Set the file number of the first destination row.
The setting range is [1] to [500].

If the destination row has a sound file setting, the [Confirm Sound Overwrite] dialog appears.



• **[Yes]**

Overwrites the row where the sound file specified in this dialog is set.

• **[Overwrite All]**

Overwrites all the rows.

• **[No]**

Does not overwrite the row where the sound file specified in this dialog is set.

• **[Cancel]**

Cancels the paste on the rows, starting from the one where the sound file specified in this dialog is set.

10) **[Delete] button**

Deletes a selected sound file.

11) **[Play] button**

Plays a selected sound file.

12) **[Stop] button**

Stops the current playback.

13) **[Time]**

Displays the playback time of a selected sound file.

14) **[Total Size]**

Displays the total size of the registered sound files.

Make sure that the total size of the files is 128 MB or less.

10.12.7 [Create New Sound File] or [Edit Sound File] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

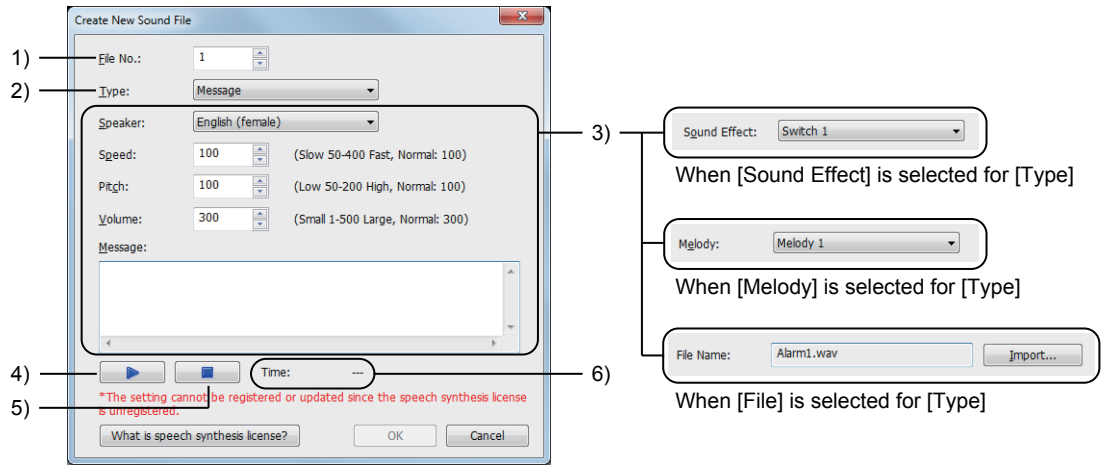
Not available to GT2505-V and GT25HS-V.

Create or edit a sound file.

The dialog name varies with the display method.

To display this dialog, perform one of the following operations.

- In the [Sound File List] dialog, click the [New] button.
- In the [Sound File List] dialog, select a target sound file and click the [Edit] button.
- In the [Sound File List] dialog, double-click a target sound file.



When [Message] is selected for [Type]

1) **[File No.]**

Set a sound file number.

The setting range is [1] to [500].

2) **[Type]**

Select a sound file type.

The following shows the items to be selected.

- [Message]: Sound file that is generated by converting the entered text into speech
- [Sound Effect]: Sound file that is supplied with GT Designer3
- [Melody]: Sound file that is supplied with GT Designer3
- [File]: User-specified WAV sound file to be imported

To register or update the sound files of the message type, the speech synthesis license must be registered.

For registering the speech synthesis license, refer to the following.

➟10.12.4 Registration of the speech synthesis license

3) **Detail setting**

Set necessary items according to the selection for [Type].

Item	Description
[Speaker]	Select the speaker to read aloud a message. The following shows the items to be selected. • [Japanese (female)] • [Japanese (male)] • [English (female)] • [English (male)] • [Simplified Chinese (female)] • [Simplified Chinese (male)] • [Traditional Chinese (female)] • [Korean (female)] • [Korean (male)] • [Spanish (female)] • [Spanish (male)]
[Speed]	Set the speed of the synthesized voice. The setting range is [50] (Slow) to [400] (Fast).

Item	Description
[Pitch]	Set the pitch of the synthesized voice. The setting range is [50] (Low) to [200] (High).
[Volume]	Set the volume of the synthesized voice. The setting range is [1] (Small) to [500] (Large).
[Message]	Enter a message to be read aloud. Up to 1024 characters can be set. A line feed is counted as two characters.
[Sound Effect]	Select a sound effect to play.
[Melody]	Select a melody to play.
[File Name]	Select a sound file to play. Click the [Import] button to display the [Open] dialog. Select a file to be imported to GT Designer3.

4) **[Play] button**
Plays the sound file being edited.

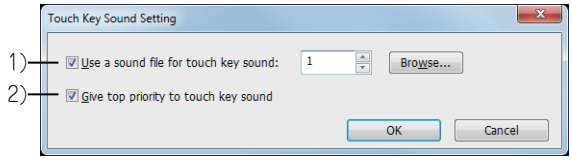
5) **[Stop] button**
Stops the current playback.

6) **[Time]**
Displays the playback time of the sound file being edited.
- When [Type] is set to [Message]
  The sound file whose playback time exceeds 30 seconds is not registrable.
  The playback time exceeding 30 seconds is displayed in red.

10.12.8 [Touch Key Sound Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2505-V and GT25HS-V.
Select [Common] → [Sound] → [Touch Key Sound Setting] from the menu to display the setting dialog.
Configure the setting to play a sound file when a relevant touch switch is touched.



1) **[Use a sound file for touch key sound]**
Plays a sound file when a relevant touch switch is touched.
Perform one of the following operations to select a sound file.
- Enter a sound file number.
- Click the [Browse] button to display the [Sound File List] dialog, and select a sound file.

2) **[Give top priority to touch key sound]**
Stops the current playback, cancels all standby sound files and plays the touch key sound when a relevant touch switch is touched.

10.12.9 Precautions

Not available to GT2505-V and GT25HS-V.

This section explains the precautions for using the sound output function.

■1 Precautions for drawing

(1) Updating a WAV sound file

The imported WAV sound file in the [Edit Sound File] dialog is not updated when you make a change to the import source file.

In such a case, import the source file again.

(2) Using the sound files of the sound effect type or melody type

Do not use the sound files of the sound effect type or melody type that are settable in the [Edit Sound File] dialog for any purpose other than the GOT sound output.

■2 Precautions for using GT SoftGOT2000

(1) Mute status of GT SoftGOT2000 at its startup

If you select [Unmute when starting GT SoftGOT2000] on the [Auxiliary Setup] tab in the [Environment Setup] dialog on GT SoftGOT2000, the application is unmuted regardless of Windows sound settings.

If you deselect the item, the Windows sound settings are applied.

However, if you mute all sounds on Windows, GT SoftGOT2000 remains mute.

10.12.10 Relevant settings

Not available to GT2505-V and GT25HS-V.

Set the relevant settings other than the specific settings for the sound output function as required. The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item	Supported models
Stopping the current playback. The standby sound file plays subsequently.	GS518.b0	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Stopping the current playback and canceling all standby sound files.	GS518.b1	
Muting or unmuting the sound.	GS518.b2	
Outputting the sound file number in execution to a device	GS669	
Detecting the jack disconnection of the sound output device	GS668.b15	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

10.13 Monitoring a Controller through a GOT (Server/Client Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.13.1 Overview of the server/client function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

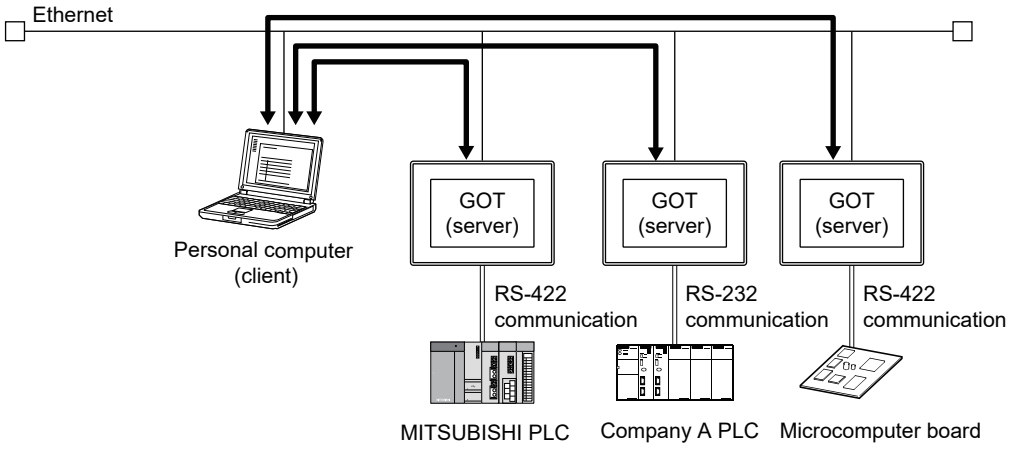
The server and client functions enable you to perform monitoring and maintenance remotely from an office.
You can access a GOT or GT SoftGOT2000 having the server function (hereafter "GOT (server)") through a client device, and easily collect or change device data of the controllers monitored by the GOT (server).
The following devices can be used as a client are supported.

- Personal computer on which MX Component is installed (hereafter "personal computer (MX Component)")
- Personal computer on which GENESIS64 is installed (hereafter "personal computer (GENESIS64)")
- GOT to which the client function is granted (hereafter "GOT (client)")

A personal computer (client) is used hereafter as a generic term for a personal computer (MX Component) and a personal computer (GENESIS64).

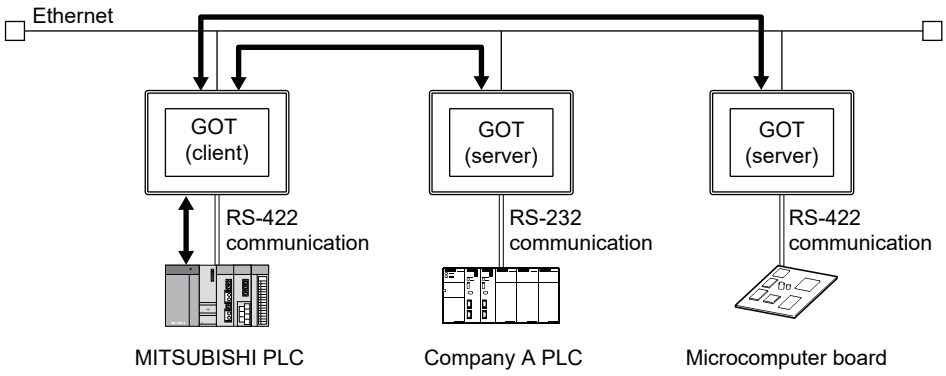
■1 Collecting or changing device data on a personal computer (client) (server function)

When you use a personal computer (MX Component) as a client, GT SoftGOT2000 cannot be a server.
When you use a personal computer (GENESIS64) as a client, GOT1000 cannot be a server.
You can read/write device data of the controllers monitored by a GOT (server) on a personal computer (client) connected to Ethernet.
Use the server function, and you can monitor multiple controllers on a personal computer by connecting the personal computer to a GOT (server) by Ethernet. The function has eliminated the need for establishing communications with controllers in their respective communication formats or installing the OPC UA server.
The function is available by installing MX Component or GENESIS64.
Communication settings for each controller is not required on the personal computer.



■2 Collecting or changing device data monitored by another GOT on a GOT (server and client functions)

GT SoftGOT2000 supports the server function but does not support the client function.
You can read/write device data of the controllers monitored by a GOT (server) by accessing the GOT (server) through a GOT (client) connected to Ethernet.
This enables you to monitor device data of different manufacturers' controllers collectively on one GOT (client).
One GOT (client) can be connected to up to 128 GOTs (servers).

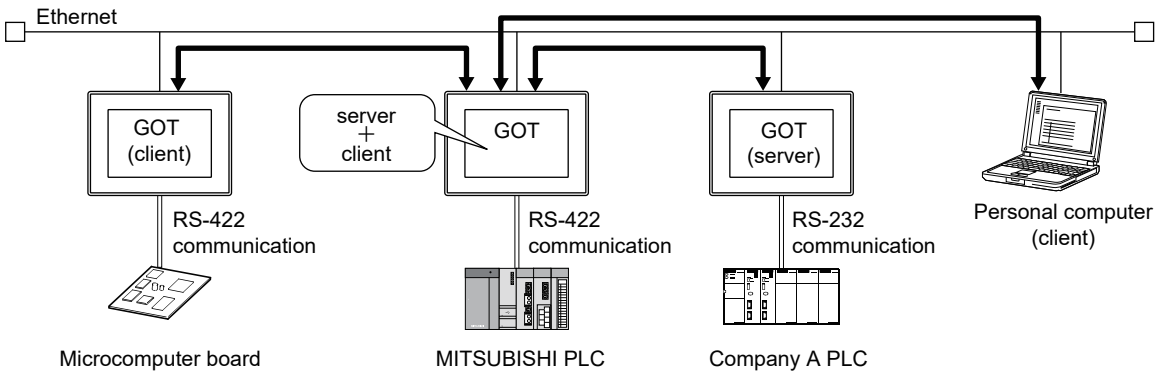


■3 Using the server and client functions in one GOT

Not available to GT SoftGOT2000.

The server and client functions can be used in one GOT.

When a GOT has the server and client functions, while collecting data of another GOT (server) you can send the data to a personal computer (client) or another GOT (client) through the GOT.

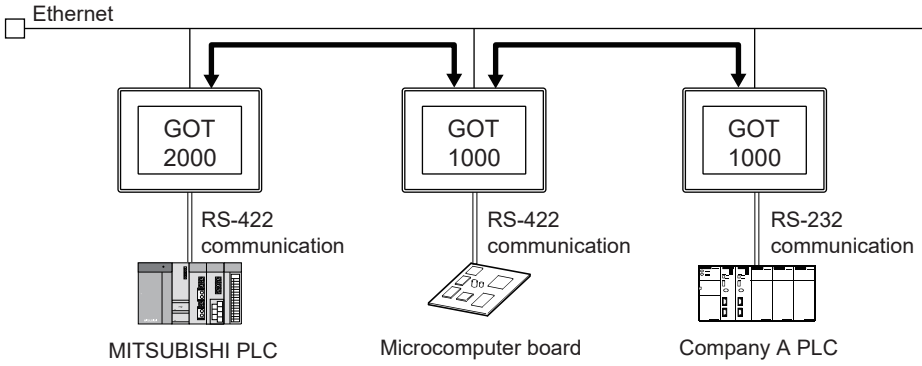


■4 Communications between the GOT2000 series and GOT1000 series

When GT SoftGOT2000 is the server, communications with the GOT1000 series (client or server) are not available.

When the server or client function is used in a personal computer (MX Component), the GOT1000 series, and the GOT2000 series, communications are available among them.

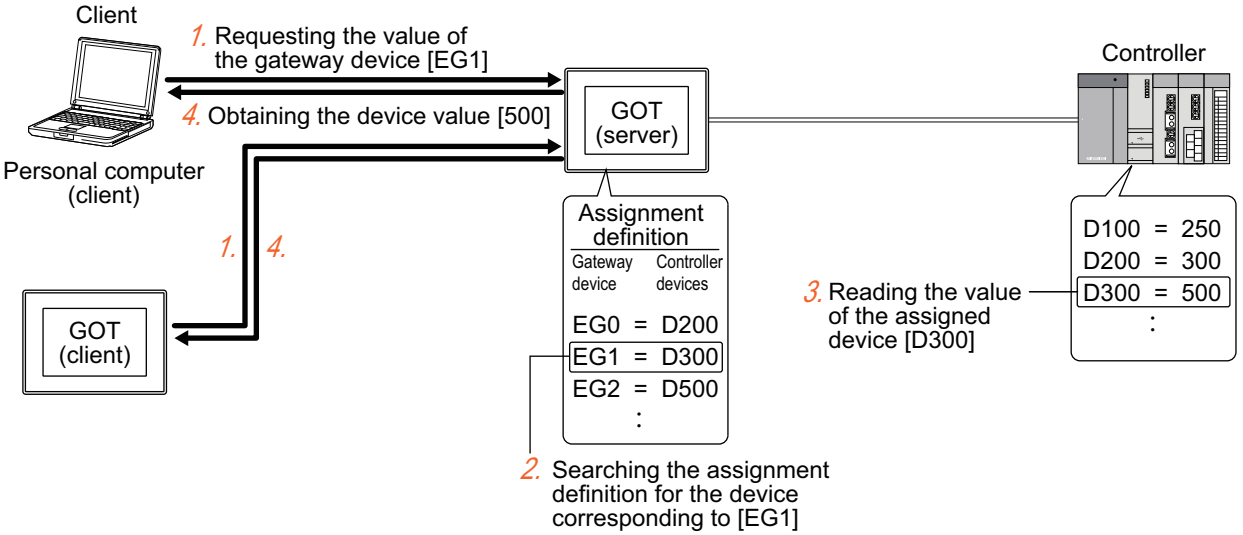
You can add the GOT2000 series to the existing system configured with the GOT1000 series or replace the GOT1000 series with the GOT2000 series.



■5 Flow of data

To collect or change device data of a controller monitored by a GOT (server) through a client, set the assignment definition of the virtual gateway devices and the corresponding devices of the monitored controller on the GOT (server). Then, you can access the gateway devices of the GOT (server) through the client and read/write the data of the controller devices assigned to the gateway devices.
Data is exchanged using the gateway devices set in the GOT (server).
There is no need to consider the manufacturer and model of the monitored controller.

The following shows the flow of data when device data of a controller connected to a GOT (server) is read to a client.
Example) Reading the value of the controller's device [D300] to a client



Step 1 The client makes a request for the value of the gateway device [EG1] to the GOT (server).

Step 2 The GOT (server) searches for the controller device assigned to the gateway device [EG1] based on the assignment definition of the gateway devices and controller devices.

Step 3 The GOT (server) reads the value [500] of the assigned device [D300] from the controller.

Step 4 The client obtains the value [500] read by the GOT (server).

How to access the gateway devices of the GOT (server) through a client depends on the client type.
Personal computer (MX Component): Use functions of MX Component.
Personal computer (GENESIS64): Use GENESIS64 tags.
GOT (client): Use the script function.
For the details, refer to the following.

➟10.13.3 ■3 How to access the gateway devices of a GOT (server) from a personal computer (MX Component)
10.13.3 ■4 How to access the gateway devices of a GOT (server) from a personal computer (GENESIS64)
10.13.3 ■5 How to access the gateway devices of a GOT (server) from a GOT (client)

10.13.2 Specifications of the server/client function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the server/client function, a system application (extended function) of [Gateway(Server, Client)] is required. Configuring the following settings in the [Controller Setting] window incorporates the application into the package data automatically.

- [Gateway Server]
- [Gateway Client]

➟10.13.6 [Gateway Server]
10.13.7 [Gateway Client]

■2 Number of server/client functions for one project

One server function setting and one client function setting are available for one project.

■3 GOTs and software applications usable as a server or client

The following GOTs and software applications can be used as a server or client.

- Server: GT27, GT25, GT SoftGOT2000, and GS25
- Client: GT27, GT25, GS25, MX Component, and GENESIS64 (GENESIS64 Advanced or GENESIS Basic SCADA)

The following shows availability of server/client combinations.

○: Available
×: Not available

Server	Client	Availability
GT27, GT25, GS25	GT27, GT25, GS25	○
	MX Component	○
	GENESIS64	○
GT SoftGOT2000	GT27, GT25, GS25	○
	MX Component	×
	GENESIS64	○

■4 Specifications of the servers and clients

The following shows the specifications of the server/client function.

Item		Specifications
Port No.	Server function	• GT27, GT25, GS25: 5011 • GT SoftGOT2000: 1024 to 65534
	Client function	5012, 5013
Maximum number of nodes		The total number of the following nodes is 64 (recommended). • GOTs (server) • GOT (client) • Personal computers that communicate with GOTs
Number of accessible clients (GOTs and personal computers) to a server (GOT) simultaneously		Up to 5 units *1
Specifying other nodes		Specifying by an IP address, up to 128 nodes
Gateway device		Word device 32768 points: EG0 to EG32767
Compatible MX Component		MX Component of Version 3 or later
Compatible GENESIS64		10.97.1 or later

*1 When six or more clients (GOTs and personal computers) access a server (GOT), the scripts of the clients may stop.

■5 Access range that can be monitored

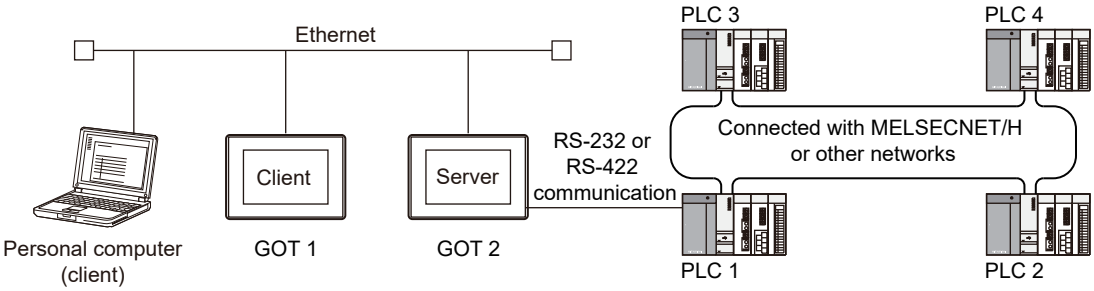
The following shows the access range for the server/client function.
To monitor controllers via the GOT, monitor the controller devices assigned to gateway devices. (Controller devices on the network are to be also assigned to gateway devices to get monitored.)
The access range that can be monitored is the same as that which the GOT can monitor.
For the access range that can be monitored by the GOT, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1

The following shows the PLCs that can be accessed from GOT1 (client) and the personal computer (client).
For the applicable connection types when GT SoftGOT2000 is a server, refer to the following.

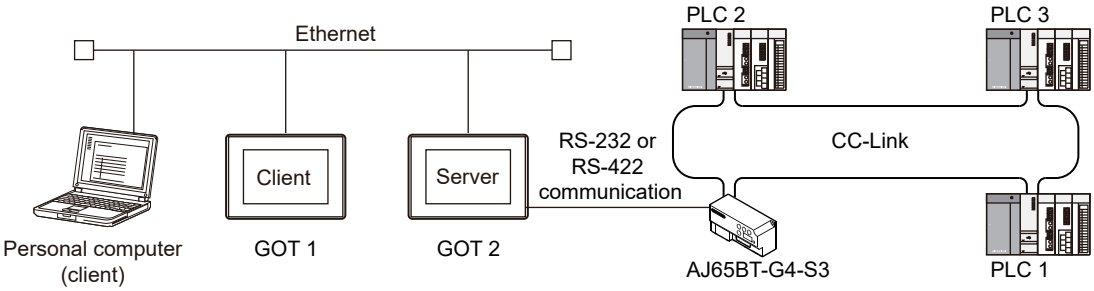
➟GT SoftGOT2000 Version1 Operating Manual

(1) When the connection type between GOT2 (server) and PLC1 is the direct CPU connection (serial) or serial communication connection



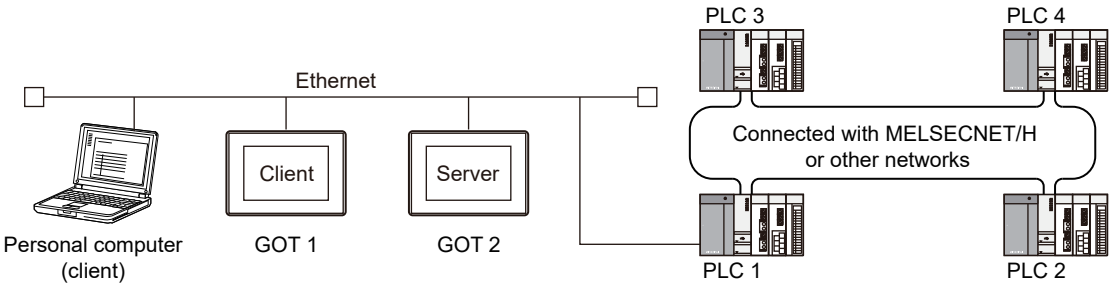
Access source	Access destination	
	GOT2 (server)	PLC1, PLC2, PLC3, PLC4
Personal computer (client)	Monitoring the gateway devices or the controller devices	Monitoring the controller devices that are assigned to the gateway devices of GOT2 from the personal computer (client) and GOT1 (client)
GOT1 (client)		

(2) When the connection type between GOT2 (server) and PLCs is a CC-Link connection (via G4)



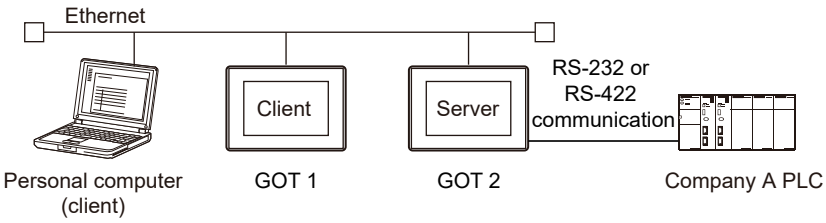
Access source	Access destination	
	GOT2 (server)	PLC1, PLC2, PLC3
Personal computer (client)	Monitoring the gateway devices or the controller devices	Monitoring the controller devices that are assigned to the gateway devices of GOT2 from the personal computer (client) and GOT1 (client)
GOT1 (client)		

(3) When the connection type between GOT2 (server) and PLCs is an Ethernet connection



Access source	Access destination		
	GOT2 (server)	PLC1	PLC2, PLC3, PLC4
Personal computer (client)	Monitoring the gateway devices or the controller devices		Monitoring the gateway devices or the controller devices from a personal computer (client) and GOT1 (client)
GOT1 (client)			Monitoring the controller devices that are assigned to the gateway devices of GOT2 from the personal computer (client) and GOT1 (client)

(4) When the connection type between GOT2 (server), PLCs, and a temperature controller is another manufacturer's PLC connection



Access source	Access destination	
	GOT2 (server)	PLC, temperature controller
Personal computer (client)	Monitoring the gateway devices or the controller devices	Monitoring the controller devices that are assigned to the gateway devices of GOT2 from the personal computer (client) and GOT1 (client)
GOT1 (client)		

10.13.3 How to use the gateway devices

The gateway device is a virtual device exclusively used to perform the server/client function on the GOT.

■1 Applicable gateway devices

The following shows the applicable gateway devices.

Device name		Device range	Device No. representation
Word device	EG	EG0 to EG32767	Decimal number
Bit device	EG	Specified bits of above word devices	Decimal number

■2 Devices that can be assigned

You can assign the following devices to gateway devices (EG).

• Controller devices that can be monitored by the GOT

• GOT internal devices

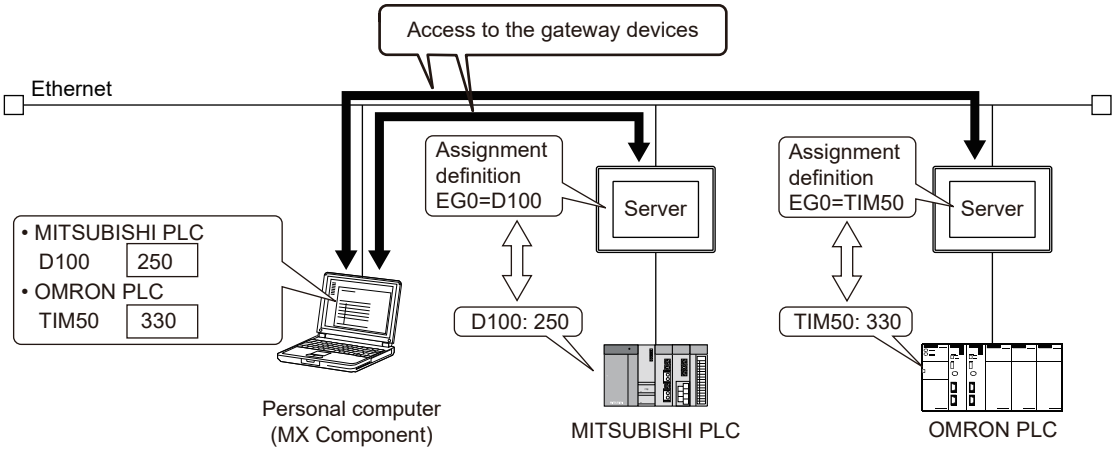
However, some controller devices cannot be assigned.

For information on which device can be assigned, refer to the following.

➟12.3 Device Range and Settings of Mitsubishi Electric Equipment
12.4 Device Range and Settings of Each Controller

■3 How to access the gateway devices of a GOT (server) from a personal computer (MX Component)

Use the functions of MX Component to access the gateway devices of a GOT (server) from a personal computer (MX Component).



For the operation and the programming procedures of MX Component, refer to the following manuals.

➟MX Component Version 3 Operating Manual
MX Component Version 3 Programming Manual

The following shows the functions of MX Component that support the GOT.

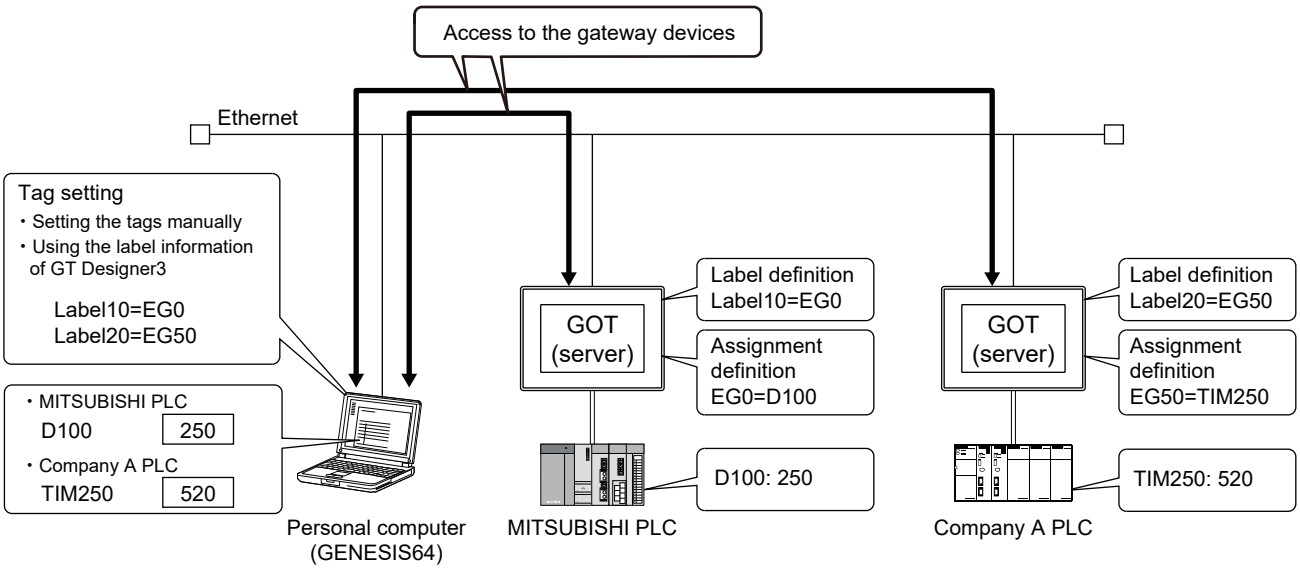
Item	Device range
Open	Opens the communication line (starts the communication with the GOT).
Close	Closes the communication line (ends the communication with the GOT).

Item	Device range
ReadDeviceBlock	Device batch read
ReadDeviceBlock2	
WriteDeviceBlock	Device batch write
WriteDeviceBlock2	
ReadDeviceRandom	Device random read
ReadDeviceRandom2	
WriteDeviceRandom	Device random write
WriteDeviceRandom2	
EntryDeviceStatus	Device status observation registration
FreeDeviceStatus	Cancels device status observation registration.
OnDeviceStatus	Event notification
SetDevice	Changes device data values.
SetDevice2	
GetDevice	Obtains device data values.
GetDevice2	
GetCpuType	Obtains GOT model information.

■4 How to access the gateway devices of a GOT (server) from a personal computer (GENESIS64)

Establish correlation between the GENESIS64 tags and the GOT gateway devices to access the gateway devices of a GOT (server) from a personal computer (GENESIS64).
You can establish correlation between the GENESIS64 tags and the GOT gateway devices manually in GENESIS64 or by using the label information for GT Designer3.
For details, refer to the following.

➟10.14.1 Overview of the GENESIS interaction function



■5 How to access the gateway devices of a GOT (server) from a GOT (client)

Use the script function of the GOT (client) to access the gateway devices of the GOT (server) from the GOT (client).

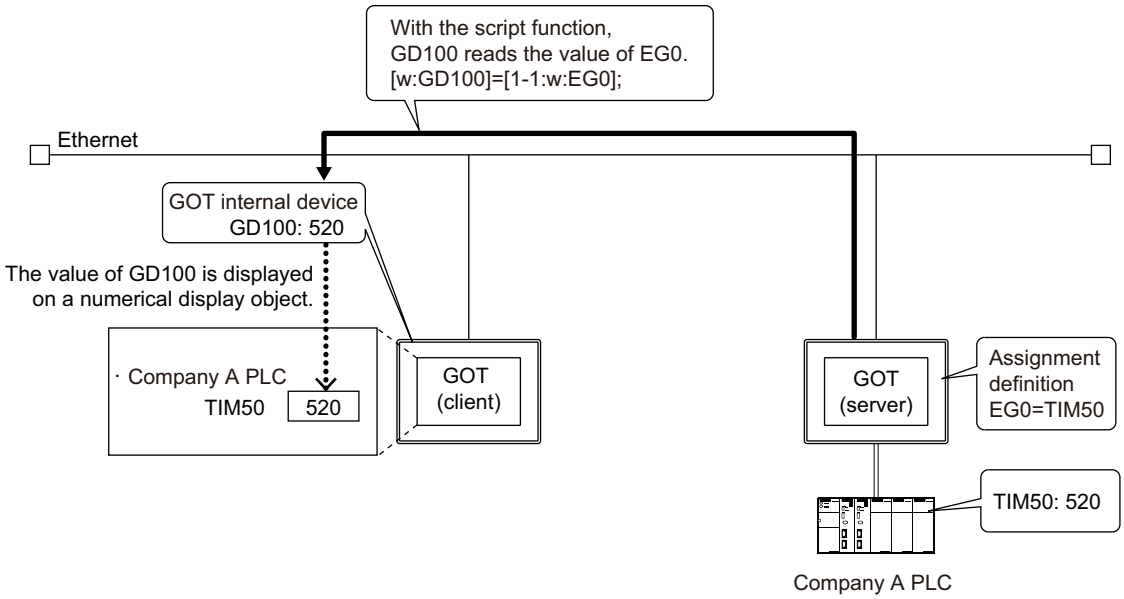
➟9.8 Controlling Operations with Scripts ([Script])

Object scripts cannot be used since the gateway devices cannot be assigned to objects.
Use a project script or screen script.

(1) When reading the value of a gateway device

Using a script reads the value of a gateway device of a GOT (server) to an internal device of a GOT (client).
You can monitor the value read to the internal device using a numerical display object or others on the GOT (client).
For details on scripts, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])

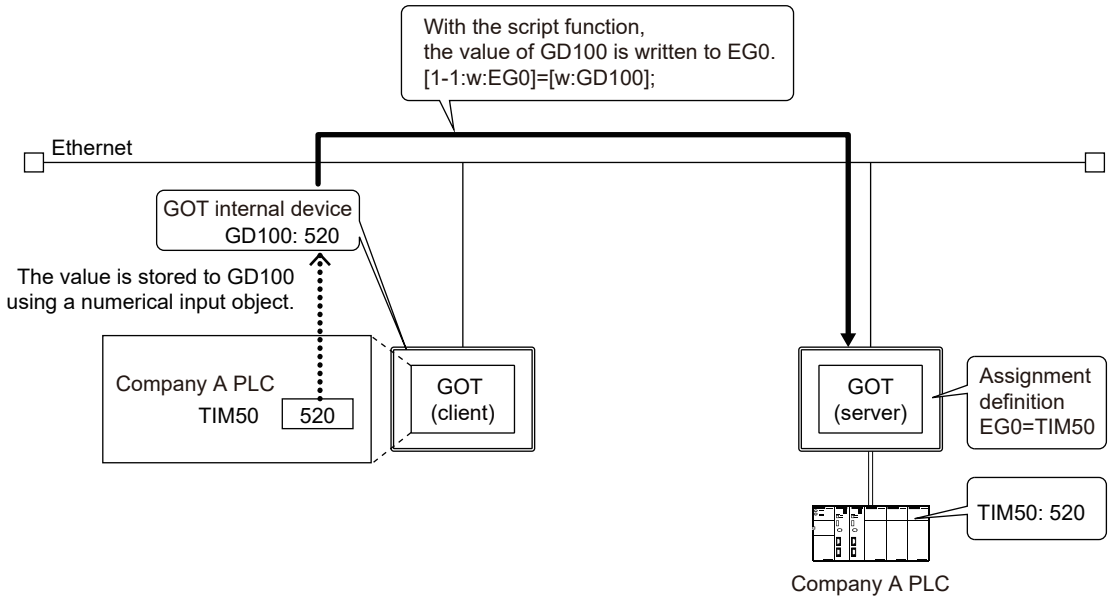


The following shows the settings required for a GOT (client) and a GOT (server).

GOT	Required setting	Description
GOT (server)	Server setting	Configures the setting for assigning the device of the company A PLC CPU to the gateway device.
GOT (client)	Script	Configures the setting to read the gateway device value of the GOT (server) to internal device of the GOT (client).
	Client setting	Registers the GOT (server) from which the client reads the device value.
	Numerical display	Configures the setting for displaying the internal device value of the GOT (client).

(2) When writing a value to the gateway device.

Write the value of the internal device of the GOT (client) to the gateway device of the GOT (server) by using a script.
Write the value to the GOT (client) internal device using a numerical input object or others.
A device of the GOT (server) can be also set as a destination for writing by the script.



GOT	Required setting	Description
GOT (server)	Server setting	Configures the setting for assigning the device of the company A PLC CPU to the gateway device.
GOT (client)	Script	Configures the setting to write the internal device value of GOT (client) to the gateway device of the GOT (server).
	Client setting	Registers the GOT (server) to which the value is written.
	Numerical input	Configures the setting for entering the value of the GOT (client) internal device.

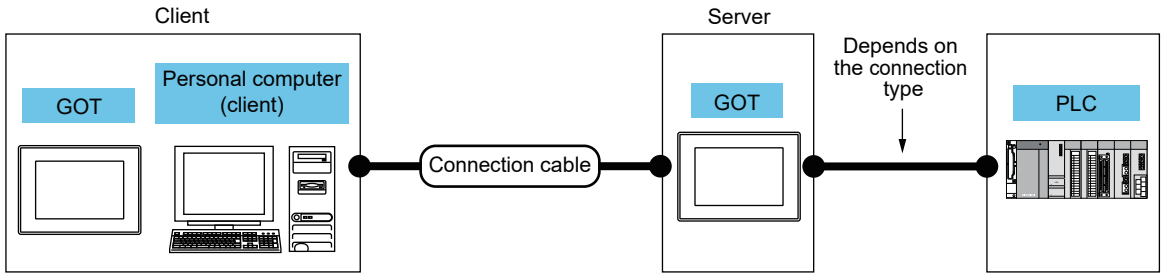
10.13.4 How to use the server/client function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

This section explains the system configuration of the server/client function.

(1) Wired connection



Client (GOT, personal computer)		Connection cable*1*2	Maximum segment length*3	Server (GOT)	
GOT model or personal computer	Option			Option	GOT
GT27 GT25 GS25	- (Built in the GOT)	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built in the GOT)	GT27 GT25 GS25
GT27 GT25	GT25-J71E71-100 *4			GT25-J71E71-100 *4	GT27 GT25
				-	Following devices with GT SoftGOT2000 installed *5 • Personal computer • PC CPU module • MELIPC
Personal computers where MX Component is installed	-	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	-	GT27 GT25 GS25
Personal computers where GENESIS64 is installed					GT27 GT25 GS25 Following devices with GT SoftGOT2000 installed *5 • Personal computer • PC CPU module • MELIPC

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)

• 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)

For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Not available to GT2505-V and GT25HS-V.

*5 To use a personal computer, an Ethernet board/card is required.

For Ethernet boards/cards, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

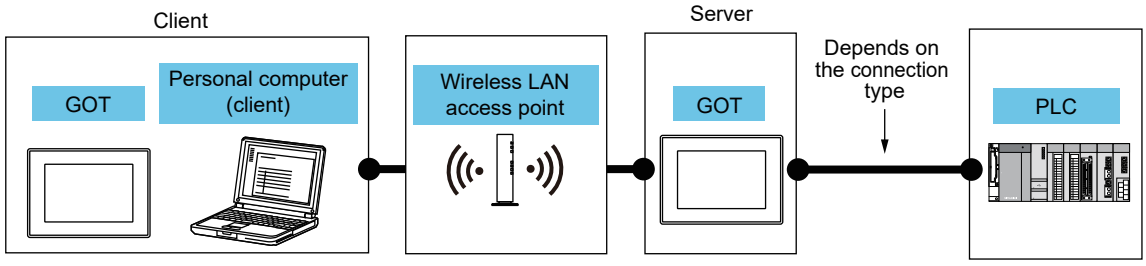
To use a PC CPU module or MELIPC, no interface board is required.

For the system configuration, refer to the following.

➟Manual of the PC CPU module used
User's manual of MELIPC

(2) Wireless LAN connection

Not available to GT2505-V and GT25HS-V.



Client (GOT, personal computer)		Wireless LAN access point	GOT (server)	
GOT model or personal computer	Option		Option	GOT
GT27*2 GT25*2 GS25*2	GT25-WLAN	-	GT25-WLAN	GT27*1 GT25*1 GS25*1
			-	Following devices with GT SoftGOT2000 installed • Personal computer • PC CPU module • MELIPC
		• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT25-WLAN	GT27*2 GT25*2 GS25*2
			-	Following devices with GT SoftGOT2000 installed • Personal computer • PC CPU module • MELIPC
Personal computers where MX Component is installed	-	-	GT25-WLAN	GT27*1 GT25*1 GS25*1
		• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT25-WLAN	GT27*2 GT25*2 GS25*2

Client (GOT, personal computer)		Wireless LAN access point	GOT (server)	
GOT model or personal computer	Option		Option	GOT
Personal computers where GENESIS64 is installed	-	-	GT25-WLAN	GT27*1 GT25*1 GS25*1
			-	Following devices with GT SoftGOT2000 installed • Personal computer • PC CPU module • MELIPC
		• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	GT25-WLAN	GT27*2 GT25*2 GS25*2
			-	Following devices with GT SoftGOT2000 installed • Personal computer • PC CPU module • MELIPC

*1 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*2 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

■2 Setting procedure

Step 1 Consider the configuration of the whole system.

- Configuration of the whole system including controllers and GOTs
- Controller settings (including device assignment)
- GOT settings (including IP address, network number, and station number)

To use GT SoftGOT2000 as a server, configure the firewall setting.
For details, refer to the following.

➟■3 Firewall setting

Step 2 Connect the GOT and the controllers.

➟■1 System configuration

Step 3 Configure the communication interface settings in the project for the server.

To use the GOT as a client, configure the settings in the project for the client.

➟10.13.5 [Communication Setting]

To use GT SoftGOT2000 as a server, configure the relevant settings in the [Communication Setup] dialog in GT SoftGOT2000.

➟GT SoftGOT2000 Version1 Operating Manual

Step 4 Set the IP address of the GOT.

➟5.4.1 ■3 [GOT IP Address Setting]

Step 5 Configure the gateway server settings in the project for the server.

➟10.13.6 [Gateway Server]

Step 6 To use the GOT as a client, configure the gateway client settings in the project for the client.

➟10.13.7 [Gateway Client]

Step 7 To use a personal computer (GENESIS64) as a client, configure the settings to enable GENESIS64 interaction with the GOT.

For details, refer to the following.

➟10.14 Monitoring a Controller through a GOT Using GENESIS64 (GENESIS Interaction Function)

Step 8 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 9 Check the GOT operation.

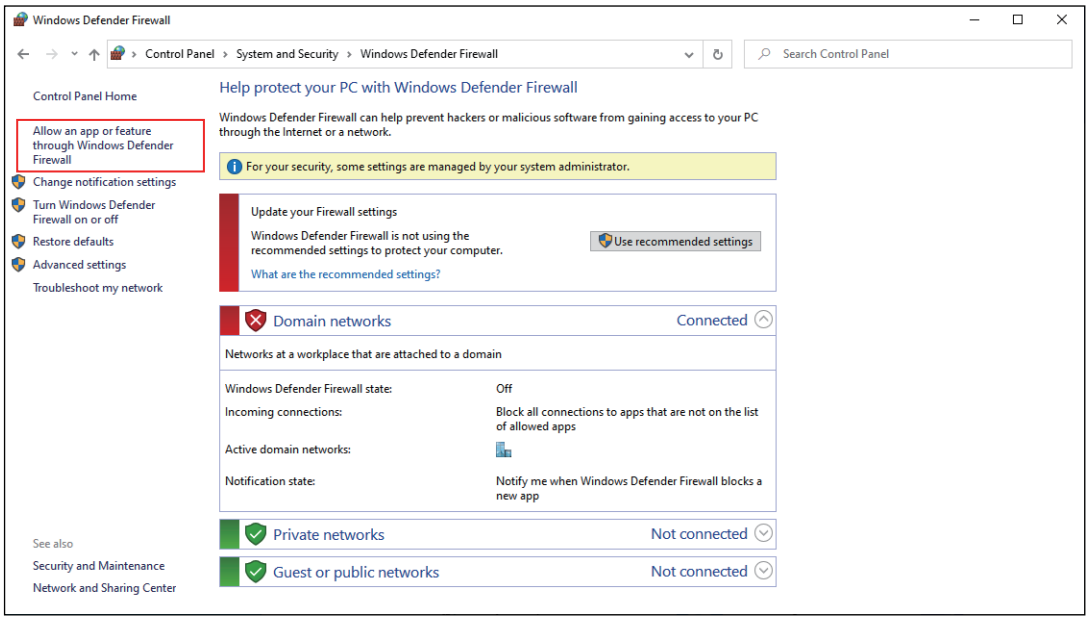
➟10.13.8 Server/client function application example

■3 Firewall setting

To use GT SoftGOT2000 as a server, change the firewall setting.
The following shows the setting procedure.

Step 1 In [Control Panel], select [System and Security] → [Windows Defender Firewall] to display the [Windows Defender Firewall] dialog.

Step 2 Click [Allow an app or feature through Windows Defender Firewall] on the left of the dialog to display the [Allowed apps] dialog.

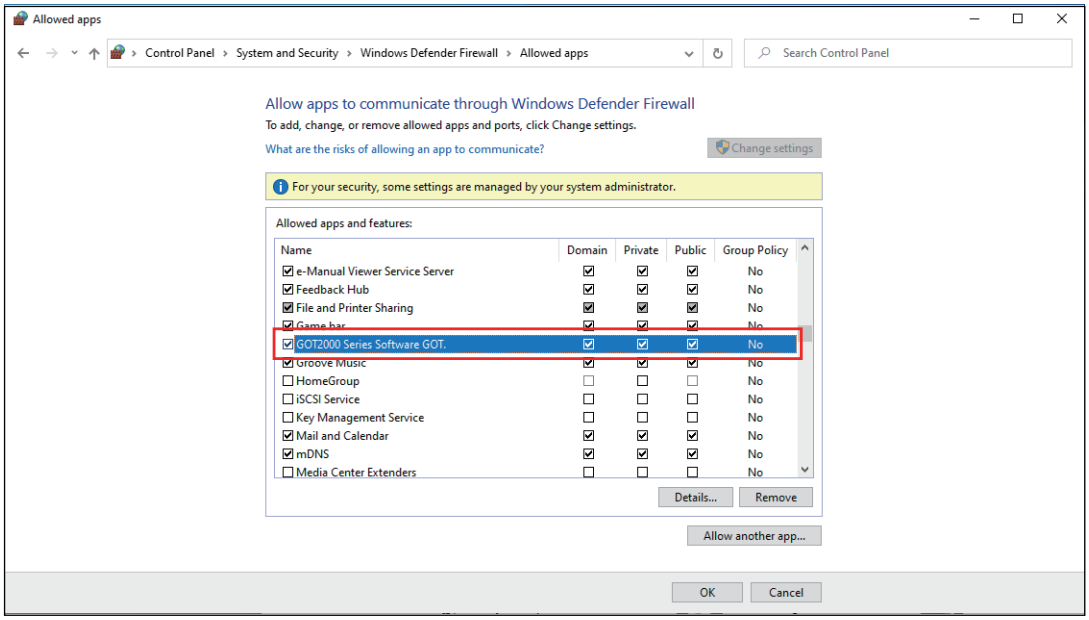


Step 3 Click the [Change settings] button.

Step 4 In [Allowed apps and features], select the following options for [GOT2000 Series Software GOT.].

- [Private]
- [Public]

If [GOT2000 Series Software GOT.] is not listed, click the [Allow another app] button and add "GTSoftGOT2000.exe".



10.13.5 [Communication Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To use GT SoftGOT2000 as a server, configure the gateway function settings in the [Communication Setup] dialog in GT SoftGOT2000.

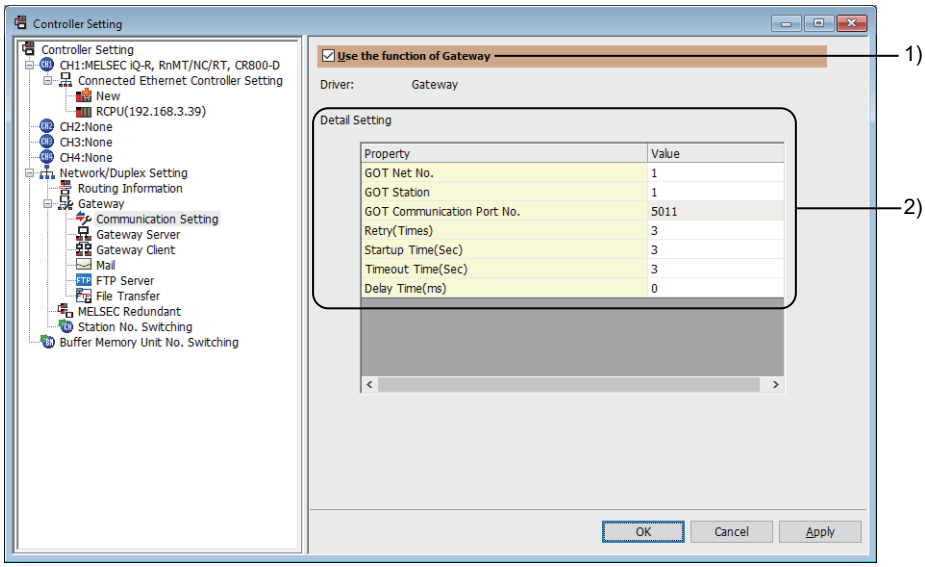
For the settings in GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

Configure the following communication settings in the project for the server and in the project for the client.

Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [Communication Setting] in the [Controller Setting] window and set necessary items.



1) **[Use the function of Gateway]**

Select this item when using the client or server function.

2) **[Detail Setting]**

Set the detailed communication format.

The setting range depends on controllers.

For the details of the settings, refer to the following.

➟GOT2000 Series Connection Manual for a controller used

Item	Description
[GOT Net No.]	Set the network No. of the GOT.
[GOT Station]	Set the GOT's station number.
[GOT Communication Port No.]	Set the port No. used by the GOT for the connection with the Ethernet module. Do not set the port number used for the other settings. Duplication of the port number disables communication.
[Retry(Times)]	Set the number of retries to be performed when a communication error occurs. When no response is received after the retries, the communication times out.
[Startup Time(Sec)]	Set the time period from the GOT startup to the beginning of the communication with the PLC CPU.
[Timeout Time(Sec)]	Set the interval for communication to time out.
[Delay Time(ms)]	Set the send delay time to lower the load of the network and the connected PLCs.

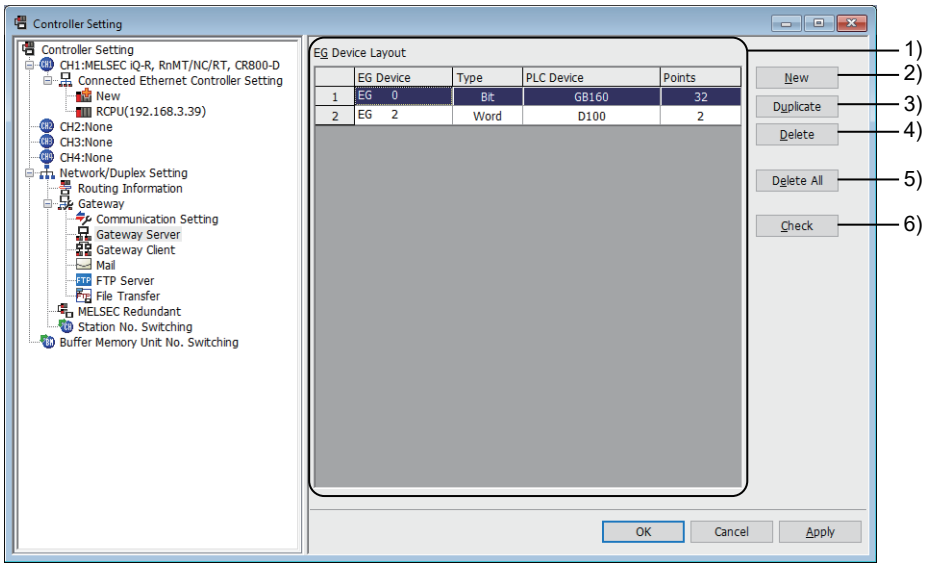
10.13.6 [Gateway Server]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the gateway devices used in the GOT (server) and the controller devices to be assigned to the gateway devices in the project for the server.

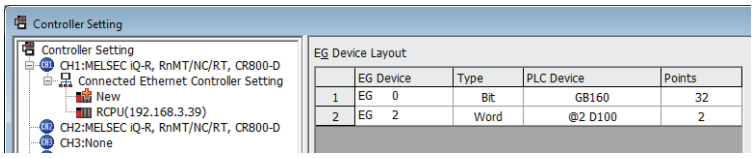
Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [Gateway-Server] in the [Controller Setting] window, and set the necessary items.



1) Assignment setting list

Assign the controller devices to the gateway devices.

Item	Description
[EG Device]	Set the gateway device. The setting range is [0] to [32766].
[Type]	Select the device type to be assigned. The following shows the items to be selected. • [BIT] • [WORD]
[PLC Device]	Set the controller devices to be assigned to the gateway devices. When the multi-channel function is used, the devices of channel No. 2 to 4 are displayed in a channel No. + Device.  For how to set the devices, refer to the following. ➟6.1.2 How to set devices
[Points]	Set the number of the devices to be assigned. The following shows the setting ranges of [BIT] and [WORD] selected in [Type]. • [BIT]: [32] to [32768] • [WORD]: [2] to [32768] A value outside the above ranges cannot be set. ➟10.13.10 ■5 Precautions for assigning devices

2) [New] button

Adds a new assignment setting to the list.

3) [Duplicate] button

Adds the copy of a selected assignment setting to the list.

4) [Delete] button

Deletes a selected assignment setting.

5) **[Delete All] button**
Deletes all assignment settings.

6) **[Check] button**
Checks if the settings are correct.

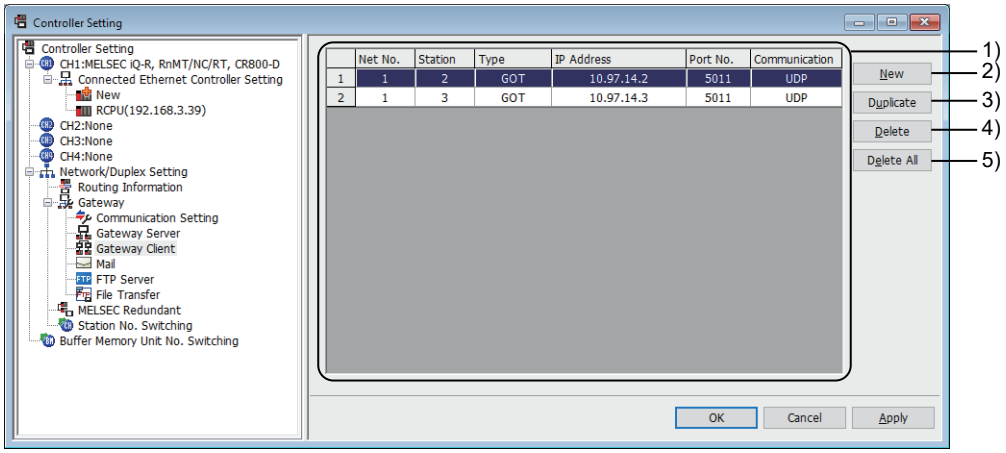
10.13.7 [Gateway Client]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Register the GOTs (servers) to be monitored in the project for the client.
Up to 128 GOTs (servers) can be registered.

Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [Gateway Client] in the [Controller Setting] window, and set the necessary items.



1) **GOT list for the server function**
Register the GOTs (server) to be monitored by the GOT (client).

Item	Description
[Net No.]	Register the network No. of each GOT. The setting range is [1] to [239].
[Station No.]	Register the PLC No. (station number) of each GOT. The setting range is [1] to [64].
[Type]	Register the type of the GOT used as a server. • [GOT] • [SoftGOT]
[IP Address]	Register the IP address of each GOT. The setting range is [0.0.0.0] to [255.255.255.255].
[Port No.]	The setting range depends on the selection for [Type]. • [GOT]: Fixed to [5011] • [SoftGOT]: [1024] to [65534]
[Communication]	Fixed to UDP.

2) **[New] button**
Adds a new GOT (server).

3) **[Duplicate] button**
Adds the copy of a selected GOT (server).

4) **[Delete] button**
Deletes a selected GOT (server).

5) **[Delete All] button**
Deletes all GOTs (server).

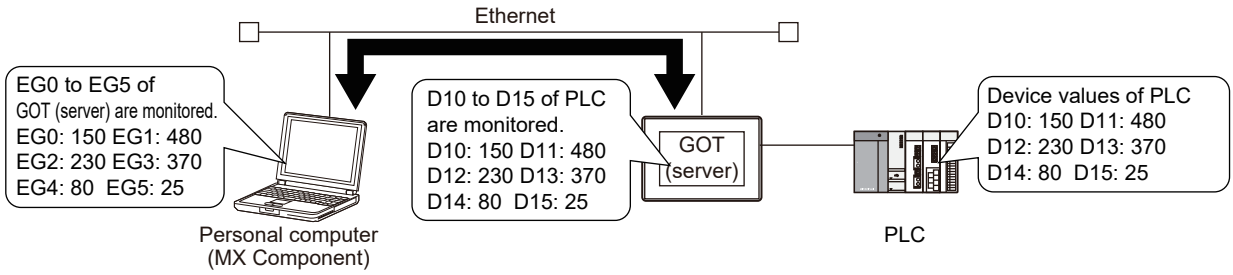
10.13.8 Server/client function application example

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To apply the example programs in this section to the actual system, make sure that the programs cause no troubles in the target system.

■1 Monitoring the PLC devices on a personal computer (MX Component) through a GOT

Monitor the values of the PLC devices D10 to D15 on a personal computer (MX Component) through a GOT (server).



Access EG0 to EG5 of the GOT (server) on the personal computer (MX Component).

(1) Setting example of GOT (server)

(a) **Settings for [Gateway Server]**

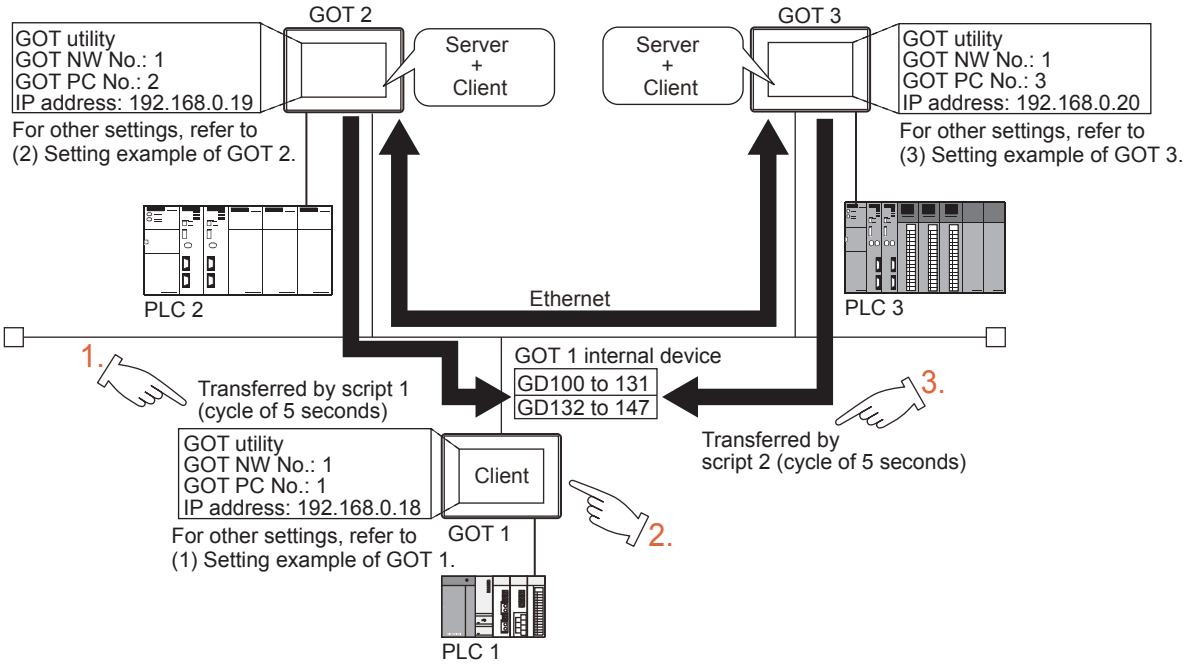
EG device	PLC CPU device	Device type	Points
EG0	D10	Word	6

(2) Personal computer setting

Access the GOT (server) by using MX Component.
For the details of MX Component, refer to the following.

➟MX Component Version 3 Operating Manual
MX Component Version 3 Programming Manual

■2 Displaying the alarms occurred in multiple PLCs on the GOT (client)



Step 1 Transfer the device values of PLC2 and PLC3 to the internal devices of GOT1 (GD100 to GD147).

Step 2 GOT1 monitors its own internal devices and displays the alarm information when an alarm occurs in PLC2 or PLC3.

(1) Setting example of GOT1

(a) Settings for [Gateway Client]

N/W No.	Station No.	IP address
1	2	192.168.0.19
1	3	192.168.0.20

(b) Alarm display (alarm display for GOT2)

Set the comments that are displayed in the alarm display in advance.

Item	Description
Device points (number of alarms)	512 points (successive)
Device	GD100.b0

(c) Alarm display (alarm display for GOT2)

Set the comments that are displayed in the alarm display in advance.

Item	Description
Device points (number of alarms)	256 points (successive)
Device	GD132.b0

(d) Script (alarm display for GOT2)

Item		Description
Script 1	Type	Screen script
	Trigger type	Cycle: 5 seconds
	Data type	Unsigned BIN 16
	Example of script description	bmov([1-2:w:EG0],[w:GD100],32); //Transfers 32 points from EG0 of GOT2 to GD100 and the following successive devices of GOT1

(e) Script (alarm display for GOT3)

Item		Description
Script 2	Type	Screen script
	Trigger type	Cycle: 5 seconds
	Data type	Unsigned BIN 16
	Example of script description	bmov([1-3:w:EG0],[w:GD132],16); //Transfers 16 points from EG0 of GOT 3 to GD132 and the following successive devices of GOT1

(2) Setting example of GOT2

(a) Settings for [Gateway Server]

EG device	PLC CPU device	Device type	Points
EG0	IB200	Bit	512

(3) Setting example of GOT3

(a) Settings for [Gateway Server]

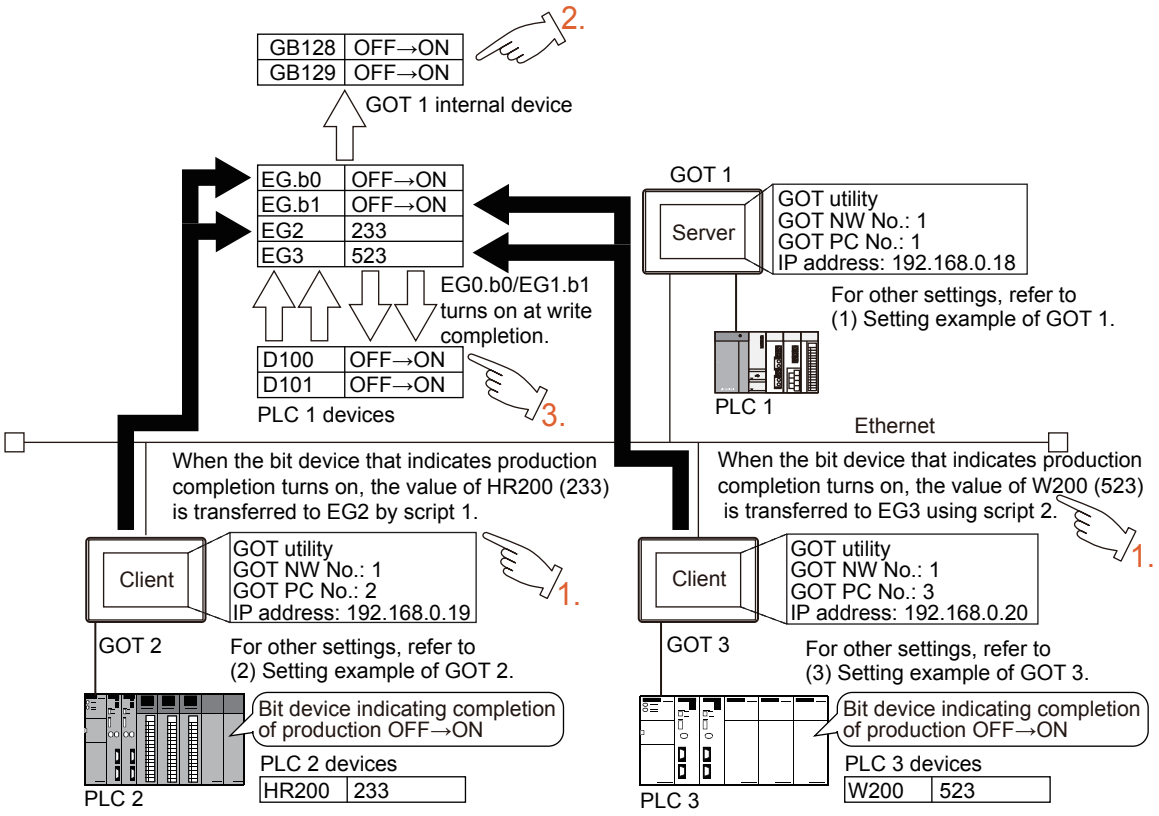
EG device	PLC CPU device	Device type	Points
EG0	..300	Bit	256

Point

Trigger type

Do not set [Ordinary] or [Sampling, 2 sec.] for the trigger type in the script. The setting may affect other monitoring operations.

■3 Monitoring and controlling the production status of multiple PLCs on the GOT (server)



Step 1 Transfer the device values of PLC2 and PLC3 to the EG devices (devices of PLC 1) of GOT1 (server).

Step 2 After the values are written to PLC1, the EG devices of GOT1 (internal devices (GB128, GB129) of GOT1) turn on. (Check a lamp or other indications to see if the writing is complete.)

Step 3 GOT1 (server) checks the production status of PLC2 and PLC3 by monitoring the devices of PLC1.

(1) Setting example of GOT1

(a) Settings for [Gateway Server]

EG device	PLC CPU device	Device type	Points
EG0	GB128	Bit	32
EG2	D100	Word	2

(b) Numerical display (setting for 2 devices)

Item	Description
Device	D100 to D101
Network setting	Host station

(c) Lamp (setting for 2 devices)

Item	Description
Device	GB128 to GB129
Network setting	Host station

(2) Setting example of GOT2

(a) Settings for [Gateway Client]

N/W No.	Station No.	IP address
1	2	192.168.0.19

(b) **Script**

Item		Description
Script 1	Type	Screen script
	Trigger type	On: Bit device that indicates the production completion
	Data type	Unsigned BIN 16

	Example of script description	[1-1:w:EG2]=[w:HR200]; //Writes the production count to PLC 1.
		set([1-1:b:EG0.00]); //Turns ON the write completion signal.

(3) Setting example of GOT3

(a) **Settings for [Gateway Client]**

N/W No.	Station No.	IP address
1	3	192.168.0.20

(b) **Script**

Item		Description
Script 1	Type	Screen script
	Trigger type	On: Bit device that indicates the production completion
	Data type	Unsigned BIN 16

	Example of script description	[1-1:w:EG3]=[w:W200]; // Writes the production count to PLC 1.
		set([1-1:b:EG0.01]); //Turns ON the write completion signal.

10.13.9 Using the server/client function efficiently

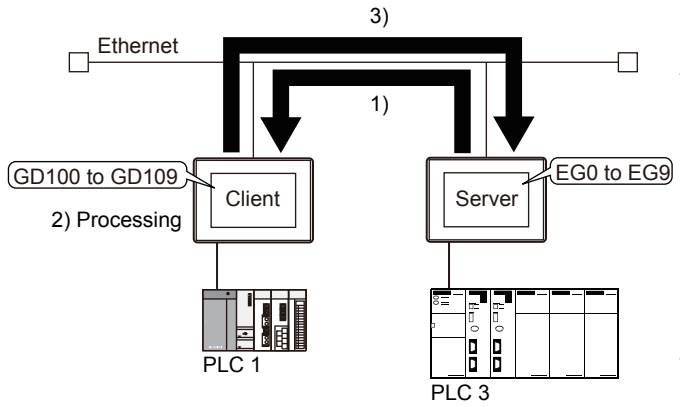
This section explains how to use the server/client function efficiently.

■1 Script setting

If a program using gateway devices directly is executed, the number of times of the access to other stations' GOTs increases and the processing delays.
Execute batch read to the GOT internal devices and execute batch write after processing as shown below to decrease the number of accesses.
Doing so improves the processing speed.

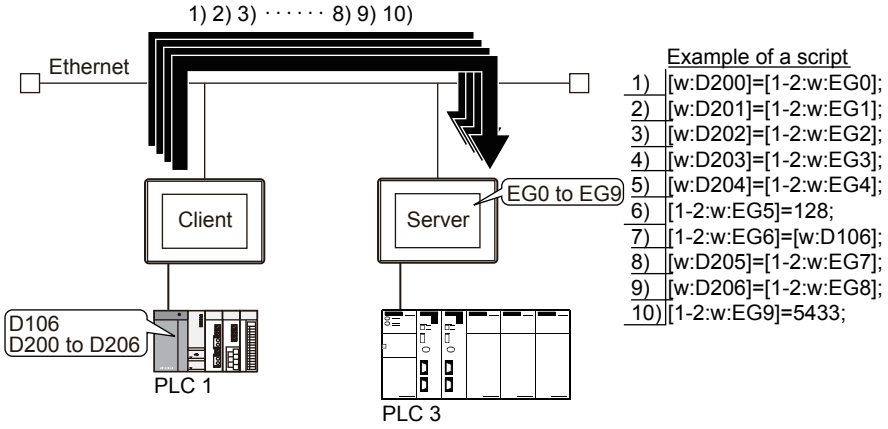
(1) When executing batch read to store in the GOT internal device (GD) and executing batch write after processing

Access to the other station's GOT occurs twice (1) and 3)).
Hence, if one access requires 50 ms, about 100 ms is necessary in total.
The gateway devices are accessed in a batch when the execution condition of the script is satisfied. Therefore, the values of the gateway devices when the conditions are satisfied are processed and written.



(2) When using gateway devices directly

Access to the other station's GOT occurs 10 times (1) to 10)).
Hence, if one access requires 50 ms, about 500 ms is necessary in total.
The gateway devices are accessed sequentially when the execution condition of the script is satisfied. Therefore, values of the gateway devices that differ from themselves when the conditions are satisfied may be written.



■2 Gateway device setting

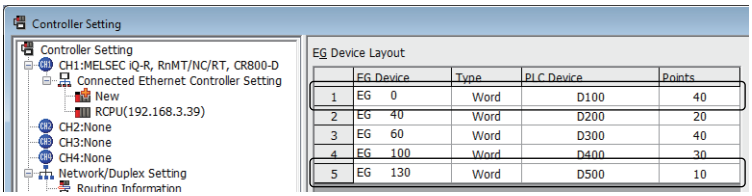
When assigning the devices of PLCs to gateway devices, assign the same type of devices of the same PLC together as far as possible.

Set the same type of devices of the same PLC together as shown below to decrease the number of accesses. Doing so improves the processing speed.

➟(2) When the devices of the host station, other stations, and other PLCs are set together

(1) When the devices for the host station, other stations, and other PLCs are not set together

When the GOT (client) accesses the host devices of the GOT (server), program 1), which reads 40 points from EG0 and program 2), which reads 10 points from EG130, are necessary.

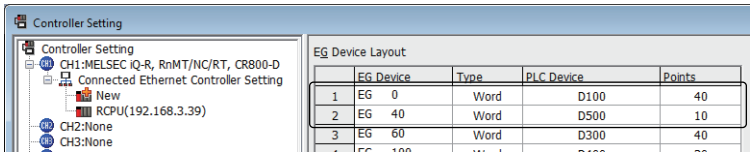


Example of a script

```
1) bmov([W:GD100],[1-2:w:EG0],40);
2) bmov([w:GD140],[1-2:w:EG130],10);
```

(2) When the devices of the host station, other stations, and other PLCs are set together

When the GOT (client) accesses the host devices of the GOT (server), only program 1), which reads 50 points from EG0, is necessary.



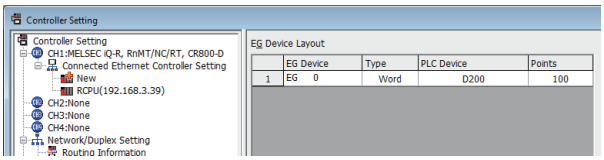
Example of a script

```
1) bmov([W:GD100],[1-2:w:EG0],50);
```

• For more efficiency

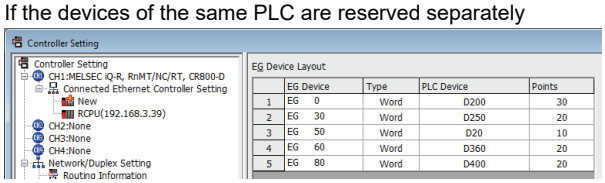
If the devices of the same PLC, used for the server/client function, are reserved as a set, as shown below, in the system design phase, the GOT (server) needs a smaller number of times of access and thus the processing speed improves.

If the devices of the same PLC are reserved as a set



If 100 points of devices are accessed,
PLC is accessed just 1 time.

If the devices of the same PLC are reserved separately



If 100 points of devices are accessed,
PLC is accessed 5 times.

■3 Performance of the server/client function (reference value)

The following shows the performance (reference values) of the server/client function when [Script Setting] and [Gateway Device Setting] are set as shown above.
The reference values are obtained under the conditions shown below.

- The system is configured with one GOT (server) and one GOT (client).
- GOT (server): Numerical input (64 points) setting
- GOT (client): Numerical input (64 points) setting
- Number of assigned device points: 10 word devices

Combinations for improving the efficiency		Response speed when direct CPU connection (serial) is used
Improving the efficiency of the script	Improving the gateway device setting efficiency	
○ ⟹(1) When executing batch read to store in the GOT internal device (GD) and executing batch write after processing	○ ⟹(2) When the devices of the host station, other stations, and other PLCs are set together	About 260 ms
○ ⟹(1) When executing batch read to store in the GOT internal device (GD) and executing batch write after processing	× ⟹(1) When the devices for the host station, other stations, and other PLCs are not set together	About 1300 ms
× ⟹(2) When using gateway devices directly	○ ⟹(2) When the devices of the host station, other stations, and other PLCs are set together	
× ⟹(2) When using gateway devices directly	× ⟹(1) When the devices for the host station, other stations, and other PLCs are not set together	

In a system where multiple GOTs (client) are configured, the number of the GOTs (client) multiplied by the response speed is the total response speed shown in the above table.

10.13.10 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the precautions for using the server/client function.

■1 Precautions for system configuration

(1) Connection to the intranet

If the system needs keeping secure against unauthorized access to the intranet, consult a network service provider or a network administrator (a person who does network planning, IP address management, and others), and include your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the intranet connection.

(2) Countermeasures against access delay

When multiple network devices (including GOTs) are connected to the same segment, the network load increases and therefore the communication performance between the GOT and PLC may be degraded.
The following countermeasures may improve the communication performance.

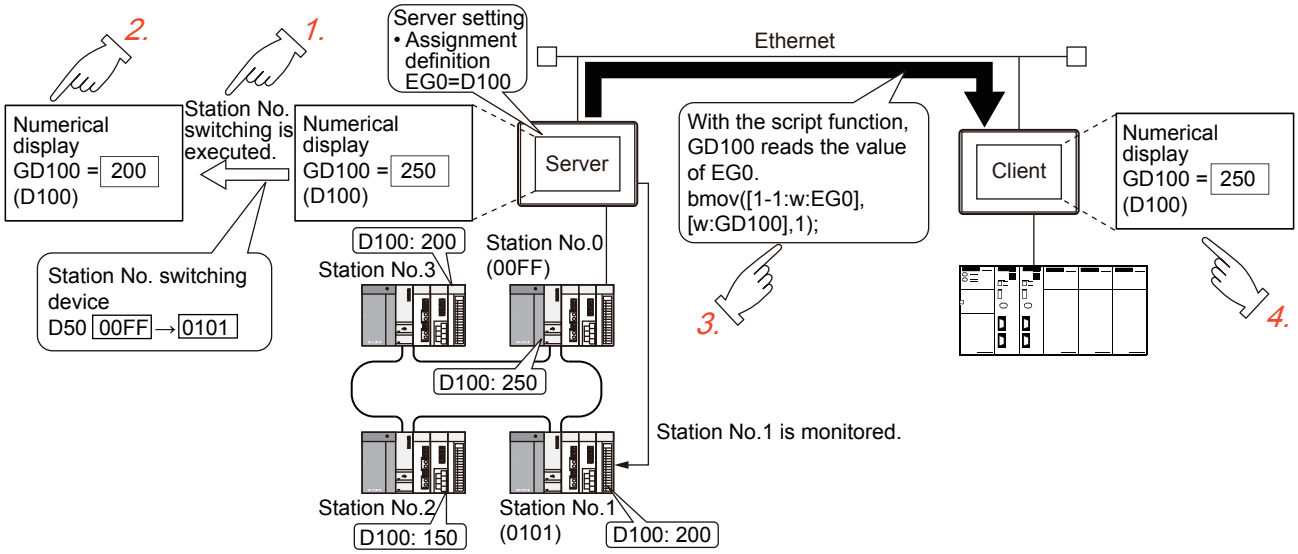
- Using the switching hub
- Reducing the number of devices the GOT monitors

(3) When a firewall is used

If a firewall disconnects the communication of the gateway function, take countermeasures such as changing the port No. to be protected behind the firewall.
If the system needs keeping secure against unauthorized access in changing the port No. to be protected behind the firewall, consult the network administrator (a person who does network planning, IP address management, and others), and develop your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the change of the port No.

■2 Precautions for station No. switching

When you monitor gateway devices, which have been assigned to controller devices, the monitored devices are not switched at station No. switching.
Create the screen for each station.



Step 1 Execute the station No. switching.

Step 2 The numerical display on the GOT (server) is changed by the station No. switching.

Step 3 The station No. switching does not affect the assignment of the gateway devices. Therefore, read the value of EG0 of the PLC (station number 0) to GD100 with the script.

Step 4 The numerical display of the GOT (client) is not affected by the station No. switching.

■3 Precautions on the script setting

(1) Setting the trigger type

When setting the script, do not set the trigger type to [Ordinary] or [Sampling, 2 sec.].
The setting may affect other monitoring operations.

(2) Monitoring gateway devices with a script

A script cannot be used to monitor the gateway devices of the GOT itself (GOT) where the script is executed.
To monitor the PLC devices assigned to the gateway devices, monitor the PLC devices directly.

(3) Specifying the network No. and PLC station number in a script

In the script, which accesses the gateway devices of the target GOT, specify the network No. and the PLC station number of the target GOT.
Even if 0-FF (host station) is set for the target, the gateway devices cannot be monitored.

(4) When using the bmov instruction in a script

A script does not run properly in the following cases.

- A bit device that cannot be specified as a word device is assigned to a gateway device. This gateway device is specified for a command specifying word devices.
- A word device that cannot be specified as a bit device is assigned to a gateway device. This gateway device is specified for a command specifying bit devices.

Do not specify such gateway devices for the commands specifying word devices and bit devices.
The following shows the commands specifying word devices and bit devices.

Item	Command type	Content
Commands specifying word devices	Function (application arithmetic operation)	sin, cos, tan, asin, acos, atan, abs, log, log10, exp, ldexp, sqrt
Commands specifying bit devices	Operator (bit device)	&, |, ~, ^, <<, >>
	Operator (assignment)	=
	Function (device operation)	set, rst alt

For the details of each device, refer to the following.

➟12.4 Device Range and Settings of Each Controller

For the details of each command, refer to the following.

➟9.9.2 ■3 Control structures for a project script, screen script, and script part

9.10.2 ■2 Control structure of object scripts

(5) Number of devices used for the bmov and fmov functions

If the gateway devices are used for the bmov and fmov functions, up to 400 devices are usable.

■4 Precautions for monitoring

- If you try to monitor the gateway devices of the GOT (server) in the situation that the server or client function cannot be used due to the power off of either of the GOTs or other possible causes, the error (error code 16) at the execution of the script occurs at the GOT (client) and the script stops

  For errors during script execution, refer to the following.

  ➟9.9.14 Troubleshooting
- When a gateway device to which no PLC device is assigned is monitored, it is monitored as 0 (off if a bit device is specified).

  When a write operation on values is executed, the values are invalid.
- During the execution of a script that uses gateway devices, the screen save time may be affected.

  Canceling the screen saver (by a screen touch or human sensor) may take longer time than usual.

  (When the script processing takes 2 seconds, for example, it takes a maximum of 2 seconds for the screen saver to be canceled after the screen is touched.)

  When the automatic screen saver is set, the execution intervals may be longer than the specified interval.

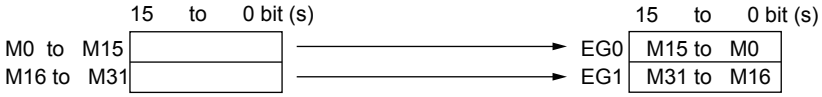
■5 Precautions for assigning devices

The gateway devices are set in a set of two points.

Therefore, the number of assigned devices depends on the controller devices to be set.

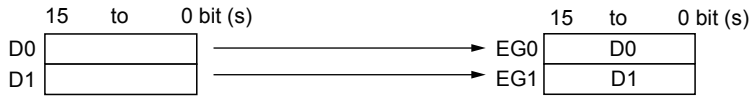
(1) When assigning bit devices to gateway devices

Bit devices are assigned in a unit of 32 points.



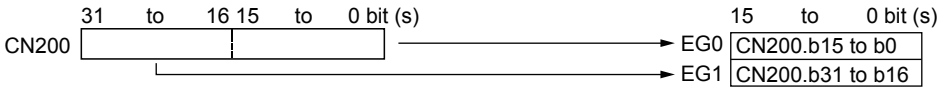
(2) When assigning word devices to gateway devices

Word devices are assigned in a unit of 2 points.



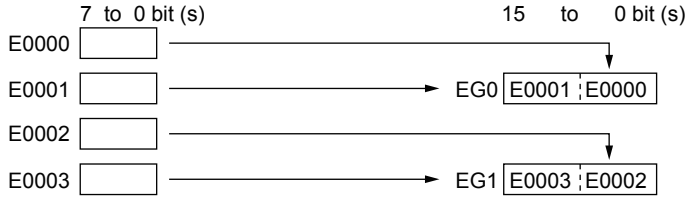
(3) When assigning double-word devices to gateway devices

Double-word devices are assigned in a unit of 1 point.



(4) When assigning 8-bit devices to gateway devices

8-bit devices are assigned in a unit of 4 points.



10.13.11 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the server/client function as required. The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item
Notifies the operation availability status of the server function.	GS200.b3
Notifies the operation availability status of the client function.	GS200.b4
Turns on when an error occurs in the use of the server function.	GS200.b14
Turns on when an error occurs in the use of the client function.	GS200.b15
Stores the number of errors that occur in the use of the server function.	GS210
Stores the error codes of errors that occur in the use of the server function.	GS211
Stores the year (upper byte, two lower digits of year) and the month (lower byte) with BCD code when an error occurs in the use of the server function.	GS212
Stores the year (upper byte) and the hour (lower byte) with BCD code when an error occurs in the use of the server function.	GS213
Stores the minute (upper byte) and the second (lower byte) with BCD code when an error occurs in the use of the server function.	GS214
Stores the lower part of the IP address of the GOT (client), where an error occurs in the use of the server function, with BCD code.	GS215
Stores the upper part of the IP address of the GOT (client), where an error occurs in the use of the server function, with BCD code.	GS216
Stores the number of errors that occur in the use of the client function.	GS220
Stores the error codes of errors that occur in the use of the client function.	GS221
Stores the year (upper byte, two lower digits of year) and the month (lower byte) with BCD code when an error occurs in the use of the client function.	GS222
Stores the day (upper byte, two lower digits of year) and the hour (lower byte) with BCD code when an error occurs in use of the client function.	GS223
Stores the minute (upper byte) and the second (lower byte) with BCD code when an error occurs in the use of the client function.	GS224
Stores the lower part of the IP address of the GOT (server), where an error occurs in the use of the client function, with BCD code.	GS225
Stores the upper part of the IP address of the GOT (server), where an error occurs in the use of the client function, with BCD code.	GS226
Clears the errors (GS200.b14, GS210 to GS216) of the server function.	GS400.b14
Clears the errors (GS200.b15, GS220 to GS226) of the client function.	GS400.b15

10.13.12 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Troubleshooting for the server/client function

The following shows the troubleshooting for the server/client function.

Symptom		Details of error and cause	Corrective action
The server/client function does not work.	When all the bits of GS200 are off and the GOT does not respond to Ping *1*2	The system application (extended function) for the server/client function is not installed on the GOT.	Write the package data, which contains the system application (extended function) for the server/client function, to the GOT. ➟4. COMMUNICATING WITH GOT
		No IP address has been set for the GOT.	Set the IP address for the GOT in the utility of the GOT.
		The port number of the personal computer (client) is different from that of the GOT (5011).	Set the same port number for the personal computer (client) and for the GOT (5011).
	If any bit of GS200 is on and the GOT responds to Ping *1*2	-	Refer to the troubleshooting for the functions corresponding to the bits which are on, and take the corrective actions.
A gateway device cannot be monitored.		A device that does not exist in the server settings has been monitored.	Check the controller devices that have been assigned to the gateway devices.
		The IP address of the GOT to be monitored has been incorrectly set in the client settings.	Check the IP address of the GOT to be monitored.
		An error has occurred in either of the GOTs (server or client).	Check the GOT special registers GS211 and GS221 and take the corrective actions. ➟■3 Error code list of the server/client function
		A script function error has occurred.	Check the script function error and take the corrective actions. ➟9.8 Controlling Operations with Scripts ([Script])

*1 For the details of the Gateway Common Information (GS200), refer to the following.

➟12.1.3 GOT special register (GS)

*2 To check if the GOT responds to Ping, give the ping command through the personal computer to the GOT.

■2 Error information of the server/client function

The error information of the server/client function is stored in the GOT special register (GS).
Check the error information of the server/client function by monitoring the following GOT special registers.
For the details of the GOT special register, refer to the following.

➟12.1.3 GOT special register (GS)

• Write device

Device	Function		Description
GS210	Server function	Error counter	Stores the number of errors that have occurred.
GS211		Error code	Stores the error code. ➟■3 Error code list of the server/client function
GS212		Error date and time	Stores the year (upper byte, two lower digits of year) and the month (lower byte) of the error occurrence date/time in BCD code.
GS213			Stores the day (upper byte) and the hour (lower byte) of the error occurrence date/time in BCD code.
GS214			Stores the minute (upper byte) and the second (lower byte) of the error occurrence date/time in BCD code.
GS215		Request source	Stores the lower part of the IP address of the GOT (client), where an error has occurred, with BIN code.
GS216			Stores the upper part of the IP address of the GOT (client), where an error has occurred, with BIN code.

Device	Function		Description
GS220	Client function	Error counter	Stores the number of errors that have occurred.
GS221		Error code	Stores the error code. ➟■3 Error code list of the server/client function
GS222		Error date and time	Stores the year (upper byte, two lower digits of year) and the month (lower byte) of the error occurrence date/time in BCD code.
GS223			Stores the day (upper byte) and the hour (lower byte) of the error occurrence date/time in BCD code.
GS224			Stores the minute (upper byte) and the second (lower byte) of the error occurrence date/time in BCD code.
GS225		Request target	Stores the lower part of the IP address of the GOT (server), where an error has occurred, with BIN code.
GS226			Stores the upper part of the IP address of the GOT (server), where an error has occurred, with BIN code.

■3 Error code list of the server/client function

The following lists the error codes that are stored in the GOT special registers GS211 (Server Function Error Code) and GS221 (Client Function Error Code).

Error code *1	Details of error and cause	Corrective action
490	A script was used for monitoring the gate device that executed the script.	• Change the monitor destination GOT specified in the script to another GOT. • Monitor the PLC devices directly without using the script.
491	A station that does not exist was accessed.	Check the network number, the PLC station number, and the Ethernet settings of the the monitor destination.
492	A communication timeout error has occurred.	• Specify a longer communication timeout period. ➟5.5.1 ■4 [Controller Setting] • Check the network. (Check if firewall exists, execute Ping, or take other actions.) • Check for cable disconnection, and check the module mounting status.
493	A communication error has occurred.	• Check for cable disconnection, and check the module mounting status. • Check the network. (Check if firewall exists, execute Ping, or take other actions.)

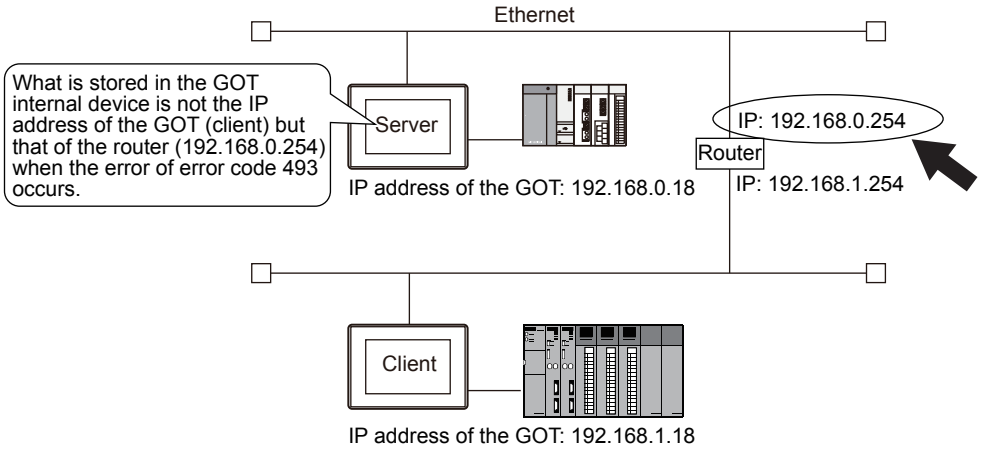
*1 The error caused in the GOT (server) is error code 493 only.

(1) Error code 493 has occurred in the GOT (server).

The error may occur in a congested network.
If no error has occurred in the GOT (client), the communication recovers by the retry processing of the GOT (client) .

(2) A system where a router is used

If error code 493 has occurred in the GOT (server), the router address is taken as the IP address of the target client.



(3) An error has occurred in the GOT (client).

When an error occurs in the GOT (client), the script stops its operation.
When an error occurs, execute the script again after taking the corrective actions. For the details of the script, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])

(4) Error code 492 has occurred in the GOT (client)

The error may occur when multiple GOTs (client) access the GOT (server).
Adjust the value of [Timeout Time].
Refer to the following calculation to set the value.
Timeout time that is already set × Number of GOTs (client) = [Timeout Time] after the adjustment

(5) Error code 15 (the script has not completed within Script Monitoring Time) was stored to the script error data (GS16 to GS47) when a script with gateway devices was used.

The error may occur when multiple GOTs (client) access the GOT (server).
Adjust the value of the [script monitoring time](GS385).
Refer to the following calculation to set the value.
Timeout time that is already set × Number of GOTs (client) = [script monitoring time] after the adjustment
For the details of the script, refer to the following.

➟9.8 Controlling Operations with Scripts ([Script])

■4 Error code list of MX Component

The following lists the error codes of the errors which occur when the GOT is accessed from MX Component.

Error code*1	Details of error and cause	Corrective action
0x0180840B	Timeout error Data could not be received within the timeout time.	Corrective action for MX Component • Review the timeout value in the property. • Set the timeout value again in the communication setting utility. • Review the system such as the PLC CPU settings, module settings, and the cable status. • Retry the method. • Perform Close once and execute Open again. • Exit the program and restart the IBM-PC/AT compatible. ➟Programming Manual for MX Component Corrective action for GOT • Check if the server settings for GT Designer3 are configured. ➟10.13.6 [Gateway Server]
0x010F4030	An unavailable device or device that does not exist has been assigned to the accessed gateway device.	Check that the device assignment is correct or the set devices exist in the server settings of GT Designer3.
0x010F4031	A device of PLCs outside the monitor range has been assigned to the accessed gateway device.	Check if the devices that are within the monitor range are assigned in the server settings of GT Designer3.
0x010F4B00	A communication timeout has occurred. A module is not mounted correctly or a cable is not correctly.	• Check for cable disconnection, and check the communication unit mounting status, and the PLC status. • The communication timeout may occur when the load on the PLC increases during the access to another station. In this case, move the data in another station to the PLC of the host station, and monitor the data at the host station. • If the sequence scan time is long, insert the COM instruction. • Check the GOT error codes of the system alarm or system information. When an error has occurred, take the corrective actions.

*1 When an error other than those listed above occurs, refer to the following.

➟MX Component Version 3 Operating Manual
MX Component Version 3 Programming Manual

*2 For details of the GOT error codes, refer to the following.

➟GOT2000 Series User's Manual (Utility)

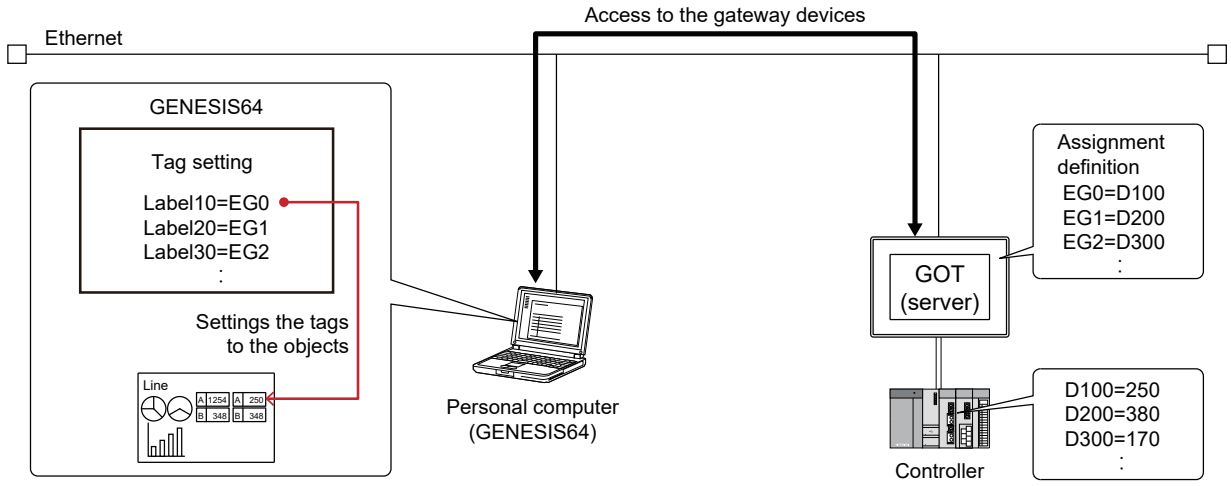
10.14 Monitoring a Controller through a GOT Using GENESIS64 (GENESIS Interaction Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.14.1 Overview of the GENESIS interaction function

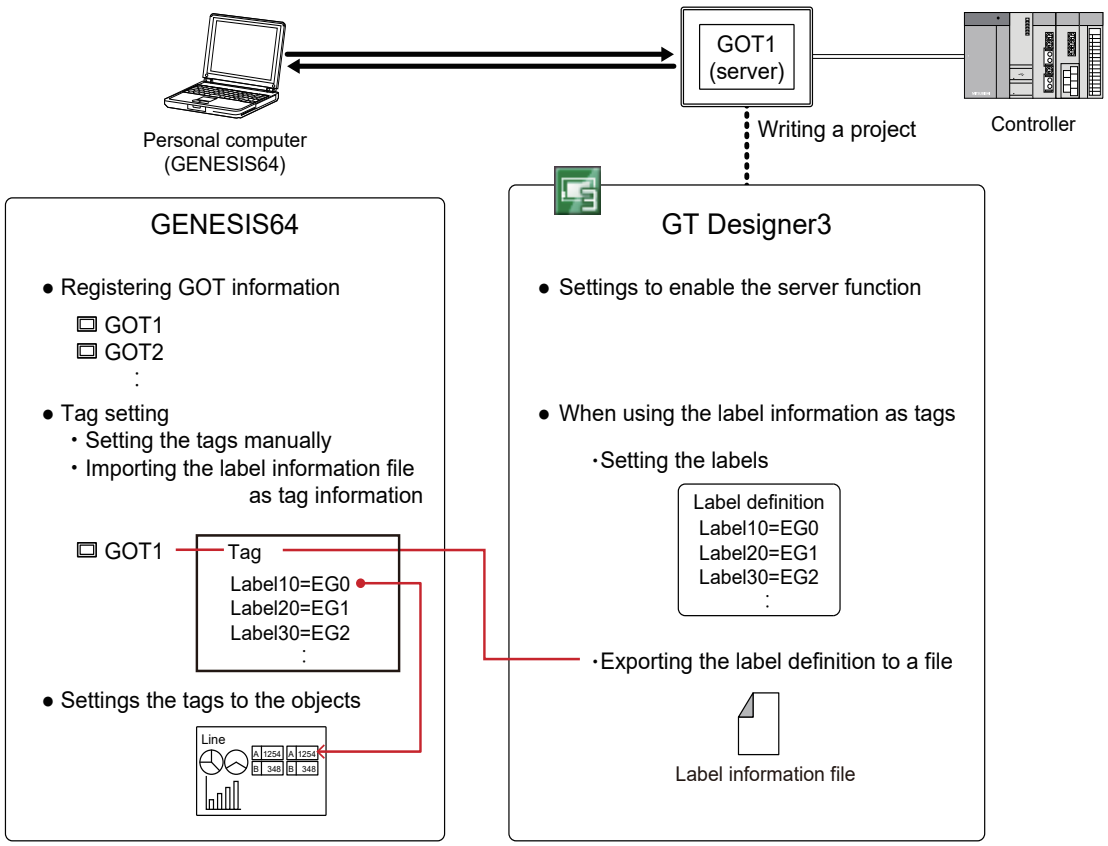
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GENESIS interaction function refers to a function used to collect or change device data of the controller monitored by a GOT (server) on the personal computer on which GENESIS64 is installed.
To use the GENESIS interaction function, configure the server function settings in the GOT (server) and establish correlation between the tags and the GOT gateway devices in GENESIS64.
The "tags" are data used when GENESIS64 accesses external data.
After establishing correlation between the tags and gateway devices in GENESIS64, assign the tags to the objects of GENESIS64. Then, you can read/write data from/to the controller connected to the GOT using the tags correlated with the gateway devices.



Establish correlation between the tags and the GOT gateway devices in GENESIS64 manually or by importing the label information of GT Designer3.
To import the label information of GT Designer3, assign the labels to the gateway devices in GT Designer3, and output that label definition to a label information file.
Import the outputted label information file as "tags" to GENESIS64, and you can set the tags to the objects on the screen design application in GENESIS64.
The label names used in GT Designer3 can be used for the tags, enabling you to design a screen with the names without paying attention to the device names.

The following shows the outline of operation required to enable the GENESIS interaction function.



■1 Registering the GOT information

In GENESIS64, the GOT information can be registered manually or by using the function that runs automatically to detect the GOTs on the same Ethernet network.

■2 Tag settings

Create tags in GENESIS64 and establish correlation between the tags and the GOT gateway devices.
You can create tags manually or by importing the label information file created in GT Designer3 to GENESIS64.

■3 Setting the tags to the objects of GENESIS64

GENESIS64 sorts the tags by GOT.
In the GENESIS64 screen design application, the sorted tags are displayed in the tree structure. This enables you to set the tags to the objects without specifying the connected GOTs one by one.

10.14.2 Specifications of the GENESIS interaction function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Description
Applicable GENESIS64	Version10.97.1 or later
Applicable GOT	• GT27 • GT25 • GT SoftGOT2000 Version1.265B or later • GS25
Applicable GT Designer3	Version1.265B or later
Range of devices accessible by GENESIS64	➡10.13.2 ■5 Access range that can be monitored • GT SoftGOT2000 on the personal computer (GENESIS64) be used as a server.
Number of GOTs (servers) simultaneously accessible to the personal computer (GENESIS64)	16 maximum

Item	Description
Number of automatically detected GOTs	255 maximum (the total of GOTs and GT SoftGOT2000 modules) For GT SoftGOT2000, the number of running modules is the maximum number of automatically detected modules.
Devices that can be monitored in GENESIS64	Refer to the following. ➟12.3 Device Range and Settings of Mitsubishi Electric Equipment 12.4 Device Range and Settings of Each Controller

10.14.3 GENESIS interaction function setting procedure

To enable the GENESIS interaction, operate GT Designer3 and GENESIS64.

Software	Operation
GT Designer3	• Assigning the labels to the gateway devices • Exporting the information to label information files
GENESIS64	• Registering the GOT information • Importing the label information files • Activating the GOTs to be used • Assigning the tags to the objects

■1 Operation in GT Designer3

Step 1 Open the [Label Group Property] dialog to create label groups for GENESIS64.

For details on the label group operation, refer to the following.

➟6.1.5 ■2 Registering, editing, and deleting the label (GT Designer3)

Step 2 In the [Label Group] dialog of a created label group, enter the tag names to be used in GENESIS64 to [Label Name] and the GOT gateway devices to be assigned to the tags to [Assign (Device)].

Step 3 Click the [Export] button to output the setting details to a label information file.

Output the file in either of the following conditions.

- Unicode text file
- CSV file with the display language of GT Designer3 set to English

Step 4 Configure the settings to use the server function.

➟10.13.4 ■2 Setting procedure

Step 5 Write the package data to the GOT.

➟4. COMMUNICATING WITH GOT

■2 Operation in GENESIS64

For how to operate GENESIS64, refer to the manual of GENESIS64.

Step 1 Register the GOT information in the Workbench.

Step 2 Import the label information files created in GT Designer3 for the registered GOTs.

Step 3 Activate the connected GOTs (servers) to be used.

Step 4 Assign the tags to the objects when creating a screen in an application such as GraphWorX64.

10.15 Sending a Mail from the GOT (Mail Send Function)

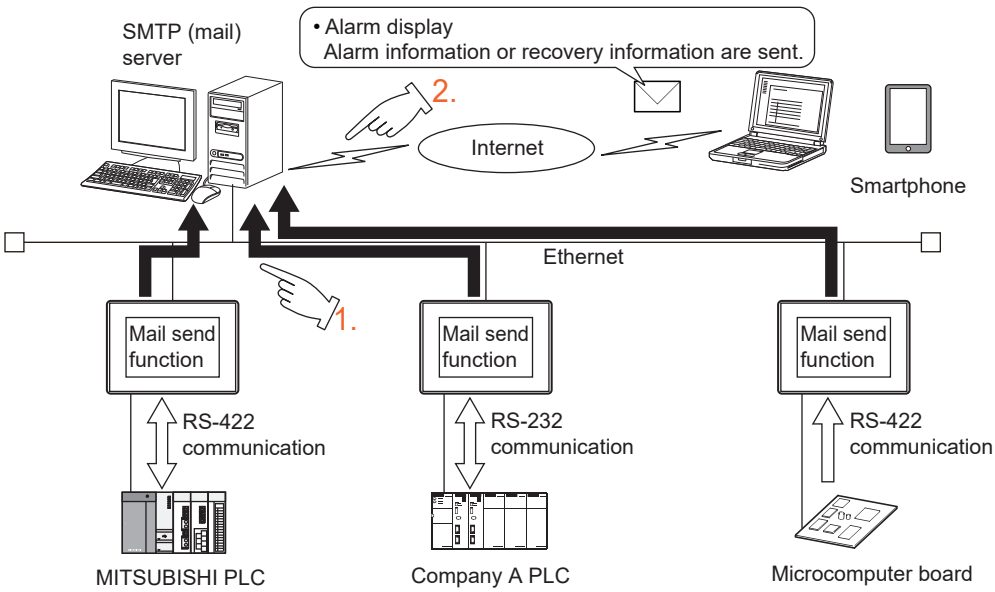
The specifications of the mail send function differ between the GOT and GT SoftGOT2000.
For the mail send function of GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

10.15.1 Overview of the mail send function

When an error occurs or is reset, you can send the information to personal computers and smartphones by an e-mail using an alarm display object.
For the details of the alarm display, refer to the following.

➟9.1.5 Viewing alarm events (Alarm display)



Step 1 The GOT uses the alarm display to issue an e-mail sending request to the SMTP server.

Step 2 The SMTP server sends an e-mail in response to the request from the GOT.

10.15.2 Specifications of the mail send function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the mail send function, a system application (extended function) of [Gateway(Mail)] is required.
Selecting [Use the function of Mail] and configuring the settings in [Mail] in the [Controller Setting] window incorporate the application into the package data automatically.

➟10.13.5 [Communication Setting]
10.15.4 [Mail]

■2 Required version of CoreOS

CoreOS version AC or later is required to specify a mail server with the host name.
If the CoreOS version is earlier than AC, system alarm 698 is output at GOT startup and e-mails cannot be sent.
Even though the DNS server settings are configured, if the SMTP server and POP3 server are both specified with the IP address, system alarm 698 is output.
In this case, e-mails can be sent.

■3 Number of mail send function settings for one project

One mail send function setting is available for one project.

■4 Specifications of mail sending

The following shows the specifications of the mail send function.

Item	Specifications	
Mail sender address	FROM	1 (Max. 64 characters: one-byte alphanumeric characters and symbols only)
Mail receiver address	TO	1 to 32 (Max. 64 characters per address: one-byte alphanumeric characters and symbols only)
	CC	0 to 32 (Max. 64 characters per address: one-byte alphanumeric characters and symbols only)
	BCC	
Subject	SUBJECT	Max. 128 characters (One-byte alphanumeric characters and symbols only)
SMTP server	Port	0 to 65535 Do not use a port for encrypted communications (SSL, TLS, or STARTTLS). Such a port cannot be used for the mail send function.
	Address	Specify the IP address or host name (when using a DNS server). IP address: 0.0.0.0 to 255.255.255.255 Host name: Max. 253 characters (One-byte alphanumeric characters and symbols only) If the internet service provider allows direct specification of the IP address to access the server, e-mails can be sent via a router.
	Authentication method	Specify SMTP authentication (CRAM-MD5, LOGIN, PLAIN) or POP before SMTP. Set the user name and password for SMTP authentication. Set the user name, password, and POP3 server address for POP before SMTP. • User name: Max. 256 characters (one-byte alphanumeric characters and symbols only) • Password: Max. 256 characters (one-byte alphanumeric characters and symbols only) To use a password of 129 or more characters, install version AA or later of BootOS on the GOT. For information on how to install the BootOS, refer to the following. ➥4.3.2 ■1 Writing data to one GOT • POP3 server: Specify the IP address or host name (when using a DNS server). IP address: 0.0.0.0 to 255.255.255.255 Host name: Max. 253 characters (One-byte alphanumeric characters and symbols only) For a POP server, use one having port 110 that does not provide encrypted communications (SSL, TLS, or STARTTLS).
Number of characters	The following two types of comments can be sent. • Comment displayed as an alarm message : Max. 1024 characters (Alphanumeric characters) • Comment displayed in the comment window of the alarm detail display : Max. 1024 characters (Alphanumeric characters)	
Max. number of sending mails	Max. 16 mails can be sent at a time. If 17 or more mails are attempted to be sent, 16 of them are sent.	

The following shows mail software whose operations have been validated by Mitsubishi Electric Corporation.
The GOT (mail sender) does not require the mail software.

Name	Manufacturer
Outlook2010, Outlook2007, Outlook2003, OutlookExpress6	Microsoft Corporation
AL-Mail32 Version1.13 (shareware)	-
Winbiff	Orangesoft Inc.

■5 Applicable languages for mail sending

Only Japanese and English are applicable.
For the other languages, the mail is sent as [?].

■6 Clock setting of the GOT

Depending on the clock setting (time setting and time notification) of the GOT, a problem may occur, such as the clock data set in the GOT or the controller is not reflected.
For the clock setting of the GOT, refer to the following.

➥5.3.5 Setting the GOT time setting method ([Time Setting])

■7 Date/Time of mail sending

The date and time of the SMTP server at mail sending is attached to the mail.

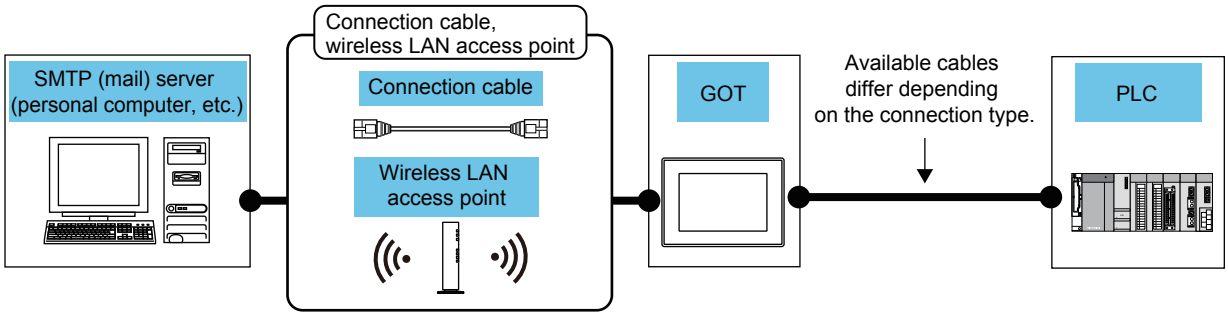
10.15.3 How to use the mail send function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

For the communication interface settings, refer to the following.

➟10.13.5 [Communication Setting]



SMTP (mail) server	Connection cable*1*2, Wireless access point	Maximum segment length*3	GOT	
			Option	GOT model
Personal computer or others	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GS25
			GT25-J71E71-100	GT27 GT25 *6
	-	-	GT25-WLAN	GT27 *4 GT25 *4*6 GS25 *4
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*6 GS25 *5

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)
• 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Not available to GT2505-V and GT25HS-V.

■2 Setting procedure

Step 1 Consider the configuration of the whole system.

- Configuration of the whole system including controllers and GOTs
- Controller settings (including device assignment)
- GOT settings (including IP address, network number, and station number)

Step 2 Connect the GOT and the controllers.

➟■1 System configuration

Step 3 Configure the communication interface settings.

In the [Controller Setting] window, select [Use the function of Gateway] in [Communication Setting].

➟10.13.5 [Communication Setting]

Step 4 Configure the mail settings with GT Designer3.

➟10.15.4 [Mail]

Step 5 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 6 Check the GOT operation.

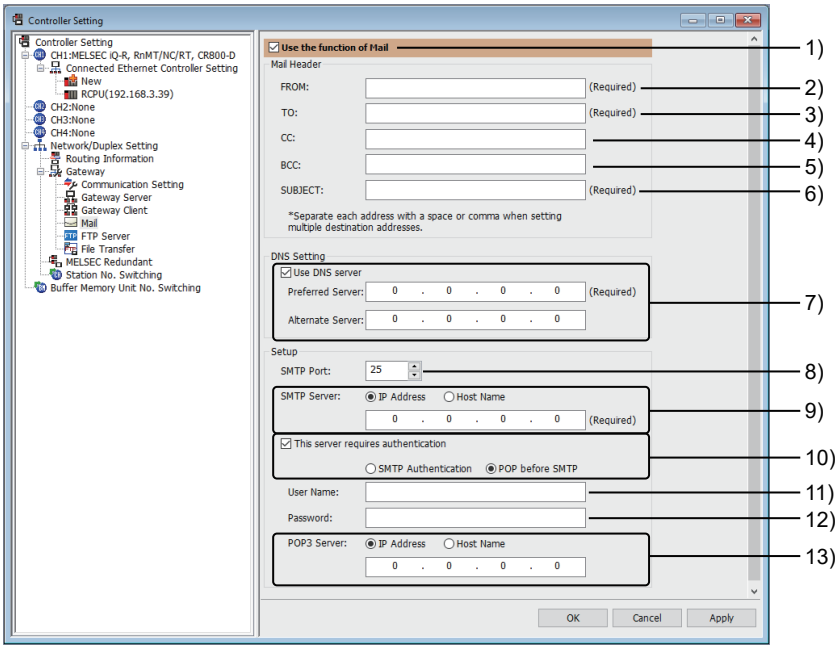
➟10.15.5 Procedure of the mail send function

10.15.4 [Mail]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [Mail] in the [Controller Setting] window and set the required items.



1) **[Use the function of Mail]**
Select this item to use the mail send function.

2) **[FROM]**
Set the address of the mail sender.
One address can be set.
Up to 64 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~
Set one of the following addresses since the GOT does not have its own address.
• Address set to [TO]
• Address you want to use as the return address

3) **[TO]**
Set the address of the mail receiver.
When setting addresses of multiple mail receivers, separate the addresses by commas or spaces.
Up to 32 addresses can be set.
Up to 64 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

4) **[CC]**
Set the address of the mail receiver. (carbon copy). (You can send mails without [CC].)
Up to 32 addresses can be set.
Up to 64 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

5) **[BCC]**
Set the address of the mail receiver. (blind carbon copy). (You can send mails without [BCC].)
Up to 32 addresses can be set.
Up to 64 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

6) **[SUBJECT]**
Set the title of the mail.
When receiving e-mails from multiple GOTs, set a different subject for each GOT to identify the sender.
Up to 128 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

7) **[Use DNS Server]**

Select this item to specify the SMTP server and POP3 server with the host name and set the following items.
To check the IP addresses of the DNS servers, contact the network administrator or connection provider (visiting its website, for example).

• [Preferred Server]:

Specify a server to communicate with first as a DNS server.
The setting range is [0.0.0.0] to [255.255.255.255].

• [Alternate Server]:

Specify a server to communicate with if attempting to communicate with the preferred server fails.
The setting range is [0.0.0.0] to [255.255.255.255].

8) **[SMTP Port]**

Set the port number of an SMTP server.
The setting range is [0] to [65535].

9) **[SMTP Server]**

Set the address of an SMTP server.

• [IP Address]:

Specify the IP address.
Specification with the IP address is available even when [Use DNS server] is selected.
The setting range is [0.0.0.0] to [255.255.255.255].

• [Host Name]:

This item is enabled when [Use DNS server] is selected.
Specify the host name.
Set the full computer name (the computer name + . (period) + domain name) for the host name.
Up to 253 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.
- .
When using e-mail service, set the specified SMTP server.
The e-mail service providers whose operations are validated by Mitsubishi Electric Corporation are as follows (as of November, 2021).
- Asahi Net (****@asahi-net.or.jp): mail.asahi-net.or.jp
- au one net (****@**.auone-net.jp): msa.**.auone-net.jp (** parts depend on the e-mail addresses.)
- Twilio SendGrid: smtp.sendgrid.net

10) **[This server requires authentication]**

Uses the server authentication.
Select this item, and set the relevant items for server authentication.

• [SMTP Authentication]

Uses SMTP authentication.
Select this item, and set [User Name] and [Password].

• [POP before SMTP]

Uses POP before SMTP.
Select this item, and set [User Name], [Password], and [POP3 Server].

11) **[User Name]**

Set the user name for server authentication.
Up to 256 one-byte alphanumeric characters (uppercase or lowercase), one-byte spaces, and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

12) **[Password]**

Set the password for server authentication.
Up to 256 one-byte alphanumeric characters (uppercase or lowercase), one-byte spaces, and symbols below are usable.
! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~

13) **[POP3 Server]**

Set this item when the authentication method is set to [POP before SMTP].
Set the address of a POP3 server.

• [IP Address]:

Specify the IP address.
Specification with the IP address is available even when [Use DNS server] is selected.
The setting range is [0.0.0.0] to [255.255.255.255].

• [Host Name]:

This item is enabled when [Use DNS server] is selected.
Specify the host name.
Up to 253 one-byte alphanumeric characters (uppercase or lowercase) and symbols below are usable.

- .
When using e-mail service, set the specified POP3 server.

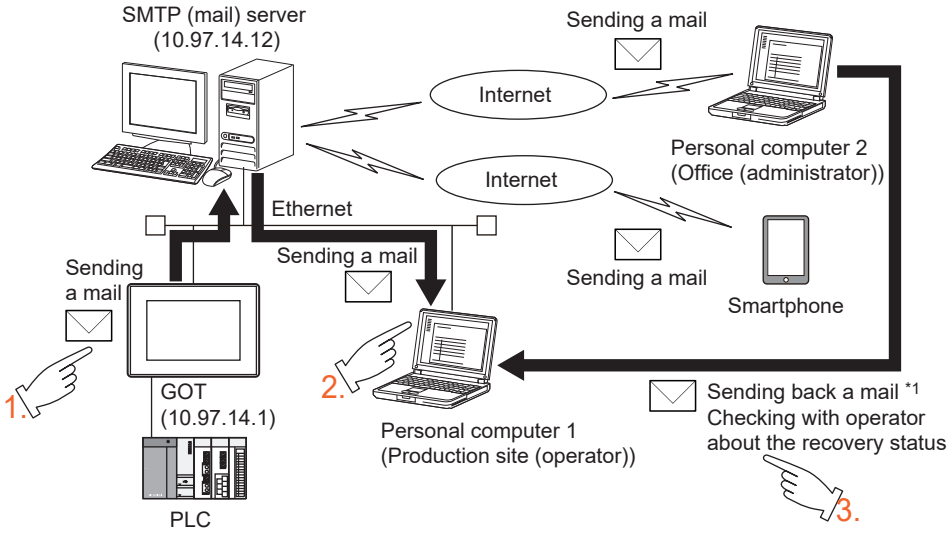
10.15.5 Procedure of the mail send function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Application examples

The following shows an application example of the mail send function.

(1) Sending mails to notify the production site and office of the details of an alarm occurring in the GOT



*1 GOTs cannot receive mails. Thus, set the mail address of the personal computer at the production site for FROM.
If the mail address of the personal computer at the production site is set for FROM, the office (administrator) can send back a mail to the production site to obtain the information about the latest recovery status.

Step 1 If an alarm occurs, the GOT sends an e-mail to notify the alarm to personal computer 1 (production site (operator)), smartphones, and personal computer 2 (office (administrator)).

Step 2 The production site receives the mail to notify the alarm, and then repairs and recovers the system.

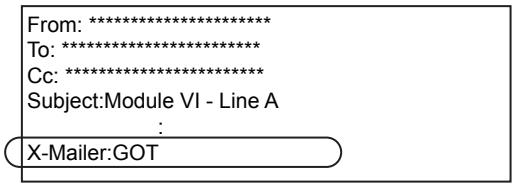
Step 3 The office sends a mail to request a report about the latest recovery status to the production site.

The following shows the setting example of the GOT.
Set the comments displayed in the alarm display in advance.

Item		Description
Controller setting	GOT IP address	10.97.14.1
	Send delay time	0 (ms)
	Communication timeout time	3 seconds
	Startup time	3 seconds
Mail setting	SMTP	10.97.14.12
	FROM	Mail address of personal computer 1 (production site (operator))
	TO	Mail address of personal computer 1 (production site (operator))
	CC	Mail addresses of personal computer 2 (office (administrator)) and smartphones
	SUBJECT	Module VI - Line A
Alarm display (Alarm display screen)	Device	Controller device to be monitored
	Mail sending	When the error occurs and recovery is completed

■2 Sending example

When a target device receives a mail from the GOT, the header of the received mail has a line showing that the GOT has sent the mail as shown below.
The display format and details of the received mail differ depending on the specifications of the mail software installed in the target device.
When a smartphone receives an e-mail from the GOT, the display details of the received e-mail may differ depending on the specifications (screen size) of the smartphone.
If 17 or more alarms occur or are recovered simultaneously, the details of first 16 alarms are sent.
Display example of the header of the received mail

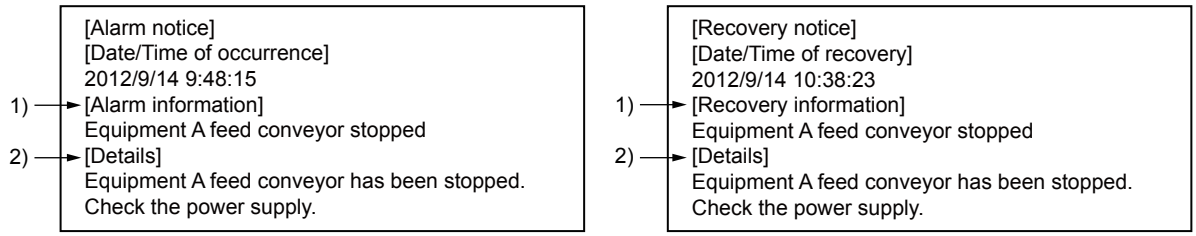


(1) When sending a mail using the alarm display

If the alarm occurs, the GOT sends mails to notify the receivers of the details on alarm occurrence.
If the alarm is recovered, the GOT sends mails to notify the receivers of the details on alarm recovery.
For how to set the alarm display, refer to the following.

➟9.1.5 Viewing alarm events (Alarm display)

(a) Display example of mail at the receiver



(At alarm occurrence) (At alarm recovery)

1) A basic alarm comment is displayed.
2) The contents of the detail display ([Details]) set for the alarm display are displayed.
If [Not Display], [Base Screen], or [Window Screen] is set for [Detailes] of the alarm display, [Detailes] is not displayed.

10.15.6 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for system configuration

(1) Connection to the intranet

If the system needs keeping secure against unauthorized access to the intranet, consult a network service provider or a network administrator (a person who does network planning, IP address management, and others), and include your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the intranet connection.

(2) Countermeasures against access delay

When multiple network devices (including GOTs) are connected to the same segment, the network load increases and therefore the communication performance between the GOT and PLC may be degraded.
The following countermeasures may improve the communication performance.

- Using the switching hub
- Reducing the number of devices the GOT monitors

(3) When a firewall is used

If a firewall disconnects the communication of the gateway function, take countermeasures such as changing the port No. to be protected behind the firewall.
If the system needs keeping secure against unauthorized access in changing the port No. to be protected behind the firewall, consult the network administrator (a person who does network planning, IP address management, and others), and develop your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the change of the port No.

■2 Precautions for using the mail send function

(1) Sending a mail to one mail address from multiple GOTs

To identify the sender of each mail in the multiple GOTs, set an individual SUBJECT for each mail.
Setting the same SUBJECT for each mail from multiple GOTs causes the difficulty in identifying the sender.

10.15.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the mail send function as required. The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item
Holding the on status while the mail send function can be used.	GS200.b0
Turning on when the error has occurred in the mail send function.	GS200.b11
Storing the number of the errors that have occurred in the mail send function.	GS201
Storing the codes of the errors that have occurred in the mail send function.	GS202
Storing the year (upper byte, two lower digits of year) and the month (lower byte) of the error occurrence date/time when the error has occurred in the mail send function in BCD code.	GS203
Storing the day (upper byte) and the hour (lower byte) of the error occurrence date/time when the error has occurred in the mail send function in BCD code.	GS204
Storing the minute (upper byte) and the second (lower byte) of the error occurrence date/time when the error has occurred in the mail send function in BCD code.	GS205
Notifying the type of the function that has caused the error in the mail sending process of the mail send function.	GS206
Clearing the errors (GS200.b11, GS201 to GS206) of the mail send function.	GS400.b11

10.15.8 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Troubleshooting for the mail send function

The following shows the troubleshooting for the mail send function.

Symptom		Details of error and cause	Corrective action
The mail send function does not work.	When all the bits of GS200 are off and the GOT does not respond to Ping *1*2	The system application (extended function) for the mail send function is not installed on the GOT.	Write the package data, which contains the system application (extended function) for the mail send function, to the GOT. ➡4. COMMUNICATING WITH GOT
		No IP address has been set for the GOT.	Set the IP address for the GOT in the utility of the GOT.
		The port number of the personal computer (MX Component) is different from that of the GOT (5011).	Set the same port number for the personal computer (MX Component) as that of the GOT (5011).
	If any bit of GS200 is on and the GOT responds to Ping *1*2	-	Refer to the troubleshooting for the functions corresponding to the bits which are on, and take the corrective actions.
Mail cannot be sent.		The SMTP server is not working properly.	Check with the network administrator that the SMTP server is working properly.
		Mail sender address is not properly set for FROM.	Set the proper sender address for FROM
		The GOT attempted to send 17 or more mails at a time.	Send 16 or less mails at a time.
Time when the mail has been sent is not correct.		Time of the SMTP server is incorrect. (The GOT sends mails referring to the time of the SMTP server.)	Set the correct time for the SMTP server.
The whole text of the e-mail is not displayed on the smartphone.		The number of characters that the smartphone can send (receive) has been exceeded.	Reduce the number of characters in the e-mail so that the smartphone can send (receive) the e-mail.
One-byte katakana is converted to two-byte katakana.		One-byte katakana cannot be used in the body of the mail. One-byte katakana is sent after converted to two-byte katakana.	This symptom is not an error.

*1 For the details of the Gateway Common Information (GS200), refer to the following.

➡12.1.3 GOT special register (GS)

*2 To check if the GOT responds to Ping, give the ping command through the personal computer to the GOT.

■2 Error information of the mail send function

The error information of the mail send function is stored in the GOT special register (GS).
Monitor the following GOT special registers to check the error information of the mail send function.
For the details of the GOT special register, refer to the following.

➡12.1.3 GOT special register (GS)

(1) Write device

Device	Function		Description
GS201	Mail send function	Error counter	Stores the number of errors that have occurred.
GS202		Error code	Stores the error code. ➡■3 Error code and error message of the mail send function
GS203		Error date and time	Stores the year (upper byte, two lower digits of year) and the month (lower byte) of the error occurrence date/time in BCD code.
GS204			Stores the day (upper byte) and the hour (lower byte) of the error occurrence date/time in BCD code.
GS205			Stores the minute (upper byte) and the second (lower byte) of the error occurrence date/time in BCD code.
GS206		Mail sender	Notifies the type of the function that has caused the error in the mail sending process. • 0: 25% 0: No error • 1: 25% 1: User Alarm Observation

■3 Error code and error message of the mail send function

The following lists the error codes that are stored in the GOT special register GS202 (Mail Send Function Error Code).

Error code	Details of error and cause	Corrective action
2	No sender address is set for FROM.	Set the sender address for FROM. ➟10.15.4 [Mail]
3	The SMTP server is not set.	Set the SMTP server. ➟10.15.4 [Mail]
4	No receiver address is set for TO.	Set the receiver address for TO. ➟10.15.4 [Mail]
5	Mail address is incorrect.	Check that the mail addresses for FROM, TO, CC, and BCC are correct. ➟10.15.4 [Mail]
6	Alarms may occur exceeding the number of mails that can be sent.	Check the number of alarms that have occurred. (Up to 16 mails can be sent at a time to notify the alarm.)
10	The connection with the SMTP server has been failed.	• Check if the SMTP server is functioning normally. • Check if the IP address or host name of the SMTP server is properly set. • Contact the network administrator to check the router address and the subnet mask, and then setup the GOT. • When the network is protected by a firewall, contact the network administrator to check that the specified port number of the SMTP server is allowed to pass through the firewall.
11	A timeout has occurred in the connection with the SMTP server.	• Check if the SMTP server is functioning normally. • Specify a longer communication timeout period. ➟5.5.1 ■4 [Controller Setting]
12	The SMTP server notifies the error.	• Check if the SMTP server is functioning normally. • Contact the network administrator to check that mails can be sent without the authentication including POP3.
13	The SMTP authentication has failed.	• Check that the user name and password for the SMTP authentication are set correctly. ➟10.15.4 [Mail]
32	The POP3 server address is not set.	• Set the IP address or host name of the POP3 server. ➟10.15.4 [Mail]
34	The connection to the POP3 server has failed.	• Check that the IP address or host name of the POP3 server is set correctly. ➟10.15.4 [Mail] • Check that the POP3 server is not down.
37	Authentication of the POP3 server has failed.	• Check that the user name and password for the POP3 server are set correctly. ➟10.15.4 [Mail]
40	A DNS server is not set.	• Set a DNS server. ➟10.15.4 [Mail]
42	The host name of the server cannot be resolved.	• Check that the address of the DNS server is set correctly. • Check that the DNS server is not down. • Check that the host name of the SMTP server and POP3 server are set correctly.

10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.16.1 Overview of the FTP server function

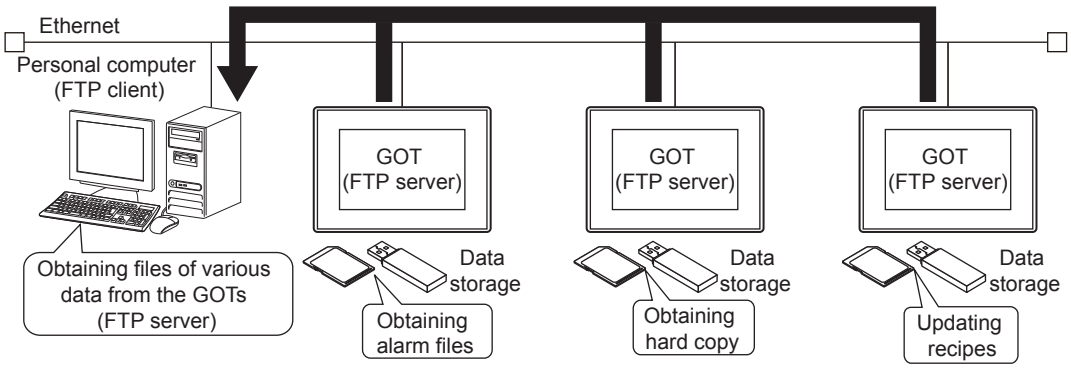
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The FTP server function enables you to read and write a file from/to an external FTP client using the GOT as the FTP server.
For GT21, the following models support this function.

- GT2107-W
- GT2104-R
- GT2104-PMBD
- GT2103-PMBD

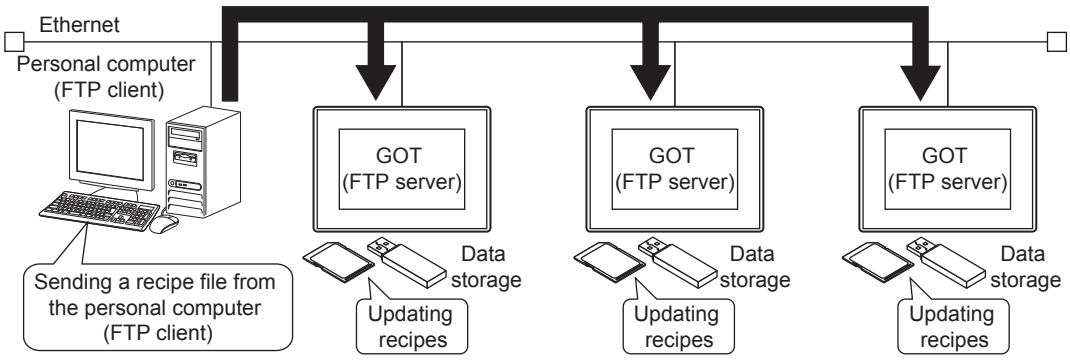
■1 Reading resource data in the GOT using a personal computer

Files including resource data saved in the GOT can be read using a personal computer (FTP client).
Use this function to read the resource data from multiple GOTs by Ethernet.



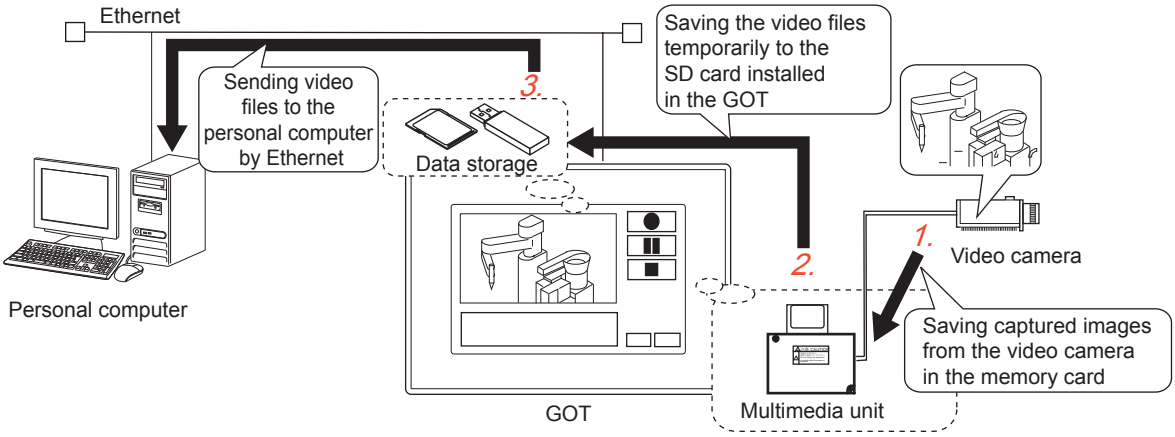
■2 Sending a file from a personal computer to the GOT

Files including resource data can be written to the GOT (FTP server) using a personal computer (FTP client).
Use this function to change the resource data of multiple GOTs at once by Ethernet.



■3 Connection with Multimedia Interaction Tool

When Multimedia Interaction Tool installed in a personal computer is used, the personal computer receives the video files and the alarm log files sent from the GOT using the FTP server function.
Not available to GT21 and GS21.



For details of Multimedia Interaction Tool, refer to the following.

- How to use Multimedia Interaction Tool

  ➟10.8.5 Multimedia Interaction Tool

- How to connect the multimedia unit

  ➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

10.16.2 Specifications of the FTP server function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the FTP server function, a system application (extended function) of [Gateway(FTP Server)] is required. Selecting [Use the function of FTP Server] and configuring the settings in [FTP Server] in the [Controller Setting] window incorporate the application into the package data automatically.

➟10.13.5 [Communication Setting]
10.16.4 [FTP Server]

■2 Number of FTP server function settings for one project

One FTP server function setting is available for one project.

■3 Specifications of the FTP server

The following shows the specifications of the FTP server function.

Item		Specifications
Setting of the FTP server function		The function can be enabled and disabled. (Default: disabled)
User name		Up to 16 one-byte alphanumeric characters (a to z, A to Z, 0 to 9) can be set. (Default: Admin) (The string "anonymous" is unusable.)
Password		Up to 32 one-byte alphanumeric characters (a to z, A to Z, 0 to 9), one-byte spaces, and symbols below can be set. ! " # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~ A one-byte space cannot be used for the start or end of a password. The symbol "|" cannot be used at the beginning.
Port No.		Control port: 21 (fixed) File transfer port: Randomly assigned in PORT mode and in PASV mode
Number of simultaneously connectable clients	GT27 GT25 GT23 GS25	1 to 4 Use GS404 to specify the number of connectable clients. When GS404 stores 0 or 5 or more, 1 is assumed. ➟12.1.3 GOT special register (GS)
	GT21 GS21	1
Command input monitoring cycle	Before logging in *1	1 minute
	After logging in *2	1 minute to 60 minutes (Default: 15 minutes)
Required devices for the file access		Data storage
Available file size for file reading		Unlimited (The maximum size depends on the capacity of the data storage.)
File name *3		One-byte alphanumeric characters only
Access mode		Reference mode: Writing to the data storage is not available. Write mode: Witing to the data storage is available.
Available FTP client		• FTP client compliant with RFC 959 • FTP client which can be accessed from the Windows command prompt using the FTP command • FTP client which supports the passive mode For the FTP clients whose operations are confirmed, refer to the following. ➟(1) FTP clients which have been checked for operation

*1 If a correct password and login name are not entered within one minute after the FTP client is connected with the GOT, the line is disconnected.

*2 If commands are not input from the FTP client within the time set as the command input monitoring cycle, the GOT disconnects the line.

*3 For the details of settable file names, refer to the following.

➟10.16.5 ■2 (2) How to specify files

(1) FTP clients which have been checked for operation

For the FTP clients whose operations have been validated by Mitsubishi Electric Corporation, refer to the following Technical Bulletin.

➟List of Devices Validated to Operate with the GOT2000 Series' FTP Server Function/ File Transfer Function (GOT-A-0167)

(2) Data which can be read and written using the FTP server function

Files including resource data can be read and written to the GOT (FTP sever) by Ethernet using a personal computer (FTP client).

The following files can be read and written using the FTP server function.

- CSV files
- Unicode text files
- Image data
- Binary format files (*.G2□)

(a) Data that cannot be read from, or written to the GOT

Files with the following extensions cannot be read or written by using the FTP server function.

- .OUT
- .FON
- .INI
- .G2
- .PRF

(b) Sending and receiving binary format files (*.G2□)

Binary format files (*.G2□) can be read to a personal computer by using the Gateway Common Control (GS400.b8). However, the following files cannot be read.

- *.G2
- *.G2D

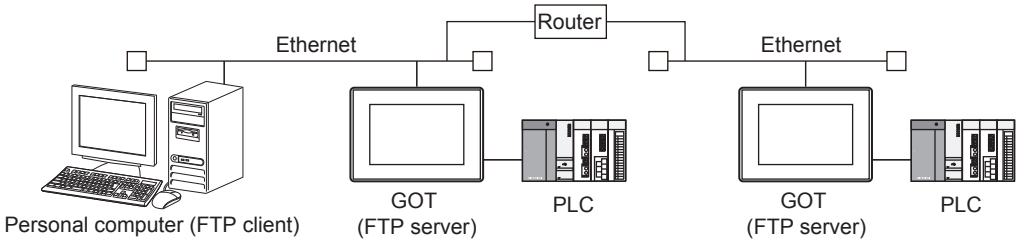
For the Gateway Common Control (GS400), refer to the following.

➟10.16.5 ■2 (2) (a) Reading a file specifying the file name
12.1.3 GOT special register (GS)

■4 File access range

The FTP server function allows the FTP client to access the GOTs on the network where the FTP client is connected. (Only one FTP client is allowed to access one GOT.)

When you use the FTP sever function via a relay device such as a router, consult with your network manager.



To simply determine whether a file can be accessed or not, issue a ping command for the GOT.

Examples of the ping commands to be issued (when the Windows command prompt is used)

IP address of the GOT: 192.168.0.18

- When the file can be accessed

```
C:\ping 192.168.0.18
  Pinging 192.168.0.18 with 32 bytes of data:
  Reply from 192.168.0.18: bytes=32 time<1ms TTL=128
  Reply from 192.168.0.18: bytes=32 time<1ms TTL=128
  Reply from 192.168.0.18: bytes=32 time<1ms TTL=128
C:\
```

- When the file cannot be accessed

```
C:\ping 192.168.0.18
  pinging 192.168.0.18 with 32 byte of data:
  request timed out.
  request timed out.
  request timed out.
C:\
```

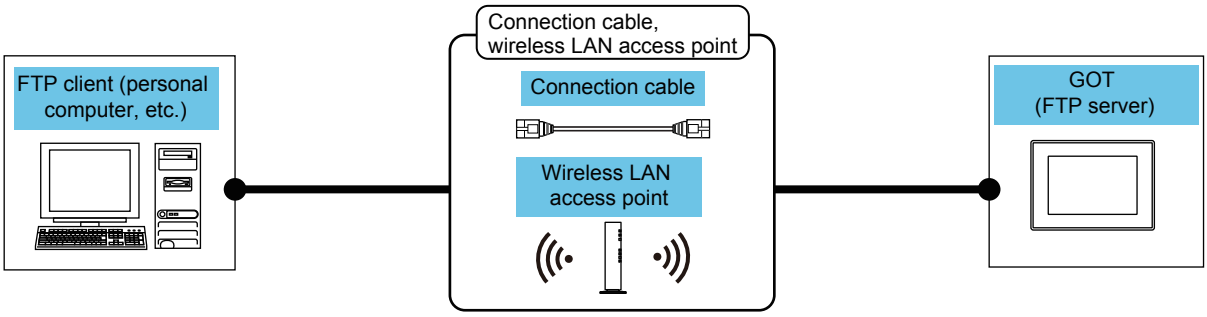
10.16.3 How to use the FTP server function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

For the communication interface settings, refer to the following.

➟10.13.5 [Communication Setting]



FTP client	Connection cable*1*2, Wireless LAN access point	Maximum segment length*3	GOT (FTP server)	
			Option	GOT model
Personal computer or others*4	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GT23 GT21 *7 GS25 GS21
			GT25-J71E71-100	GT27 GT25 *8
	-	-	GT25-WLAN	GT27 *5 GT25 *5*8 GS25 *5
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *6 GT25 *6*8 GS25 *6

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)
• 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades. For the limit, contact the switching hub manufacturer.

*4 For the details of applicable FTP clients, refer to the following.
➟10.16.2 ■3 (1) FTP clients which have been checked for operation

*5 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*7 For GT21, the following models support this function.
• GT2107-W

• GT2104-R
• GT2104-PMBD
• GT2103-PMBD

*8 Not available to GT2505-V and GT25HS-V.

■2 Setting procedure

Step 1 Consider the configuration of the whole system.

• Configuration of the whole system including controllers and GOTs
• Controller settings (including device assignment)
• GOT settings (including IP address, network number, and station number)

Step 2 Connect the GOT and the controllers.

➟■1 System configuration

Step 3 Configure the communication interface settings.

➟10.13.5 [Communication Setting]

Step 4 Configure the FTP server setting on GT Designer3.

➟10.16.4 [FTP Server]

Step 5 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 6 Check the operation of the FTP server function on the GOT.

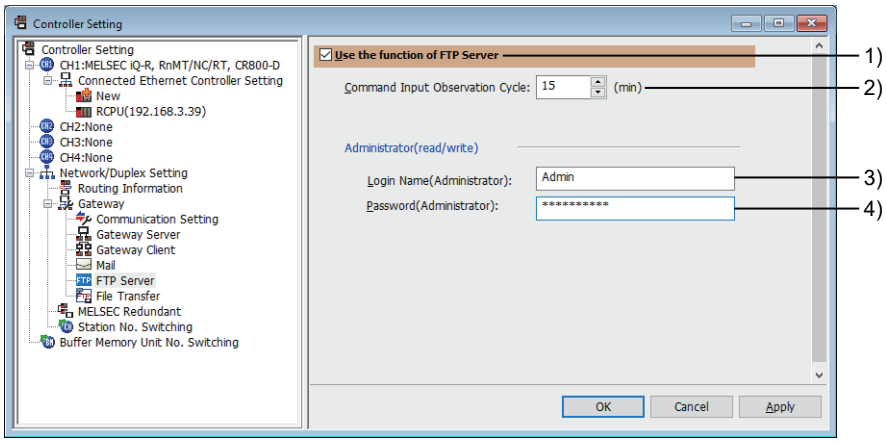
➟10.16.5 Procedures of the FTP server function

10.16.4 [FTP Server]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [FTP Server] in the [Controller Setting] window and set the necessary items.



1) **[Use the function of FTP Server]**
Select this item to use the FTP server function.

2) **[Command Input Observation Cycle]**
Set the time when the line connection with the GOT will be disconnected if any command is not input from the FTP client.
The setting range is [1] to [60].
Usually, use the default setting (15 minutes).

3) **[Login Name]**
Set a login name for connecting the FTP client with the GOT.
You can set one login name.
Up to 16 one-byte alphanumeric characters (a to z, A to Z, 0 to 9) can be used.
The default login name is Admin.

4) **[Password]**
Set a password for connecting the FTP client with the GOT.
You can set one password. Up to 32 one-byte alphanumeric characters (a to z, A to Z, 0 to 9) can be used.
Alphanumeric characters (a to z, A to Z, 0 to 9) and the following symbols are available.
! " # $ % & ‘ ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { | } ~
A one-byte space cannot be used for the start or end of a password.

10.16.5 Procedures of the FTP server function

■1 Application examples

The following shows application examples of the FTP server function.
For these application examples, the Windows command prompt is used for accessing between the GOT and the FTP client.
When using a commercially available FTP client tool, refer to the manual of the FTP client tool used.

(1) Outline procedure

The following shows the outline procedure.
For the detailed operating procedure, refer to each item described as follows.

Step 1 Connect the line between the GOT and the FTP client.

➟(2) Connecting the line between the GOT and the FTP client

Step 2 Read files in the GOT (data storage).

➟(3) Reading the files in the GOT (data storage)

Step 3 Write files to the GOT (data storage).

➟(4) Writing files to the GOT (data storage)

Step 4 Manage the directory in the GOT (data storage).

➟(5) Managing the directory in the GOT (data storage)

Step 5 Disconnect the line between the GOT and the FTP client.

➟(6) Disconnecting the line between the GOT and the FTP client

When writing files to the GOT (data storage) or managing the directory, enable writing to the data storage of the GOT.

(2) Connecting the line between the GOT and the FTP client

Step 1 Starting the FTP client

Input [ftp] and press the Enter key.

Step 2 Connecting with the GOT

Input [open] and input the IP address of the GOT after the [open]. Then, press the Enter key.

Step 3 Inputting a login name

Input the login name registered previously in the GOT and press the Enter key.

Step 4 Inputting a password

Input the password registered previously in the GOT and press the Enter key.

Login image (When the line is properly connected.)

```
C:\>ftp
ftp>open 192.168.0.18
connected to 192.168.0.18
220 GOT2000 FTP server ready.
user:GOT2000
331 Password required.
Password:****
230 User logged in.
ftp>
```

Login image (If another personal computer has been connected to the GOT)

```
C:\>ftp
ftp>open 192.168.0.18
connected to 192.168.0.18
421 Session limit reached, closing control connection
user:GOT2000
connection closed by remote host
ftp>
```

Login image (When a wrong password is input)

```
C:\>ftp
ftp>open 192.168.0.18
connected to 192.168.0.18
220 GOT2000 FTP server ready.
user:GOT2000
331 Password required.
Password:****
530 Not logged in.
ftp>
```

(3) Reading the files in the GOT (data storage)

Read the files from the GOT in the following procedure.

Step 1 Notifying of no file conversion

Input [binary] and press the Enter key.

Step 2 Reading files

Input [get] and the file name, and press the Enter key.

Example for file reading

```
ftp>binary
200 TYPE is now BINARY.
ftp>get SNAP0001.BMP
200 PORT command successful
150 Opening connection.
226 Closing data connection.
ftp: 63 bytes sent in 0.00 seconds 63000.00
K bytes/sec.
ftp>
```

(4) Writing files to the GOT (data storage)

Write files to the GOT in the following procedure.

Step 1 Notifying of no file conversion

Input [binary] and press the Enter key.

Step 2 Entering the write mode (if not in the write mode)

Input [quote gtwr] and press the Enter key.

Step 3 Display the file name to check that the same file name is not used in the GOT (data storage).

Input [ls] or [dir] and press the Enter key.

Step 4 If the same file name is used in the GOT, delete the file.

Input [delete] and the file name to be deleted, and press the Enter key.

Step 5 Writing files

Input [put] and the file name to be written, and press the Enter key.
Example for file writing

```
ftp>binary
200 TYPE is now BINARY.
ftp>quote gtwr
200 command successful.
ftp>ls
200 PORT command successful.
150 Opening connection.
SNAP0001.BMP
SNAP0002.BMP
226 Closing data connection.
ftp>delete SNAP.0001.BMP
250 File deleted Successfully.
ftp>put SNAP0001.BMP
200 PORT command successful
150 Opening connection.
226 Closing data connection.
ftp: 63 bytes sent in 0.00 seconds 63000.00
K bytes/sec.
ftp>
```

(5) Managing the directory in the GOT (data storage)

Create a directory and modify it in the following procedure.

Step 1 Displaying the current directory

Input [pwd] and press the Enter key.

Step 2 Entering the write mode (if not in the write mode)

Input [quote gtwr] and press the Enter key.

Step 3 Creating a directory

Input [mkdir] and the directory name to be created, and press the Enter key.

Step 4 Modifying the current directory

Input [cd] and the directory name to be modified, and press the Enter key.
Example for directory management

```
ftp>pwd
257 "A:/snapshot" is current directory.
ftp> quote gtwr
200 command successful.
ftp>mkdir bmpdata
275 MKD command successful.
ftp>cd bmpdata
250 CWD command successful.
ftp>pwd
257 "A:/snapshot/bmpdata" is current directoryftp>cd ..
250 CWD command successful.
ftp>pwd
257 "A:/snapshot" is current directory.
ftp>
```

(6) Disconnecting the line between the GOT and the FTP client

Disconnect the line between the GOT and the FTP client in the following procedure.

Step 1 Input [quit] (exit command) and press the Enter key.

Example for a logout (disconnection of the line)

```
ftp>quit
221 User logged out. Good-Bye.
C:\>
```

(7) Displaying errors

Errors related to the FTP server function are displayed on the FTP client.

For the error messages to be displayed, refer to the following.

➟10.16.8 ■2 Code and message of the FTP server function

If a non-existent file (snap0010.bmp in this example) is intended to be read

```
ftp>get snap0010.bmp
200 PORT command successful.
550 snap0010.bmp:No such file or directory.
ftp>
```

■2 Handling on the FTP client side

(1) Input commands for the FTP client

(a) General commands

The following table shows the general commands available for the Windows command prompt and the FTP client, and their compatibility with the FTP server function of the GOT.

The following commands cannot be used depending on the specifications of the FTP client to be used.

○: Available, ×: Unavailable

Command name	Function	Reference mode	Write mode
append	Writes files additionally to the GOT.	×	○
ascii	Changes the file transfer mode to the ascii mode.	○	○
binary	Changes the file transfer mode to the binary mode.	○	○
bye	Exits the FTP client tool.	○	○
cd	Changes the current directory of the GOT.	○	○
cd	Disconnects the line with the GOT.	○	○
delete	Deletes files in the GOT.	×	○
dir	Reads the file information in the GOT.	○	○
get	Reads files from the GOT.	○	○
ls	Displays file names in the GOT.	○	○
mdelete	Deletes multiple files specified with a wild card.	×	○
mdir	Reads the file information in the GOT to a specified file.	○	○
mget	Reads multiple files specified with a wild card.	○	○
mkdir	Creates a directory in the GOT.	×	○
mls	Reads the file name in the GOT to a specified file.	○	○
mput	Writes multiple files specified with a wild card to the GOT.	×	○
open	Connects the line with the GOT.	○	○
put	Writes files to the GOT.	×	○
pwd	Displays the current directory of the GOT.	○	○
rename	Changes a file name in the GOT.	×	○
rmdir	Deletes a directory in the GOT.	×	○
quit	Disconnects the line with the GOT and exits the FTP client tool.	○	○
quote	Use this command when using the GOT-dedicated commands with the command prompt. (Example: quote gtwr)	○	○

Command name	Function	Reference mode	Write mode
user	Input a user name and a password for logging in the GOT.	○	○

(b) **GOT-dedicated commands**

When the FTP client is connected to the GOT, the FTP client is in the [write mode].
Issue a command for changing modes between the reference mode and the write mode.

○: Available, ×: Unavailable

Command name *1	Function	Reference mode	Write mode
gtwr	Changes the mode of the FTP server function of the GOT to the write mode.	○	○*2
gtrd	Changes the mode of the FTP server function of the GOT to the reference mode.	○*2	○
help	Displays the general commands of the FTP protocol supported by the FTP server function of the GOT.	○	○
gtds	Not available to GT21 and GS21.	×	○

*1 When the GOT-dedicated commands are input with the command prompt, use quote.
To input [gtwr] with the command prompt, input [quote gtwr].

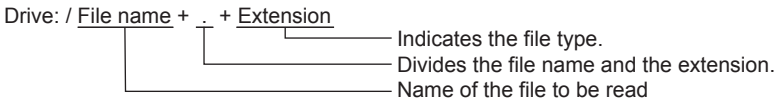
*2 The setting is disabled. (The command does not cause an error.)

(2) How to specify files

The following two methods are provided for specifying files: you can directly specify one file or specify multiple files which satisfy the condition.

(a) **Reading a file specifying the file name**

Specify the file name of the file to be specified and add a period and an extension.

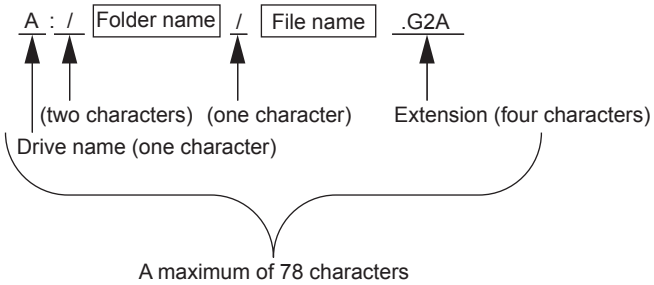


- Drive

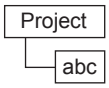
  Specify drive A, drive B, drive C, drive E, drive F, drive G, or drive V.
  For GT23, drive A, drive B, drive C, drive E, drive F, or drive G can be specified.
  For GT2107-W, drive A or drive E can be specified.
  For GT2105-Q, GT2104-R, GT2104-P, GT2103-P, and GS21, drive A can be specified.

- Number of characters for the folder name and file name

  The GOT recognizes the location of the file with the following path.
  Set a folder name and file name so that the total number of characters used for the path is 78 or less.
  Only the folder name and file name in the path can be set by the user.
  (Other part of the path is automatically specified.)



To set a hierarchy to the folder, put / (slash) between folder names. (/ (slash) is counted as one character.)
(Setting example)
Folder name: Project1/abc



- Unavailable character strings

  The use of the following character strings is prohibited. (You cannot use them regardless of capitals or small letters.)

COM1 to COM9, LPT1 to LPT9, AUX, CON, NUL, PRN, CLOCK$
The use of the following folder and file names is prohibited.
Folder name starting with G2
[.] (period) or [/] (slash) is used at the beginning or the end of the folder or file names.
Folder or file named as only [.] (one period) or [..] (two periods)

• Extension

The following file extensions are mainly used for the FTP server function.
csv:
Alarm file (alarm), operation log file (operation log), logging file (logging), and recipe file (recipe)
txt:
Alarm file (alarm), operation log file (operation log), logging file (logging), and recipe file (recipe)
bmp,jpg:
Image data (hard copy)
3GP:
Video file (multimedia)

Point

Reading binary format files

When the GOT special register GS400.b8 (bit location: 8) is turned on, the FTP client can read binary format files (*.G2□) directly.
However, the following binary format files cannot be read.
• *.G2
• *.G2D
You can use the binary format file read to GT Designer3 as backup data.
Some files can be converted to other formats using GT Designer3.
For the file conversion using GT Designer3, refer to the following.

➟2.3.2 Opening a project

(b) **Specifying files which meet the condition (wild card)**

To specify multiple files, [*] and [?] can be used as a wild card.
(Example)
*.jpg: When only JPEG files are specified
Main*.csv: When CSV files whose names start with "Main" are specified
*.b??: When files whose extensions start with b are specified

(3) Checking the connection status

Check the connection status between the GOT and an FTP client with the following GOT special registers (GS).

Item	GOT special register (GS)	Description
Checking if one FTP client is connected to the GOT	GS200.b2	This device turns on when an FTP client is connected to the GOT. Check if an FTP client is connected to the GOT with this device.
Checking if multiple FTP clients are connected to the GOT	GS208	This device stores the number of the FTP clients connected to the GOT. Check that FTP clients are connected to the GOT by checking a change of the stored value.

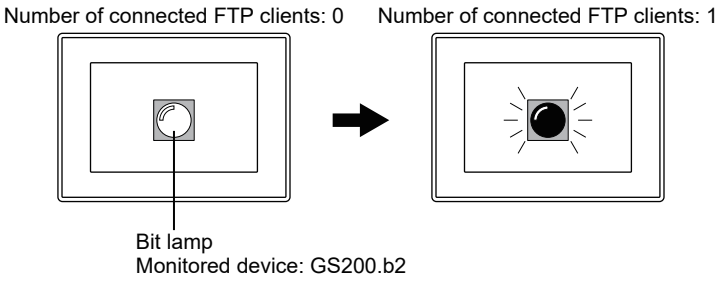
For the details of the GOT special registers, refer to the following.

➟12.1.3 GOT special register (GS)

The following shows application examples.

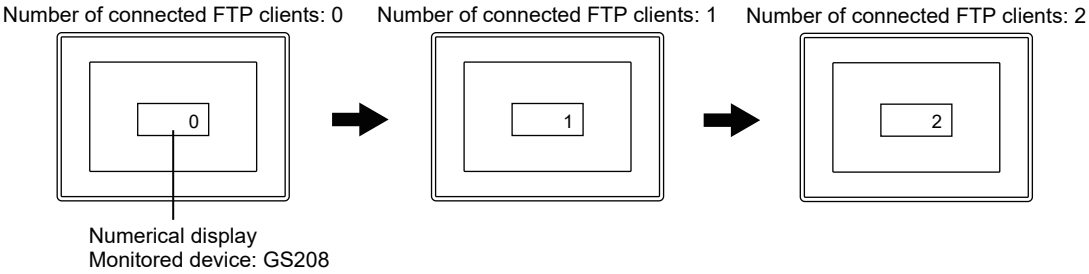
• Notifying the connection status when one FTP client is connected

Specify GS200.b2 for a lamp object to notify whether an FTP client is connected.



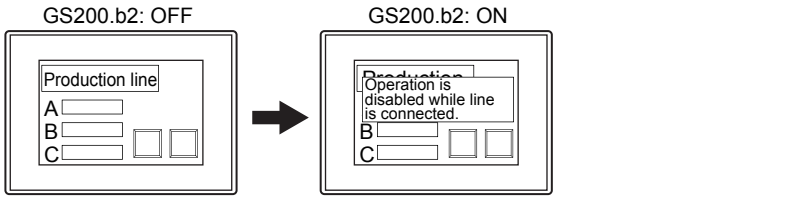
• Notifying the connection status when multiple FTP clients are connected

Specify GS208 for a numerical display object to display the number of connected FTP clients.



• Limiting operations

Specify GS200.b2 as the trigger device for a touch switch or numerical input object, and configure the settings to disallow inputs while an FTP client is being connected to the GOT.



Configure the settings with the touch switch function or numerical input function so that input is allowed only when the device (GS200.b2) is off.

(4) Disconnecting the line

The following two methods are provided for disconnecting the line: Automatic disconnection and manual disconnection.
Since the GOT cannot detect the error status of the FTP client, if you cannot shut down the FTP client properly (for example, if the personal computer is powered off when the line is connected), the GOT does not disconnect the line immediately.
However, the line will be automatically disconnected after a specified time since the command input monitoring cycle is set.

• Automatic disconnection

If commands are not input from the FTP client within the time set as the command input monitoring cycle in the FTP server setting, the GOT disconnects the line automatically.
The command input monitoring cycle must be set.
For the settings of the command input monitoring cycle, refer to the following.

➟10.16.4 [FTP Server]

• Manual disconnection (The line is forcibly disconnected.)

Use GS400.b2 to forcibly disconnect all the FTP clients.
To disconnect the FTP clients, turn on GS400.b2.
Check that the clients are disconnected, and then make sure to turn off GS400.b2.
For the details of the GOT special register, refer to the following.

➟12.1.3 GOT special register (GS)

10.16.6 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for system configuration

(1) Connection to the intranet

If the system needs keeping secure against unauthorized access to the intranet, consult a network service provider or a network administrator (a person who does network planning, IP address management, and others), and include your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the intranet connection.

(2) Countermeasures against access delay

When multiple network devices (including GOTs) are connected to the same segment, the network load increases and therefore the communication performance between the GOT and PLC may be degraded.
The following countermeasures may improve the communication performance.

- Using the switching hub
- Reducing the number of devices the GOT monitors

(3) When a firewall is used

If a firewall disconnects the communication of the gateway function, take countermeasures such as changing the port No. to be protected behind the firewall.
If the system needs keeping secure against unauthorized access in changing the port No. to be protected behind the firewall, consult the network administrator (a person who does network planning, IP address management, and others), and develop your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the change of the port No.

■2 Precautions for using the FTP server function

(1) Precautions for designing the system including the FTP server function

(a) **Recipe file format**

To write recipe files from the FTP client to the GOT, set the same format of the recipe files as the one set with the recipe of the GOT.
To write recipe files from a personal computer at a distant location, check the procedure with field workers before writing recipe files.

(b) **Performing a test on the FTP client tool**

Before using the FTP client tool, make sure to read the manual for the FTP client tool to check the functions and operating procedure, then conduct the test operation.
Some operations may not be supported by the GOT (FTP server) depending on the FTP client tool to be used.
Also, depending on the FTP client tool used, the FTP server function may not be usable because the GOT cannot support the extended command (quote) and issue GOT-dedicated commands.

(c) **Reading multiple files using one command**

If you read many files at once using one command (if you execute mget or mput specifying a wild card), the processing may be slowed down due to network congestion.
When the processing speed is slow, issue commands separately to divide the processing.

(2) Precautions for transferring files

(a) **Automatically disconnecting the line**

If commands are not input from the FTP client within the time set as the command input monitoring cycle, the GOT disconnects the line.

(b) **Retaining the connection when GOT becomes offline**

Even if the GOT transitions to the offline mode (such as when downloading monitor screen data), the line between the GOT and the FTP client is held.

(c) **Precautions for transferring a recipe file**

Do not use the recipe when you transfer recipe files.
If the recipe file in the data storage is deleted while the recipe is processed, the function may not be performed properly.
If the recipe file is deleted even while the recipe is not processed, the error (system alarm: recipe file error) occurs when

the recipe is performed next time.

➟10.16.5 ■2 (3) Checking the connection status

(d) **Precautions for overwriting a file in the GOT**

When you overwrite files in the GOT using the FTP client, check that the files are properly overwritten.
When an error occurs while files are written, the files which have been written in the GOT are deleted.
Write the files again using the FTP client.

(e) **Login if an FTP client goes down**

If an FTP client (personal computer) goes down, wait a time longer than the command input monitoring interval or turn on GS400.b2 (a forced logout signal), and then log into the GOT again.
Check the connection status between the FTP client and the GOT with GS200.b2 and GS208.

(f) **Powering off the GOT during access to the files in the data storage**

Do not power off the GOT while the FTP client accesses the files in the data storage of the GOT.
Doing so may cause the data corruption in the data storage.

(g) **Operations of the FTP client at line disconnection**

If the GOT is reset or powered off when the line between the GOT and the FTP client is connected, the operations of the FTP client depends on the specification of the FTP client tool to be used.
Use an FTP client tool which detects the FTP server down or properly shuts down the FTP client.

(h) **If the put command does not write data to the data storage**

If the put command does not write data to the data storage, check that the following conditions are satisfied.

- The SD card cover of the GOT is closed.
- The SD card access switch of the GOT is turned on.
- The write-protect switch of the data storage is turned off.

(i) **Time stamp of a transfer file**

The time stamp of a transfer file may differ from that of the file in the GOT data storage depending on the FTP client tool to be used.
When the time stamps differ, check the settings of the FTP client tool.

(3) Precautions for FTP login

(a) **In the event of a forgotten password**

If you forget the password for FTP login, you cannot connect the FTP client with the GOT.
Reset the password in [FTP Server] in the [Controller Setting] window.

➟10.16.4 [FTP Server]

(b) **Simultaneous logins from multiple FTP clients**

Multiple FTP clients cannot log in to the GOT simultaneously.

(c) **If the login name or password is incorrectly input on the FTP software**

When you input a login name or a password for FTP login incorrectly, you may need to exit the FTP client and input them again depending on the FTP software to be used.

(d) **If Microsoft Internet Explorer does not display the user authentication screen**

When you use Microsoft Internet Explorer, the user authentication screen may not be displayed.
Input the address of the GOT in the following format.
ftp://<User name>:<Password>@<The address name or the host name of the GOT>/
Example) When "AdminPass" is set for the password
ftp://Admin:AdminPass@192.168.0.18

(4) Precautions for accessing files

Deleting certain files may cause any malfunctions to the GOT.
To prevent the GOT from operation errors, do not delete the files in the FTP server by accessing from the FTP client.

(5) Precautions for using FFFTP

When FFFTP is used with the FTP server function, [501 NLST: Options not supported] may be displayed on the screen and you may not be able to connect to the server.
In this case, conduct the following procedure to avoid errors.

Step 1 Open the host list on FFFTP.
Step 2 Select the [Special] tab.
Step 3 Select [Use LIST command to get file list].
Step 4 Click the [OK] button to close the dialog.

(6) To maintain file access performance

You are recommended to format the data storage before using it.
The number of files to be stored in a folder should be less than 500.
If 500 or more files are stored in a folder, the access performance may be lowered.
When data is repeatedly written to or deleted from the data storage, the access performance may be lowered regardless of the number of files.
In such a case, format the data storage.

10.16.7 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the FTP server function as required. The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item
Notifying that the FTP server function is ready	GS200.b1
Notifying that an FTP client is connected to the GOT	GS200.b2
Notifying the number of the FTP clients connected to the GOT	GS208
Forcibly disconnecting all FTP clients	GS400.b2
Enabling the binary format file (*.G2□) to be read from the FTP client.	GS400.b8
Specifying the number of FTP clients connectable to the GOT	GS404 (Not available to GT21 and GS21)
Specifying drive V as the current directory when logging in to the FTP server	GS423.b10 (Not available to GT23, GT21, and GS21)

10.16.8 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Troubleshooting for the FTP server function

The following shows the troubleshooting for the FTP server function.

Symptom		Details of error and cause	Corrective action
The FTP server function does not work.	When all the bits of GS200 are off and the GOT does not respond to Ping *1*2	The system application (extended function) for the FTP server function is not installed on the GOT.	Write the package data, which contains system application (extended function) for the FTP server function, to the GOT. ➟4. COMMUNICATING WITH GOT
		No IP address has been set for the GOT.	Set the IP address for the GOT in the utility of the GOT.
		The port number of the personal computer (MX Component) is different from that of the GOT (5011).	Set the same port number for the personal computer (MX Component) as that of the GOT (5011).
	If any bit of GS200 is on and the GOT responds to Ping *1*2	-	Refer to the troubleshooting for the functions corresponding to the bits which are on, and take the corrective actions.
The FTP client cannot connect to the line.		[Use the function of FTP Server] is not enabled in the FTP server setting of GT Designer3.	Enable [Use the function of FTP Server].
		The number of connected FTP clients has reached the upper limit.	Perform one of the following operations, and then connect the FTP client again. • Disconnect an FTP client. • Change the number of connectable FTP clients with GS404. (Not available to GT21 and GS21)
		-	Issue a ping command to the GOT and check if the GOT responds to it.
		-	Consult with a network manager.
The FTP client cannot log in.		The login name or the password is incorrectly input.	Input a correct login name and password. (The difference between capital letters and small letters is distinguished.)
Files cannot be written.		The GOT cannot recognize the file name.	For the details of settable file names, refer to the following. ➟10.16.5 ■2 (2) How to specify files
		The FTP client is in the reference mode.	Change the mode of the function to the write mode.
		Overwriting is prohibited in the FTP client setting.	Change the FTP client setting.
		The FTP client which does not send a file when the same file name exists in the FTP server is used.	Change the setting of the FTP client to enable sending (overwriting) files even when the same file name exists in the FTP server. Delete the file which exists in the FTP server in which the file name is overlapped with the name of the file to be sent.
		The data storage is write-protected.	Cancel the write protection for the data storage.
		The SD card cover of the GOT is open.	Close the SD card cover of the GOT.
		The SD card access switch of the GOT is turned off.	Turn on the SD card access switch of the GOT.
		The SD card is write-protected.	Check that the write protection for the SD card is canceled.
Files cannot be read.		The file to be read does not exist.	Use the dir or ls command to check if the file exists.
		The SD card cover of the GOT is open.	Close the SD card cover of the GOT.
		The SD card access switch of the GOT is turned off.	Turn on the SD card access switch of the GOT.
		The SD card is write-protected.	Check that the write protection for the SD card is canceled.
Files cannot be deleted.		The data storage is write-protected.	Cancel the write protection for the data storage.
		The SD card cover of the GOT is open.	Close the SD card cover of the GOT.
		The SD card access switch of the GOT is turned off.	Turn on the SD card access switch of the GOT.
		The SD card is write-protected.	Check that the write protection for the SD card is canceled.

Symptom	Details of error and cause	Corrective action
The GOT was powered off during login.	-	Delete the file being transferred without using it since it may be damaged. (Operation of an FTP client differs depending on the specifications of the FTP client to be used.)
The FTP client software was forcibly exited during login.	-	Log in to the GOT again after the command input monitoring cycle set in the FTP server setting. (The GOT logs out after the time set with commands elapses.)

*1 For the details of the Gateway Common Information (GS200), refer to the following.

➟12.1.3 GOT special register (GS)

*2 To check if the GOT responds to Ping, give the ping command through the personal computer to the GOT.

■2 Code and message of the FTP server function

The codes and messages related to the FTP server function are displayed on the FTP client.
The display of the codes and messages differs depending on the FTP client tool to be used.
The following shows the codes and messages sent from the GOT to the FTP client.

(1) Codes and messages in normal condition

Code	Message	Description
125	Data Connection already open; transfer starting	Start of transfer
150	Opening connection.	Establishment of connection for transfer
200	TYPE is now BINARY.	Setting to the binary transfer mode is successful.
	TYPE is now ASCII.	Setting to the ASCII transfer mode is successful.
	PORT command successful.	PORT command is successful.
	File structure set to NO RECORD	The data transfer structure type is set to File. (STRU)
	Command Okay.	Normal command
	Command successful.	
	NOOP -- did nothing as requested...hah!	NOOP command response
	File deleted successfully.	The DELE command is successful. (File deletion)
	RMD command successful.	The RMD command is successful. (Directory deletion)
214	The following commands are recognized. (* =>'s not implemented)	List of available commands (Commands marked with * are not available.)
	Help end.	HELP display end
	Syntax: <Command name>...	HELP display of each command
215	GOT2000	SYST command response
220	GOT2000 FTP server ready.	Establishment of connection
221	User logged out. Good-Bye.	Connection end
226	Closing data connection.	End of connection for transfer
227	Entering Passive Mode (%d,%d,%d,%d,%d,%d)	The PASV command is successful. (Socket passive mode)
230	User logged in.	Logging in is successful.
	Guest login ok, access restrictions apply.	Guest user can log in. (Writing is unavailable.)
	Guest login ok, upload directory is %s.	Guest user can log in. (Writing is available.)
250	CWD command successful.	The CWD (change of the current directory) command is successful.
	File deleted successfully.	The DELE command is successful.
	File renamed successfully.	The RNTO command is successful.
257	"/*****/****/**.***" is current directory.	Displaying the current directory
275	MKD command successful.	The MKD (creation of a directory) command is successful.
331	Password required.	A password is required.
	Guest login ok, send your complete e-mail address as password.	Guest user specification
350	Requested file action pending further information.	The RNFR command (setting of the target to be renamed) is successful.

(2) Codes and errors in error condition

Error code	Error message	Description	Corrective action
221	You could at least say goodbye.	Command read error	Reading commands has failed. Input a correct command.
421	Timeout (%d seconds): closing connection.	Connection timeout	Connect the FTP client to the line again.
	Service not available, closing control connection.	Unavailable client connection	After another device is logged out, connect the FTP client to the line again.
	Session limit reached, closing control connection	Upper limit error of sessions (maximum four sessions)	The number of sessions has exceeded the upper limit. Reduce the number of sessions.
425	Can't open passive connection	PASV command failure	The access from the GOT has been blocked by the firewall of Windows. Allow the FTP server programs through the firewall of Windows.
	Can't open data connection	Data socket connection (accept) failure	Data socket connection has failed. Connect to the data socket again.
	Can't build data connection	Maximum number of retry exceedance error (connect)	Connection has failed within the set number of retry. Check that the FTP server and the FTP client are properly connected.
426	Connection closed; transfer aborted.	Transfer error	The data transfer has failed. Transfer the data again or check the connection status.
	Data connection error	Data socket connection error	Connect the FTP client to the line again.
500	Syntax error, command unrecognized.	Syntax errors and commands cannot be recognized.	Check that syntax and commands are correctly input.
501	Syntax error in parameters or arguments.	CWD, CDUP, XCWD, XCUP command failure (The parameter is not a directory.)	Specify a correct directory for the parameter.
504	Command not implemented for that parameter	Parameter error of the commands	Input a correct value to the parameter of the command.
510	Command not supported.	Unsupported command	The input command is not supported. Input a supported command.
	Port open fails.	Port open failure	Opening the port has failed. Open the port.
	File open fails.	File open failure	Files could not be opened. Check that the files exist and the file name is correct.
530	Not logged in.	Login failure	Check that the login name and password are correct. Check that the login name and password are correctly input.
	USER and PASS required	Command error (The command is executed without logging in.)	Log in and input commands.
	Requested action not taken.	Command execution failure	Check that commands are available.
	Can't access the file or the Directory.	Access unavailable	Check that the connection target can be accessed. Check that the connection target is allowed to be accessed.
	No files found or invalid directory or permission problem	The specified file or directory does not exist.	Check that the specified file or directory exists.
	%s:No such file or directory.	The file does not exist or the required operation is not allowed.	Check that the file exists. Enable the required operation and execute it again.
	Unimplemented TYPE %d	Unsupported transfer mode error	Send data in a supported transfer mode.
	%s: not a plain file	RETR, SIZE, MDTM command failure (The file is corrupted.)	Access a proper file.
551	Requested file action aborted.	Input file transfer error	Transfer the file again.
553	Requested action not taken.	File open failure (STOR)	The file may be damaged. Do not use the file and delete it.

10.17 Transferring a File between the GOT and Peripheral Device (File Transfer Function (FTP Transfer))

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.17.1 Overview of the file transfer function (FTP transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

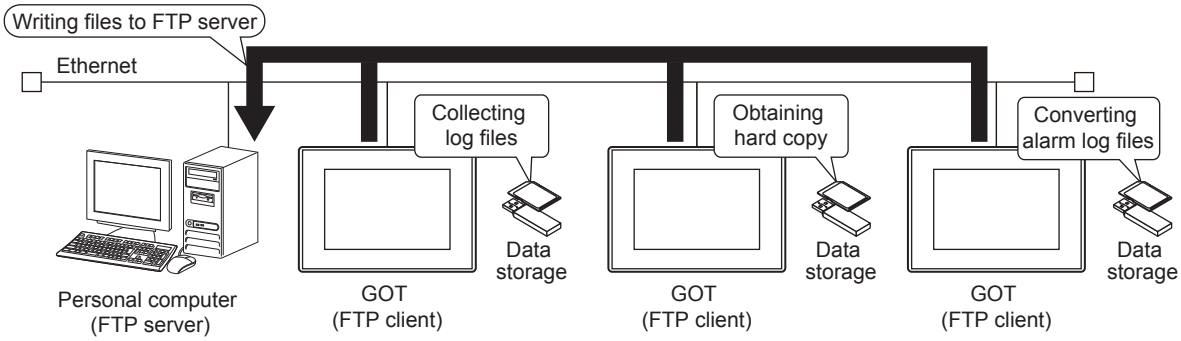
The file transfer function (FTP transfer) enables you to write a file to an external FTP server from the GOT (FTP client). For GT21, the following models support this function.

- GT2107-W
- GT2104-R
- GT2104-PMBD
- GT2103-PMBD

You can write files including resource data to a personal computer (FTP server) by Ethernet in operating the GOT (FTP client).
Files are written to up to 64 FTP servers preregistered.

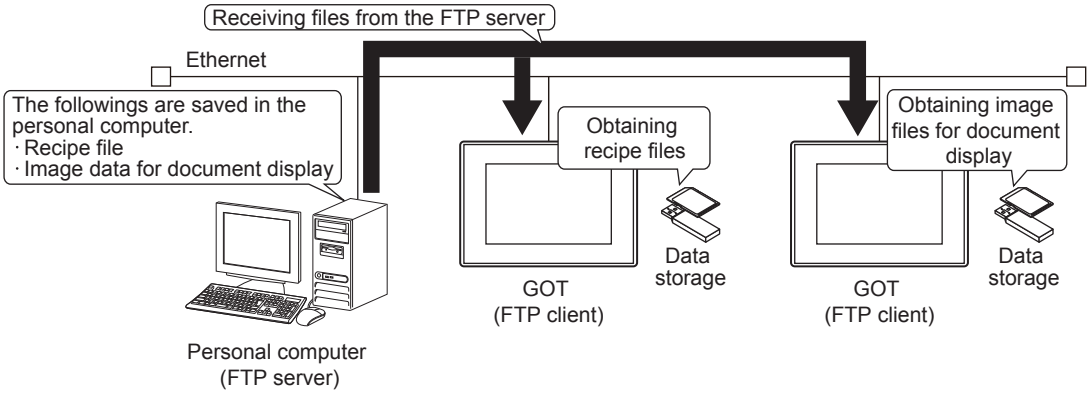
■1 Sending files from the GOT to the FTP server

You can write various files including the resource data to the personal computer (FTP server) in operating the GOT (FTP client).
This function is used to update the resource data in the personal computer by using the GOT, or for other purposes.



■2 Obtaining the resource data from the FTP server

You can read files including the resource data saved in the personal computer (FTP server) in operating the GOT.
This function is used to obtain recipe files created with the personal computer and use them with the recipe, to display image data saved in the personal computer on the GOT by the document display, or for other purposes.



10.17.2 Specifications of the file transfer function (FTP transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the file transfer function (FTP transfer), a system application (extended function) of [File Transfer] is required.
To incorporate the application into package data automatically, select [Use the function of File Transfer] and configure the settings in the [Controller Setting] window ([File Transfer]).

➟10.17.4 [File Transfer] (FTP transfer)

■2 Specifications of the FTP transfer

The following shows the specifications of the file transfer function (FTP transfer).

Item	Specifications
Applicable FTP server	FTP server compliant with RFC 959 ➟(1) FTP servers whose operations have been validated
Number of connectable FTP servers	Max. 64
Number of file transfer settings	Max. 100 (FTP transfer settings and GOT internal transfer settings in total)
Transfer mode	In the stream mode, the communication is performed with binary data. PORT mode and Passive mode are supported.
Required devices for the file access	Data storage
Number of characters for file path	• <GOT folder path>\<Transfer file name>: Up to 78 one-byte alphanumeric characters and symbols in total (including backward slash marks) • <FTP server folder path>\<Transfer file name>: Up to 250 one-byte alphanumeric characters and symbols in total (including backward slash marks)

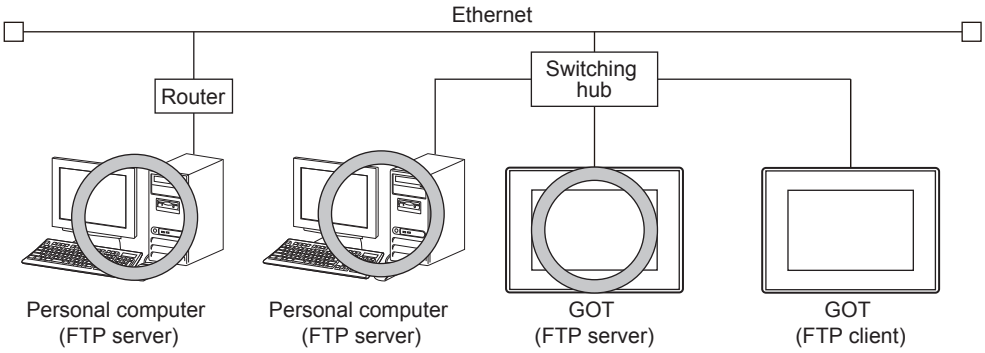
(1) FTP servers whose operations have been validated

For the FTP servers whose operations have been validated by Mitsubishi Electric Corporation, refer to the following.

➟List of Devices Validated to Operate with the GOT2000 Series' FTP Server Function/ File Transfer Function (GOT-A-0167)

■3 File access range

The GOT (FTP client) can access the FTP servers in the network to which the GOT is connected.
The GOT (FTP client) also can access GOTs (FTP server).
To connect to the FTP servers in a different network, the router is required.



■4 Required settings for the GOT and personal computer

To use the file transfer function (FTP transfer), configure the GOT (FTP client) settings and FTP server settings.
For the FTP server settings, refer to the following.

- Personal computer or others

➟Manual of the FTP server used

- GOT (FTP server)

➟10.16.4 [FTP Server]

■5 PORT mode and PASV mode

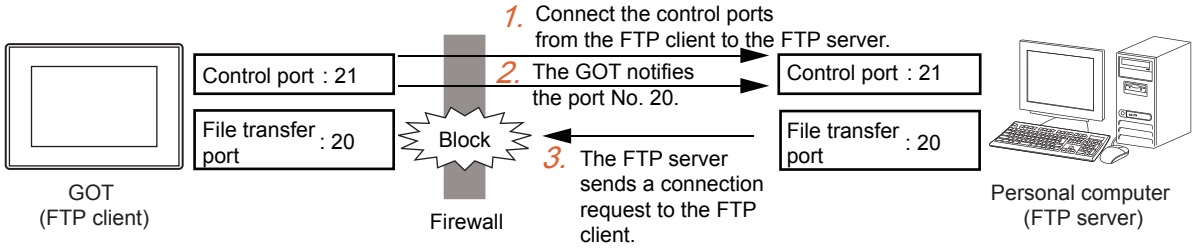
(1) File transfer in the PORT mode

Step 1 Connect the control ports from the FTP client to the FTP server.

Step 2 The GOT notifies the file transfer port No. to the FTP server.

Step 3 The FTP server sends a connection request for sending the data to the FTP client using the notified port No..

If the network is protected behind the firewall, the request is refused and thus the connection is not established.



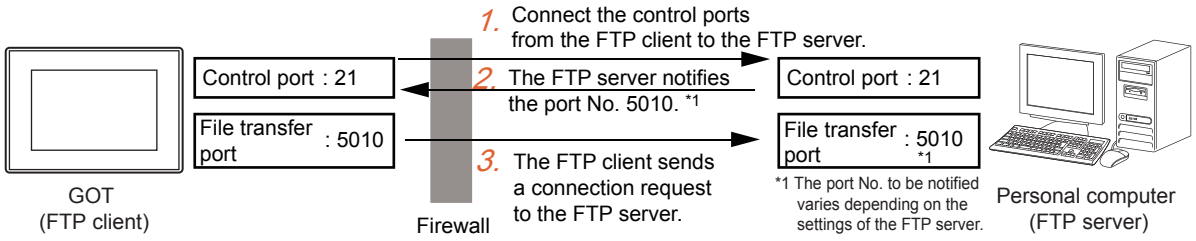
(2) File transfer in the PASV mode

Step 1 Connect the control ports from the FTP client to the FTP server.

Step 2 The FTP server notifies the file transfer port No. to the GOT (FTP client).

Step 3 The FTP client sends again a connection request for the data communication to the FTP server using the notified port No..

Even if the network is protected behind the firewall, the connection is established.



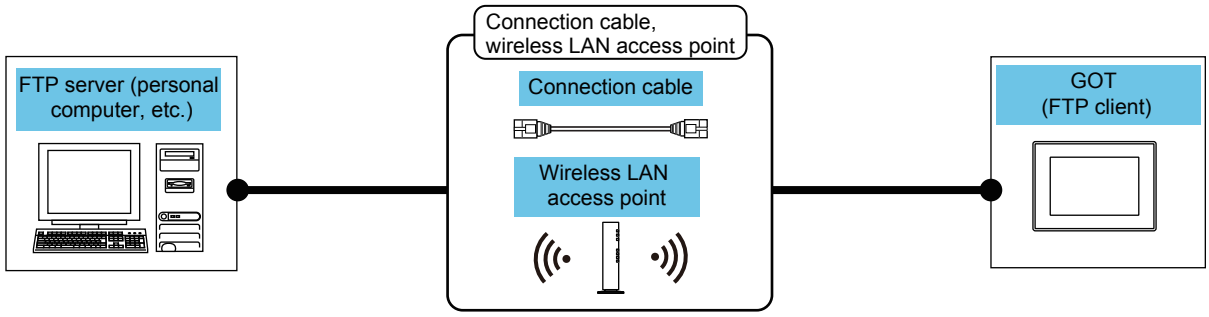
10.17.3 How to use the file transfer function (FTP transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System configuration

For the communication interface settings, refer to the following.

➟10.13.5 [Communication Setting]



FTP server	Connection cable*1*2, Wireless LAN access point	Maximum segment length*3	GOT (FTP client)	
			Option	GOT model
Personal computer or others*4	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GT23 GT21 *7 GS25 GS21
			GT25-J71E71-100	GT27 GT25 *8
	-	-	GT25-WLAN	GT27 *5 GT25 *5*8 GS25 *5
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *6 GT25 *6*8 GS25 *6

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use. When a repeater hub is used, the number of connectable personal computers is as follows.
• 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)
• 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)
For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades.
For the limit, contact the switching hub manufacturer.

*4 For the details of applicable FTP servers, refer to the following.
➟10.17.2 ■2 (1) FTP servers whose operations have been validated

*5 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*7 For GT21, the following models support this function.
• GT2107-W

• GT2104-R
• GT2104-PMBD
• GT2103-PMBD

*8 Not available to GT2505-V and GT25HS-V.

■2 Setting procedure

Step 1 Consider the configuration of the whole system.

• Configuration of the whole system including controllers and GOTs
• Controller settings (including device assignment)
• GOT settings (including IP address, network number, and station number)

Step 2 Connect the GOT and the controllers.

➟■1 System configuration

Step 3 Configure the communication interface settings.

➟10.13.5 [Communication Setting]

Step 4 Configure the settings for the file transfer function (FTP transfer) with GT Designer3.

➟10.17.4 [File Transfer] (FTP transfer)
10.17.5 [Destination FTP Server Setting] dialog
10.17.6 [File Transfer Setting] dialog

Step 5 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 6 Check the operation of the file transfer function (FTP transfer).

➟10.17.7 Operation of the file transfer function (FTP transfer)

10.17.4 [File Transfer] (FTP transfer)

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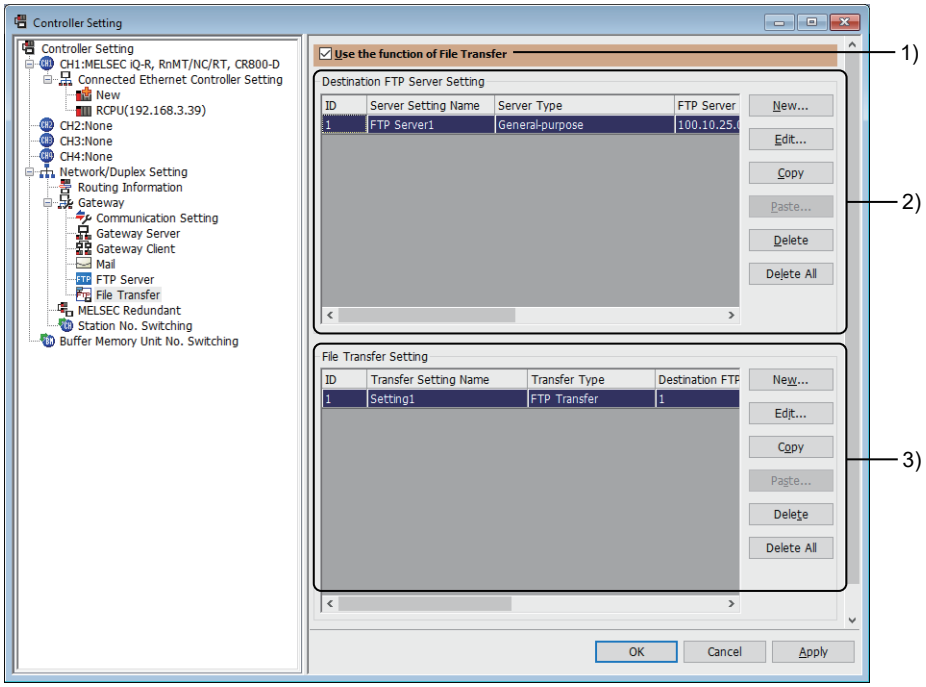
Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [File Transfer] in the [Controller Setting] window, and set the items.



1) **[Use the function of File Transfer]**
Enables the file transfer function.

2) **[Destination FTP Server Setting]**
The connection settings between the client and FTP servers are displayed in a list.

Up to 64 FTP servers can be registered.

Item	Description
[New] button	Click this button to add a destination FTP server setting. When the button is clicked, the [Destination FTP Server Setting] dialog appears. Add a new destination FTP server setting. ➟10.17.5 [Destination FTP Server Setting] dialog
[Edit] button	Click this button to change the contents of the selected destination FTP server setting. When the button is clicked, the [Destination FTP Server Setting] dialog appears. Edit the contents of the selected destination FTP server setting. ➟10.17.5 [Destination FTP Server Setting] dialog
[Copy] button	Click this button to copy the contents of the selected destination FTP server setting.
[Paste] button	Click this button to paste the copied contents of the destination FTP server setting. When the button is clicked, the dialog appears on which you can specify the FTP server setting ID for copying. Specify the FTP server setting ID.
[Delete] button	Click this button to delete the contents of the selected destination FTP server setting.
[Delete All] button	Click this button to delete the contents of all the destination FTP server settings.

3) **[File Transfer Setting]**

Lists the file transfer settings.

Up to 100 file transfer settings can be configured.

Item	Description
[New] button	Displays the [File Transfer Setting] dialog to add a new file transfer setting. ➟10.17.6 [File Transfer Setting] dialog
[Edit] button	Displays the [File Transfer Setting] dialog to edit the selected file transfer setting. ➟10.17.6 [File Transfer Setting] dialog
[Copy] button	Copies the selected file transfer setting.
[Paste] button	Displays a dialog to specify the destination file transfer ID, and pastes the copied file transfer setting to the specified destination.
[Delete] button	Deletes the selected file transfer setting.
[Delete All] button	Deletes all the file transfer settings.

10.17.5 [Destination FTP Server Setting] dialog

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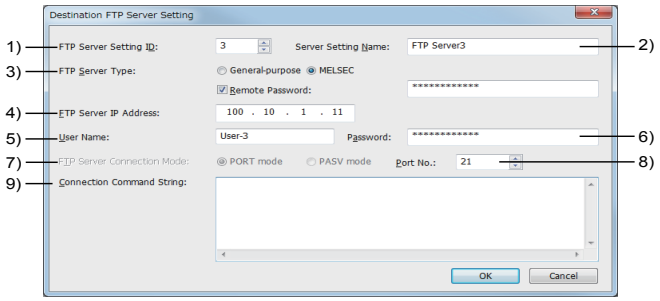

1) **[FTP Server Setting ID]**
Set the ID to specify the destination FTP server setting.
Set the number which does not overlap with that of other FTP server settings.
The setting range is [1] to [32767].

2) **[Server Setting Name]**
Set the name of the destination FTP server setting.
A maximum of 32 characters can be set.

3) **[FTP Server Type]**
Select the type of the accessed FTP server.
- [General-purpose]: Accesses a FTP server other than a PLC.
- [MELSEC]: Accesses the FTP server function of a MITSUBISHI PLC.
  To access MELSEC iQ-F, select [General-purpose].
  ➟10.17.2 ■2 (1) FTP servers whose operations have been validated

Item	Description
[Remote Password]	This item appears when [MELSEC] is selected for [FTP Server Type]. Enter the remote password for the accessed PLC (FTP server).

4) **[FTP Server IP Address]**
Set the IP address of the destination FTP server.
The setting range is [0.0.0.0] to [255.255.255.255].

5) **[User Name]**
Set the user name to login to the FTP server.
Up to 32 alphanumeric characters or symbols can be set.

6) **[Password]**
Set the password to login to the FTP server.
Up to 32 alphanumeric characters or symbols can be set.

7) **[FTP Server Connection Mode]**
Set the connection mode of the FTP server.
- [PORT mode]: Establishes connection in the PORT mode.
  To access MELSEC iQ-F, select [PORT mode].
- [PASV mode]: Establishes connection in the PASV mode.
  This item is not selectable when [MELSEC] is selected for [FTP Server Type].

8) **[Port No.]**
Set the control port No. of the FTP server.
The following shows the setting range.
- [21]
- [1024] to [65535]

Use the following port No. for the file transfer port of the FTP server.
- In PORT mode: 20
- In PASV mode: Differs depending on the settings of the FTP server.

9) **[Connection Command String]**
Set the command issued when the FTP server is connected.
Specify the command with one-byte alphanumeric characters and symbols.

Up to 10 lines with a maximum of 255 characters per line can be specified.
The available commands differ depending on FTP servers.
For details, check the manual for the FTP server.

10.17.6 [File Transfer Setting] dialog

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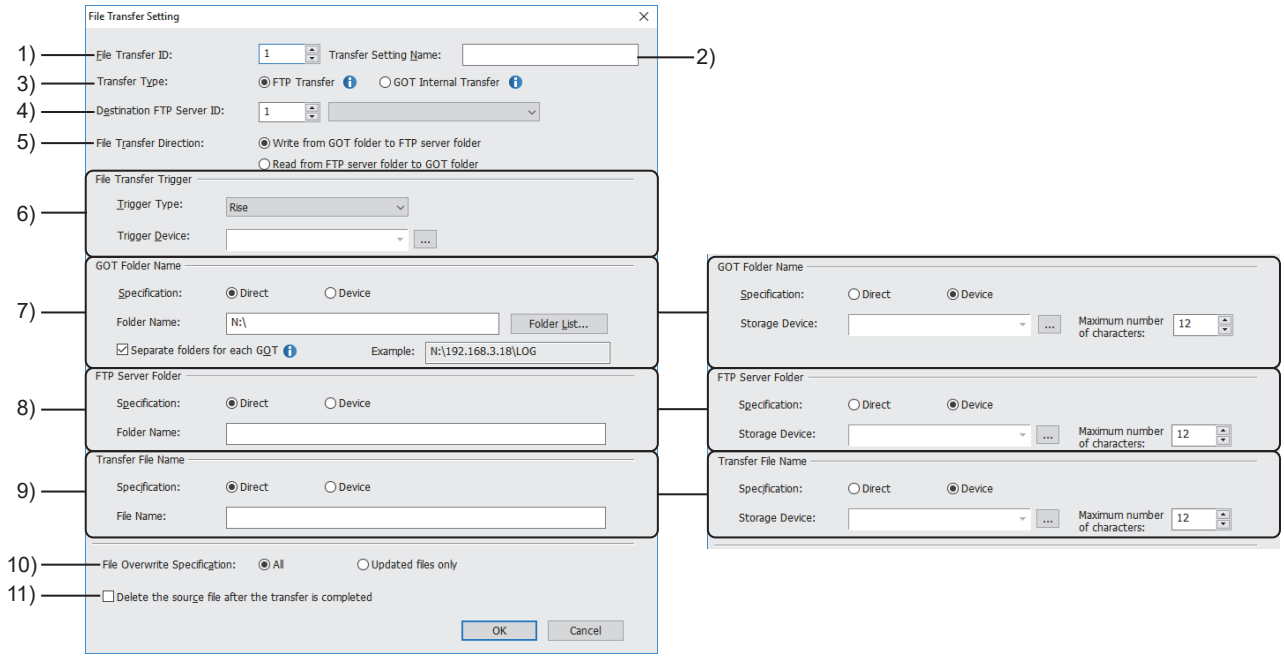


1) **[File Transfer ID]**
Set the ID to specify the file transfer setting.
Set the number which does not overlap with that of other file transfer settings.
The setting range is [1] to [32767].

2) **[Transfer Setting Name]**
Set the name of the file transfer setting.
Up to 32 characters can be set.

3) **[Transfer Type]**
Not available to GT21 and GS21.
Select [FTP Transfer].

4) **[Destination FTP Server ID]**
Set the destination FTP server setting ID for the file transfer.
➟10.17.5 [Destination FTP Server Setting] dialog

5) **[File Transfer Direction]**
Set the direction of the file transfer.
The following shows the items to be selected.
- [Write from GOT folder to FTP server folder]
- [Read from FTP server folder to GOT folder]

6) **[File Transfer Trigger]**
Set the trigger to execute the file transfer.

Item	Description
[Trigger Type]	Set the trigger type. The following shows the items to be selected. • [Rise] • [Fall] • [Sampling] • [ON Sampling] • [OFF Sampling] ➟10.17.7 ■4 Operation when the conditions of file transfer triggers are satisfied

Item	Description
[Trigger device]	When selecting [Rise], [Fall], [ON Sampling], or [OFF Sampling] for the trigger type, set the bit device as the trigger device. ➟6.2.2 Setting Trigger Types

7) **[GOT Folder Name]**

Set the folder path for the GOT (FTP client) to send and receive files.

Up to 76 one-byte alphanumeric characters and symbols are settable for the folder path.

The folder division symbol "\" is not required at the end.

The following drives are settable.

- Drive A
- Drive B
- Drive E
- Drive F
- Drive G
- Drive N
- Drive X (current drive)

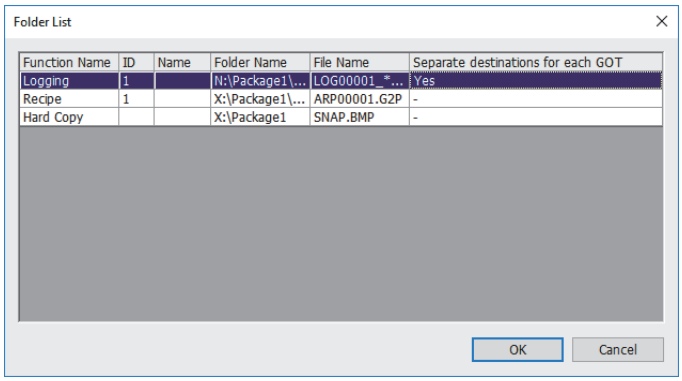
For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

For the restrictions on the folder name used in the GOT, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the GOT folder name. • [Direct]: Select this item to enter the GOT folder name directly. • [Device]: Select this item to specify the GOT folder indirectly with a device. ➟10.17.7 ■3 Indirect specification of the folder name and file name
[Folder Name]	When selecting [Direct] for [Specification], enter the folder name directly. To select a GOT (FTP client) folder from the folders set in GT Designer3, click the [Folder List] button. Clicking this button displays the [Folder List] dialog. Select the save destination folder name from the list. Only [GOT Folder Name] reflects an item selected in the [Folder List] dialog. [Transfer File Name] does not reflect.

Item	Description
[Folder List] button	When the following functions are set in the project, the [Folder List] dialog lists the names of the save destination folders set for each function. • [Comment] • [User Alarm Observation] • [System Alarm Observation] • [Logging] • [Recipe] • [Operation Log] • [Hard Copy]  • [Function Name] Displays the name of the function for which the file save settings have been configured. • [ID] Displays the setting ID set for each function. (Example: Alarm ID is displayed for the user alarm observation.) This space is blank when the function has no setting ID. • [Name] Displays the setting name set for each function. (Example: Alarm name is displayed for the user alarm observation.) This space is blank when the function has no setting name. • [Folder Name] Displays the name of the save destination folder for the file. • [File Name] Displays the name of the file stored in the save destination folder. • [Separate destinations for each GOT] Displays the setting of [Separate destinations for each GOT] in the setting dialog of each function. If any drive other than the network drive is selected as the save destination, [-] is displayed.
[Separate folders for each GOT]	This item is settable when drive N is specified in [Folder Name]. Creates a folder to save files for each GOT. For the details, refer to the following. ⇒5.3.15 ■4 Creating a folder for each GOT
[Example]	Displays a sample path when drive N is specified in [Folder Name]. Regardless of the entry in [Folder Name], one of the following paths is displayed. • When [Separate destinations for each GOT] is selected: N:\192.168.3.18\LOG • When [Separate destinations for each GOT] is deselected: N:\LOG
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the GOT folder name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ⇒10.17.7 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the GOT folder name. The setting range is [8] to [76].

8) **[FTP Server Folder]**

Set the folder path for the FTP server to send and receive files.
To access the default folder of the FTP server, do not specify a folder.

Example) When the default folder of the FTP server is set to \root\ftp\file\

- If no folder is specified, the GOT will access the default folder (\root\ftp\file\).
- If \hoge\ is specified, the GOT will access the specified folder (\root\ftp\file\hoge\).

Up to 250 one-byte alphanumeric characters and symbols are settable for the folder path.
The maximum number of characters and available characters differ depending on the specifications of the FTP server.
Check the manual of the FTP server before setting.
The folder division symbol "\" is not required at the end.
For the restrictions on the folder name used in the GOT, refer to the following.

➡12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the FTP server folder. • [Direct]: Select this item to enter the FTP server folder directly. • [Device]: Select this item to specify the FTP server folder indirectly with a device. ➡10.17.7 ■3 Indirect specification of the folder name and file name
[Folder Name]	When selecting [Direct] for [Specification], enter the folder name directly. If the specified folder does not exist, the folder is automatically created.
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the FTP server folder name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ➡10.17.7 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the FTP server folder name. The setting range is [8] to [250].

9) **[Transfer File Name]**

Set a transfer file name.
Up to 75 one-byte alphanumeric characters and symbols are settable for the file name.
A wildcard character can be used in the transfer file name.

➡10.17.7 ■5 Specifying the transfer file with the wild card

For the restrictions of the file name used in the GOT, refer to the following.

➡12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the transfer file name. • [Direct]: Select this item to enter the transfer file name directly. • [Device]: Select this item to specify the transfer file name with specific devices. ➡10.17.7 ■3 Indirect specification of the folder name and file name
[File Name]	When selecting [Direct] for [Specification], enter the transfer file name directly.
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the transfer file name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ➡10.17.7 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the transfer file name. The setting range is [8] to [75].

10) **[File Overwrite Specification]**

Set the behavior to be performed when the transfer destination folder has a file with the same name as the transfer file.

- [All]: Overwrites files each time.
- [Updated files only]: Overwrites an existing file in the transfer destination folder only when the time stamp of the transfer file is equal to or newer than that of the existing file.
  In other cases, files are not transferred.

11) **[Delete the source file after the transfer is completed]**

Select this item to delete the source file after the transfer is completed.

Point

Selection for [File Overwrite Specification]

To transfer only the logging files that are updated by the logging function, select [Updated files only].
Since the transferred files are not resent, the file transfer efficiency is increased.

10.17.7 Operation of the file transfer function (FTP transfer)

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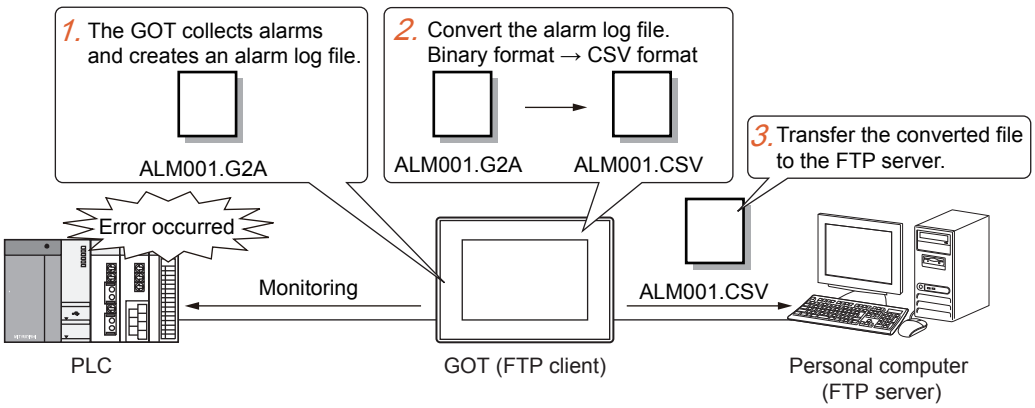
■1 Application examples

The following shows application examples of the file transfer function (FTP transfer).

(1) Sending an alarm log file

The alarm log file created by the GOT is converted to a CSV file and transferred to the FTP server.
The file conversion is optional.
For the details of alarms, refer to the following.

➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])



Step 1 The GOT creates the alarm log file based on the collected alarm data.

Step 2 Convert the alarm log file from the binary format to the CSV format by using the convert trigger device for the file.

Step 3 Transfer the converted file to the FTP server.

(a) Settings

This application example requires the following settings.

• Alarm settings

Setting	Description		Reference
[Alarm Common Setting]	[Convert trigger device]	Set any bit device.	➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])
	[Convert-in-motion notification device]		
[User Alarm Observation]	[Basic] tab	Set the method of collecting the history. Select [Historical] or [Cumulative].	
	[Device] tab	Set the target device for observation.	
	[File Save] tab	Select [Save alarm log files] and set the save destination for the log file and the storage trigger. Select [Rise] for the trigger type of the storage trigger.	

• Settings of the file transfer function (FTP transfer)

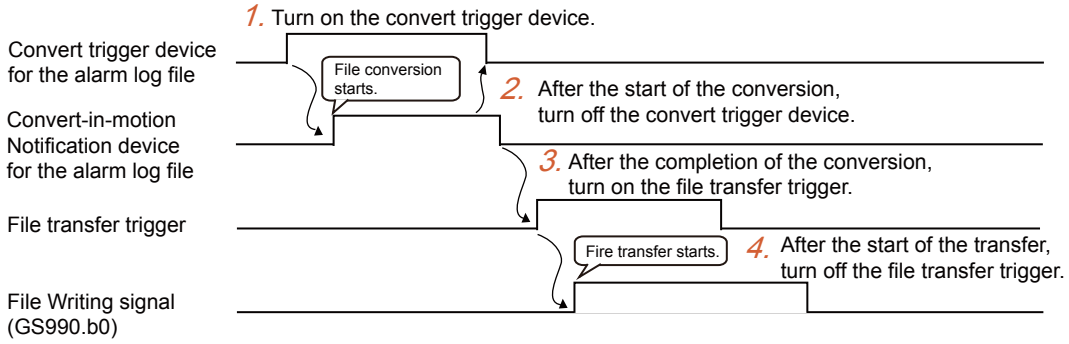
Setting	Description		Reference
[Destination FTP Server Setting]	Set any FTP server.		➟10.17.5 [Destination FTP Server Setting] dialog
[File Transfer Setting]	[Transfer Type]	Select [FTP Transfer].	➟10.17.6 [File Transfer Setting] dialog
	[File Transfer Trigger]	Set [Rise].	
	[Transfer File Name]	Set the name of the alarm log file specified in the alarm observation.	

• GOT special register (GS)

Setting	Description	Reference
GS990.b0	File Writing signal	➡10.17.7 ■2 (2) Write device

(b) **Action**

The following shows an example of converting and transferring an alarm log file.



Step 1 Turn on the convert trigger device for the alarm log file.

The GOT starts the file conversion and the Convert-in-motion Notification device turns on.

Step 2 Turn off the convert trigger device after the start of the file conversion.

Upon completion of the file conversion, the Convert-in-motion Notification device turns off.

Step 3 Turn on the file transfer trigger.

The GOT starts the file transfer and the File Writing signal (GS990.b0) turns on.

Step 4 Turn off the file transfer trigger after the start of the file transfer.

Upon completion of the file transfer, the File Writing signal (GS990.b0) turns off.

For the convert trigger device for the alarm log file, refer to the following.

➡9.1.2 ■5 [Alarm Common Setting] dialog

Point

Turning on the file transfer trigger automatically

In the example above, the user needs to turn on the file transfer trigger after the file conversion.
The user also needs to turn off the convert trigger device for the alarm log file and file transfer trigger after the start of the processing.
Using two project scripts enables these operations to be performed automatically.
The following shows an example of settings.

(1) Device

Device name	Device No.	Script which uses the device
Convert-in-motion Notification device for the alarm log file	GB100	Script No.1
Trigger device for script No.1		
Convert trigger device for the alarm log file	GB105	Script No.1
File transfer trigger	GB110	Script No.1, script No.2
File Writing signal	GS990.b0	Script No.2
Trigger device for script No.2		

(2) Project script setting

(a) Script No.1 Set [Rise] for the trigger type. Use the Convert-in-motion Notification device for the alarm log file as the trigger device.

(b) Script No.2 Set [Rise] for the trigger type. Use the File Writing signal (GS990.b0) as the trigger device.

(3) Script

(a) Script No.1 set([b: GB110]); //File transfer trigger ON rst([b: GB105]); //Alarm log file convert trigger OFF

(b) Script No.2 rst ([b: GB110]); //File transfer trigger OFF

■2 Checking the processing status

With the file transfer function (FTP transfer), you can check the file transfer status, errors, and other relevant information by using GOT special registers (GS).

(1) Read device

➟12.1.3 GOT special register (GS)

Device	Name		Description
GS401	File Transfer Control		Controls the file transfer.
	b0	Clear File Transfer Error signal	Turn on this signal to clear the error code stored in the following device or to turn off the following signals. • File Transfer Error No. (GS989) • Warning signal (GS990.b14) • File Transfer Error signal (GS990.b15)
GS402	File Transfer Timeout Time		Set the timeout period for the file transfer. The default is 3 seconds. The setting range is [1] to [300] second(s). When the device value is set to 0, or 301 or more, [3] seconds is applied.

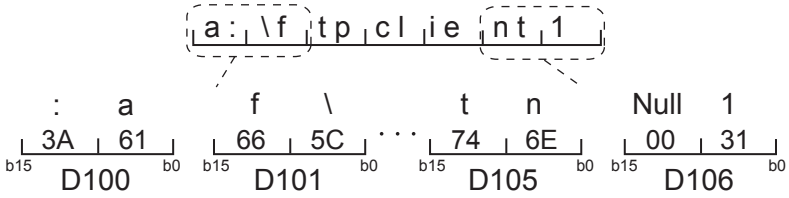
(2) Write device

➟12.1.3 GOT special register (GS)

Device	Name		Description
GS987	Executing File Transfer ID Notification		Stores the file transfer ID of the file transfer in execution.
GS988	Communicating FTP Server ID Notification		Stores the FTP server setting ID of the currently connected destination FTP server.
GS989	File Transfer Error No.		Stores the error code of an error that occurred in the file transfer. Turn on GS401.b0 to clear the stored error code. ➟10.17.10 ■2 Error codes for the file transfer function
GS990	File Transfer Status		Notifies the file transfer processing status.
	b0	File Writing signal	Turns on when the GOT (FTP client) writes files to the FTP server. When [Trigger Type] is [Rise] or [Fall], this bit turns off when the trigger condition is dissatisfied after the file writing.
	b1	File Reading signal	Turns on when the GOT (FTP client) reads files from the FTP server.
	b2	FTP Server Connection Mode signal	Notifies the connection mode of the GOT (FTP client) and the FTP server. ON: PASV mode OFF: PORT mode
	b14	Warning signal	Turns on when the error with which the processing can be continued occurs during the file transfer. Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.
	b15	File Transfer Error signal	Turns on when the error with which the processing cannot be continued occurs during the file transfer. Files cannot be transferred while this signal is on. Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.
GS991	Number of Transfer Target Files		Stores the total number of files to be transferred. When the transfer file name is specified with the wild card, the total count includes the files which are not transferred due to an invalid number of characters for the folder name or other causes. (However, the total count does not include only the files which have invalid names consisting of such as two-byte characters.) Holds the device value until the processing for the next file transfer ID is started.
GS992	Number of Transferred Files		Stores the total number of the files already transferred. The total count includes the files which are not transferred due to the error or other causes. Holds the device value until the processing for the next file transfer ID is started.

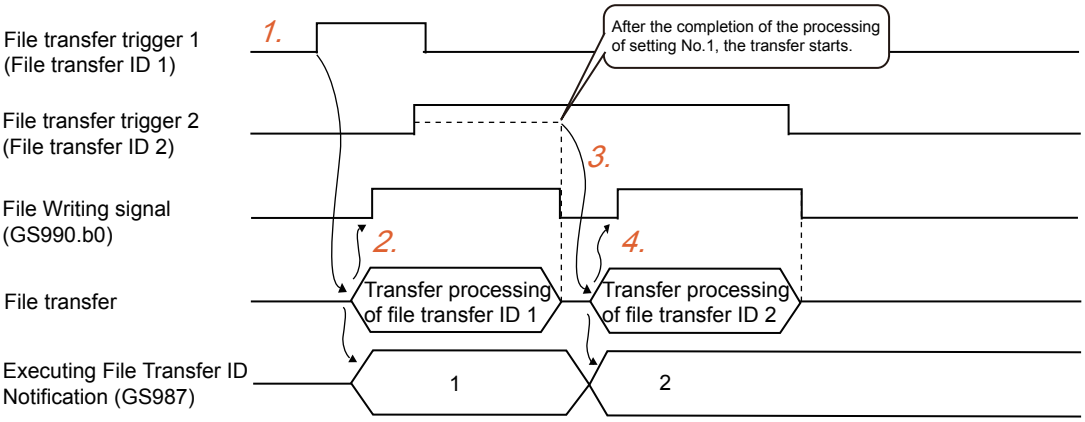
■3 Indirect specification of the folder name and file name

When [Device] is selected for [Specification] in the folder name or file name setting, consecutive word devices starting from a specified device store the folder name or file name.
The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.)
In the ASCII code, store the folder name or file name in order from the lower to the upper bit of each device.
Store Null (0x00) at the end of the folder name.
Example) Specifying the [ftpclient1] folder in drive A



■4 Operation when the conditions of file transfer triggers are satisfied

The following shows an operation example of the file transfer function when the conditions of two file transfer triggers are satisfied sequentially.



Step 1 When the condition of file transfer trigger 1 is satisfied, the GOT starts the file transfer for file transfer ID 1.

Step 2 The File Writing signal (GS990.b0) turns on, and the Executing File Transfer ID Notification device (GS987) stores 1.

Step 3 While the File Writing signal (GS990.b0) is on, even if the condition of file transfer trigger 2 is satisfied, the GOT does not start the file transfer for file transfer ID 2.

Upon completion of the file transfer for file transfer ID 1, the File Writing signal (GS990.b0) turns off. Then, the GOT starts the file transfer for file transfer ID 2.

Step 4 The File Writing signal (GS990.b0) turns on, and the Executing File Transfer ID Notification device (GS987) stores 2.

Upon completion of the file transfer for file transfer ID 2, the File Writing signal (GS990.b0) turns off.

(1) File transfer trigger at GOT startup

When the trigger type of the file transfer trigger is [Rise] and the trigger device is on at GOT startup, the trigger condition is satisfied.
When the trigger type is [Rise] and the trigger device is off, the trigger condition is also satisfied.

(2) File transfer trigger condition satisfied during file transfer

A file transfer trigger condition satisfied during file transfer is processed as shown below.

- Trigger for the same file transfer setting: The file transfer trigger does not start the transfer even if the condition is satisfied.
- Trigger for a different file transfer setting: When the file transfer trigger condition is satisfied, the GOT (FTP client) transfers the file after the transfer of the previous file is completed. When multiple trigger conditions are satisfied during the file transfer, the files are transferred in order of the file transfer setting ID.

(3) Trigger type of the file transfer trigger

When [Rise] or [Fall] is set for [Trigger Type] of the file transfer trigger, be sure to dissatisfy the trigger condition after the file transfer is started.

When the trigger condition remains satisfied, the File Writing Notification signal (GS990.b0) does not turn off even when the file transfer is completed.

■5 Specifying the transfer file with the wild card

Use the wild card under the following conditions.

- Only [*] can be used as the wild card. Example of valid use: [ARP*.DAT] Example of invalid use: [ARP?????.DAT]
- Only one [*] can be used. However, only [*.*] is an exception. Example of valid use: [*.DAT] Example of invalid use: [ARP*.*]
- You can use [*] only immediately before [.] (period) for the file name. Example of valid use: [ARP*.DAT] Example of invalid use: [ARP*01.DAT]
- When you use [*] in the extension part of the file name, the extension must consist of the wild card only. Example of valid use: ARP00001.*] Example of invalid use: [ARP00001.*AT]

10.17.8 Precautions

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■1 Precautions for system configuration

(1) Connection to the intranet

If the system needs keeping secure against unauthorized access to the intranet, consult a network service provider or a network administrator (a person who does network planning, IP address management, and others), and include your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the intranet connection.

(2) Countermeasures against access delay

When multiple network devices (including GOTs) are connected to the same segment, the network load increases and therefore the communication performance between the GOT and PLC may be degraded.
The following countermeasures may improve the communication performance.

- Using the switching hub
- Reducing the number of devices the GOT monitors

(3) When a firewall is used

If a firewall disconnects the communication of the gateway function, take countermeasures such as changing the port No. to be protected behind the firewall.
If the system needs keeping secure against unauthorized access in changing the port No. to be protected behind the firewall, consult the network administrator (a person who does network planning, IP address management, and others), and develop your own countermeasures.
Mitsubishi Electric Corporation assumes no responsibility for consequences that may arise from system troubles due to the change of the port No.

■2 Precautions for using the file transfer function (FTP transfer)

(1) Precautions for system design

(a) **Port No. overlap**

Check if the port No. for FTP communication is not used in the connection with other equipment.
If an overlapped port No. is set, the communication with the FTP server may fail, or unexpected operation may occur in other equipment.

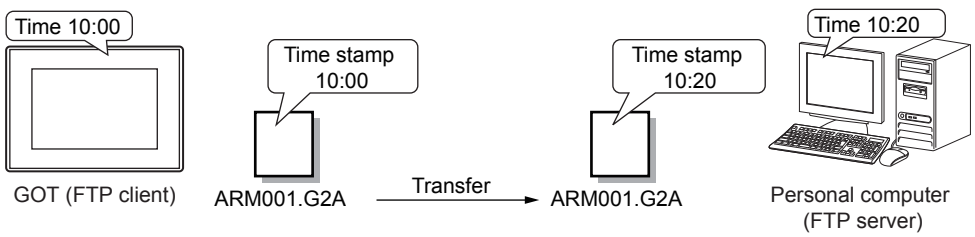
(b) **Time stamp of the transfer file**

The time stamp of the transfer file indicates the time taken from the destination FTP server when the file transfer to the destination folder is completed.
Depending on the destination FTP server, the time stamp of the transfer file may not be obtained.
In this case, the transfer file is overwritten each time regardless of the setting of [File Overwrite Specification].

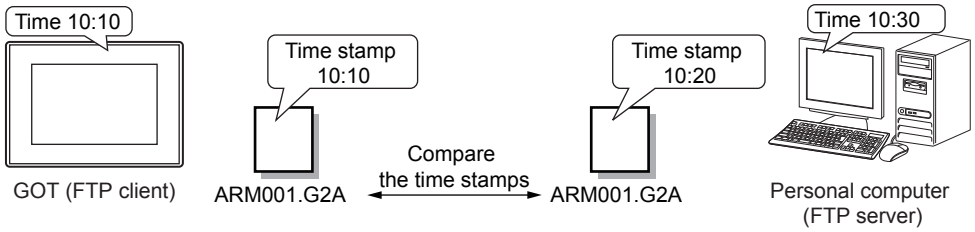
(c) **GOT (FTP client) time and FTP server time**

When selecting [Updated files only] for [File Overwrite Specification], set the GOT (FTP client) time and FTP server time to be the same.
The time stamp of the transfer file indicates the time taken from the destination FTP server when the file transfer to the destination folder is completed.
Therefore, when the GOT (FTP client) time and FTP server time are different, the latest file may be regarded as older than the file transferred last time.
In this case, the file is not transferred.
Example) When the time difference is 20 minutes between the GOT (FTP client) and personal computer (FTP server)

Step 1 The GOT (FTP client) transfers the file created at 10:00.



Step 2 The time stamps of the file created at 10:10 and the file at the FTP server are compared.



Step 3 Since the latest file is recognized as being older than that at the FTP server, the GOT (FTP client) does not transfer the file.

Select [All] for [File Overwrite Specification] if the time difference between the installation locations of the GOT (FTP client) and FTP server exists.
If the time difference between the installation locations exists, the GOT time and FTP server time may differ even the both time are set correctly. Therefore the time stamps cannot be compared properly.

(d) Indication in the file list of the FTP server

The GOT (FTP client) is compatible with the FTP servers that use alphanumerics to show the date and time information of the files in the file list.
If an FTP server uses characters other than alphanumerics such as Japanese kanji in the file list, the files cannot be transferred.
Configure the settings including the OS setting on the FTP server so that the FTP server uses alphanumerics to show the information in the file list.
To check the file list of the FTP server, issue a dir command or a list command in the command prompt on a personal computer that is connected to the FTP server.

Example 1) When the FTP server uses alphanumerics in the file list
The FTP server is compatible with the GOT (FTP client).

```
02-08-14  05:30PM                348000 sample1.txt
11-02-15  10:30AM                234000 sample2.txt
                                    :
```

Example 2) When the FTP server uses alphanumerics in the file list
The FTP server is compatible with the GOT (FTP client).

```
-rwxrwxrwx  1 owner  group      348000 Feb 8 17:30 sample1.txt
-rwxrwxrwx  1 owner  group      234000 Nov 2 10:30 sample2.txt
                                    :
```

Example 3) When the FTP server uses Japanese kanji characters in the file list
The FTP server is incompatible with the GOT (FTP client).

```
-rwxrwxrwx  1 owner  group      348000  2月 8日 17:30 sample1.txt
-rwxrwxrwx  1 owner  group      234000 11月 2日 10:30 sample2.txt
                                    :
```

(2) Precautions for transferring files

(a) Folder path and transfer file name

The total number of characters of the folder path and transfer file name must be set as shown below.

- <GOT folder path>\<Transfer file name>: 78 characters or less (including backward slash marks)
- <FTP server folder path>\<Transfer file name>: 250 characters or less (including backward slash marks)

If the total number of the characters exceeds the limits, an error occurs.
Specify the folder path and transfer file name by using one-byte alphanumeric characters and symbols.
If you use two-byte characters, the specified file cannot be transferred.

(b) Warning possibly given if the file name is specified with a wildcard character

If the file name is specified with a wildcard character, a warning may be given at a file transfer.
Even if a warning is given, the file transfer process does not stop.
However, the file transfer may fail due to other causes, such as an invalid transfer file name or write-protect transfer destination folder.
Check the error code stored in the File Transfer Error No. (GS989), eliminate the cause, and then perform the file transfer again.

➟10.17.10 ■2 Error codes for the file transfer function

(c) Offline status of the GOT

When the GOT becomes offline during the file transfer, the file transfer is interrupted.
During the file transfer, do not perform the operation that causes the GOT to be offline, such as establishing the communication with GT Designer3.

(d) Deleting source files after the file transfer has completed

When you make a selection to delete source files after the file transfer is complete in [File Transfer Setting], note the following.

- Deleting files to which the GOT refers Do not delete the files to which the GOT refers, such as a logging file, from the GOT folder. Otherwise, you cannot view such data on the GOT.
- Specifying the transfer file name with a wildcard character When specifying the transfer file name with a wildcard character, you may delete a required file unintentionally. If the transfer source folder has a required file, take one of the following measures. · Deselect [Delete the source file after the transfer is completed]. · When specifying the transfer file name with a wildcard character, check in advance that only the transfer target files are narrowed down.

(e) Handling of a file transfer error

If an error occurs in the file transfer, turn on the Clear File Transfer Error signal (GS401.b0) to turn off the File Transfer Error signal (GS990.b15).
While the File Transfer Error signal (GS990.b15) is on, the GOT does not start transferring the subsequent files because the file transfer is recognized to have an error.

(f) Using a recipe while a recipe file is transferred

Do not use the recipe while you transfer the recipe file to the GOT.
If the recipe file in the data storage is deleted while the recipe is processed, the function may not be performed properly.
If the recipe file is deleted even while the recipe is not processed, the error (system alarm: recipe file error) occurs when the recipe is performed next time.

(g) Power off during the access to the data storage

Do not power off the GOT while the FTP server is accessing the file in the data storage of the GOT.
Doing so may cause the data corruption in the data storage.

(h) File password when the FTP server function of a MITSUBISHI PLC is used

When the FTP server function of a MITSUBISHI PLC is used, the GOT cannot transfer a password-protected file.
Do not set a password for the file to be transferred with the file transfer function (FTP transfer).

(i) Creating a folder when the FTP server function of a MITSUBISHI PLC is used

When you use the FTP server function of a MITSUBISHI PLC, the GOT cannot create a folder in the PLC by using the file transfer function (FTP transfer).
Create a file transfer destination folder in advance.

■3 Restrictions on accessing MELSEC iQ-F

When using MELSEC iQ-F as an FTP server, note the following restrictions.

(1) Setting the FTP server type

Select [General-purpose] for [FTP Server Type] in the [Destination FTP Server Setting] dialog.
If you select [MELSEC], the GOT cannot communicate with the FTP server.
For the settings of the [Destination FTP Server Setting] dialog, refer to the following.

➟10.17.6 [File Transfer Setting] dialog

(2) Remote password authentication

Do not set a remote password on the FTP server.
The GOT cannot access the FTP server that uses the remote password authentication.

(3) Access in the PASV mode

Set [FTP Server Connection Mode] to [PORT mode] in the [Destination FTP Server Setting] dialog.
The GOT cannot access the FTP server in the PASV mode.
For the settings of the [Destination FTP Server Setting] dialog, refer to the following.

➟10.17.6 [File Transfer Setting] dialog

(4) Writing files to the FTP server

Do not write files to the FTP server.
This operation is not available.
(Only reading files is available.)

10.17.9 Relevant settings

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Set the relevant settings other than the specific settings for the file transfer function (FTP transfer) as required.
The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item
Turning on this signal to clear an error that occurred in the file transfer	GS401.b0
Setting the timeout period for FTP communication	GS402
Storing the file transfer ID of the file transfer in execution	GS987
Storing the FTP server setting ID of the connected FTP server	GS988
Storing the error code of an error that occurred in the file transfer	GS989
Notifying the file transfer processing status	GS990
Storing the total number of files to be transferred	GS991
Storing the total number of transferred files	GS992

10.17.10 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Troubleshooting for the file transfer function (FTP transfer)

The following shows the troubleshooting for the file transfer function (FTP transfer).

Symptom		Details of error and cause	Corrective action
The file transfer function (FTP transfer) does not work.	When all the bits of GS200 are off and the GOT does not respond to Ping *1*2	The system application (extended function) for the file transfer function is not installed on the GOT.	Write the package data that contains the system application (extended function) for the file transfer function to the GOT. ➟4. COMMUNICATING WITH GOT
		No IP address has been set for the GOT.	Set the IP address for the GOT in the utility of the GOT.
		The port number of the personal computer (MX Component) is different from that of the GOT (5011).	Set the same port number for the personal computer (MX Component) as that of the GOT (5011).
	If any bit of GS200 is on and the GOT responds to Ping *1*2	-	Refer to the troubleshooting for the functions corresponding to the bits which are on, and take the corrective actions.
File cannot be transferred.		The system application (extended function) for the file transfer function is not installed on the GOT.	Write the package data that contains the system application (extended function) for the file transfer function to the GOT. ➟4. COMMUNICATING WITH GOT
		The connection setting with the FTP server is not configured properly.	Check the followings in [Destination FTP Server Setting]. • FTP server IP address, connection mode, and port No. • User name and password
		The FTP server is not working.	Check if the FTP server has stopped.

*1 For the details of the Gateway Common Information (GS200), refer to the following.

➟12.1.3 GOT special register (GS)

*2 To check if the GOT responds to Ping, give the ping command through the personal computer to the GOT.

■2 Error codes for the file transfer function

The following lists the error codes that are stored in the GOT special register, GS989 (File Transfer Error No.).

Error code	Details of error and cause	Corrective action
1	The connection to the FTP server has failed.	• Check the IP address of the FTP server. • Check if a cable is connected. • Check the connection status of the HUB. • Check if the FTP server is working on the target device. • Check if the setting in [Destination FTP Server Setting] is configured properly.
2	Authentication of the FTP server has failed.	Check if the login username and the password for the accessed FTP server are correct.
	The authentication using the remote password has failed.	Check if the remote password for the PLC is correct.
3	FTP server Busy	Wait until the FTP server recovers from the busy status. *1
4	FTP communication timeout	• Check if the communication line has not been physically interrupted. • Check the communication congestion.
5	Access to the target file to be written has failed.	• Check if the write destination drive is enabled. • Check if the write destination drive has enough available space. • Check if the file is not write-prohibited. • When using the GOT as the FTP server, check if the GOT is in the write enable mode. • When using the FTP server function of the PLC, check if a write destination folder exists. If no write destination folder exists, create one. • When using the FTP server function of the PLC, check if a password is set for the file to be transferred. If a password is set, cancel the password protection.

Error code	Details of error and cause	Corrective action
6	Access to the target file to be read has failed.	• Check if the target file exists. • Check if the file name specified in [File Transfer Setting] is correct. • Check if the data storage has been installed on the GOT. • Check if the SD card cover has been closed. • Check that the SD card access switch is turned on. • Check that the write protection for the SD card is canceled. • When using the FTP server function of the PLC, check if a password is set for the file to be transferred. If a password is set, cancel the password protection.
7	The file whose size is the file supported by the GOT or more was attempted to be transferred.	Check if the size of the transfer file is less than 2GB.
10	• For the FTP transfer The GOT folder name is invalid. • For the GOT internal transfer The transfer source folder name is invalid.	Check that the GOT folder name or the transfer source folder name does not contain invalid characters, such as two-byte characters.
11	The transfer file name is invalid.	Check if the transfer file name does not include invalid characters such as two-byte characters.
12	The transfer source folder and destination folder have the same path.	Set different paths to the transfer source folder and the transfer destination folder.
13	Drive N is specified for both the transfer source folder and the transfer destination folder.	Specify drive N for only one of the transfer source folder and the transfer destination folder.
50	The drive specification on the PLC side is incorrect.	When a PLC is used as a FTP server, only drive 2 (Memory card (ROM)) is accessible. Check if the setting of [FTP Server Folder] specified in the [File Transfer Setting] dialog is correct.
100	The destination FTP server setting ID which does not exist has been specified.	• Check if the destination FTP server setting ID specified in [File Transfer Setting] is correct. • Add the required destination FTP server setting.
200	Access to the storage device has failed when the file name or folder name is specified indirectly.	Check if the device setting used for the indirect specification is correct.
507	The total number of characters of the folder path and transfer file name exceeds the limit.	Check that the total number of the characters does not exceed the limit as shown below. • <GOT folder path>\<Transfer file name>: 78 characters or less (including backward slash marks) • <FTP server folder path>\<Transfer file name>: 250 characters or less (including backward slash marks) • <Transfer source folder path>\<Transfer file name>: 78 characters or less (including backward slash marks) • <Transfer destination folder path>\<Transfer file name>: 78 characters or less (including backward slash marks)
600 *2	The file transfer has been skipped because the total number of characters of the folder path and transfer file name exceeds the limit. (Only when the file is specified with a wildcard character)	
601 *2	Since invalid characters had been used for the transfer file name, the transfer processing was skipped. (only when the file is specified with the wild card)	Check if the transfer file name does not include invalid characters such as two-byte characters.
602 *2	Since the write operation for the file had failed, the transfer processing was skipped. (only when the file is specified with the wild card)	• Another function might have been using the transfer file. Transfer the file again. • Check if the write destination drive has enough available space.
603 *2	Since the read operation for the file had failed, the transfer processing was skipped. (only when the file is specified with the wild card)	• The file might have been deleted before being transferred. Check if all the files have been transferred to the destination folder. • Check if the data storage has been installed on the GOT. • Check if the SD card cover has been closed. • Check that the SD card access switch is turned on. • Check that the write protection for the SD card is canceled.
606 *2	Since the file specified with the wild card had not existed, the file was not transferred. (only when the file is specified with the wild card)	Check if the specified file name is correct.
607 *2	The file whose size is the file supported by the GOT or more was attempted to be transferred. (only when the file is specified with the wild card)	Check if the size of the transfer file is less than 2GB.
610 *2	Deleting the source file has failed.	Check if the source file is in the deletable status.

*1 The status in which a request from the client cannot be accepted

*2 Even if a warning is given, the file transfer process does not stop.

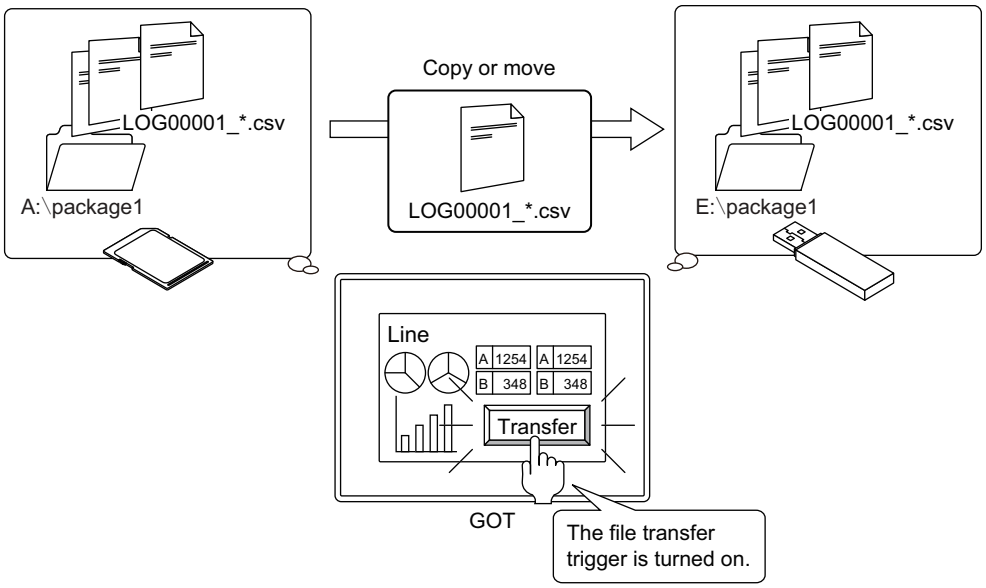
10.18 Transferring a File between the Drives (File Transfer Function (GOT Internal Transfer))

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.18.1 Overview of the file transfer function (GOT internal transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The file transfer function (GOT internal transfer) enables you to copy or move a file to another drive or folder within the GOT.



10.18.2 Specifications of the file transfer function (GOT internal transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 System application (extended function)

To use the file transfer function (GOT internal transfer), a system application (extended function) of [File Transfer] is required.

To incorporate the application into package data automatically, select [Use the function of File Transfer] and configure the settings in the [Controller Setting] window ([File Transfer]).

➟10.18.4 [File Transfer] (GOT internal transfer)

■2 Specifications of the GOT internal transfer

The following shows the specifications of the file transfer function (GOT internal transfer).

Item	Specifications
Number of file transfer settings	Max. 100 (FTP transfer settings and GOT internal transfer settings in total)
Required devices for the file access	Data storage
Transfer target	Files in the transfer source folder (The files in the sub folders are excluded.)
Number of characters for file path	• <Transfer source folder path>\<Transfer file name>: Up to 78 one-byte alphanumeric characters and symbols in total (including backward slash marks) • <Transfer destination folder path>\<Transfer file name>: Up to 78 one-byte alphanumeric characters and symbols in total (including backward slash marks)

10.18.3 How to use the file transfer function (GOT internal transfer)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Setting procedure

Step 4 Set the file transfer function (GOT internal transfer) with GT Designer3.

➟10.18.4 [File Transfer] (GOT internal transfer)
10.18.5 [File Transfer Setting] dialog

Step 5 Write the package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 6 Check the operation of the file transfer function (GOT internal transfer) on the GOT.

➟10.18.6 Operation of the file transfer function (GOT internal transfer)

10.18.4 [File Transfer] (GOT internal transfer)

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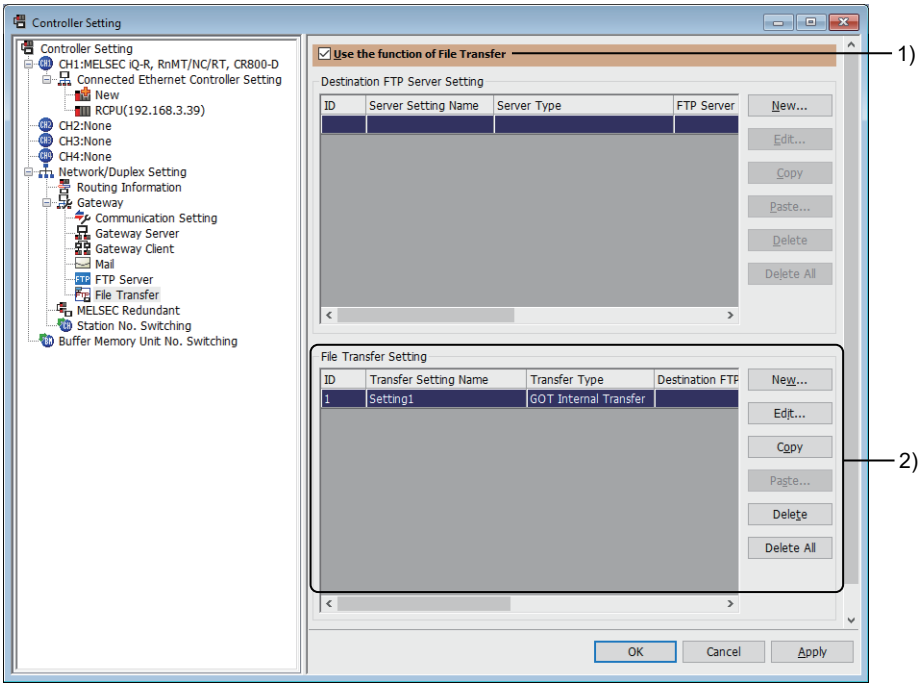
Step 1 Select [Common] → [Controller Setting] from the menu to display the [Controller Setting] window.

Step 2 Select [File Transfer] in the [Controller Setting] window, and set the items.

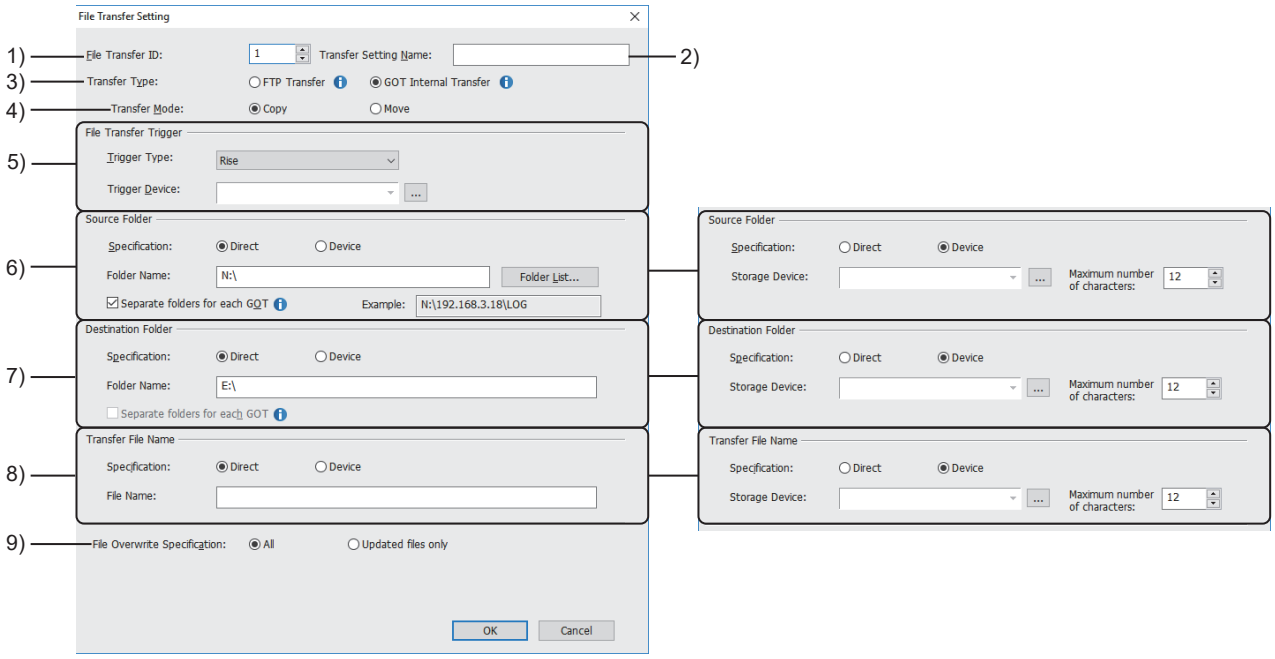


1) **[Use the function of File Transfer]**
Enables the file transfer function.

2) **[File Transfer Setting]**
Lists the file transfer settings.
Up to 100 file transfer settings can be configured.

Item	Description
[New] button	Displays the [File Transfer Setting] dialog to add a new file transfer setting. ➟10.18.5 [File Transfer Setting] dialog
[Edit] button	Displays the [File Transfer Setting] dialog to edit the selected file transfer setting. ➟10.18.5 [File Transfer Setting] dialog
[Copy] button	Copies the selected file transfer setting.
[Paste] button	Displays a dialog to specify the destination file transfer ID, and pastes the copied file transfer setting to the specified destination.
[Delete] button	Deletes the selected file transfer setting.
[Delete All] button	Deletes all the file transfer settings.

10.18.5 [File Transfer Setting] dialog



1) **[File Transfer ID]**
Set the ID to specify the file transfer setting.
Set the number which does not overlap with that of other file transfer settings.
The setting range is [1] to [32767].

2) **[Transfer Setting Name]**
Set the name of the file transfer setting.
Up to 32 characters can be set.

3) **[Transfer Type]**
Select [GOT Internal Transfer].

4) **[Transfer Mode]**
Select the method of transferring a file.
The following shows the items to be selected.
- [Copy]
- [Move]

5) **[File Transfer Trigger]**
Set the trigger to execute the file transfer.

Item	Description
[Trigger Type]	Set the trigger type. The following shows the items to be selected. • [Rise] • [Fall] • [Sampling] • [ON Sampling] • [OFF Sampling] ➟10.18.6 ■4 Operation after file transfer trigger conditions being satisfied
[Trigger device]	When selecting [Rise], [Fall], [ON Sampling], or [OFF Sampling] for the trigger type, set the bit device as the trigger device. ➟6.2.2 Setting Trigger Types

6) **[Source Folder]**
Specify the transfer source folder path.
Up to 76 one-byte alphanumeric characters and symbols are settable for the folder path.
The folder division symbol "\" is not required at the end.
The following drives are settable.

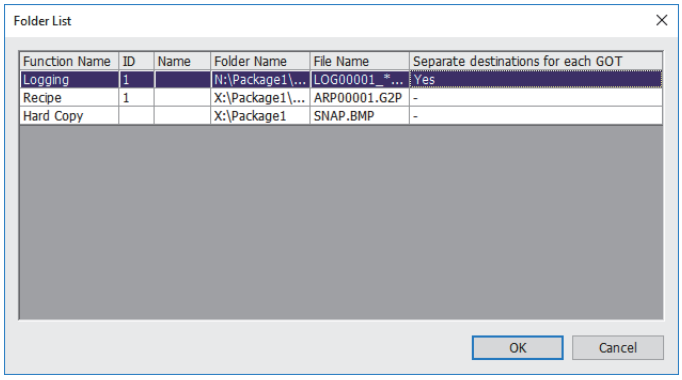
• Drive A
• Drive B
• Drive E
• Drive F
• Drive G
• Drive N
• Drive X (current drive)

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

For the restrictions on the folder name used in the GOT, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the transfer source folder name. • [Direct]: Select this item to enter the transfer source folder name directly. • [Device]: Select this item to specify the transfer source folder name with specific devices. ➟10.18.6 ■3 Indirect specification of the folder name and file name
[Folder Name]	When selecting [Direct] for [Specification], enter the folder name directly. To select a folder from the existing ones that are set with GT Designer3, click the [Folder List] button to display the [Folder List] dialog. Select the transfer source folder from the folder list. The folder selected in the [Folder List] dialog is reflected in [Source Folder] only. (The folder is not reflected in [File Name].)
[Folder List] button	When the following functions are set in the project, the [Folder List] dialog lists the names of the save destination folders set for each function. • [Comment] • [User Alarm Observation] • [System Alarm Observation] • [Logging] • [Recipe] • [Operation Log] • [Hard Copy]  • [Function Name] Displays the name of the function for which the file save settings have been configured. • [ID] Displays the setting ID set for each function. (Example: Alarm ID is displayed for the user alarm observation.) This space is blank when the function has no setting ID. • [Name] Displays the setting name set for each function. (Example: Alarm name is displayed for the user alarm observation.) This space is blank when the function has no setting name. • [Folder Name] Displays the name of the save destination folder for the file. • [File Name] Displays the name of the file stored in the save destination folder. • [Separate destinations for each GOT] Displays the setting of [Separate destinations for each GOT] in the setting dialog of each function. If any drive other than the network drive is selected as the save destination, [-] is displayed.

Item	Description
[Separate folders for each GOT]	This item is settable when drive N is specified in [Folder Name]. Creates a folder to save files for each GOT. For the details, refer to the following. ➟5.3.15 ■4 Creating a folder for each GOT
[Example]	Displays a sample path when drive N is specified in [Folder Name]. Regardless of the entry in [Folder Name], one of the following paths is displayed. • When [Separate destinations for each GOT] is selected: N:\192.168.3.18\LOG • When [Separate destinations for each GOT] is deselected: N:\LOG
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the transfer source folder name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ➟10.18.6 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the transfer source folder name. The setting range is [8] to [76].

7) **[Destination Folder]**

Specify the transfer destination folder path.

Up to 76 one-byte alphanumeric characters and symbols are settable for the folder path.

The folder division symbol "\" is not required at the end.

The following drives are settable.

- Drive A
- Drive B
- Drive E
- Drive F
- Drive G
- Drive N
- Drive X (current drive)

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

For the restrictions on the folder name used in the GOT, refer to the following.

➟12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the transfer destination folder name. • [Direct]: Select this item to enter the transfer destination folder name directly. • [Device]: Select this item to specify the transfer destination folder name with specific devices. ➟10.18.6 ■3 Indirect specification of the folder name and file name
[Folder Name]	When selecting [Direct] for [Specification], enter the folder name directly.
[Separate folders for each GOT]	This item is settable when drive N is specified in [Folder Name]. Creates a folder to save files for each GOT. For the details, refer to the following. ➟5.3.15 ■4 Creating a folder for each GOT
[Example]	Displays a sample path when drive N is specified in [Folder Name]. Regardless of the entry in [Folder Name], one of the following paths is displayed. • When [Separate destinations for each GOT] is selected: N:\192.168.3.18\LOG • When [Separate destinations for each GOT] is deselected: N:\LOG
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the transfer destination folder name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ➟10.18.6 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the transfer destination folder name. The setting range is [8] to [76].

8) **[Transfer File Name]**

Set a transfer file name.

Up to 75 one-byte alphanumeric characters and symbols are settable for the file name.

A wildcard character can be used in the transfer file name.

➟10.18.6 ■5 Specifying the transfer file with the wild card

For the restrictions of the file name used in the GOT, refer to the following.

➡12.7 Restrictions for Folder Names and File Names used in GOT

Item	Description
[Specification]	Select the method of specifying the transfer file name. • [Direct]: Select this item to enter the transfer file name directly. • [Device]: Select this item to specify the transfer file name with specific devices. ➡10.18.6 ■3 Indirect specification of the folder name and file name
[File Name]	When selecting [Direct] for [Specification], enter the transfer file name directly.
[Storage Device]	When selecting [Device] for [Specification], set the start device of consecutive word devices that store the transfer file name. The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.) ➡10.18.6 ■3 Indirect specification of the folder name and file name
[Maximum number of characters]	Set the maximum number of characters for the transfer file name. The setting range is [8] to [75].

9) **[File Overwrite Specification]**

Set the behavior to be performed when the transfer destination folder has a file with the same name as the transfer file.

- [All]: Overwrites files each time.
- [Updated files only]: Overwrites an existing file in the transfer destination folder only when the time stamp of the transfer file is equal to or newer than that of the existing file.
  In other cases, files are not transferred.

Point

Selection for [File Overwrite Specification]

To transfer only the logging files that are updated by the logging function, select [Updated files only]. Since the transferred files are not resent, the file transfer efficiency is increased.

10.18.6 Operation of the file transfer function (GOT internal transfer)

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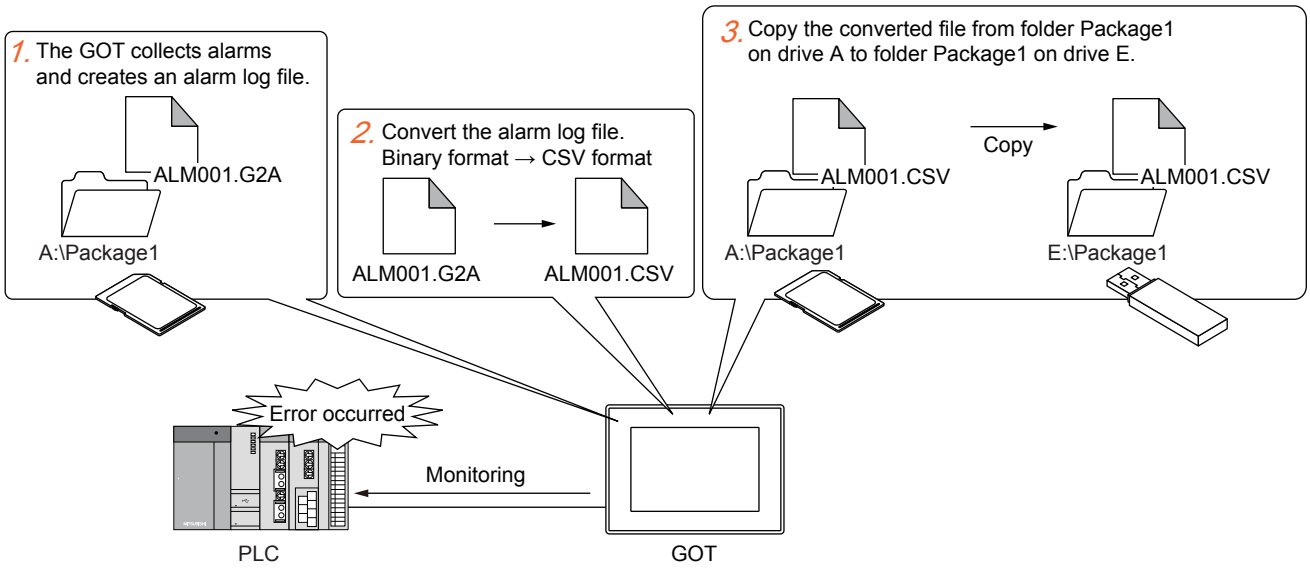
■1 Application examples

The following shows an application example of the file transfer function (GOT internal transfer).

(1) Copying an alarm log file to another drive

The following shows an example of copying an alarm log file from folder Package1 on drive A to folder Package1 on drive E. The alarm log file is converted to the CSV format in advance.
The file conversion is optional.
For the details of alarms, refer to the following.

➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])



Step 1 The GOT collects alarm data and creates an alarm log file in folder Package1 on drive A.

Step 2 Convert the alarm log file from the binary format to the CSV format by using the convert trigger device for the file.

Step 3 Copy the converted file from folder Package1 on drive A to folder Package1 on drive E.

(a) Settings

This application example requires the following settings.

• Alarm settings

Setting	Description		Reference
[Alarm Common Setting]	[Convert trigger device]	Set any bit device.	➟9.1 Collecting Alarms by Monitoring Devices or the System ([Alarm])
	[Convert-in-motion notification device]		
[User Alarm Observation]	[Basic] tab	Set the method of collecting the history. Select [Historical] or [Cumulative].	
	[Device] tab	Set the target device for observation.	
	[File Save] tab	Select [Save alarm log files] and set the save destination for the log file and the storage trigger. Select [Rise] for the trigger type of the storage trigger.	

• Settings of the file transfer function (GOT internal transfer)

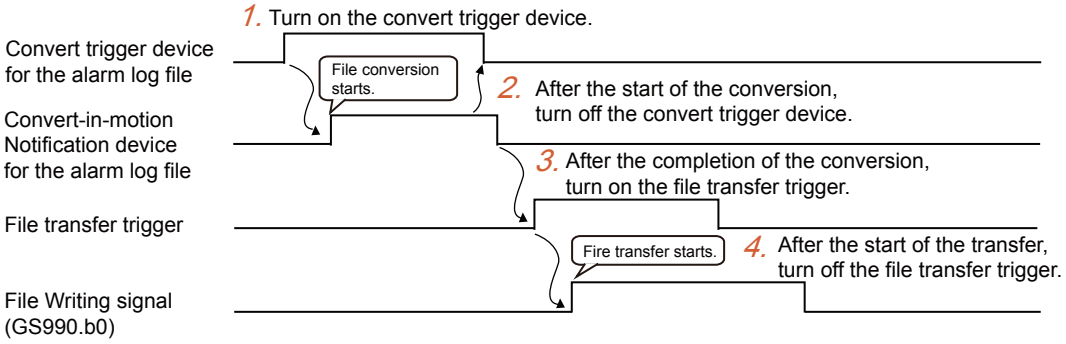
Setting	Description		Reference
[File Transfer Setting]	[Transfer Type]	Select [GOT Internal Transfer].	➟10.18.5 [File Transfer Setting] dialog
	[Transfer Mode]	Select [Copy].	
	[File Transfer Trigger]	Set [Rise].	
	[Transfer File Name]	Set the name of the alarm log file specified in the alarm observation. Example) ALM001.CSV	

• GOT special register (GS)

Setting	Description	Reference
GS990.b0	File Writing signal	➟10.18.6 ■2 (2) Write device

(b) **Action**

The following shows an example of converting and transferring an alarm log file.



Step 1 Turn on the convert trigger device for the alarm log file.

The GOT starts the file conversion and the Convert-in-motion Notification device turns on.

Step 2 Turn off the convert trigger device after the start of the file conversion.

Upon completion of the file conversion, the Convert-in-motion Notification device turns off.

Step 3 Turn on the file transfer trigger.

The GOT starts the file transfer and the File Writing signal (GS990.b0) turns on.

Step 4 Turn off the file transfer trigger after the start of the file transfer.

Upon completion of the file transfer, the File Writing signal (GS990.b0) turns off.

For the convert trigger device for the alarm log file, refer to the following.

➟9.1.2 ■5 [Alarm Common Setting] dialog

Point

Turning on the file transfer trigger automatically

In the example above, the user needs to turn on the file transfer trigger after the file conversion.
The user also needs to turn off the convert trigger device for the alarm log file and file transfer trigger after the start of the processing.
Using two project scripts enables these operations to be performed automatically.
The following shows an example of settings.

(1) Device

Device name	Device No.	Script which uses the device
Convert-in-motion Notification device for the alarm log file	GB100	Script No.1
Trigger device for script No.1		
Convert trigger device for the alarm log file	GB105	Script No.1
File transfer trigger	GB110	Script No.1, script No.2
File Writing signal	GS990.b0	Script No.2
Trigger device for script No.2		

(2) Project script setting

(a) Script No.1 Set [Rise] for the trigger type. Use the Convert-in-motion Notification device for the alarm log file as the trigger device.

(b) Script No.2 Set [Rise] for the trigger type. Use the File Writing signal (GS990.b0) as the trigger device.

(3) Script

(a) Script No.1 set([b: GB110]); //File transfer trigger ON rst([b: GB105]); //Alarm log file convert trigger OFF

(b) Script No.2 rst ([b: GB110]); //File transfer trigger OFF

■2 Checking the processing status

With the file transfer function (GOT internal transfer), you can check the file transfer status, errors, and other relevant information by using GOT special registers (GS).

(1) Read device

➟12.1.3 GOT special register (GS)

Device	Name		Description
GS401	File Transfer Control		Controls the file transfer.
	b0	Clear File Transfer Error signal	Turn on this signal to clear the error code stored in the following device or to turn off the following signals. • File Transfer Error No. (GS989) • Warning signal (GS990.b14) • File Transfer Error signal (GS990.b15)

(2) Write device

➟12.1.3 GOT special register (GS)

Device	Name		Description
GS987	Executing File Transfer ID Notification		Stores the file transfer ID of the file transfer in execution.
GS989	File Transfer Error No.		Stores the error code of an error that occurred in the file transfer. Turn on GS401.b0 to clear the stored error code. ➟10.17.10 ■2 Error codes for the file transfer function
GS990	File Transfer Status		Notifies the file transfer processing status.
	b0	File Writing signal	Turns on during the file transfer. When [Trigger Type] is [Rise] or [Fall], this bit turns off when the trigger condition is dissatisfied after the file transfer.
	b14	Warning signal	Turns on when the error with which the processing can be continued occurs during the file transfer. Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.
	b15	File Transfer Error signal	Turns on when the error with which the processing cannot be continued occurs during the file transfer. Files cannot be transferred while this signal is on. Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.
GS991	Number of Transfer Target Files		Stores the total number of files to be transferred. When the transfer file name is specified with the wild card, the total count includes the files which are not transferred due to an invalid number of characters for the folder name or other causes. (However, the total count does not include only the files which have invalid names consisting of such as two-byte characters.) Holds the device value until the processing for the next file transfer ID is started.
GS992	Number of Transferred Files		Stores the total number of the files already transferred. The total count includes the files which are not transferred due to the error or other causes. Holds the device value until the processing for the next file transfer ID is started.

■3 Indirect specification of the folder name and file name

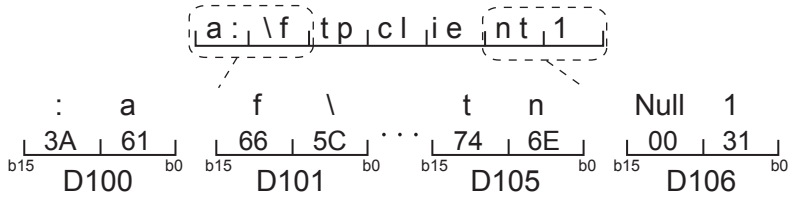
When [Device] is selected for [Specification] in the folder name or file name setting, consecutive word devices starting from a specified device store the folder name or file name.

The number of the consecutive word devices equals half of the set value of [Maximum number of characters]. (Fractions are rounded up.)

In the ASCII code, store the folder name or file name in order from the lower to the upper bit of each device.

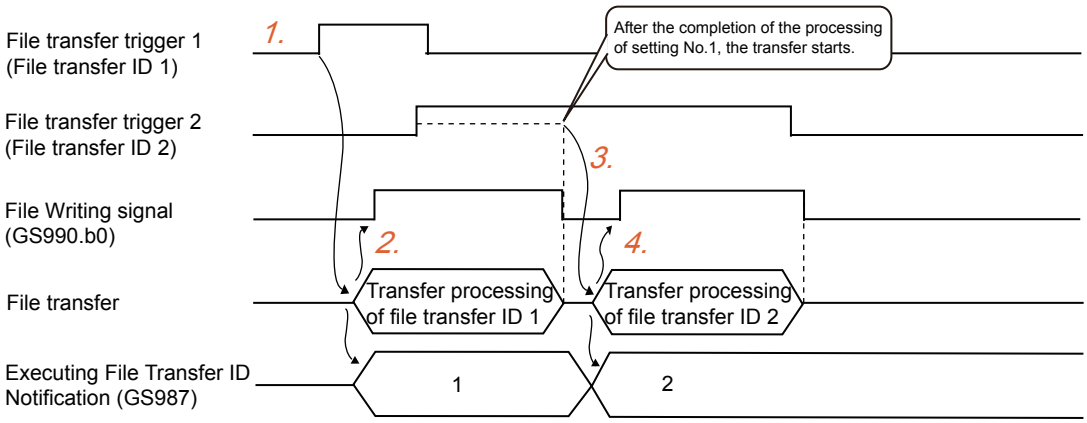
Store Null (0x00) at the end of the folder name.

Example) Specifying the [ftpclient1] folder in drive A



■4 Operation after file transfer trigger conditions being satisfied

The following shows an operation example of the file transfer function when the conditions of two file transfer triggers are satisfied sequentially.



Step 1 When the condition of file transfer trigger 1 is satisfied, the GOT starts the file transfer for file transfer ID 1.

Step 2 The File Writing signal (GS990.b0) turns on, and the Executing File Transfer ID Notification device (GS987) stores 1.

Step 3 While the File Writing signal (GS990.b0) is on, even if the condition of file transfer trigger 2 is satisfied, the GOT does not start the file transfer for file transfer ID 2.

Upon completion of the file transfer for file transfer ID 1, the File Writing signal (GS990.b0) turns off. Then, the GOT starts the file transfer for file transfer ID 2.

Step 4 The File Writing signal (GS990.b0) turns on, and the Executing File Transfer ID Notification device (GS987) stores 2.

Upon completion of the file transfer for file transfer ID 2, the File Writing signal (GS990.b0) turns off.

(1) File transfer trigger at GOT startup

When the trigger type of the file transfer trigger is [Rise] and the trigger device is on at GOT startup, the trigger condition is satisfied.

When the trigger type is [Rise] and the trigger device is off, the trigger condition is also satisfied.

(2) File transfer trigger condition satisfied during file transfer

A file transfer trigger condition satisfied during file transfer is processed as shown below.

- Trigger for the same file transfer setting: The file transfer trigger does not start the transfer even if the condition is satisfied.
- Trigger for a different file transfer setting: When the file transfer trigger condition is satisfied, the GOT (FTP client) transfers the file after the transfer of the previous file is completed. When multiple trigger conditions are satisfied during the file transfer, the files are transferred in order of the file transfer setting ID.

■5 Specifying the transfer file with the wild card

Use the wild card under the following conditions.

- Only [*] can be used as the wild card. Example of valid use: [ARP*.DAT] Example of invalid use: [ARP?????.DAT]
- Only one [*] can be used. However, only [*.*] is an exception. Example of valid use: [*.DAT] Example of invalid use: [ARP*.*]
- You can use [*] only immediately before [.] (period) for the file name. Example of valid use: [ARP*.DAT] Example of invalid use: [ARP*01.DAT]
- When you use [*] in the extension part of the file name, the extension must consist of the wild card only. Example of valid use: ARP00001.*] Example of invalid use: [ARP00001.*AT]

10.18.7 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Folder path and transfer file name

The total number of characters of the folder path and transfer file name must be set as shown below.

- <Transfer source folder path>\<Transfer file name>: 78 characters or less (including backward slash marks)
- <Transfer destination folder path>\<Transfer file name>: 78 characters or less (including backward slash marks)

If the total number of the characters exceeds the limits, an error occurs.
Specify the folder path and transfer file name by using one-byte alphanumeric characters and symbols.
If you use two-byte characters, the specified file cannot be transferred.

■2 Warning possibly given if the file name is specified with a wildcard character

If the file name is specified with a wildcard character, a warning may be given at a file transfer.
Even if a warning is given, the file transfer process does not stop.
However, the file transfer may fail due to other causes, such as an invalid transfer file name or write-protect transfer destination folder.
Check the error code stored in the File Transfer Error No. (GS989), eliminate the cause, and then perform the file transfer again.

➟10.17.10 ■2 Error codes for the file transfer function

■3 Offline status of the GOT

When the GOT becomes offline during the file transfer, the file transfer is interrupted.
During the file transfer, do not perform the operation that causes the GOT to be offline, such as establishing the communication with GT Designer3.

■4 Moving a file

When selecting [Move] for [Transfer Mode], note the following.

- Moving a file to which the GOT refers For a file (such as a logging file) to which the GOT refers, copy the file to another location instead of moving it. Otherwise, you cannot view the file on the GOT because the file is deleted from the source folder after the file transfer is complete.
- Specifying the transfer file name with a wildcard character When specifying the transfer file name with a wildcard character, you may delete a required file unintentionally. If the transfer source folder has a required file, take one of the following measures. · Select [Copy] for [Transfer Mode]. · When specifying the transfer file name with a wildcard character, check in advance that only the transfer target files are narrowed down.

■5 Transferring files in the sub folders

The files in the sub folders of the transfer source folder are not transferred.

■6 Handling of a file transfer error

If an error occurs in the file transfer, turn on the Clear File Transfer Error signal (GS401.b0) to turn off the File Transfer Error signal (GS990.b15).
While the File Transfer Error signal (GS990.b15) is on, the GOT does not start transferring the subsequent files because the file transfer is recognized to have an error.

10.18.8 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the file transfer function (GOT internal transfer) as required.
The following shows the functions that are available by the relevant settings.

➥12.1.3 GOT special register (GS)

■1 GOT Internal Device

Function	Setting item
Turning on this signal to clear an error that occurred in the file transfer	GS401.b0
Storing the file transfer ID of the file transfer in execution	GS987
Storing the error code of an error that occurred in the file transfer	GS989
Notifying the file transfer processing status	GS990
Storing the total number of files to be transferred	GS991
Storing the total number of transferred files	GS992

10.18.9 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Troubleshooting for the file transfer function (GOT internal transfer)

The following shows the troubleshooting for the file transfer function (GOT internal transfer).

Symptom	Details of error and cause	Corrective action
File cannot be transferred.	The system application (extended function) for the file transfer function is not installed on the GOT.	Write the package data that contains the system application (extended function) for the file transfer function to the GOT. ➥4. COMMUNICATING WITH GOT

■2 Error codes for the file transfer function

For the error codes that are stored in the GOT special register, GS989 (File Transfer Error No.), refer to the following.

➥10.17.10 ■2 Error codes for the file transfer function

10.19 Monitoring a Controller from Tablets or Other Clients (GOT Mobile Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

10.19.1 Overview of the GOT Mobile function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this section, the "server" and "client" refer to the server and client of the GOT Mobile function.
The server (GOT) is GT27, GT25, GT SoftGOT2000, or GS25.

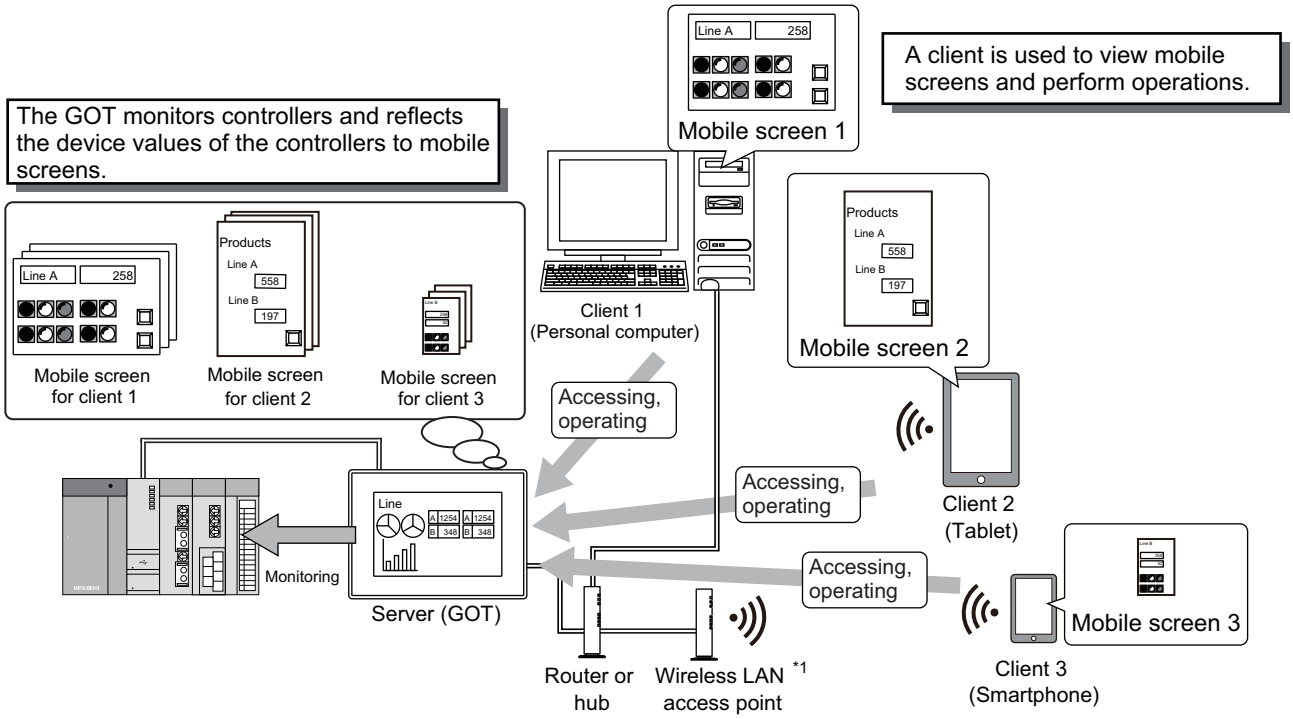
⚠ WARNING

- Remote control is available through a network by using GOT functions, including the SoftGOT-GOT link function, the remote personal computer operation function, the VNC server function, and the GOT Mobile function.
  If these functions are used to perform remote control of control equipment, the field operator may not notice the remote control, possibly leading to an accident.
  In addition, a communication delay or interruption may occur depending on the network environment, and remote control of control equipment cannot be performed normally in some cases.
  Before using the above functions to perform remote control, fully grasp the circumstances of the field site and ensure safety.
- When operating the server (GOT) of the GOT Mobile function to disconnect a client, notify the operator of the client about the disconnection beforehand.
  Not doing so may cause an accident.
- Make sure to fully understand the GOT network interaction function before using this function to control the authorization among pieces of equipment to prevent simultaneous operations.
  The exclusive authorization control of the GOT network interaction function can be enabled or disabled for each screen. (For all screens, the exclusive authorization control is disabled by default.)
  Properly determine the screens for which the exclusive authorization control is required, and set the control by screen.
  A screen for which the exclusive authorization control is disabled can be operated simultaneously from pieces of equipment. Make sure to determine the operation period for each operator, fully grasp the circumstances of the field site, and ensure safety to perform operations.

By using the GOT Mobile function, you can monitor a controller through the GOT from an information device, such as a tablet.
In the GOT Mobile function, the GOT operates as a server to provide mobile screens for clients.
Information devices, such as a tablet, use a browser as the GOT Mobile function client to access mobile screens in the server (GOT).

Access to a mobile screen in the server (GOT) from a tablet

After the client accesses a mobile screen, you can perform operations on the mobile screen to monitor a controller through the GOT.
The number of clients that can access the server (GOT) simultaneously depends on the model.



*1 This is an example of when a wireless LAN access point is used.
The wireless LAN access point is unnecessary if [Operation Mode] is set to [Access Point] in the GOT wireless LAN function.
➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

Overlap windows and superimpose windows can be displayed on mobile screens as well.
In the GOT, base screens are created as [Base Screen] and overlap windows and superimpose windows are created as [Window Screen]. For mobile screens, these screens are created and used as [Mobile Screen].
The window screen is controlled by using a screen switching device.

➟■4 [Screen Switching/Window]

If an overlap window extends off the mobile screen area, the extended part is hidden (display of an off-screen window).
The overlap window can be displayed off the right side or bottom of the screen.
On a mobile screen, display of an off-screen overlap window is always enabled.
Display of an off-screen window can be disabled in the GOT but not on mobile screens.

The following shows the methods of connecting the server (GOT) and clients.
- Connection with the operator name and password-based authentication (The authentication screen appears.)
- Connection without the operator name and password-based authentication—ANDON function (The authentication

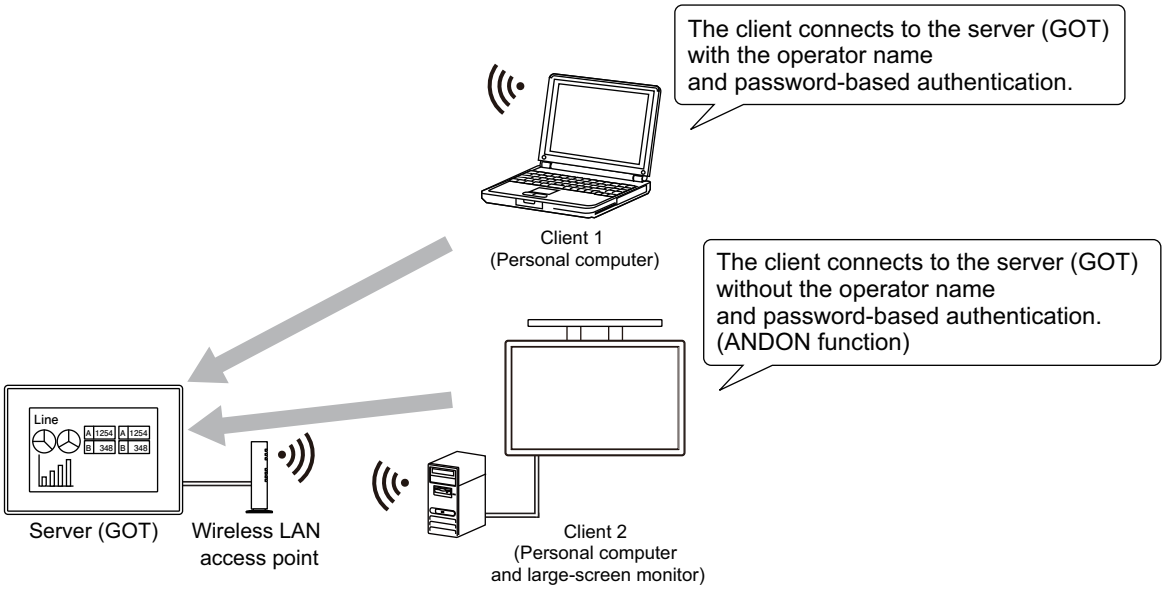
screen does not appear.)

For the authentication, refer to the following.

➟10.19.2 ■5 Authentication

For the ANDON function, refer to the following.

➟10.19.4 ANDON function



10.19.2 Specifications of the GOT Mobile function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Operating environment
■2 Usable functions
■3 Mobile screen
■4 GOT Mobile device (VGB and VGD)
■5 Authentication
■6 Authorization control
■7 Public folder
■8 File manager
■9 Hard copy function
■10 Differences between the functions to remotely operate the GOT

■1 Operating environment

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) License number registration

To use the GOT Mobile function, register a license number in the GOT.
For how to register the license number, refer to the following.
When GT27, GT25, or GS25 is a server

➥GOT2000 Series User's Manual (Utility)

When GT SoftGOT2000 is a server

➥GOT Mobile Function License for GT SoftGOT2000 Registration Instructions

If the license number is unregistered, you can try the GOT mobile function for a cumulative amount of 30 minutes starting from the GOT startup.
During the trial, the mobile screen displays a watermark saying [License unregistration.] and the remaining trail time.
Up to two clients can access the server (GOT) simultaneously.

(2) Server specifications

The following shows the server specifications.

Item	GT27, GT25, GS25	GT SoftGOT2000*5
Http port No.	No.80 (standard), No.1024 to No. 65535 (user-definable)	No.80 (standard), No.1024 to No. 65535 (user-definable)*2*3*4
Maximum number of clients connectable simultaneously*1	5	15 per personal computer*6
Http timeout time (Time limit to respond to a request from a browser)	30 seconds	30 seconds
Operating environment of personal computers	-	OS: The following OSs compatible with Internet Information Services (IIS) 8.5 or later • Microsoft Windows Server 2019 Standard (64 bit) • Microsoft Windows Server 2016 Standard (64 bit) • Microsoft Windows Server 2012 R2 Standard (64 bit) • Microsoft Windows 11 Enterprise (64 bit) • Microsoft Windows 11 Pro (64 bit) Memory: 4 GB or more recommended
CoreOS	Version L or later	-
Other software	-	The following software is required. • Internet Information Services (IIS) 8.5 or later

*1 Indicates the number of clients (browsers), not the number of information devices, which are connectable to the server simultaneously.
Example) When you use five browsers on a tablet to access the server (GOT), the number of clients being connected is counted as five.
*2 If firewall settings are configured for port numbers, open the ports as required.
*3 When using port No. 80, display the Internet Information Services (IIS) Manager dialog and click Stop in the Actions pane.
*4 Three consecutive numbers (specified port number and the following two consecutive numbers) are used.
Specify a number that comes after three or more consecutive numbers for the port number.
Example) When 8080 is specified for the port number, the ports 8081 and 8082 are also used.

*5 It is recommended to use GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.
*6 A total of 20 modules are connectable when the Pocket GOT mobile app and GOT Mobile function are used together.

(3) Client operating environment

Network environment is required for operation.
The following shows the recommended browsers.

- Microsoft Edge for Windows
- Google Chrome for Windows and Android
- Firefox for Windows, Android, and iOS
- Safari for iOS

Use a browser that supports HTML5, CSS3, JavaScript, and WebSocket Protocol (RFC 6455).
Make sure to validate the operations of your browser.

■2 Usable functions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the functions that can be used on a client.

(1) Common functions

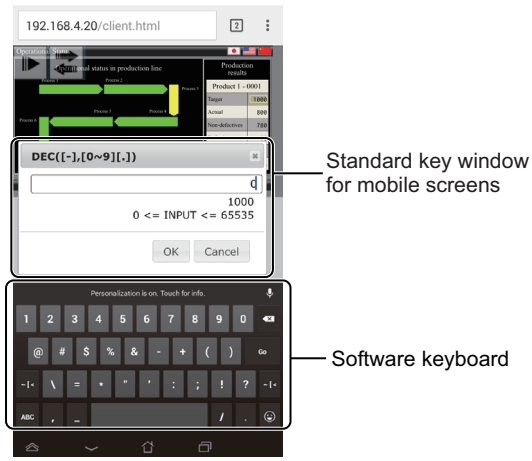
○: Available, ×: Not available

Function	Availability	Remarks
System font display	×	The standard font of each client is used.
Option font display	×	-
Superimposition of objects	○	-
Base screen display	○	A mobile screen is used as a base screen.
Overlap window display	○	A mobile screen is used as overlap window 1 or 2.
Superimpose window display	○	A mobile screen is used as superimpose window 1 or 2.
Key window display	○	The standard key window for mobile screens is used. For the details, refer to the following. ➟(a) Key window
Screen switching	○	The screen switching setting for mobile screens is used. For the details, refer to the following. ➟(b) Screen switching
Station No. switching	×	The GOT monitoring target cannot be switched for each mobile screen independently. Although the station No. switching can be performed on a client, the change is applied to all the clients.
Buffer memory unit No. switching	×	The GOT monitoring target cannot be switched for each mobile screen independently. Although the buffer memory unit No. switching can be performed on a client, the change is applied to all the clients.
Language switching	○	The language switching setting for mobile screens is used. For the details, refer to the following. ➟(c) Language switching
System information	○	The GOT system information can be used on a client. However, the monitoring target cannot be switched on a per-client basis.
Security authentication	○	-
Alarm observation	○	The operation results of the function on the GOT can be used on a client.
Alarm popup display	○	The alarm popup display setting for mobile screens is used. For the details, refer to the following. ➟(d) Alarm popup display
Trigger action (project)	○	The operation results of the function on the GOT can be used on a client.
Trigger action (screen)	×	The operation results of the trigger action (screen) on the GOT can be used on a client.
Time action	○	The operation results of the function on the GOT can be used on a client.
Hard copy function	×	-
Comment	○	-

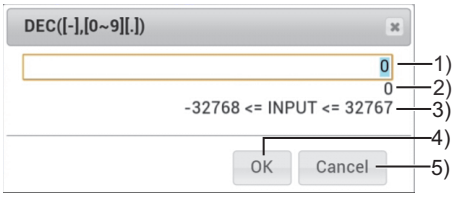
Function	Availability	Remarks
Figure	○	For the details, refer to the following. ➟(4) Figures that can be placed
Object	○	For the details, refer to the following. ➟(5) Objects that can be placed
GOT internal device	○	The GOT internal devices (GB and GD) can be specified for clients using the GOT Mobile devices (VGB and VGD). For the details, refer to the following. ➟■4 GOT Mobile device (VGB and VGD) The GOT internal devices (GB and GD) can be directly specified for clients without using the GOT Mobile devices (VGB and VGD).
SoftGOT2000 internal device	○	When GT SoftGOT2000 is set as the server (GOT), SoftGOT2000 internal devices (SGB and SGD) can be used.
Cursor movement	×	-
Operation Log	○	The operation results of the function on the GOT can be used on a client.
Logging	○	
Recipe	○	
Project script	○	
Screen script	×	No screen script is settable for a mobile screen. However, script operating results on the GOT can be used on a client.
Object script	×	No object script is settable for an object on a mobile screen. However, script operating results on the GOT can be used on a client.
Multi-channel connection	×	The GOT Mobile device does not have a function to set a controller using multi-channel connection but can monitor a controller connected using multi-channel connection of the GOT or GT SoftGOT2000.
Vertical display	○	The size of a mobile screen is settable in the screen property.

(a) **Key window**

The standard key window for mobile screens is supported.
User-created windows are not supported.
When using a tablet or smartphone, input characters with the software keyboard.



The minimum width of the standard key window is 420 dots.
Note that the actual display size of the standard key window varies with the resolution set on the client or the contents displayed on the key window.
Check the actual size of the key window size in the browser.
The following shows the setting items of the standard key window for mobile screens.



1) **Input value display**
Displays the input value.

2) **Current value display**
Displays the current value of the device.

3) **Input range display**
Displays the valid input range.
(This item is not displayed for the text input.)
The displayed input range depends on the number of displayed digits which is set for the numerical input.
The following shows the meaning of displayed symbols.

- [INPUT]: Value to be input
- [<]: The left side of the symbol is less than the right side.
- [<=]: The left side of the symbols is less than or equal to the right side.
- [==]: The left side of the symbols is equal to the right side.
- [!=]: The left side of the symbols differs from the right side.

4) **[OK] key (Enter key)**
Confirms the input value.

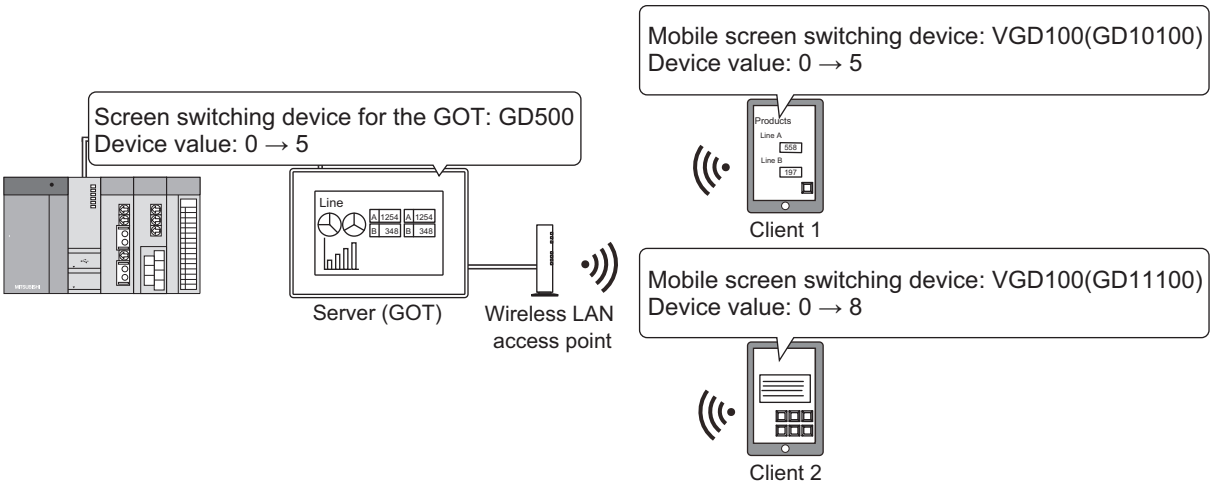
5) **[CANCEL] key**
Cancels the input value.

(b) **Screen switching**

You can switch between mobile screens with the screen switching device dedicated to mobile screens.
This device is set independently of the GOT environmental setting.
Therefore, when you switch between mobile screens on a client, the screen displayed on the GOT is not switched coincidentally.
To display different mobile screens on each client simultaneously, set a GOT Mobile device (VGB or VGD) for the screen switching device dedicated to mobile screens.

➟■4 GOT Mobile device (VGB and VGD)

Example) When [Points] is set to 1000 and [First Device] is set to GD10000 in the device (VGD) allocation setting



On a mobile screen, when screen switching is performed for the overlap window which is being moved, that overlap window is switched.

For the screen switching setting for mobile screens, refer to the following.

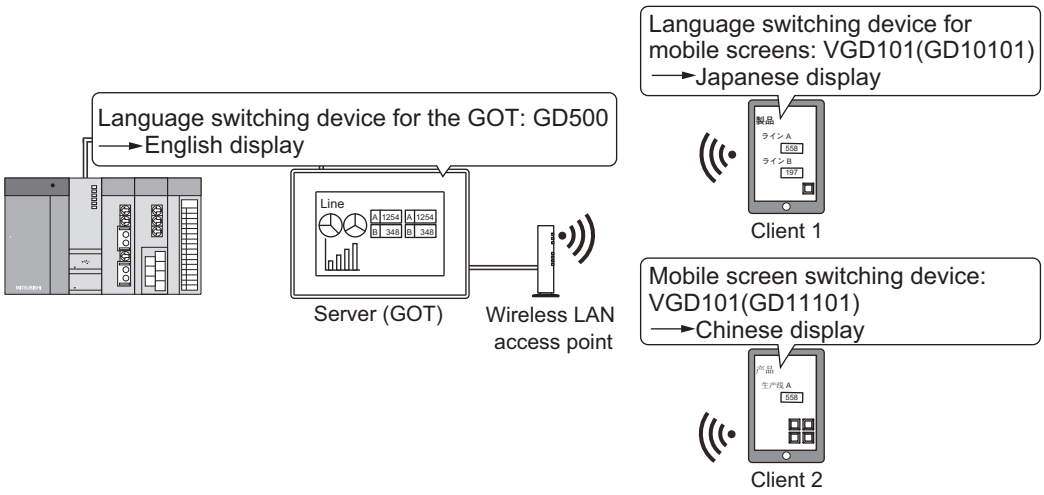
➟10.19.6 ■4 [Screen Switching/Window]

(c) **Language switching**

You can switch the languages of mobile screens with the language switching device dedicated to mobile screens.
Therefore, when you switch the languages of mobile screens on a client, the display language on the GOT is not switched coincidentally.
To switch between languages on a per-client basis, set a GOT Mobile device (VGB or VGD) for the language switching device dedicated to mobile screens.

➟■4 GOT Mobile device (VGB and VGD)

Example) When [Points] is set to 1000 and [First Device] is set to GD10000 in the device (VGD) allocation setting



Except for the language switching device dedicated to mobile screens, the language switching settings configured in the [Environmental Setting] window are applied to the clients.
(The language switching settings are common to the GOT and the clients.)
The language switching device dedicated to mobile screens is settable when the language switching is enabled in the [Environmental Setting] window.
For the setting of the language switching device for mobile screens, refer to the following.

➟10.19.6 ■5 [Language Switching]

(d) **Alarm popup display**

You can use the alarm popup display dedicated to mobile screens.
The alarm popup display settings are not common to the GOT and the clients.
To use the alarm popup display on both the GOT and the clients, configure the alarm popup settings for the GOT and the mobile screens independently.
For the alarm popup display for mobile screens, some setting items have restrictions as shown below.

- [Basic] tab
  [Close up the space between alarm comments] is not settable.
  [Touch Mode] can be set to [None] or [Stage Hierarchy Switching] only.
- [Text Style] tab
  [Font] is not settable.

When a mobile screen with alarm popup display settings configured is used as an overlap window screen or superimpose window screen, the settings become disabled.
For the alarm popup display settings, refer to the following.

➟10.19.6 ■8 [Alarm Popup Display]

GOT Graphic Ver.2

For the alarm popup display for mobile screens, an opaque popup window appears in a user-specified background color.

(2) Utility function

The utility function cannot be used on clients.

(3) Extended functions

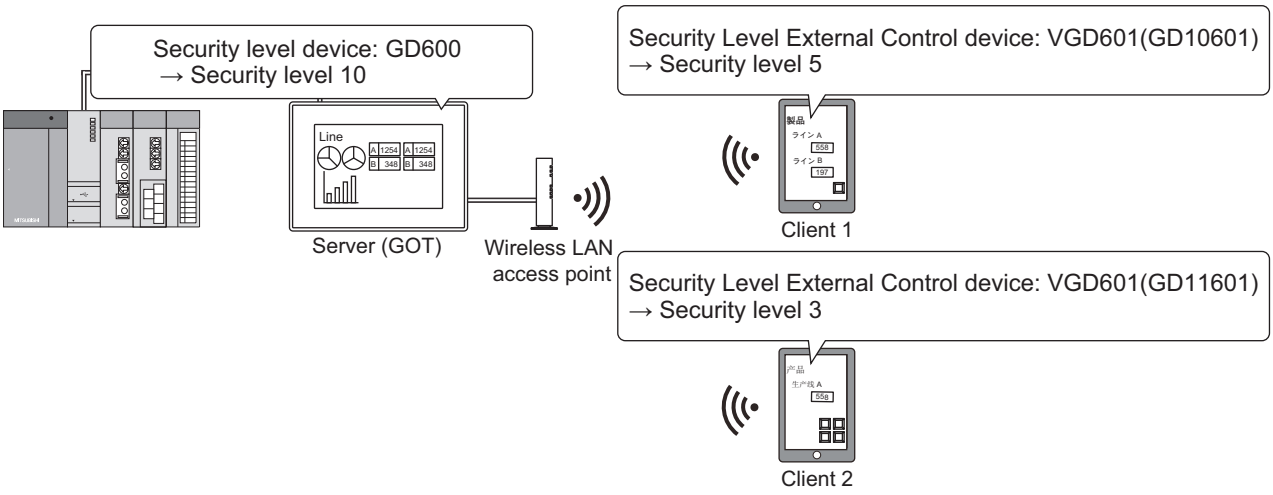
The following extended functions are usable.

- GOT network interaction
- Operator authentication

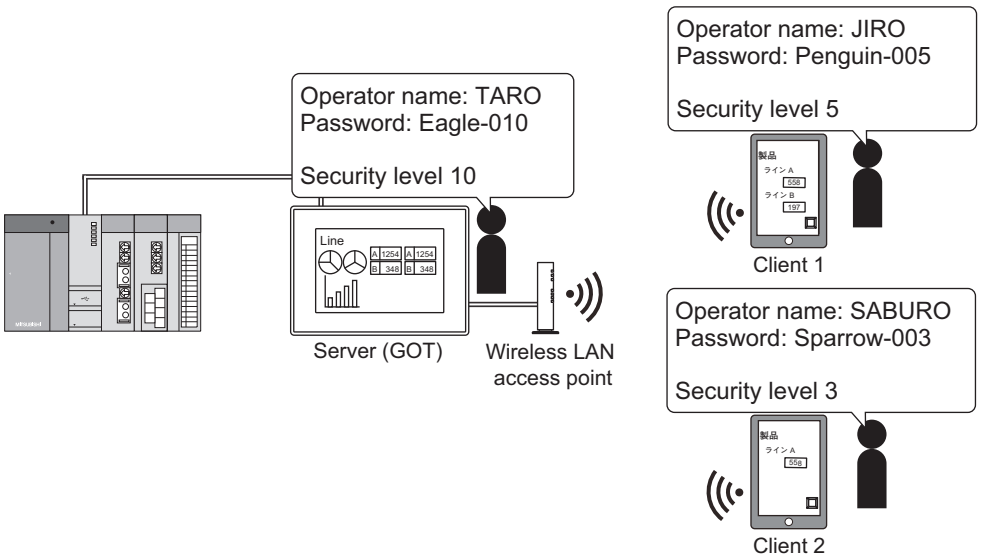
(a) **Screen security (level authentication and operator authentication)**

For the screen security on clients, the authentication method set in [Security] in the [Environmental Setting] window is applied.
(The authentication method is common to the GOT and the clients.)
When the level authentication is used, the GOT and each client can display a screen according to their security levels.
For the clients, the security level device (Security Level External Control device) dedicated to mobile screens is used for the level authentication.
To display a screen with different security levels on each client, set a GOT Mobile device (VGB or VGD) for the Security Level External Control device.
Except for the Security Level External Control device dedicated to mobile screens, the screen security settings configured

in [Security] in the [Environmental Setting] windows are applied to the clients.
Example) When [Points] is set to 1000 and [First Device] is set to GD10000 in the device (VGD) allocation setting



When the operator authentication is used, you can log in or out from the GOT and each client with different operator accounts.
Configure the operator authentication settings for the GOT and the clients independently.
On the clients, the operator authentication through an external authentication device (such as a barcode reader or RFID controller) is not available.



For the screen security setting for clients, refer to the following.

➟10.19.6 ■7 [Security]

For the screen security setting for the GOT, refer to the following.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

(4) Figures that can be placed

The following shows the figures that can be placed on mobile screens.

○: Available, ×: Not available

Figure	Availability	Restrictions
Text	○	• [Font], [Direction], and [KANJI Region] are not settable.
Logo text	○	-
Line	○	• The [Lamp Feature] and [Trigger] tabs are not settable.
Line freeform	○	
Rectangle	○	
Polygon	○	
Circle	○	
Arc, sector	○	-
Table	○	-
Scale	○	-
Piping	○	• The [Lamp Feature] and [Trigger] tabs are not settable. • [Layer] is not settable.
Paint	×	-
Import image data	○	-
Import DXF data	○	-
Import IGES data	○	-

For the figures on mobile screens, some setting items have restrictions.

(a) **[Lamp Feature] tab and [Trigger] tab**

The lamp feature and trigger settings are not available.
Therefore, a figure cannot be displayed in different styles according to the conditions. In this case, use a lamp object instead.

(b) **[Font], [Direction], and [KANJI Region]**

Each client displays characters in its standard font.
Therefore, the font, orientation of characters, and KANJI region are not settable with GT Designer3.
To change the font or KANJI region, change the standard font of the client used.
The orientation of characters cannot be changed.

(c) **[Layer]**

For mobile screens, the layer setting is not available.
Figures and objects are always displayed in the order specified with GT Desinger3.

(5) Objects that can be placed

The following shows the objects that can be placed on mobile screens.

○: Available, ×: Not available

Object		Availability	Restrictions
Touch switch	Switch	○	• In [Action List] of the [Action] tab, [Station No. Switching] and [Key Window Display] are not selectable. • In the [Style] tab, [Reverse Switch Area] is not settable. • In the [Text] tab, [Font] is not settable. • The [Script] tab is not settable. • In the [Extended] tab, [Buzzer], [KANJI Region], and [Layer] are not settable.
	Bit switch	○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [KANJI Region] and [Layer] are not settable.
	Word switch	○	
	Go to screen switch	○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [Buzzer], [KANJI Region], and [Layer] are not settable.
	Change station No. switch	×	-
	Special function switch	○	• In the [SP Function] tab, items other than the following ones are not selectable for [Switch Action]. [Password (Security Level)] [Login/Logout (Operator)] [Password Change (Operator)] • In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [Buzzer], [KANJI Region], and [Layer] are not settable.
	Key window display switch	×	-
	Key code switch	○	• Becomes active when either of the following is selected for [Key Code Type] in the [Key Code] tab. [Alarm Display] [Historical Trend Graph/Historical Data List] • In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [Buzzer], [KANJI Region], and [Layer] are not settable.
Lamp	Bit lamp	○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [KANJI Region] and [Layer] are not settable. • The [Script] tab is not settable.
	Word lamp	○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [KANJI Region] and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
	Lamp area	×	-
Numerical display		○	• In the [Device] tab, [Font] is not settable. • In the [Extended] tab, [Display Mode], [KANJI Region], and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Numerical input		○	• In the [Device] tab, [Font] is not settable. • In the [Extended] tab, the following items are not settable. [Display Mode], [Move Destination ID], [Display input value on destination object location], [Input data using Bar Code/RFID], [KANJI Region], and [Layer] • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available. • Use the standard key window for numerical input. Key code switches cannot be used.
Text display		○	• In the [Device/Style] tab, [Font] and [Reverse] are not settable. • In the [Extended] tab, [Display Mode], [KANJI Region], and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Text input		○	• In the [Device/Style] tab, [Font] and [Reverse] are not settable. • In the [Extended] tab, the following items are not settable. [Display Mode], [Move Destination ID], [Display input value on destination object location], [Kana-Kanji/Pinyin Conversion], [Input data using Bar Code/RFID], [KANJI Region], and [Layer] • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available. • Use the standard key window for numerical input. Key code switches cannot be used.
Date/Time display		×	-

Object		Availability	Restrictions
Comment display	Bit comment	○	• In the [Text/Style] tab, [Font] and [Display the comments in Windows fonts] are not settable. • In the [Extended] tab, [Display Mode], [KANJI Region], and [Layer] are not settable.
	Word comment	○	
	Simple comment	○	• [Font], [Reverse], and [Layer] are not settable.
Parts display		×	-
Parts movement		×	-
Historical data list display		○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [KANJI Region] and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Alarm display (user)		○	• In the [Alarm Setting] tab, [Operation] is not selectable for [Touch Mode]. • In the [Text] tab, [Font] and [KANJI Region] are not settable. • In the [Style] tab, [Text color on cursor display] is not settable. • In the [Extended] tab, [Layer] is not settable.
Alarm display (system)		○	
Simple alarm display		×	-
System alarm display		○	• [Font] and [Layer] are not settable.
Recipe Display (Record List)		×	-
Line graph		○	• In the [Style] tab, [Font] is not settable. • In the [Extended] tab, [Layer] is not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Trend graph		○	
Bar graph		○	
Statistics bar graph		○	• In the [Style] tab, [Font] is not settable. • In the [Extended] tab, [Layer] is not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Statistics pie graph		○	
Scatter graph		○	• In the [Style] tab, [Font] is not settable. • In the [Extended] tab, [Store Memory] and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Historical trend graph		○	• In the [Style] tab, [Font] is not settable. • In the [Extended] tab, [Layer] is not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Graphical Meter		○	• In the [Text] tab, [Font] is not settable. • In the [Extended] tab, [KANJI Region] and [Layer] are not settable. • The [Operation] tab is displayed instead of the [Operation/Script] tab. The object script settings are not available.
Level object		×	-
Panelmeter		×	-
Slider		×	-
Document display		×	-
Video/RGB display object		×	-
Script Parts		×	-
Set overlay screen		○	• In the [Set Overlay Screen] window, only mobile screens are listed in the [Screen Selection] tree. • In the [Number Specification] window, [Screen Type] is fixed to [Mobile Screen].
Window position		○	• This is enabled only when a mobile screen is displayed as the base screen. This is disabled when a mobile screen is displayed as an overlap window or superimpose window.
Key window object		×	-
Hyperlink		○	-

For the objects on mobile screens, some setting items have restrictions.

(a) **Object script**

No object script is settable for an object on a mobile screen.

Create a mobile screen without object scripts.

(b) **Font and KANJI region**

Each client displays characters in its standard font.
Therefore, the font and KANJI region are not settable with GT Designer3.
To change the font or KANJI region, change the standard font of the client used.

(c) **Layers and display mode**

For mobile screens, the layer settings are not available.
Therefore, the display mode ([Transparent] or [XOR]) of an object is not settable.
Figures and objects are always displayed in the order specified with GT Desinger3.

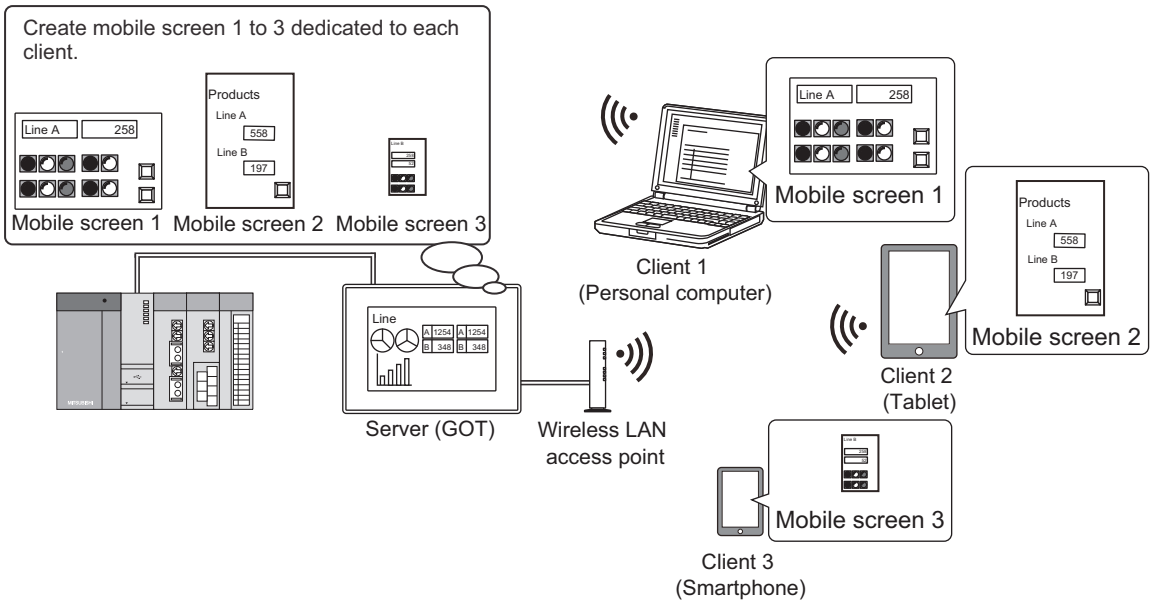
(d) **Set overlay screen object**

Only mobile screens can be called.
You cannot call another mobile screen from a called mobile screen.

■3 Mobile screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The mobile screen is a monitor screen dedicated to clients.
(The GOT cannot display mobile screens.)
Since the screen size is settable for each mobile screen, you can create mobile screens for each client according to the client display size.



For the functions, figures, and objects available on mobile screens, refer to the following.

➟■2 Usable functions

Mobile screens are created with GT Designer3, and the mobile screen data is contained in the GOT project.
For information on how to create a mobile screen, refer to the following.

➟10.19.3 ■7 Usage

A created base screen or window screen can be copied to a mobile screen.
For details, refer to the following.

➟10.19.3 ■5 Copying a base screen or window screen to a mobile screen

(1) Mobile screen specifications

Equipment	Screen size (width × height) (dots)	Number of screens registrable	Registrable screen number	Number of simultaneously displayable screens
Personal computer, tablet, or smartphone (client)	16 to 3000 × 2 to 3000	4096	0 to 32767	5

(a) **Font and KANJI region**

Each client displays characters in its standard font. Therefore, the font and KANJI region are not settable with GT Designer3.
To change the font or KANJI region, change the standard font of the client used.

(b) **Layers and display mode**

For mobile screens, the layer settings are not available.

Figures and objects are always displayed in the order specified with GT Desinger3.

■4 GOT Mobile device (VGB and VGD)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

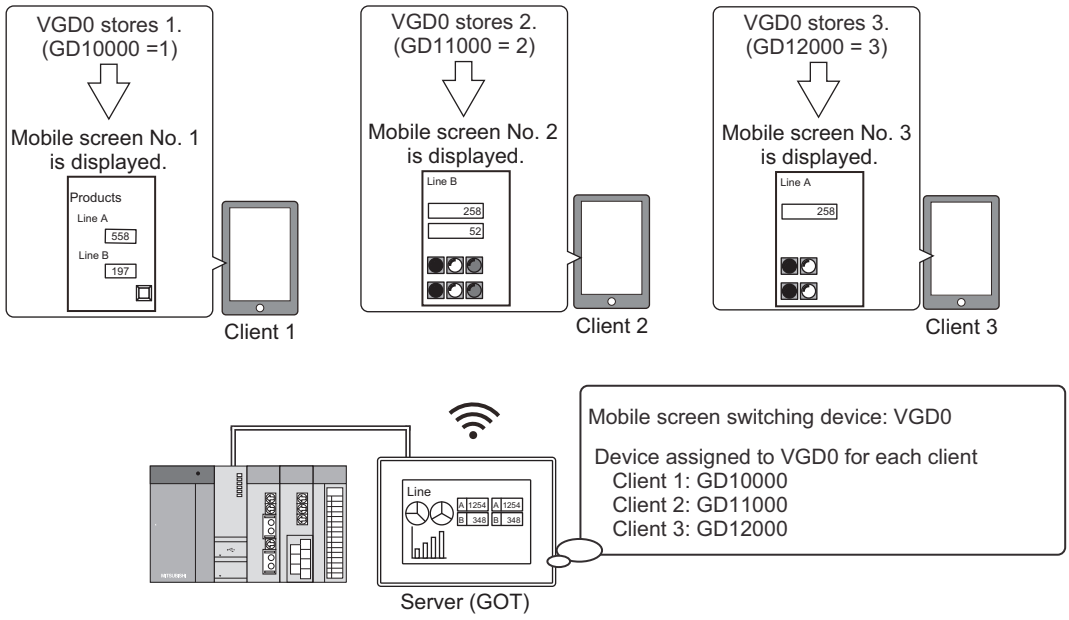
The GOT Mobile devices (VGB and VGD) are virtual devices usable for a client.

Assign GOT internal devices (GB and GD) to GOT Mobile devices for a client.

Thus, the GOT Mobile devices are used as internal devices for the client.

Multiple clients are controllable individually by assigning different GOT internal devices for each client.

Example) When the screen switching is performed simultaneously on multiple clients



(1) Setting range and settable devices

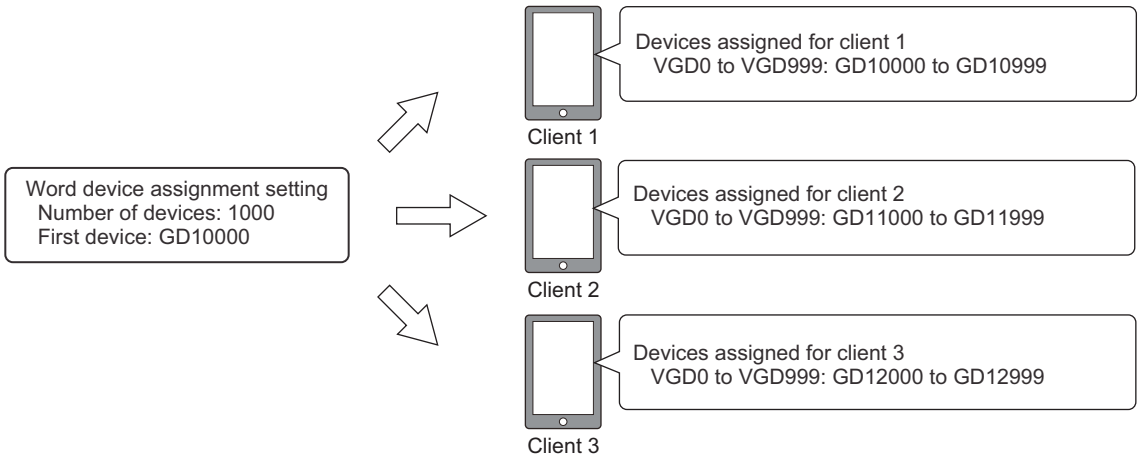
Target device	Setting range of the GOT Mobile device	GOT Mobile device No. representation	Number of the GOT internal devices that can be assigned	GOT internal device that can be assigned
GOT Mobile bit register (VGB)	VGB0 to VGB32767	Decimal number	32 to 32768 (in 32-point units)	GB64 to GB65535*1
GOT Mobile data register (VGD)	VGD0 to VGD32767	Decimal number	2 to 32768 (in 2-point units)	GD0 to GD65535

*1 Do not assign GB0 to GB63 to the GOT Mobile device because these internal devices (GB0 to GB63) are already assigned for the GOT system.

(2) How to assign a GOT internal device

Set the number of devices to be assigned, and specify the first device assigned for client 1. Then, the set number of consecutive devices (starting from the specified first device) are automatically assigned to the GOT Mobile devices for each client.

Example) Assigning 1000 GOT internal devices (GD) to the GOT Mobile devices (VGD) for client 1, client 2, and client 3



For the GOT Mobile device setting, refer to the following.

➟10.19.6 ■3 [Device Allocation Setting]

(3) Clearing the values of the GOT Mobile devices

If you select [Initialize the devices (VGD, VGB) at the time of client connection] in the [GOT Mobile Setting] window ([Device Allocation Setting]), the values of the GOT Mobile devices assigned to a client are cleared when the client connects to the GOT.

If you deselect the item, the assigned devices retain the values stored in the last session.

➟10.19.6 ■3 [Device Allocation Setting]

■5 Authentication

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the methods of connecting the GOT and clients.

- Connection with the operator name and password-based authentication (The authentication screen appears.)
- Connection without the operator name and password-based authentication—ANDON function (The authentication screen does not appear.)

For the ANDON function, refer to the following.

➟10.19.4 ANDON function

For the connection with the operator name and password-based authentication, a target client displays mobile screens upon being authenticated.

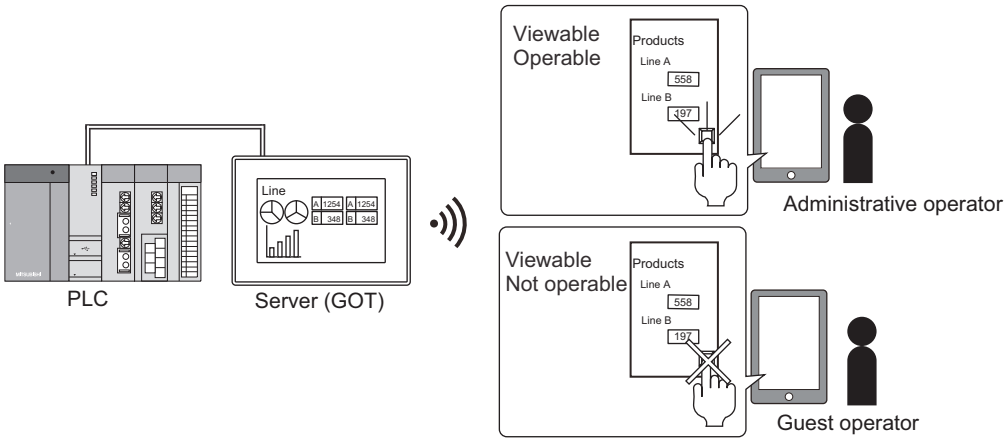
The authentication method is selectable between the GOT Mobile exclusive authentication and the operator authentication.

For the authentication setting, refer to the following.

➟10.19.6 ■2 [Authentication Setting]

(1) GOT Mobile exclusive authentication

This authentication method is dedicated to the GOT Mobile function.
The account dedicated to the GOT mobile function is used for the authentication.
The operator management information is not used.
After the GOT Mobile authentication succeeds, you can log in using the operator authentication or the level authentication.
Two types of accounts are used in the GOT Mobile authentication: administrative operator account and guest operator account.
When authenticated with the administrative operator account, the client can obtain the authorization of the GOT network interaction function.
You can view a mobile screen in which the authorization control is enabled, and operate the objects on the mobile screen.
When authenticated with the guest operator account, the client cannot obtain the authorization of the GOT network interaction function.
You can view a mobile screen in which the authorization control is enabled, but cannot operate the objects on the mobile screen.



One administrative operator account and one guest operator account are settable for each project.
For the setting method, refer to the following.

➟10.19.6 ■2 [Authentication Setting]

(2) Operator authentication

This authentication needs an operator account in the operator management information file.
Make sure to preconfigure the operator authentication setting in [Security] in the [Environmental Setting] window.
Otherwise, the authentication method of the GOT Mobile function is fixed to the GOT Mobile exclusive authentication.
After the operator authentication succeeds, you can view mobile screens according to the operator account security level.
The authenticated client can obtain the authorization of the GOT network interaction function, regardless of the operator account security level.
If the operator account is logged out, the GOT automatically disconnects the client.
Even if the operator account is logged out because of the automatic logout time, the client becomes disconnected from the GOT.
The operator switching is not available on a client that is connected to the GOT.
To switch between operators, disconnect the target client from the GOT, and then perform the authentication with another operator account.
For the details of the operator authentication, refer to the following.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

■6 Authorization control

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can prevent simultaneous operations from multiple clients and the GOT by enabling the authorization control.
Base screens, overlap windows, and superimpose windows for GOT Mobile are the targets for authorization control, which is the same as authorization control of GOT screens.
To control the authorization among clients and the GOT, use the GOT network interaction function in combination.
For the details of the GOT network interaction function, refer to the following.

➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])

You can check the authorization status of each client and control the authorization with the following devices.

(1) Operational Authority Status Notification device

This device notifies the authorization status of each client in a control group.
Specify this device using the GOT Mobile device (VGD) or the word-specified GOT Mobile device (VGB).

➟10.19.6 ■9 [Exclusive Control of Operational Authority]

Bit number	Function	Description
b0	Notifies whether the equipment obtains the authorization.	Turns on when the equipment obtains the authorization.
b1	Notifies whether the authorization control is enabled in the screen being displayed.	Turns on when the authorization control is enabled in the screen being displayed.
b2 to b15	-	Use prohibited

(2) Operational Authority Status Control device

This device controls the authorization among the clients and the GOT in a control group.
Specify this device using the GOT Mobile device (VGD) or the word-specified GOT Mobile device (VGB).

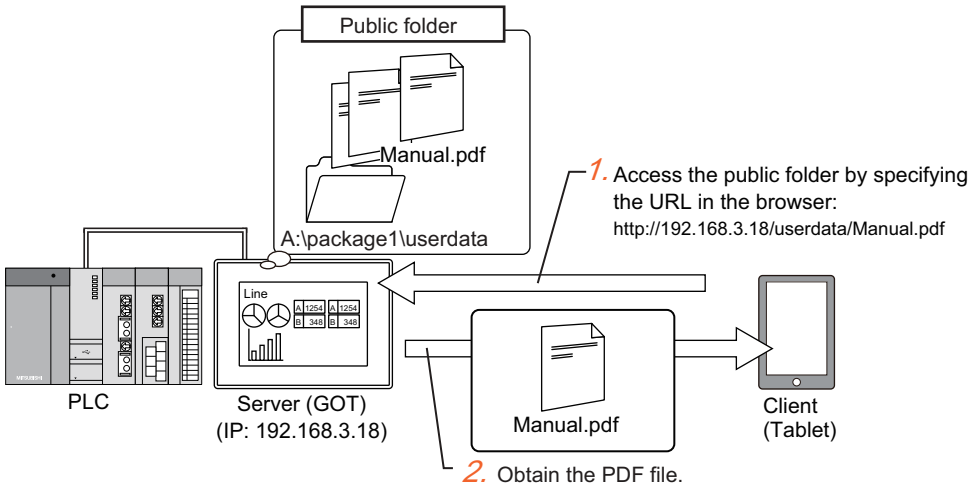
➟10.19.6 ■9 [Exclusive Control of Operational Authority]

Bit number	Function	Description
b0	Disables the automatic acquisition of the authorization.	When this bit turns on, the automatic acquisition of the authorization becomes disabled. On unauthorized equipment, even if you switch a screen to another screen in which the authorization control is enabled, the equipment cannot automatically obtain the authorization.
b1 to b15	-	Use prohibited

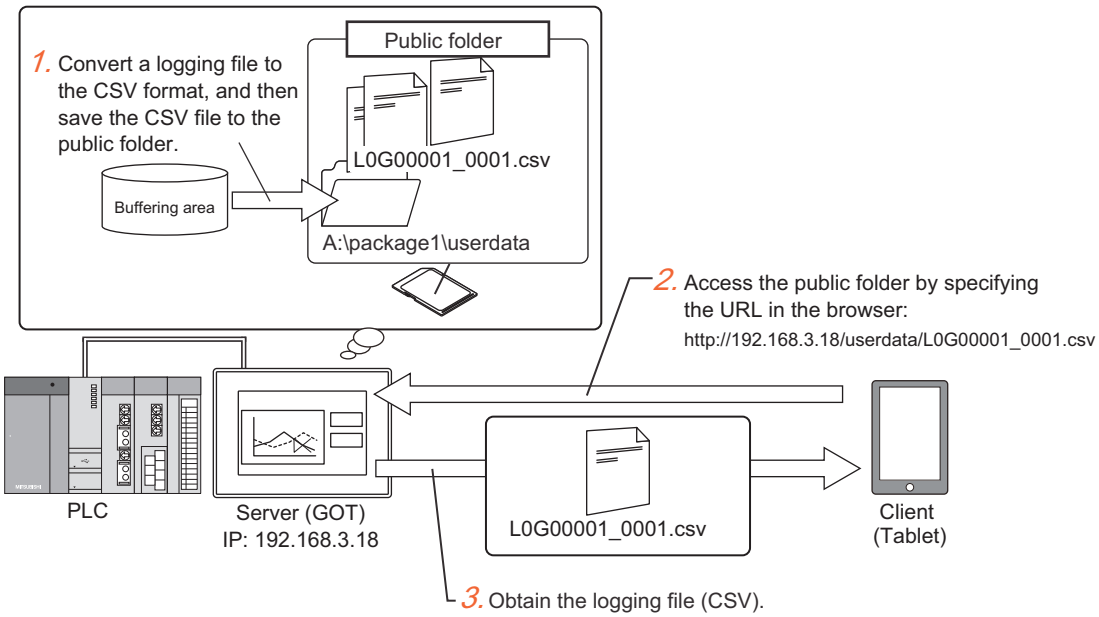
■7 Public folder

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The server (GOT) uses the public folder to provide files for clients.
To access a file in the public folder on the server (GOT), specify the URL of the file in your browser.
No authentication is performed to access the public folder.
Application example 1) Accessing a manual PDF file in the public folder from a client



Application example 2) Saving a logging file to the public folder and accessing the file from a client



(1) Enabling the public folder

To allow clients to access the public folder, select [Allow external access to GOT public folder] in [Basic Setting] in the [GOT Mobile Setting] window.

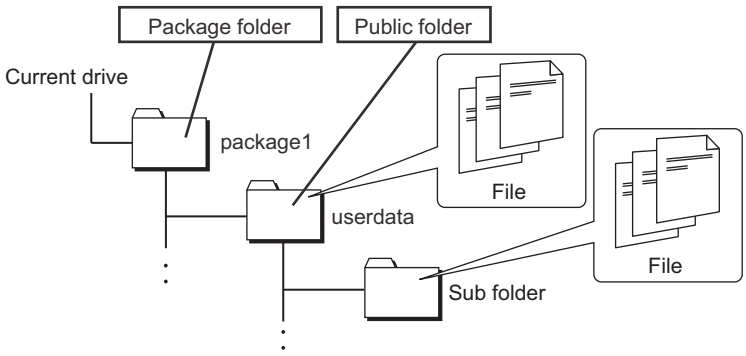
➟10.19.6 ■1 [Basic Setting]

(2) Creating the public folder

The public folder is created by the user.
Under the package folder of the GOT, create the public folder named "userdata".
The package folder is in the current drive.
For the details of the current drive, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

If a sub folder is created under the public folder, files in the sub folder are also accessible.
Create sub folders when necessary.



(3) Accessing a file in the public folder from a client

To access a file in the public folder, enter the URL of the file in the address bar of the browser in the following format.
http://GOT IP address/userdata/sub folder name/file name
(Enter the sub folder name only when the sub folder is created.)
Example) http://192.168.3.18/userdata/subfolder1/AAM00001.csv
When you place a hyperlink object on a mobile screen and specify the URL of a file in the public folder in the object setting, touch the object to access the file.
For the detail of the hyperlink object, refer to the following.

➟8.33 Placing a Hyperlink on a Mobile Screen

■8 File manager

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

On the file manager screen, you can view the folders and files in the public folder, or perform manipulations on them such as copying.

Item	Description
Viewing	The folders and files in the public folder are viewable.
Manipulations	The following manipulations are supported. • Copy • Cut (GT SoftGOT2000 does not support this manipulation for folders.) • Paste • Rename • New folder • Delete (GT SoftGOT2000 does not support this manipulation for folders.) Folders and files cannot be moved between the public folder and the other folders.

For the public folder, refer to the following.

➟■7 Public folder

To manipulate the folders and files in the public folder, turn on GS1896.b1.
To limit users to perform the manipulations, specify a security level with GS1892.
When a security level (0 to 15) is specified with GS1892, the users with the specified security level and higher are allowed to perform the manipulations.

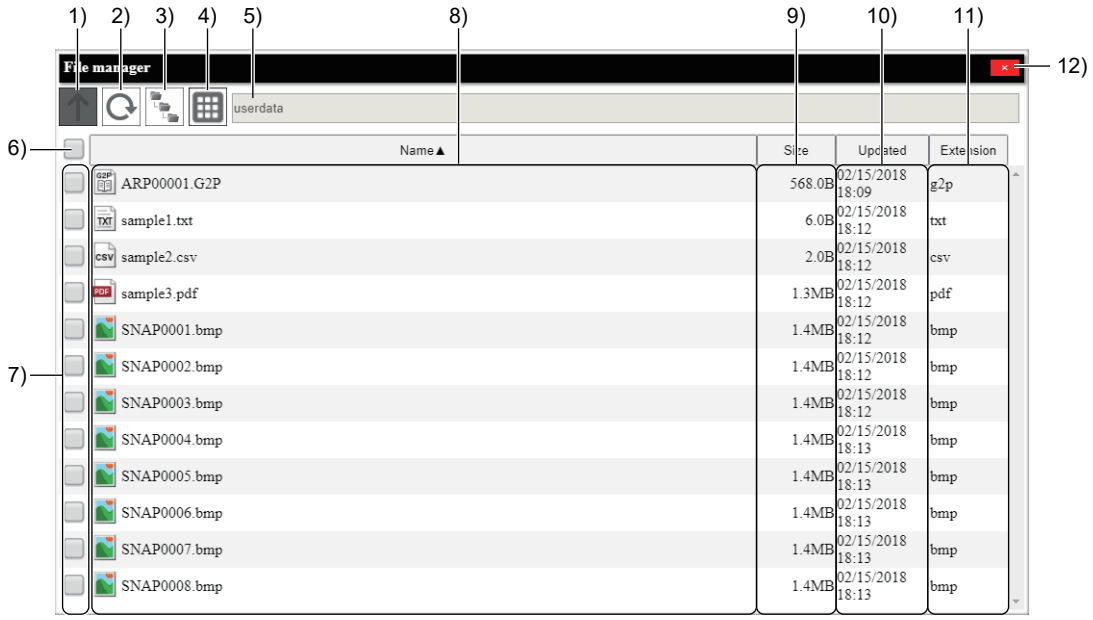
➟12.1.3 GOT special register (GS)

(1) File manager screen

To display the file manager screen, touch the extended function button on the operation menu bar on a mobile screen, and select [File manager] from the displayed menu.

➟10.19.3 ■7 (2) Operation menu bar on the mobile screen

The mobile screen is not operable while the file manager screen is being displayed.
Touch a row to open the corresponding folder or file.



1) **Return button**
Moves to the parent folder.

2) **Update button**
Updates the contents of the file manager screen.

3) **Directory button**
Displays the directory tree to the open folder.
Touch the folder to move to in the tree structure.

4) **Manipulation button**

Displays the menu for manipulating the folders and files listed.

Item	Description
[Copy]	Copies the selected folder or file.
[Cut]	GT SoftGOT2000 does not support this manipulation for folders. Cuts the selected folder or file.
[Paste]	Pastes the copied or cut folder or file in the open folder.
[Rename]	Renames the selected folder or file. For restrictions on the folder name and file name, refer to the following. ➟12.7 Restrictions for Folder Names and File Names used in GOT
[New folder]	Creates a folder.
[Delete]	GT SoftGOT2000 does not support this manipulation for folders. Deletes the selected folder or file. If you delete a folder, the files in the folder will also be deleted even though they are in use.

5) **Address bar**
Displays the path to the open folder.

6) **Select all checkbox**
Selects all folders and files.

7) **Select checkbox**
Selects a folder or file to be manipulated.

8) **[Name]**
Displays the folder and file names.

9) **[Size]**
Displays the size of files.

10) **[Updated]**
Displays the updated date and time of folders and files.

11) **[Extension]**
Displays the filename extensions.

12) **Close button**
Closes the file manager screen.

■9 Hard copy function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The hard copy function captures the current mobile screen in PNG format and outputs it to a new tab in the browser.
To execute the hard copy function, touch the extended function button on the operation menu bar on a mobile screen, and select [Hard Copy] from the displayed menu.

➟10.19.3 ■7 (2) Operation menu bar on the mobile screen

The image is displayed in full size (100%) that is set on GT Designer3.
Save the displayed image as necessary.

The following items are not captured in the screenshot by the hard copy function.

- Mouse pointer
- Operation menu bar on the mobile screen
- Authorization popup display
- Alarm popup display
- Key window
- Dialog

■10 Differences between the functions to remotely operate the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the differences between the functions to remotely operate the GOT, refer to the following.

➟10.5.2 ■7 Differences between the functions to remotely operate the GOT

10.19.3 How to use the GOT Mobile function

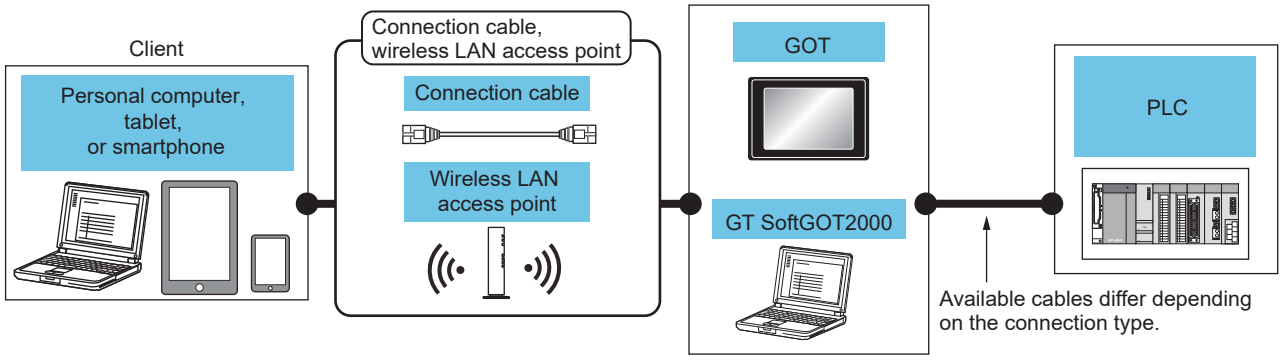
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 System configuration
■2 Setting procedure
■3 Setting GT27, GT25, or GS25 as a server
■4 Setting GT SoftGOT2000 as a server
■5 Copying a base screen or window screen to a mobile screen
■6 Setting on the client
■7 Usage

■1 System configuration

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the system configuration of the GOT Mobile function.



Client (Personal computer, tablet, or smartphone)	Connection cable*1*2, wireless LAN access point	Maximum segment length*3	Server (GOT)		PLC
			Option	GOT model	
Select by each user	• 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	- (Built into GOT)	GT27 GT25 GS25	For the system configuration between the GOT and the PLC, refer to each connection manual.
			GT25-J71E71-100	GT27 GT25 *6	
			GT SoftGOT2000		
	-	-	GT25-WLAN	GT27 *4 GT25 *4*6 GS25 *4	
	• Wireless LAN access point For the connectable wireless LAN access points and system devices, refer to the following Technical News. ➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)	-	GT25-WLAN	GT27 *5 GT25 *5*6 GS25 *5	
	• Wireless LAN access point *7	-	GT SoftGOT2000		

*1 The applicable destination to connect the twisted pair cable depends on the configuration of the Ethernet network system.
Connect to the applicable Ethernet module, hub, transceiver, wireless LAN adapter (NZ2WL-JPA or NZ2WL-JPS), or other system equipment according to the Ethernet network system.
Use the cable, connector, or hub that meets the IEEE802.3 10BASE-T/100BASE-TX standard.
For the controller to which the wireless LAN adapter can be connected and how to configure the settings for the wireless LAN adapter, refer to the manual of the wireless LAN adapter you use.

*2 A straight cable is applicable.
When the GOT is directly connected to the personal computer via Ethernet cable, a cross cable is applicable.

*3 The length between the hub and node.
The maximum length depends on the Ethernet equipment you use.
When a repeater hub is used, the number of connectable personal computers is as follows.

• 10BASE-T: Up to 4 cascade-connected hubs (within 500 m)
• 100BASE-TX: Up to 2 cascade-connected hubs (within 205 m)

For the cascade connection between the switching hubs, there is no theoretical limit to the number of cascades. For the limit, contact the switching hub manufacturer.

*4 Set [Operation Mode] to [Access Point] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*5 Set [Operation Mode] to [Station] in [Wireless LAN Setting] in the [GOT Setup] window.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

*6 Not available to GT2505-V and GT25HS-V.

*7 The usable wireless LAN access point varies with the personal computer used.

■2 Setting procedure

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The setting procedure to use the GOT Mobile function depends on the model.

• GT27, GT25, and GS25

➟■3 Setting GT27, GT25, or GS25 as a server

• GT SoftGOT2000

➟■4 Setting GT SoftGOT2000 as a server

■3 Setting GT27, GT25, or GS25 as a server

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Set the GOT Ethernet interface.

➟5.4 Setting the GOT Ethernet Interface ([GOT Ethernet Setting])

Step 2 To use the GOT wireless LAN function, configure the wireless LAN connection setting.

➟5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])

Step 3 Configure the GOT Mobile function setting.

Select [Common] → [GOT Mobile Setting] from the menu to display the [GOT Mobile Setting] window. In [Basic Setting], select [Use GOT Mobile function].
For the GOT Mobile function setting, refer to the following.

➟10.19.6 [GOT Mobile Setting] window

Step 4 Create a mobile screen.

Perform one of the following operations to display the [Screen Property] dialog.

• Select [Screen] → [New] → [Mobile Screen] from the menu.
• Double-click [New] under [Mobile Screen] in the tree in the [Screen] window.

In the displayed dialog, configure the setting and click the [OK] button.

➟10.19.7 Mobile screen properties

A created base screen or window screen can be copied to a mobile screen.

➟■5 Copying a base screen or window screen to a mobile screen

Step 5 A mobile screen is created and a screen editor appears in the work window.

Place figures and objects on the mobile screen.

➟6.5 Placing and Editing Figures and Objects

Step 6 If you have enabled the external access to the GOT public folder, create the public folder under the package folder.

Create the package folder in the data storage to be installed in the current drive of the GOT.
Store the public folder (folder name: userdata) in the package folder.

➟10.19.2 ■7 Public folder

After the public folder is created, install the data storage to the GOT.

Step 7 To use the file manager, refer to the following.

➟10.19.2 ■8 File manager

Step 8 To connect the GOT and clients without the operator name and password-based authentication, configure the setting in the [GOT Mobile Setting] window ([ANDON Setting]).

➟10.19.6 [GOT Mobile Setting] window

For the ANDON function, refer to the following.

➟10.19.4 ANDON function

Step 9 Connect the personal computer to the GOT, and write the project to the GOT.

➟4.3 Transferring the Data between the Personal Computer and the GOT

Step 10 Register the license number to the GOT.

For information on how to register the license number, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■4 Setting GT SoftGOT2000 as a server

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Enable Internet Information Services (IIS) and the required IIS components on a personal computer on which GT SoftGOT2000 runs.

For how to enable IIS, refer to the following.

➟(1) Enabling IIS

Step 2 Configure the GOT Mobile function setting.

Select [Common] → [GOT Mobile Setting] from the menu to display the [GOT Mobile Setting] window. In [Basic Setting], select [Use GOT Mobile function].
For the GOT Mobile function setting, refer to the following.

➟10.19.6 [GOT Mobile Setting] window

Step 3 Create a mobile screen.

Perform one of the following operations to display the [Screen Property] dialog.

- Select [Screen] → [New] → [Mobile Screen] from the menu.
- Double-click [New] under [Mobile Screen] in the tree in the [Screen] window.

In the displayed dialog, configure the setting and click the [OK] button.

➟10.19.7 Mobile screen properties

A created base screen or window screen can be copied to a mobile screen.

➟■5 Copying a base screen or window screen to a mobile screen

Step 4 A mobile screen is created and a screen editor appears in the work window.

Place figures and objects on the mobile screen.

➟6.5 Placing and Editing Figures and Objects

Step 5 If you have enabled the external access to the GOT public folder, create the public folder under the package folder.

Create the package folder in the virtual drive A.
Store the public folder (folder name: userdata) in the package folder.

➟10.19.2 ■7 Public folder

To access the file stored in the public folder from multiple clients, configure the IIS settings.
For the required IIS settings, refer to the following.

➟(2) IIS settings

Step 6 To use the file manager, refer to the following.

➟10.19.2 ■8 File manager

Step 7 To connect GT SoftGOT2000 and the clients without the operator name and password-based authentication, configure the setting in the [GOT Mobile Setting] window ([ANDON Setting]).

➟10.19.6 [GOT Mobile Setting] window

For the ANDON function, refer to the following.

➟10.19.4 ANDON function

Step 8 Register the license number to the GT SoftGOT2000.

➟GOT Mobile Function License for GT SoftGOT2000 Registration Instructions

Step 9 Start GT SoftGOT2000 and open the created project.

➟GT SoftGOT2000 Version1 Operating Manual

(1) Enabling IIS

The following shows the steps to enable Internet Information Services (IIS) and the required IIS components.
This is an example of Windows 10.

Step 1 Select [Control Panel] from the Windows start menu.

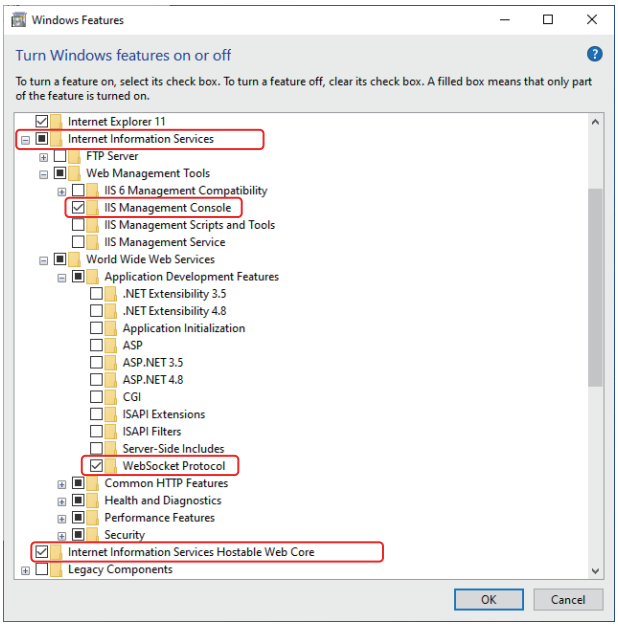
The [Control Panel] window appears.

Step 2 Select [Programs] → [Turn Windows features on or off].

The [Windows Features] window appears.

Step 3 Select the following items and click the [OK] button.

- Internet Information Services
- IIS Management Console
- WebSocket Protocol
- Internet Information Services Hostable Web Core

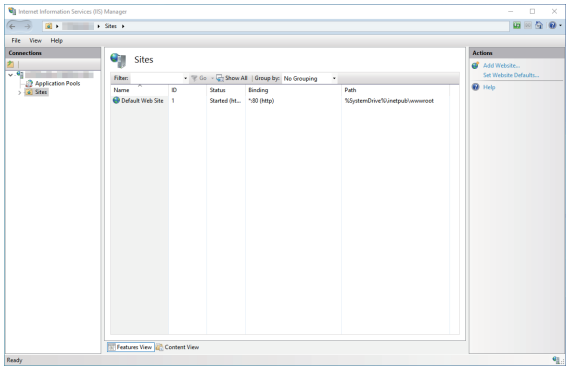


IIS and the required IIS components are enabled.
IIS starts automatically at the OS startup by default.
For operations such as to stop IIS, open the Windows start menu → [Administrative Tools] → [Internet Information Services (IIS) Manager] and perform the relevant operation in the [Actions] pane.

(2) IIS settings

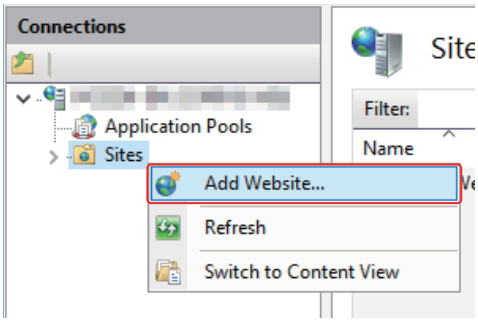
To access the file stored in the public folder from multiple clients, the Internet Information Services (IIS) settings must be configured.
The following shows how to configure the required settings using Windows 10 as an example.

Step 1 From the Windows start menu, select [Administrative Tools] → [Internet Information Services (IIS) Manager].

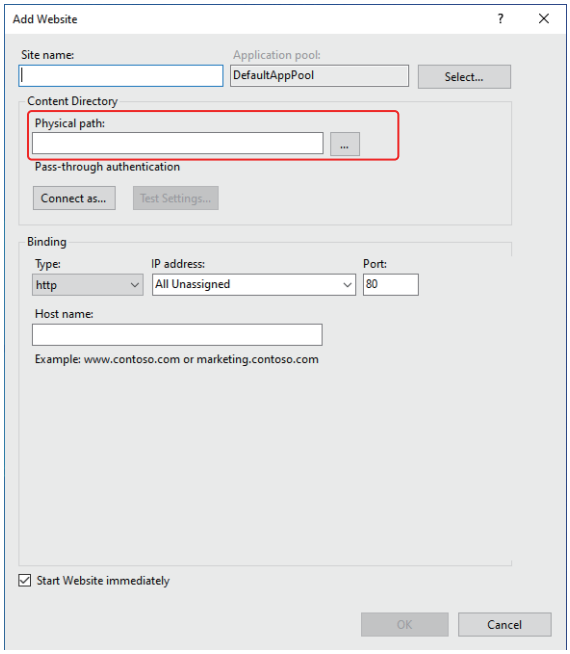


Step 2 Right-click [Sites] in the [Connections] field, and click [Add Website].

The [Add Website] dialog appears.



Step 3 Set the path to the public folder of [GOT Mobile Setting] to [Physical path] within [Content Directory]. Store the file to be accessed from multiple clients in the specified path.



To use the hyperlink function, configure the following settings in the [Hyperlink] dialog.

- Select [Open a website] for [Action].
- In [URL], set the path you entered in [Physical path] for the IIS settings.

For details on the [Hyperlink] dialog, refer to the following.

➟■1 [Action/Style] tab

■5 Copying a base screen or window screen to a mobile screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A created base screen or window screen can be copied to a mobile screen.
The following shows the procedure to copy a screen.

Step 1 In the [Screen] window, right-click on a base screen and window screen to be copied and select [Copy to Mobile Screen].

Step 2 In the [Copy to Mobile Screen] dialog, set the destination screen number and other items.

➡(2) [Copy to Mobile Screen] dialog

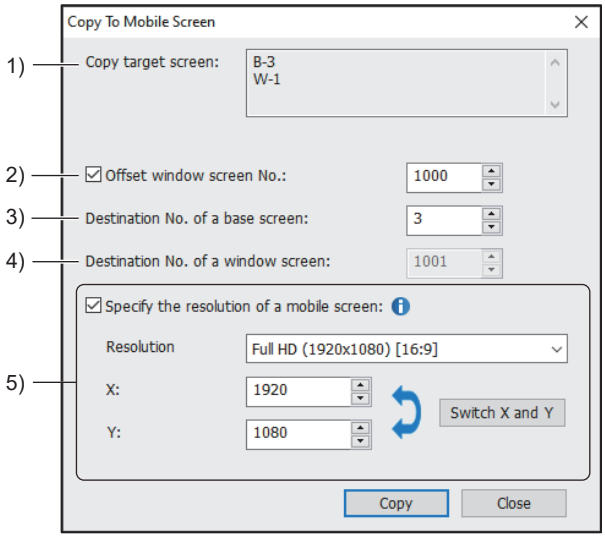
Step 3 Click the [Copy] button to copy the screen to the mobile screen.

(1) Specifications for copying a screen to a mobile screen

The following shows the specifications for copying a screen to a mobile screen.

Item		Description
Screen	Expanded screen	Automatically resized according to the resolution of the model set in [GOT Type Setting].
	Screen whose display is prohibited by setting the project security	Not available for copying. When multiple screens are simultaneously copied, the screen numbers of the screens that are not copied are skipped.
Object	Go To Screen switch	When the screen after the switching is also copied, the screen number will be changed to the one specified for the copied screen. The number will be retained when the screen after the switching is not copied. When [Offset window screen No.] is selected, the copy destination screen number is the sum of the copy source screen number and the offset value. If the sum is outside the range, the copy source screen number is retained.
	Set overlay screen	When a copy source screen has a set overlay screen object, the called screen is also copied. The screen number will be changed to the one specified for the copied screen (mobile screen). The original screen number will be retained when the called screen is a display-prohibited screen.

(2) [Copy to Mobile Screen] dialog



1) **[Copy target Screen]**
Displays the screen numbers to be copied to the mobile screen.
The screen numbers selected when [Copy to Mobile Screen] is pressed are displayed.

2) **[Offset window screen No.]**
The sum of the copy source screen number and the offset value is the copy destination window screen number.
Select this item to set the offset value to be added.
This function is helpful when using a copied screen as a window screen for mobile application.
In GOT, base screens (screen type [B]) and window screens (screen type [W]) are distinguishable.
These screens for mobile application are both created as mobile screens [M] and thus indistinguishable.Use this function and set an offset value [1000], for example, is to be added.

Then, you can use the screens with screen numbers in the 1000s as window screens.

3) **[Destination No. of a base screen]**
Specify a screen number of the copy destination screen (mobile screen) to which the base screen is copied.
The setting range is [0] to [32767].

4) **[Destination No. of a window screen]**
Specify a screen number of the copy destination screen (mobile screen) to which the window screen is copied.
The setting range is [0] to [32767].
When [Offset window screen No.] is selected, this item is grayed out.

5) **[Specify the resolution of a mobile screen]**
Set the screen size of the mobile screen.
For the setting details, refer to the following.

➟10.19.7 ■1 [Basic] tab

■6 Setting on the client

Enable JavaScript and Cookie in the browser.
The method to enable JavaScript or Cookie differs depending on the browser.
The setting items may also differ depending on the information device and the browser version.
For the setting method, refer to the following.

• For using Google Chrome (for Android or Windows)

➟Google Help website

• For using Safari (for iOS)

➟Apple Support website

• For using Microsoft Edge (for Windows)

➟Microsoft official website

■7 Usage

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Connecting a client

To connect a client to the GOT, enter the URL of the destination GOT on the address bar in the browser.

• GOT URL

"index.html" can be omitted from the URL.

· When connecting a client to the standard HTTP port No. 80

http://192.168.1.18/index.html
GOT IP address

· When connecting a client to a user-specified HTTP port
(Example: port No. 8080)

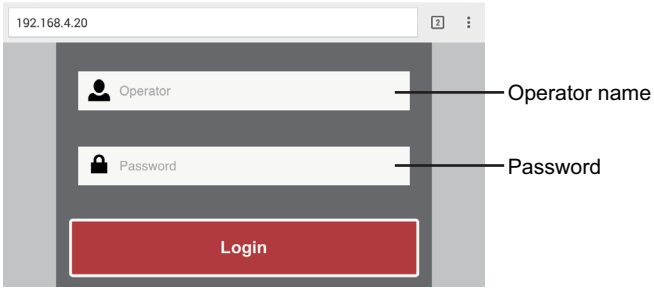
http://192.168.1.18 : 8080/index.html
GOT IP address port No.

The following shows the procedure for connecting a client using Google Chrome (for Android).

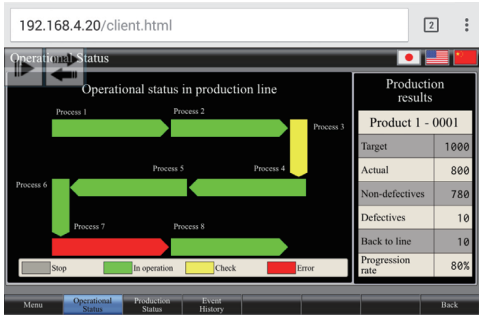
Step 1 Start Google Chrome.

Step 2 Touch the address bar, and enter the URL of the destination GOT with the software keyboard.

Step 3 In the authentication screen, enter an operator name and its password, and touch the [Login] button.



Step 4 If the client becomes authenticated to the GOT, an applicable mobile screen appears in the browser.



You can specify the mobile screen appearing after the client is authenticated to the GOT in the [GOT Mobile Setting] window. In [Screen Switching], select [Specify the No. of a screen to be displayed at the time of client connection] and specify a screen number.
If you do not specify the mobile screen, the smallest-numbered mobile screen appears.

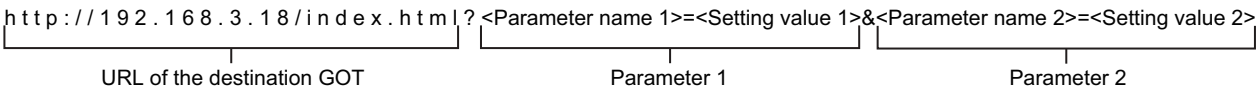
➟10.19.6 ■4 [Screen Switching/Window]

(a) **URL parameters**

The behavior of the client is customizable by appending specific parameters to the URL of the destination GOT.
The following shows available parameters.

Function	Parameter name	Setting value	Behavior without the target parameter	Remarks
Always fitting the mobile screen display on the width of the browser window	autofit	true false	Same as for specifying "false" (The target function is disabled.)	-
Hiding the operation menu bar on the mobile screen	hiddenmenu	true false	Same as for specifying "false" (The target function is disabled.)	When this function is enabled, zooming and scrolling the mobile screen display are not available.
Specifying a client number to connect to the GOT	clientno	1 to 5	A client number is automatically assigned.	The following client numbers cannot be specified. • Client number that is higher than the set value of [Simultaneous Client Connection] in the [GOT Mobile Setting] window ([Basic Setting]) • Client number of a client being connected to the GOT If you specify the client number set for [Target Client No.] in [ANDON Setting] of the [GOT Mobile Setting] window, also add the parameter for enabling the ANDON function (andon=true).
Enabling the ANDON function (Connecting to the GOT without the operator name and password-based authentication)	andon	true false	Same as for specifying "false" (The target function is disabled.)	When this function is enabled, the target client is not disconnected automatically even if no operation is performed on the client for a certain time. To use the ANDON function, the settings must be configured on GT Designer3 and the utility as well. For the details, refer to the following. ➟10.19.4 ■1 Settings required for the ANDON function
Specifying the screen number of the initial mobile screen appearing after the client connects to the GOT with authentication	initscreen	0 to 32767	The corresponding setting made on GT Designer3 is applied.	To enable this function, turn on the Enable Initial Screen Specification with URL Parameter signal (GS1896.b0). This parameter setting overrides the setting of [Specify the No. of a screen to be displayed at the time of client connection] in the [GOT Mobile Setting] window ([Screen Switching]).
Displaying the disconnect screen (client.html) when the client disconnects the GOT.	disconnectscreen	true false	Same as for specifying "false" (The target function is disabled.)	When this function is enabled, the screen that appears at the disconnection changes. • true: Displays the disconnect screen. • false: Displays the connection authentication screen. For details on the disconnect screen, refer to the following. ➟10.19.4 ■3 Displaying the disconnect screen
Reloading the mobile screen at regular intervals	reloadtime	1 to 43200	The screen is displayed without reloading.	To enable this function, use the URL parameter [reloadtime] and specify the time (in minutes). For details on the reload time, refer to the following. ➟10.19.4 ■4 Reloading the mobile screen at specified intervals

To use a parameter, append "?<Parameter name>=<Setting value>" to the URL of the destination GOT.
Delimit parameters with single ampersands (&).
The used parameters must be different.
One-byte alphanumeric characters are usable for the parameters.
The parameters are case-sensitive.



Example 1) When specifying client No. 3

http://192.168.3.18/index.html?clientno=3

Example 2) When setting the following functions

· Enabling the ANDON function

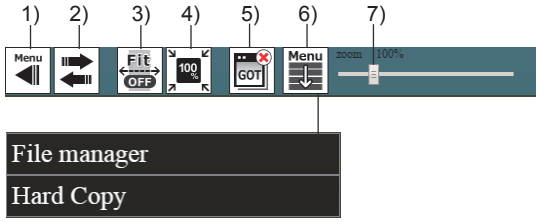
· Always fitting the mobile screen display on the width of the browser window

· Hiding the operation menu bar on the mobile screen

http://192.168.3.18/index.html?andon=true&autofit=true&hiddenmenu=true

(2) Operation menu bar on the mobile screen

The operation menu bar is displayed in the upper-left corner of a mobile screen to control the display.



1) **Expand/collapse button**
Expands or collapses the operation menu bar.
While the operation menu bar is expanded, you cannot touch the objects on the mobile screen.
However, you can scroll the screen by a swipe or flick operation on a tablet or smartphone.

2) **Button to move the operation menu bar**
Moves the operation menu bar from side to side.

3) **[Fit Width] button**
Adjusts the mobile screen display to fit on the width of the browser window.
While the [Fit Width] button is held down, the mobile screen display is fit on the width of the browser window automatically in the following timing.
- When the screen is switched
- When the width of the browser window is changed

4) **[100%] button**
Displays the mobile screen display at its original magnification (100%).

5) **Disconnect button**
Disconnects the client from the GOT.

6) **Extended function button**
Displays a pull-down menu.
- [File manager]
  Displays the file manager screen where you can view the folders and files in the public folder, or perform manipulations on them such as copying.
  ➟10.19.2 ■8 File manager
- [Hard Copy]
  Captures the current mobile screen in PNG format and outputs it to a new tab in the browser.
  ➟10.19.2 ■9 Hard copy function

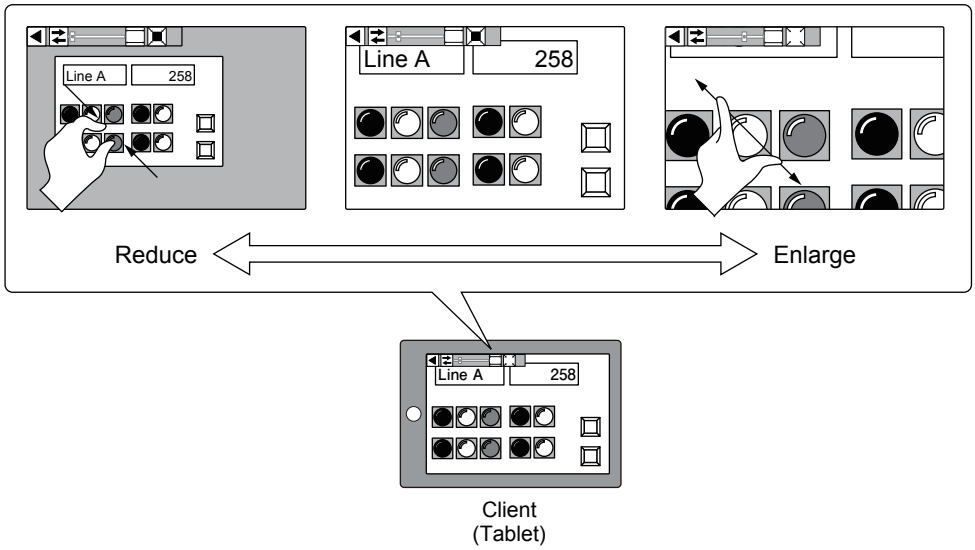
7) **Zoom slider**
Zooms in or out the mobile screen display.
Move the slider control to the right to zoom in the display, and move the slider control to the left to zoom out the display.

The setting range is [10]% to [500]%.

(3) Zooming the mobile screen display

When the operation menu bar is expanded on the mobile screen, you can pinch in or out to zoom the screen display (10% to 500%).

The screen display is zoomed by moving fingers toward or away from each other.



Client
(Tablet)

(4) Disconnecting a client

If you perform any of the following operations, the client becomes disconnected from the GOT.

- Close an applicable browser.
- Perform a logout when the authentication method of the GOT Mobile function is set to the operator authentication.
- Touch the Disconnect button on the operation menu bar in the mobile screen.
- Turn on b0 of the client control device that is specified in [Client Information] of the [GOT Mobile Setting] window.
- Touch the [Disconnect] button on the [GOT Mobile information] screen in the utility.

The client becomes disconnected in the following timing as well.

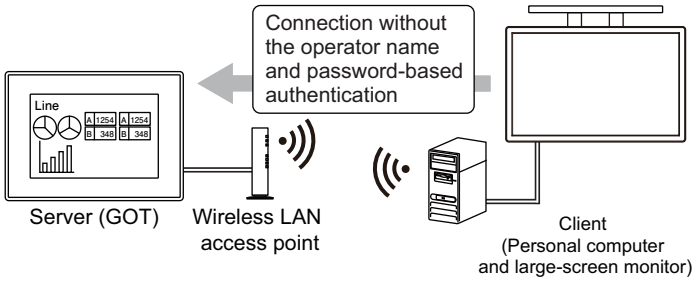
- When a communication timeout occurs on the GOT
- When the GOT is turned off
- When the GOT enters the offline mode because of package data writing or others
- When no operation is performed on the client for a certain time
  (When [Automatically disconnect clients with no operation] is selected in [Basic Setting] of [GOT Mobile Setting] window)
  When the ANDON function is used, the client does not become disconnected.
- When the authentication method of the GOT Mobile function is set to the operator authentication, and the automatic logout is performed
- When the connection time exceeds 30 minutes without license registration

Once the client is disconnected from the GOT, the client is not automatically reconnected.
In such a case, reconnect the client to the GOT.

10.19.4 ANDON function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The ANDON function enables a specific client to connect to the GOT without the operator name and password-based authentication. (The authentication screen does not appear.)
This function is usable for applications, such as an andon display. You can specify a set of a personal computer and a large-screen monitor as a client to display mobile screens.



For information on how to use the ANDON function, refer to the following.

➟■1 Settings required for the ANDON function

By configuring the above setting and the client side setting in combination, the target client can display a mobile screen upon its power-on.
For the details, refer to the following.

➟■2 Displaying a mobile screen on the client upon power-on

If you click the [OK] button in the confirmation dialog for disconnection while the ANDON function is enabled, the client does not become disconnected due to the automatic reconnection.
For how to display the disconnect screen without allowing a reconnection, refer to the following.

➟■3 Displaying the disconnect screen

■1 Settings required for the ANDON function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To use the ANDON function, configure all the following settings (1) to (3).

(1) Setting on GT Designer3

Step 1 Select [Common] → [GOT Mobile Setting] from the menu to display the [GOT Mobile Setting] window. In [ANDON Setting], select [Use ANDON function].

Step 2 Select a client number targeted for the ANDON function.

➟10.19.6 [GOT Mobile Setting] window

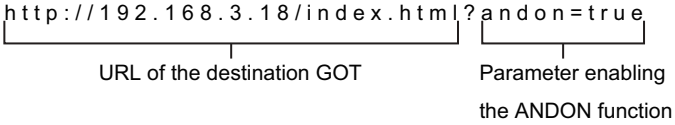
(2) Settings for the server (GOT)

In [ANDON connection] of the utility, set the IP address of a client targeted for the ANDON function.
For the setting, refer to the following.

➟GOT2000 Series User's Manual (Utility)

(3) URL parameter setting

When you enter the URL of the destination GOT on the address bar in the browser, add the parameter for enabling the ANDON function.



For the details of the URL parameters, refer to the following.

➟10.19.3 ■7 (1) (a) URL parameters

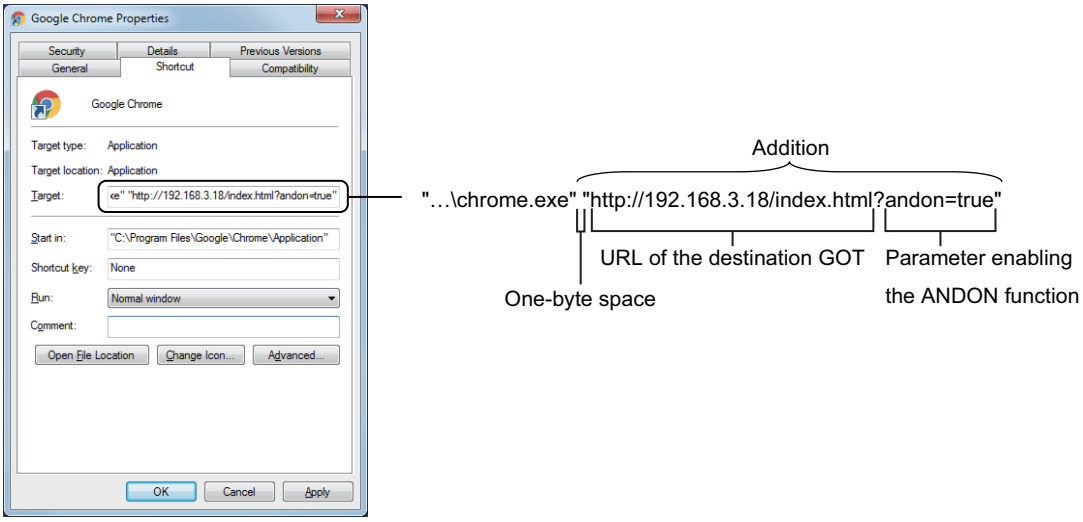
■2 Displaying a mobile screen on the client upon power-on

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

A client can display a mobile screen upon power-on without specific operations, such as logging into the OS, starting a browser, and entering a URL on the address bar.
The following shows the setting method to achieve this behavior by using Windows 7 and Google Chrome (for Windows) as an example.

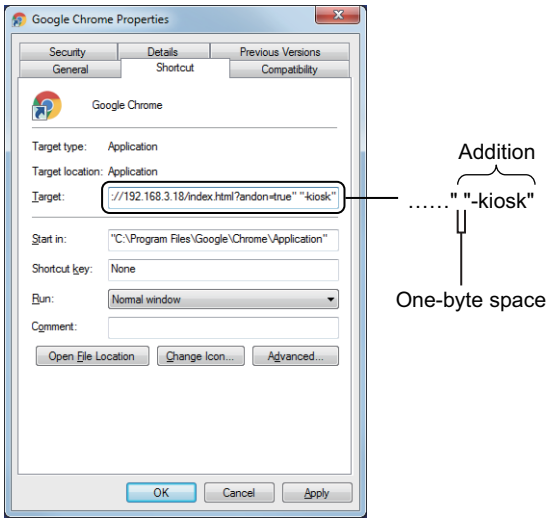
Step 1 Set the destination of a Google Chrome shortcut by specifying the URL of the destination GOT and the parameter for enabling the ANDON function.

Create a Google Chrome shortcut, and select [Properties] from the right-click context menu.
In the [Shortcut] tab of the [Google Chrome Properties] dialog, add the URL and parameter to [Target] as shown below.



Step 2 Configure the setting to open a browser in full screen mode.

In the [Shortcut] tab of the [Google Chrome Properties] dialog, add a one-byte space and "-kiosk" to [Target] as shown below.

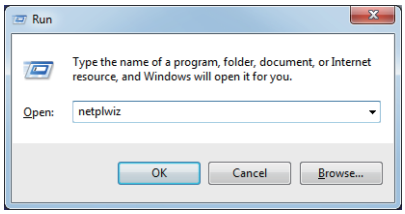


Step 3 Configure the setting to open the browser automatically upon startup of Windows.

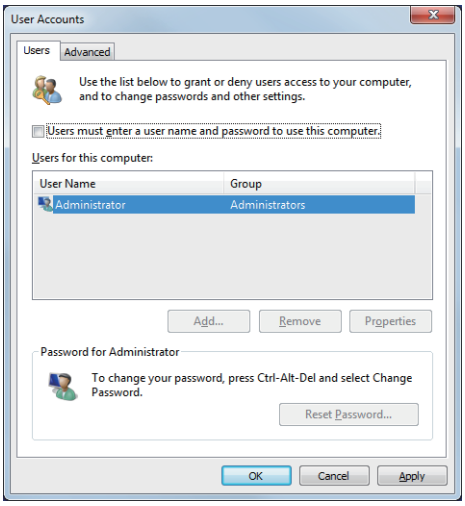
Place the Google Chrome shortcut set as above in the directory below.
[\Users\(User name)\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup]

Step 4 Configure the setting to log into Windows automatically upon power-on of the client.

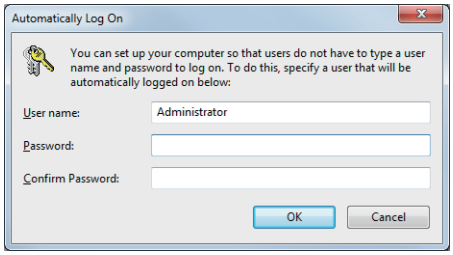
On the Windows start menu, use [Search programs and files] to display the [Run] dialog.
Enter "netplwiz" in [Open] and click the [OK] button to display the [User Accounts] dialog.



In the [Users] tab, select a user to log into Windows automatically, and clear [Users must enter a user name and password to use this computer].
Click the [OK] button to display the [Automatically Log On] dialog.



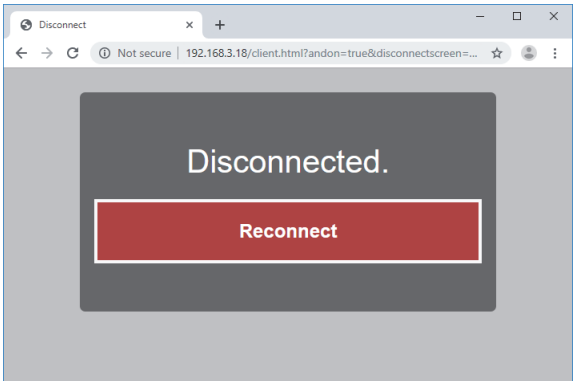
Enter the target user name and its password, and click the [OK] button.



■3 Displaying the disconnect screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When the ANDON function is used, clicking the OK button in the confirmation dialog for disconnection establishes an automatic reconnection without displaying the connection authentication screen.
Enable the URL parameter (disconnectscreen) to display the disconnect screen without allowing an automatic reconnection after clicking the OK button in the confirmation dialog for disconnection.



Clicking the [Reconnect] button establishes a reconnection.
When the ANDON function is not used, click the [Reconnect] button to display the connection authentication screen.
For the details of the URL parameters, refer to the following.

➟10.19.3 ■7 (1) (a) URL parameters

■4 Reloading the mobile screen at specified intervals

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When the URL parameter [reloadtime] is enabled, the mobile screen reloads at the specified intervals.
Other URL parameter settings are retained during the reload.
When the ANDON function is used, the screen reloads automatically without displaying the login authentication screen.
When the ANDON function is not used, the login authentication screen with the user name and password fields appears after the reload.
For details on the URL parameters, refer to the following.

➟10.19.3 ■7 (1) (a) URL parameters

10.19.5 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Precautions for drawing

(1) User area in the operation memory (RAM)

A portion of the user area is reserved for the GOT Mobile function, and another portion of the area is reserved for clients according to the setting of [Simultaneous Client Connection].
Consider the available space in the user area, and set [Simultaneous Client Connection].
The GOT reserves 2 MB space for each client.
For the available space in the GOT user area, refer to the following.

➟12.10.1 Data transferred to the GOT and capacity of the destination drive

(2) Project data size

If a client accesses the server (GOT) that has project data containing high-volume mobile screen data, a browser may abend and no mobile screens may be displayed depending on the specifications of the client.
In such a case, reducing the project data size by deleting unnecessary mobile screens or objects may prevent the symptom.

(3) Mobile screen size

To determine the mobile screen size, consider the screen resolution and OS of the information device, and the browser characteristics.
If you set the mobile screen size the same as the resolution of the information device, a portion of the screen may not be displayed depending on the location of the OS status bar, browser tabs, or other conditions.

(4) Mobile screen switching device

When you use multiple clients simultaneously, specify a GOT Mobile device as the mobile screen switching device.
If any device other than GOT Mobile devices is specified as the screen switching device, all clients display the same screen upon screen switching.

(5) Values of the GOT Mobile devices at the start of accessing the GOT

If you deselect [Initialize the devices (VGD, VGB) at the time of client connection] in the [GOT Mobile Setting] window ([Device Allocation Setting]), the values of the GOT Mobile devices assigned to a client are not cleared automatically when the client starts accessing the GOT.
(The values stored before the access are retained.)
Configure the settings so that the values of the GOT mobile devices are cleared when a client starts accessing the GOT or becomes disconnected from the GOT.
Note that restarting the GOT clears the values of the GOT Mobile devices that are assigned to each client.

(6) Placing an object in the location of the operation menu bar on a mobile screen

When you place an object, make sure that the object and the operation menu bar do not overlap each other.
Otherwise, the object is hidden under the menu bar and you cannot touch the object.

(7) Data size of the project containing a BMP image

When the GOT Mobile function is enabled, if a BMP image is used in a mobile screen or is registered as a part, the image is automatically converted to the PNG format and saved as a new file.
(Even if you do not use the BMP image registered as a part in a mobile screen, the image is converted to the PNG format and saved as a new file.)
Since the project contains both the BMP image and the PNG image, the project size becomes larger.

(8) Using the GOT Mobile devices (VGB and VGD) for the GOT

Use the GOT Mobile devices (VGB and VGD) in the following settings only.

- Setting for an object on a mobile screen
- Setting in the [GOT Mobile Setting] window
- Setting in the [Alarm Popup Display(GOT Mobile Setting)] dialog

If you set the GOT Mobile devices for objects on screens other than mobile screens and for functions configured in the project, these objects and functions do not operate properly.

(9) Exclusive authorization control

To enable the exclusive authorization control, select all the setting items below.

- [Enable the exclusive control of operational authority] in the [GOT Mobile Setting] window ([Exclusive Control of

Operational Authority])

• [Target for exclusive control of operational authority] in the [Screen Property] dialog for each target mobile screen

If you select only one of the items, the exclusive authorization control is disabled in the project.

■2 Precautions for use

(1) Precautions for the license

When you incorporate the GOT into your product, if the GOT Mobile function is enabled in the GOT, make sure to register the license to the GOT.

If the license is unregistered, the GOT Mobile function is usable for 30 minutes only.

Upon the lapse of a cumulative amount of 30 minutes, the GOT forcibly disconnects the client.

The disconnection is performed even while you are operating the client. Therefore, the target controller may exhibit unintended behavior.

(2) [Back], [Forward], and [Refresh] buttons on the browser

While a mobile screen is being displayed, do not use the [Back] button, [Forward] button, and [Refresh] button on the browser.

Doing so disconnects the client from the GOT and returns you to the authentication screen.

(3) Zoom function of the browser

While a mobile screen is being displayed, do not use the zoom function of the browser.

Doing so may cause an unintended display, such as an enlarged or reduced operation menu bar.

(4) Files in the public folder

Each file in the public folder is accessible without authentication by specifying the URL of the file in the browser.

Once equipment is connected to the GOT by Ethernet, anyone can obtain the files in the public folder. Therefore, do not store your important data in the folder.

(5) Precautions for using the file manager

When the file manager is used for multiple tabs in the windows of the same browser, an error occurs.

Do not use the file manager for multiple tabs in the windows of the same browser.

You cannot move to the destination folder with the Return button in the file manager screen if you manipulate an open folder or file or its parent folders on the GOT.

In such a case, use the Directory button to display the directory tree, and select the folder to move to.

(6) GOT Mobile device information indicated by the system alarm

If a system alarm occurs in the process using GOT Mobile device data, the system alarm indicates the relevant GOT Mobile device as supplementary information.

The GOT internal device assigned to the GOT Mobile device is not indicated.

(7) Displaying the mobile screens in multiple languages

The display language of the mobile screens depends on the client OS.

To display the mobile screens in multiple languages, check that the client OS supports relevant languages.

(8) Long time use of the browser

If you use a browser for a long time, the connection with the GOT may be disconnected depending on the browser.

In such a case, perform authentication again to connect to the GOT.

If the hardware acceleration feature is used for the browser, disabling the feature may improve the situation.

The following shows the corrective actions to take if the problem persists.

• Reduce the number of on-screen objects or graph points, or restart the browser.

For details on restarting the browser, refer to the following Technical Bulletin.

➟Precautions for the GOT Mobile Function (for Overseas) (GOT-A-0231)

• Specify the URL parameter [reloadtime] to reload the screen at regular intervals.

(9) Forcibly turning off a touch switch if the communication is lost (momentary switch forced off)

If a touch switch is released on a client after the client loses communication with the GOT, the GOT does not recognize the release.

After a specified time (default: 3 seconds) elapses, the GOT forcibly turns off the touch switch.

Use the Time to Force Mobile Momentary Switch OFF device (GS1899) to set the time from when communication is lost until when the GOT forcibly turns off the touch switch.

For the details of the Time to Force Mobile Momentary Switch OFF device (GS1899), refer to the following.

➟12.1.3 ■6 (26) Time to Force Mobile Momentary Switch OFF (GS1899)

(10)Precautions when system alarm 621 occurs

The following shows how to act when system alarm 621 occurs.

- When port numbers are duplicated
  Correct the port number to set different port numbers.
  There must be three or more consecutive numbers between the port numbers specified.
- If GT SoftGOT2000 was abnormally terminated before starting the GOT Mobile function
  Restart the personal computer.

(11)Display of the communication error message

If you turn off the GOT being accessed by a client, the browser of the client may not display a communication error message immediately.
Do not turn off the GOT while the client is being operated.

(12)Precautions for using Safari or Firefox on iOS browsers

The hyperlink function may not work even if the object with the hyperlink function set to the second point is touched using multi-touch.
In this case, disable the browser's popup blocker.
For information on how to disable the popup blocker, refer to the support site or help page of each browser.

■3 Precautions for using the ANDON function

(1) Connection without the operator name and password-based authentication

If you only configure the settings required to use the ANDON function, anyone can access the GOT from the client using the ANDON function without an operator name and a password.
Take security measures for such a client, including limiting displayable screens.

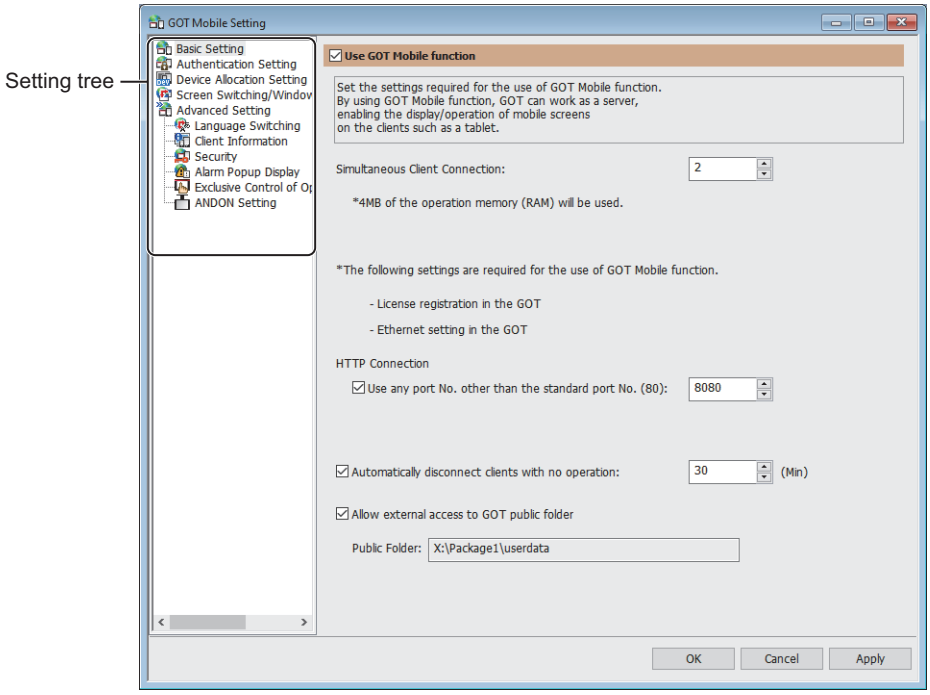
(2) Login using the operator authentication

Even if [GOT Mobile Authentication Method] is set to [Operator] in [Authentication Setting] of the [GOT Mobile Setting] window, the operator authentication is not performed.

10.19.6 [GOT Mobile Setting] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Configure the GOT Mobile function setting.
Select [Common] → [GOT Mobile Setting] from the menu to display this window.
The display contents are changeable by selecting an item in the setting tree on the left of the window.



➥■1 [Basic Setting]
■2 [Authentication Setting]
■3 [Device Allocation Setting]
■4 [Screen Switching/Window]
■5 [Language Switching]
■6 [Client Information]
■7 [Security]
■8 [Alarm Popup Display]
■9 [Exclusive Control of Operational Authority]
■10 [ANDON Setting]

■1 [Basic Setting]

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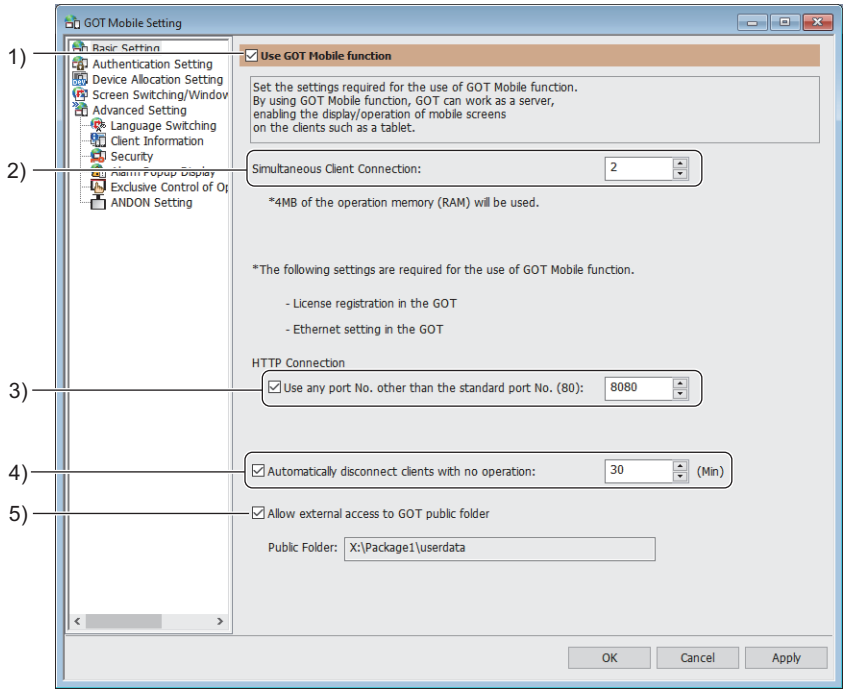


1) **[Use GOT Mobile function]**
Enables the GOT Mobile function.

2) **[Simultaneous Client Connection]**
Set the maximum number of clients connectable to the GOT simultaneously.
The GOT reserves 2 MB space of the user area in the operation memory (RAM) for each client.
The setting range depends on the GOT type.
GT27, GT25, and GS25: [1] to [5]
GT SoftGOT2000: [1] to [15]

3) **[Use any port No. other than the standard port No. (80)]**
Connects a client to the GOT through a port other than the standard port No. 80.
Select this item, and specify the port number.
The setting range is [1024] to [65535].

4) **[Automatically disconnect clients with no operation]**
Disconnects a client from the server (GOT) if no operation is performed on the client for a specified time period.
Select this item, and specify the time period until disconnection is performed.
The setting range is [1] minute to [60] minutes.

5) **[Allow external access to GOT public folder]**
Allows clients to access the files in the GOT public folder.
For the details of the public folder, refer to the following.

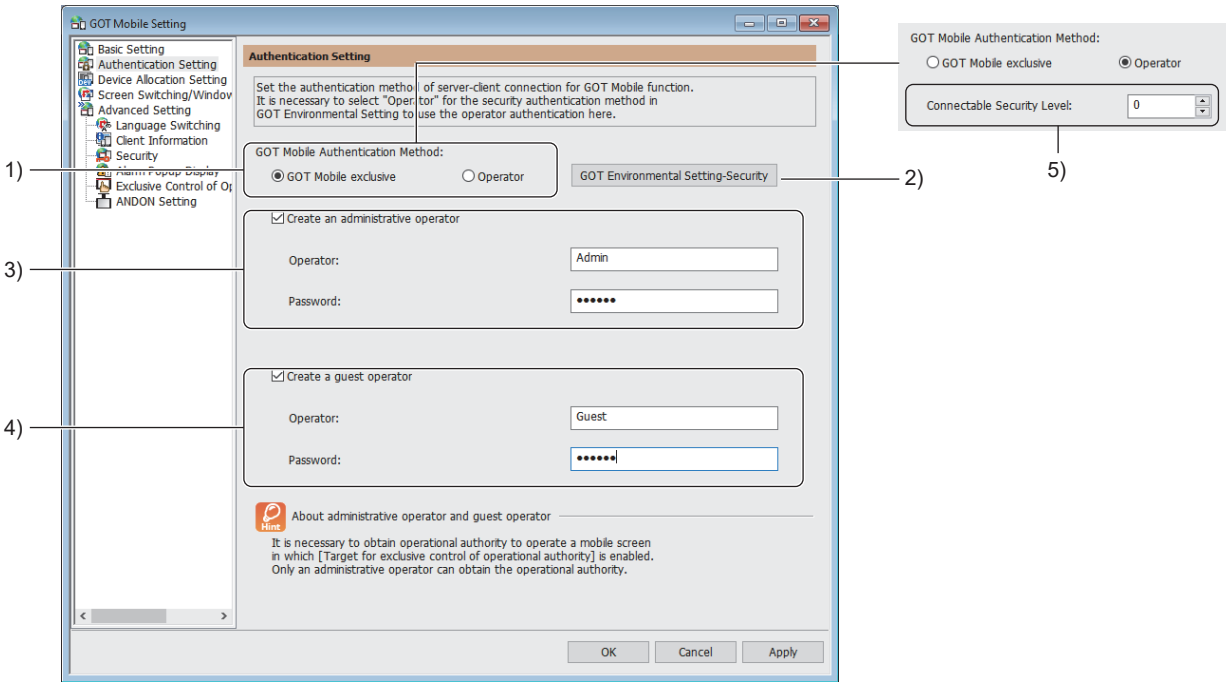
➟10.19.2 ■7 Public folder

■2 [Authentication Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the details of the authentication, refer to the following.

➟10.19.2 ■5 Authentication



1) **[GOT Mobile Authentication Method]**

Select an authentication method for connecting a client to the GOT.

The following shows the items to be selected.

- [GOT Mobile exclusive]
- [Operator]

2) **[GOT Environmental Setting-Security] button**

Displays the [Environmental Setting] window ([Security]).

For the settings in the [Environmental Setting] window ([Security]), refer to the following.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

3) **[Use an administrative operator]**

Set an administrator operator account for authentication.

When authenticated with the administrative operator account, the client can obtain the authorization of the GOT network interaction function.

This item is settable when [GOT Mobile Authentication Method] is set to [GOT Mobile exclusive].

Select this item, and set [Operator] and [Password].

Specify the operator name and password with one-byte upper- and lowercase alphabets and numbers, one-byte spaces, and the symbols below within 32 characters.

! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { ¦ } ~

Note that the operator name or password cannot end in a one-byte space.

4) **[Use a guest operator]**

Set a guest operator account for authentication.

When authenticated with the guest operator account, the client cannot obtain the authorization of the GOT network interaction function.

This item is settable when [GOT Mobile Authentication Method] is set to [GOT Mobile exclusive].

Select this item, and set [Operator] and [Password].

Specify the operator name and password with one-byte upper- and lowercase alphabets and numbers, one-byte spaces, and the symbols below within 32 characters.

! " # $ % & ' ( ) * + , ` - . / : ; < = > ? @ [\ ] ^ _ { ¦ } ~

Note that the operator name or password cannot end in a one-byte space.

5) **[Connectable Security Level]**

Set the security level of the operator allowed to access the GOT.

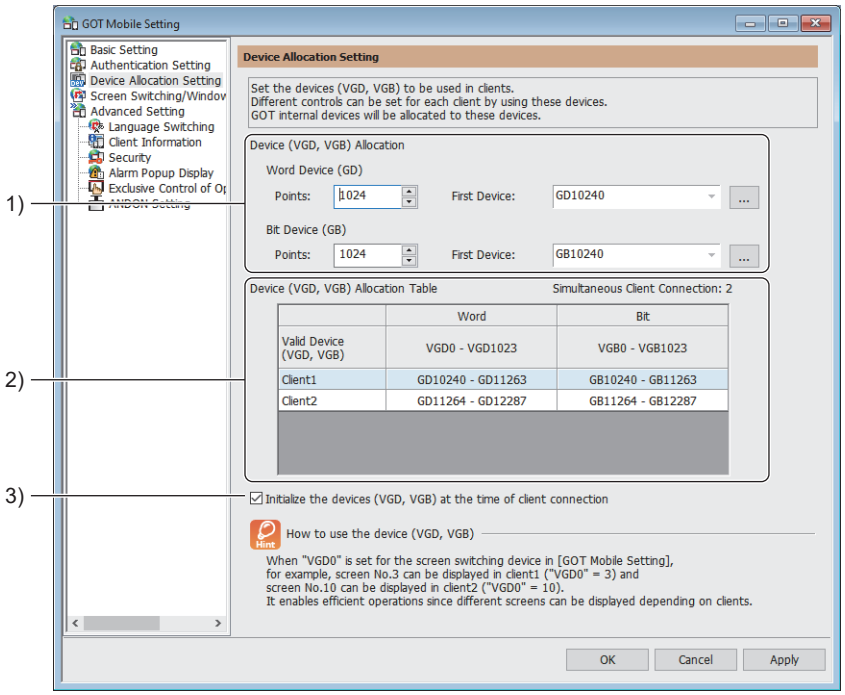
This item is settable when [GOT Mobile Authentication Method] is set to [Operator].
The setting range is [0] to [15].

■3 [Device Allocation Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the details of the GOT Mobile devices, refer to the following.

➟10.19.2 ■4 GOT Mobile device (VGB and VGD)



1) **[Device (VGD, VGB) Allocation]**

Set GOT internal devices to be assigned to the GOT Mobile devices (VGD and VGB).
The number of GOT internal devices (GD and GB) to be assigned is obtained by the following formula: [Points] × [Simultaneous Client Connection].

Item		Description
[Word Device (GD)]	[Points]	Set the number of GOT internal devices (GD) to be assigned for one client. The value is settable in 2-point units. The setting range is [2] to [32768].
	[First Device]	Set the first GOT internal device (GD) to be assigned for client 1. The consecutive devices starting from [First Device] are assigned for clients. The total number of assigned devices is obtained by the following formula: [Points] × [Simultaneous Client Connection]. The setting range is [GD0] to [GD65535].
[Bit Device (GB)]	[Points]	Set the number of GOT internal devices (GB) to be assigned for one client. The value is settable in 32-point units. The setting range is [32] to [32768].
	[First Device]	Set the first GOT internal device (GB) to be assigned for client 1. The consecutive devices starting from [First Device] are assigned for clients. The total number of assigned devices is obtained by the following formula: [Points] × [Simultaneous Client Connection]. The setting range is [GB0] to [GB65520].

2) **[Device (VGD, VGB) Allocation Table]**

Shows the correspondence between the GOT Mobile devices and the assigned GOT internal devices by client number.

Item	Description
[Simultaneous Client Connection]	Maximum number of clients connectable to the GOT simultaneously The value set in [Basic Setting] is displayed.
[Valid Device (VGD, VGB)]	Setting range of GOT Mobile devices usable in clients
[Client1] to [Client15]	GOT internal devices that are assigned for each client

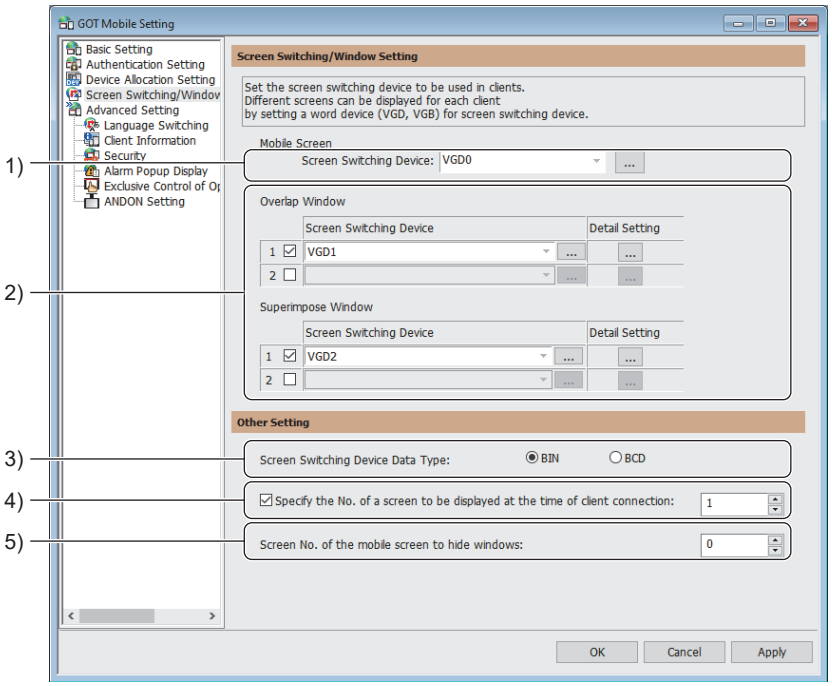
3) **[Initialize the devices (VGD, VGB) at the time of client connection]**
Clears the values of the GOT Mobile devices assigned to a client when the client connects to the GOT.

■4 [Screen Switching/Window]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the details of screen switching on a client, refer to the following.

➟10.19.2 ■2 (1) (b) Screen switching



1) **[Screen Switching Device]**
Set the screen switching device for clients.
You can specify a word device or word-specified bit device.

2) **Settings of overlap windows 1 and 2 and superimpose windows 1 and 2**
Set whether to use overlap windows 1 and 2, superimpose windows 1 and 2, screen switching devices, display methods, and others.
For details, refer to the following.

➟5.2.1 ■5 [Screen Switching/Window]

3) **[Screen Switching Device Data Type]**
Select the data type of the screen switching device for clients.
The following shows the items to be selected.
- [BIN]: Signed 16-bit binary or unsigned 16-bit binary
- [BCD]: 16-bit binary coded decimal

4) **[Specify the No. of a screen to be displayed at the time of client connection]**
Set the screen number of the mobile screen to be displayed immediately after the client becomes authenticated to the GOT.
The setting range varies depending on the setting of [Screen Switching Device Data Type].
- For [BIN]: [0] to [32767]
- For [BCN]: [0] to [9999]

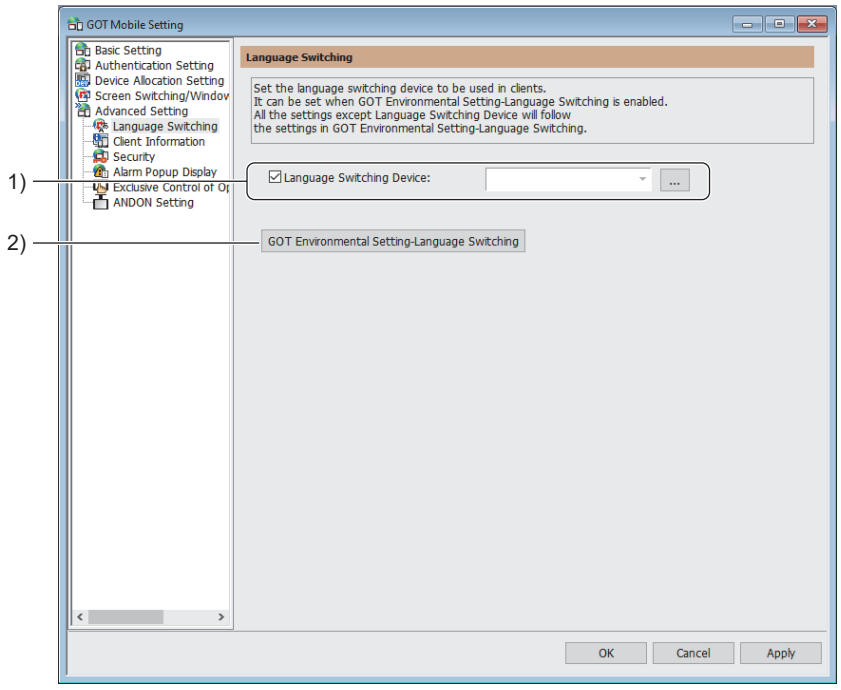
5) **[Screen No. of the mobile screen to hide windows]**
Set the screen number of a mobile screen. Then, the overlap windows and superimpose windows displayed on the screen are hidden.
When the set number is stored in the screen switching device, the corresponding window is hidden.

■5 [Language Switching]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the details of language switching on the mobile screen, refer to the following.

➟10.19.2 ■2 (1) (c) Language switching



1) **[Language Switching Device]**
Set the language switching device for clients.
You can specify a word device or word-specified bit device.

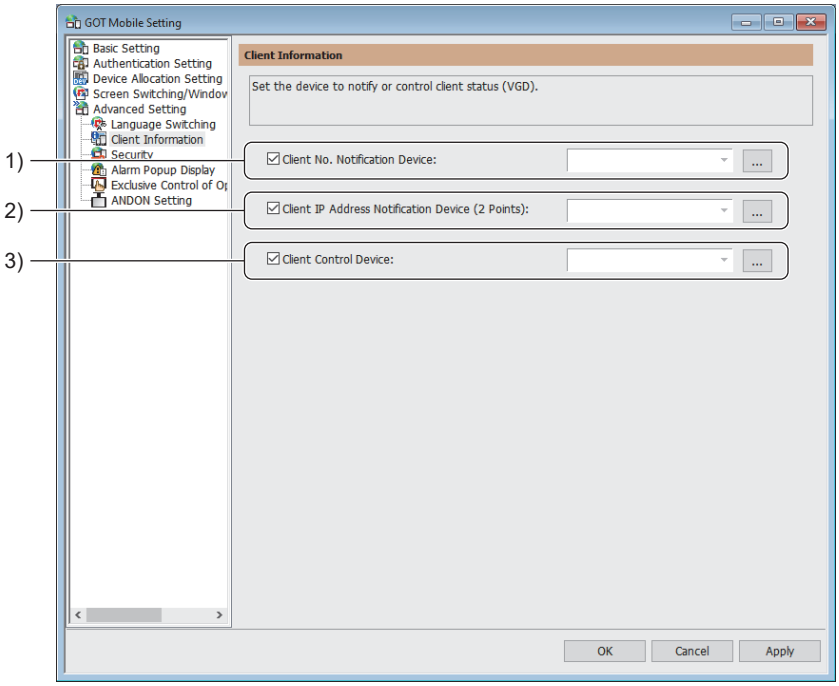
2) **[GOT Environmental Setting-Language Switching] button**
Displays the [Environmental Setting] window ([Language Switching]).
For language switching on the mobile screen, the GOT environmental settings are applied except the setting of [Language Switching Device].
For the settings in the [Environmental Setting] window ([Language Switching]), refer to the following.

➟5.2.2 ■4 [Language Switching]

■6 [Client Information]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

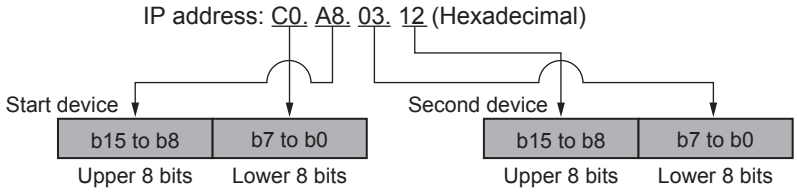
Set the devices to notify the information on the client being connected or to control the state of the client.



1) **[Client No. Notification Device]**
Set a device to store the client number of the client being connected.
Select this item, and set the device.
You can specify a GOT Mobile device (VGD) only.
The data type of the device is unsigned 16-bit binary.

2) **[Client IP Address Notification Device (2 Points)]**
Set a device to store the IP address of the client.
Select this item, and set the device.
You can specify a GOT Mobile device (VGD) only.
Two consecutive word devices are reserved, starting from the specified device.
The data type of the device is unsigned 32-bit binary.
The IP address is stored as shown below.

Example) When the IP address is 192.168.3.18 (decimal)



3) **[Client Control Device]**
Set a device to control the state of the client being connected.
Select this item, and set the device.
Turning on b0 of the set device disconnects the client from the GOT.
You can specify a GOT Mobile device (VGD) only.
The data type of the device is unsigned 16-bit binary.

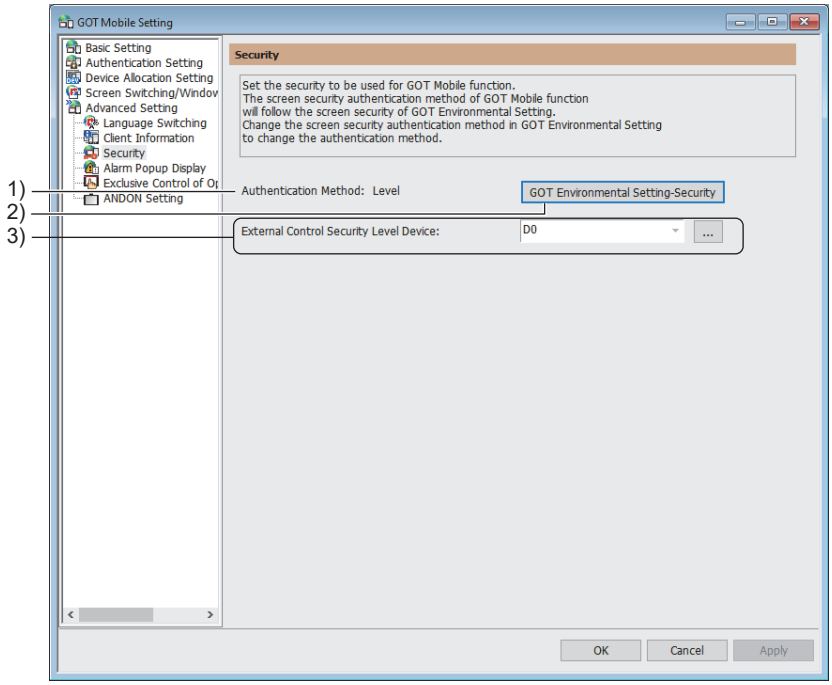
■7 [Security]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The setting items differ according to the authentication method of the screen security.
For the details of the mobile screen security authentication, refer to the following.

➟10.19.2 ■2 (3) (a) Screen security (level authentication and operator authentication)

(1) For the level authentication



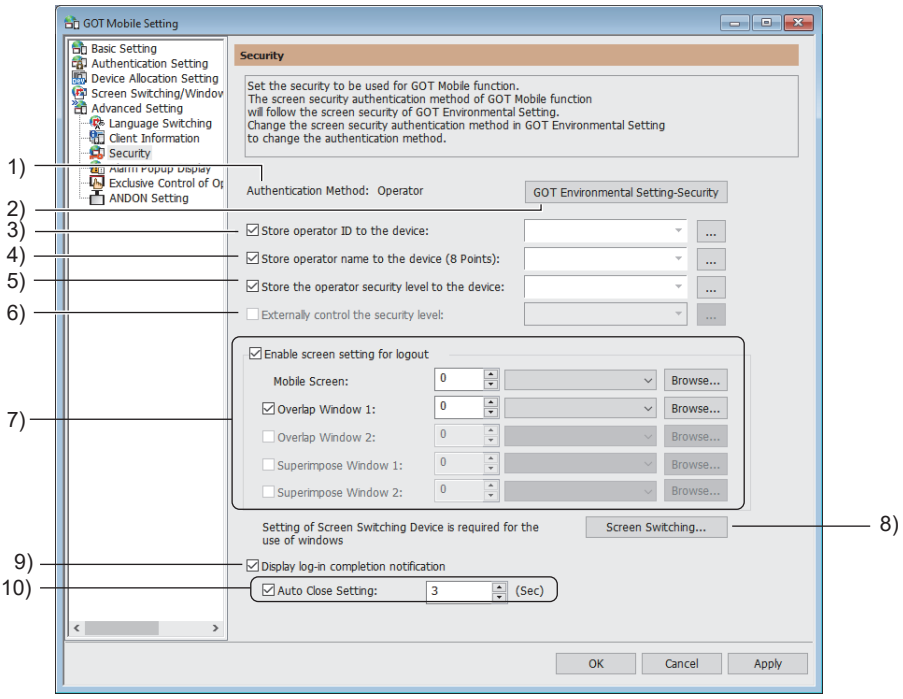
1) **[Authentication Method]**
Displays the security authentication method selected for [Authentication Method] in the [Environmental Setting] window ([Security]).

2) **[GOT Environmental Setting-Security] button**
Displays the [Environmental Setting] window ([Security]).
The security level password is common to the clients and the GOT.
Change the authentication method and security level password for the GOT as necessary.
For details, refer to the following.

➟5.2.6 ■3 [Security] ([Screen Security] tab)

3) **[External Control Security Level Device]**
Set a device to store the security level of a client.
You can specify a word device or word-specified bit device.

(2) For the operator authentication



1) **[Authentication Method]**
Displays the security authentication method selected for [Authentication Method] in the [Environmental Setting] window ([Security]).

2) **[GOT Environmental Setting-Security] button**
Displays the [Environmental Setting] window ([Security]).
Change the authentication method for the GOT as necessary.
For details, refer to the following.

➟5.2.6 ■3 [Security] ([Screen Security] tab)

3) **[Store operator ID to the device]**
Set a device to store the ID number of the operator who is logged in from a client (Operator ID External Notification device).
You can specify a GOT Mobile device (VGD) only.
The specified device stores 0 when the operator logs out.

4) **[Store operator name to the device (8 Points)]**
Set a device to store the name of the operator who is logged in from a client (Operator Name External Notification device).
You can specify a GOT Mobile device (VGD) only.
Eight consecutive word devices are reserved, starting from the specified device.
If the operator name contains less than 16 characters, blank devices store 0.
All the devices store 0 when the operator logs out.

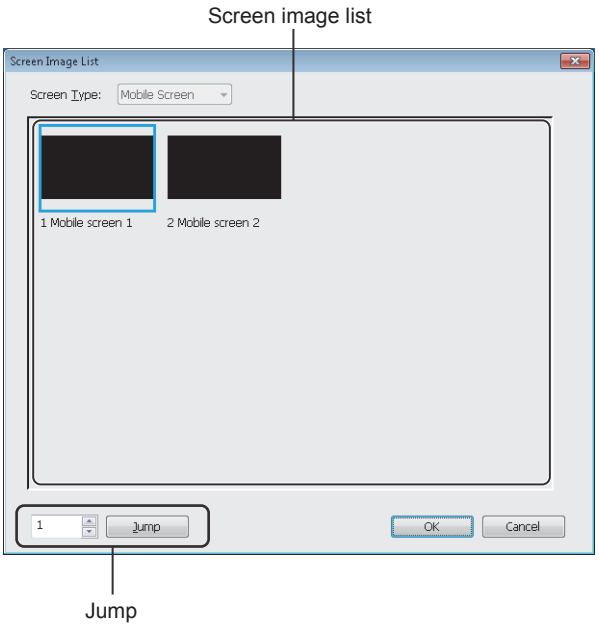
5) **[Store the operator security level to the device]**
Set a device to store the security level of the operator who is logged in from a client (Operator Level External Notification device).
You can specify a GOT Mobile device (VGD) only.
The specified device stores 0 when the operator logs out.

6) **[Externally control the security level]**
Set a device to externally control the operator authentication on a client (Operator Authentication External Control device).
You can specify a word device or word-specified bit device.
For the details of the security level control from an external device, refer to the following.

➟5.2.7 ■1 (8) Security level control from an external device

7) **[Enable screen setting for logout]**
Set a screen to be displayed at logout.
When using an overlap window or superimpose window, set a screen switching device in [Screen Switching/Window] in the [GOT Mobile Setting] window.

Click the [Browse] button to display the [Screen Image List] dialog.



- **Screen image list**
  Displays mobile screen images.
  Select a screen to be displayed at logout.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

When [GOT Mobile Authentication Method] is set to [Operator] in [Authentication Setting], the GOT disconnects the client at logout, and therefore the specified screen does not appear.

➟■2 [Authentication Setting]

8) **[Screen Switching] button**
Displays the setting screen for the screen switching devices.

➟■4 [Screen Switching/Window]

9) **[Display log-in completion notification]**
Displays a login completion notification dialog upon login.

10) **[Auto Close Setting]**
Closes the login completion notification dialog automatically.
Select this item, and specify the time period from when the login completion notification dialog appears until it closes.
The setting range is [1] second to [60] seconds.

■8 [Alarm Popup Display]

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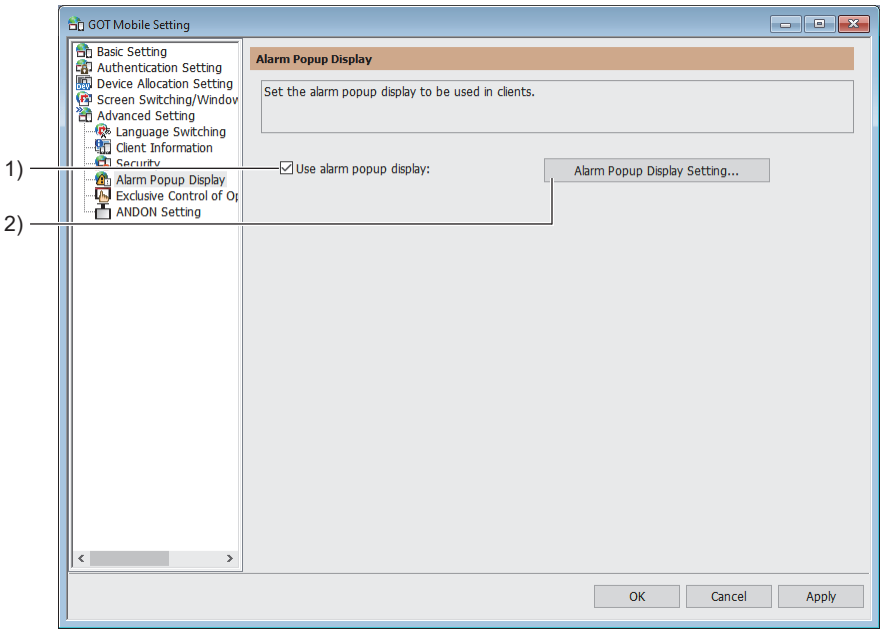
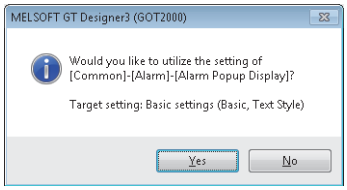
For the details of the alarm popup display on mobile screens, refer to the following.

➟10.19.2 ■2 (d) Alarm popup display



1) **[Use alarm popup display]**
   Uses the alarm popup display on mobile screens.

2) **[Alarm Popup Display Setting] button**
   Displays the following dialog to configure the alarm popup display setting for mobile screens.



To utilize the alarm popup display setting for the GOT, click the [Yes] button to display the [Alarm Popup Display(GOT Mobile Setting)] dialog.
To not to utilize the alarm popup display setting for the GOT, click the [No] button to display the [Alarm Popup Display(GOT Mobile Setting)] dialog.

➟9.1.4 Enabling the popup display for when an alarm occurs

■9 [Exclusive Control of Operational Authority]

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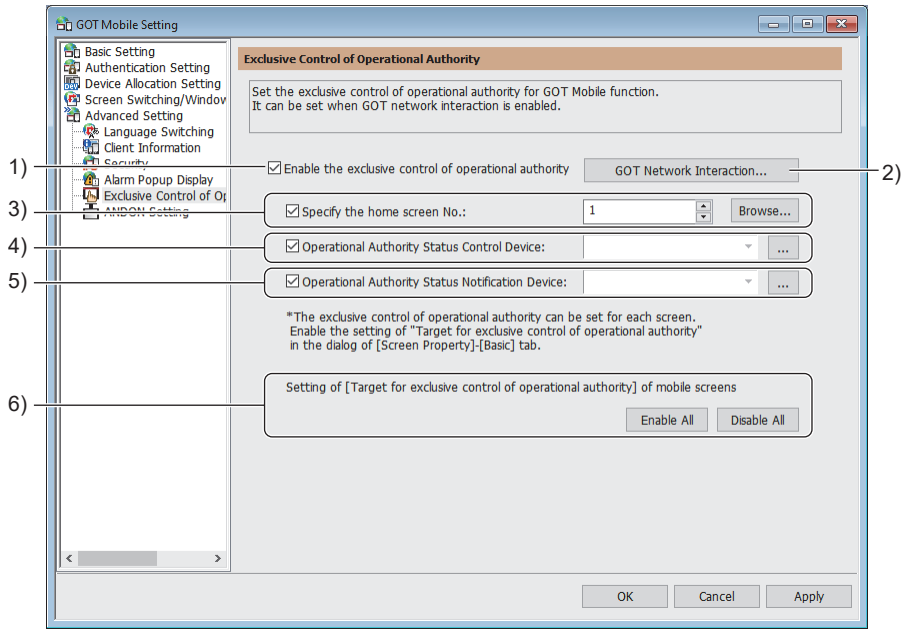
For the details of the GOT network interaction function, refer to the following.

➟5.6 Setting the Interaction Function for Equipment on Ethernet ([GOT Network Interaction])



1) **[Enable the exclusive control of operational authority]**

Enables the authorization control of the GOT network interaction function in the GOT Mobile function.

This item is settable only when the GOT network interaction function is enabled.

To enable the authorization control for a screen, select [Target for exclusive control of operational authority] in the [Basic] tab in the [Screen Property] dialog.

➟10.19.7 ■1 [Basic] tab

2) **[GOT Network Interaction] button**

Displays the [GOT Network Interaction] dialog.

For the settings in the [GOT Network Interaction] dialog, refer to the following.

➟5.6.4 [GOT Network Interaction] dialog

3) **[Specify the home screen No.]**

Set a mobile screen to be displayed by the home screen button on the popup display of the GOT network interaction function.

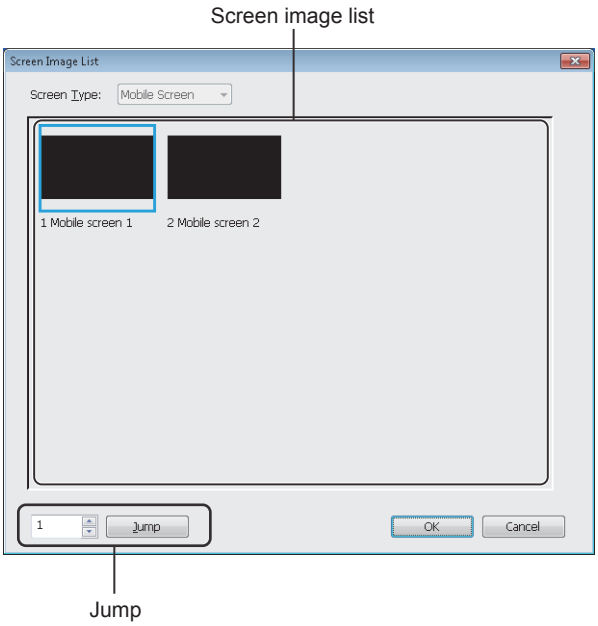
Select this item, and specify the screen number of the mobile screen.

Make sure to disable the authorization control in the mobile screen set as the home screen.

For the details of the home screen in the GOT network interaction function, refer to the following.

➟5.6.2 ■3 Operation on target equipment

Click the [Browse] button to select a mobile screen in thumbnail view in the [Screen Image List] dialog.



- **[Screen Type]**
  Displays the screen type.
- **Screen image list**
  Displays mobile screen images.
  Select a destination screen.
- **Jump**
  Specify a screen number and click the [Jump] button to select the screen in the screen image list.

4) **[Operational Authority Status Control Device]**
Set a device to control the authorization status.
Select this item, and set the device.
You can specify a GOT Mobile device (VGD) or word-specified GOT Mobile device (VGB).
For the details of the Operational Authority Status Control device, refer to the following.

➟10.19.2 ■6 (2) Operational Authority Status Control device

5) **[Operational Authority Status Notification Device]**
Set a device to notify the authorization status.
Select this item, and set the device.
You can specify a GOT Mobile device (VGD) or word-specified GOT Mobile device (VGB).
For the details of the Operational Authority Status Notification device, refer to the following.

➟10.19.2 ■6 (1) Operational Authority Status Notification device

6) **[Setting of [Target for exclusive control of operational authority] of mobile screens]**
Enables or disables the setting of [Target for exclusive control of operational authority] in all mobile screens at once.
For the mobile screen setting, refer to the following.

➟10.19.7 Mobile screen properties

■10 [ANDON Setting]

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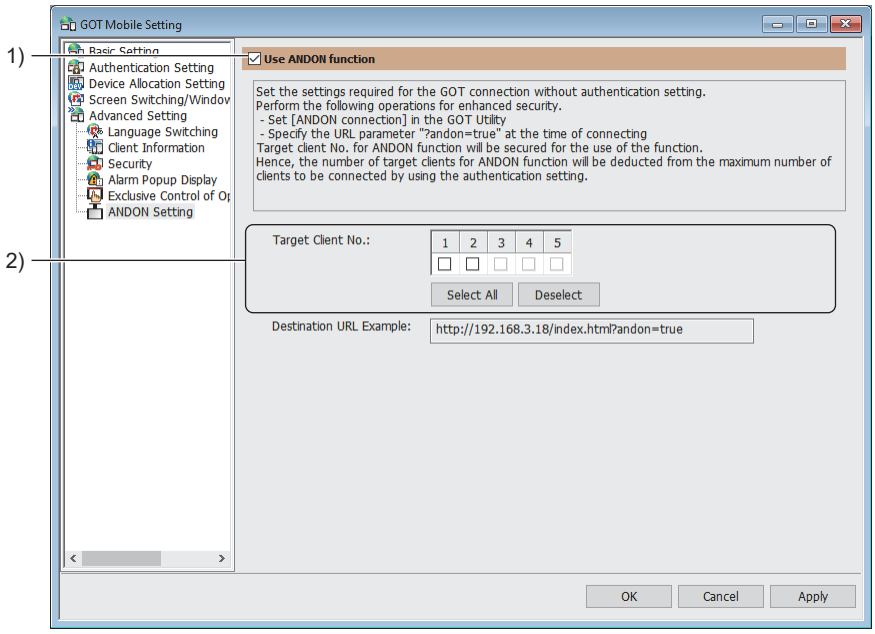
For the details of the ANDON function, refer to the following.

➟10.19.4 ANDON function



1) **[Use ANDON function]**
Enables connection between the GOT and clients without the operator name and password-based authentication.

2) **[Target Client No.]**
Select the target client number of the ANDON function.
The number of settable clients depends on the model.
The selected client connects to the GOT without the operator name and password-based authentication.
Connection using the GOT Mobile exclusive authentication or the operator authentication is not applicable.

10.19.7 Mobile screen properties

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Set the properties of a mobile screen.
To display the properties, perform one of the following operations.
When creating a mobile screen
• Select [Screen] → [New] → [Mobile Screen] from the menu.
• Double-click [New] under [Mobile Screen] in the tree in the [Screen] window.
When editing an existing mobile screen
• Right-click a mobile screen, and select [Screen Property].
• Right-click a mobile screen in the tree in the [Screen] window, and select [Screen Property].

➥■1 [Basic] tab

■1 [Basic] tab

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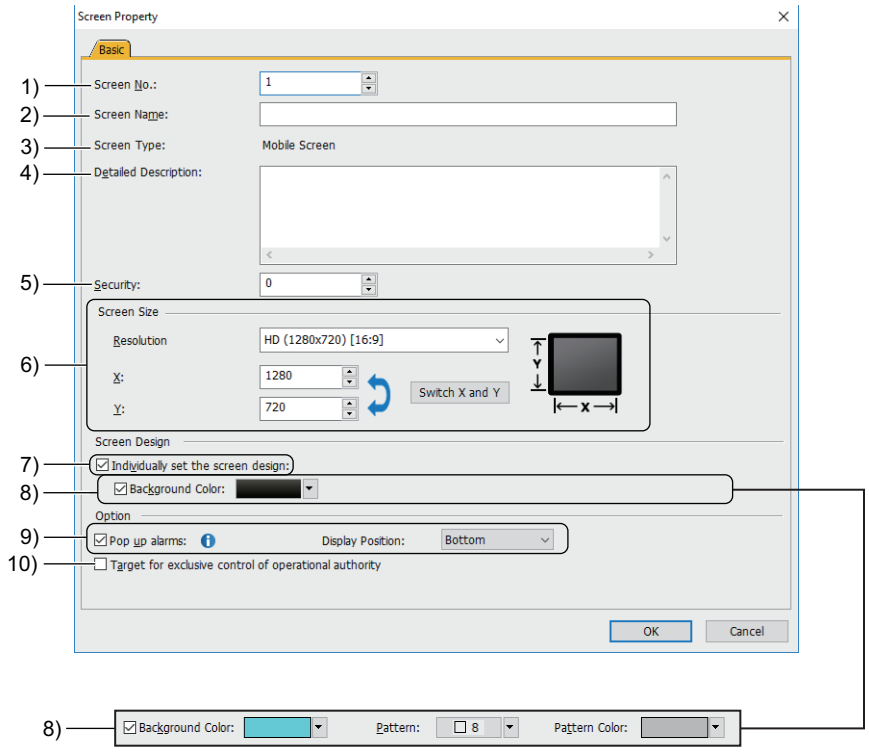


1) **[Screen No.]**
Set a screen number.
The setting range is [0] to [32767].
If you display the [Screen Property] dialog selecting multiple screens, this value cannot be changed.

2) **[Screen Name]**
Set the title of the screen.
Up to 32 characters can be set.

3) **[Screen Type]**
Displays the screen type.

4) **[Detailed Description]**
Set the explanation for the screen.
Up to 512 characters can be set.
A line feed is counted as two characters.

5) **[Security]**
Set the security level.
The setting range is [0] to [15].

If you do not use the security function of the GOT, select [0].

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

6) **[Screen Size]**

Set the screen size.

Item	Description			
[Resolution]	Select the resolution of the mobile screen. The values of [X] and [Y] are automatically specified according to the selection for [Resolution]. The following shows the items to be selected.			
	[VGA (640x480) [4:3]]	[SVGA (800x600) [4:3]]	[XGA (1024x768) [4:3]]	[QXGA (2048x1536) [4:3]]
	[WXGA (1280x800) [16:10]]	[HD (1280x720) [16:9]]	[FWXGA (1366x768) [16:9]]	[Full HD (1920x1080) [16:9]]
	[WUXGA (1920x1200) [16:10]]			
	[iPhone 4]	[iPhone 5]	[iPhone 5c]	[iPhone 5s]
	[iPhone 6]	[iPhone 6 Plus]	[iPhone 6s]	[iPhone 6s Plus]
	[iPhone 7]	[iPhone 7 Plus]	[iPhone 8]	[iPhone 8 Plus]
	[iPhone X]	[iPhone XR]	[iPhone XS]	[iPhone XS Max]
	[iPhone 11]	[iPhone 11 Pro]	[iPhone 11 Pro Max]	[iPhone 12 mini]
	[iPhone 12]	[iPhone 12 Pro]	[iPhone 12 Pro Max]	[iPhone SE]
	[iPhone SE (2nd generation)]			
	[iPad (5th generation)]	[iPad (6th generation)]	[iPad (7th generation)]	[iPad (8th generation)]
	[iPad Air (1st generation)]	[iPad Air 2]	[iPad Air (3rd generation)]	[iPad Air (4th generation)]
	[iPad mini 2]	[iPad mini 3]	[iPad mini 4]	[iPad mini (5th generation)]
	[iPad Pro 9.7-inch]	[iPad Pro 10.5-inch]	[iPad Pro 11-inch (1st generation)]	[iPad Pro 11-inch (2nd generation)]
	[iPad Pro 11-inch (3rd generation)]	[iPad Pro 12.9-inch (1st generation)]	[iPad Pro 12.9-inch (2nd generation)]	[iPad Pro 12.9-inch (3rd generation)]
	[iPad Pro 12.9-inch (4th generation)]	[iPad Pro 12.9-inch (5th generation)]		
	[Custom]			
	The above resolutions are approximate and should be used for reference. Adjust the resolution according to the information device and browser to be used.			
[X]	Screen width If you change a specified value, the selection for [Resolution] is changed to [Custom]. The setting range is [16] to [3000].			
[Y]	Screen height If you change a specified value, the selection for [Resolution] is changed to [Custom]. The setting range is [2] to [3000].			
[Switch X and Y] button	Interchanges the values of [X] and [Y]. If you click this button, the selection for [Resolution] is changed to [Custom].			

7) **[Individually set the screen design]**

Enables the individual screen design (including the background color), instead of the design selected in the [Screen Design] dialog.

8) **[Background Color]**

GOT Graphic Ver.2

Select a background color.

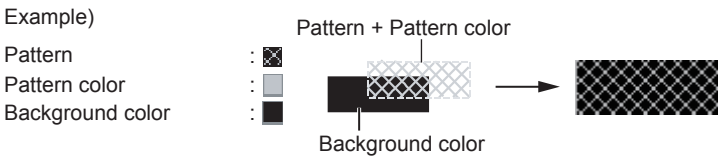
For the color setting, refer to the following.

➟6.4.2 Color settings

GOT Graphic Ver.1

Select a background color, pattern, and pattern color for the screen.

The pattern is displayed on the colored background.



9) **[Pop up alarms]**

An alarm pops up when an alarm occurs.

Item	Description
[Display Position]	Select the position to display an alarm to be popped up. The following shows the items to be selected. • [Top] • [Center] • [Bottom]

Configure the following settings additionally.

• User alarm settings or system alarm settings

➟9.1.2 ■7 [User Alarm Observation] dialog
9.1.3 ■5 [System Alarm Observation] dialog

• Alarm popup display settings

➟9.1.4 ■4 [Alarm Popup Display] dialog

10) **[Target for exclusive control of operational authority]**

Enables the authorization control in the screen being edited.

➟10.19.2 ■6 Authorization control

To enable the authorization control throughout the project, select [Enable the exclusive control of operational authority] in the [GOT Mobile Setting] window ([Exclusive Control of Operational Authority]).

➟10.19.6 ■9 [Exclusive Control of Operational Authority]

10.19.8 Relevant settings

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Set the relevant settings other than the specific settings for the GOT Mobile function as required.
The following shows the functions that are available by the relevant settings.

➟12.1.3 GOT special register (GS)

■1 GOT internal device

Function	Setting item
Storing the number of clients connected to the GOT (Write device)	GS1400
Turned on when a client is connect to the GOT (Write device)	GS1401.b1 to .b15
Specifying a security level with which folder and file manipulations are allowed on the file manager screen (Read device)	GS1892
Setting whether to use the URL parameter (initscreen) (Read device)	GS1896.b0
Enabling folder and file manipulations on the file manager screen (Read device)	GS1896.b1
Disabling the addition of X-Frame-Options to the HTTP response header (Read device)	GS1896.b2
Setting the time from when communication is lost between the GOT and a client until when the GOT forcibly turns off the touch switch being touched on the client (Read device)	GS1899

10.19.9 Troubleshooting

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If you have any trouble with the GOT Mobile function, check the operating environment first.

➟10.19.2 ■1 Operating environment

■1 Troubleshooting for clients

The following shows the troubleshooting for clients.

Symptom	Details of error and cause	Corrective action
Although a URL is specified, a communication error occurs and no screen appears.	The specified URL is incorrect.	Enter the correct URL. ➟10.19.3 ■7 (1) Connecting a client
	The setting for connection to the server (GOT) is configured incorrectly.	Check that the system is configured correctly. ➟10.19.3 ■1 System configuration If the system is configured correctly, check that the connection setting on the client and the following settings on GT Designer3 are configured correctly. • [GOT Standard Ethernet Setting] in the [Controller Setting] window • [Wireless LAN] in the [I/F Communication Setting] window • [Destination Access Point Setting] or [Access Point Setting] in the [GOT Setup] window ([Wireless LAN Setting]) ➟5.5.1 Setting channels 5.7.3 [I/F Communication Setting] dialog 5.3.12 Configuring the settings for a wireless LAN ([Wireless LAN Setting])
	The system application (extended function) for the GOT Mobile function is not installed on the GOT.	Write the package data that contains the system application (extended function) for the GOT Mobile function to the GOT. ➟4. COMMUNICATING WITH GOT
After the authentication, the client stays at a black screen and no mobile screen appears.	The antivirus software causes the mobile screen not to appear.	Set any number other than 80 or 8080 for the HTTP port No. for GOT Mobile. ➟10.19.6 ■1 [Basic Setting] If no mobile screen appears even after you change the port number, disable the antivirus software.
	No mobile screen appears due to unintended browser refresh at switching between tabs or by other actions.	Close all browser tabs, restart the browser, and connect the server (GOT) again.
Response speed is low.	When you operate a mobile screen or an object on the mobile screen, the response speed or display refresh rate is low depending on the specifications of the client.	Reduce the number of objects or graph points on the mobile screen. The situation may improve.
The client is unintentionally disconnected from the GOT.	Browser tabs may be switched or another application may be operated during communications with the server (GOT).	Connect the client to the server (GOT) again. Close unnecessary browser tabs or exit applications other than the browser. The situation may improve.
A mobile screen is unintentionally enlarged.	The screen may be enlarged when displayed for the first time.	Adjust the screen display to fit on the width of the browser window by using the [Fit Width] button on the mobile screen operation menu bar. Alternatively, preset the mobile screen size appropriate to the enlarged view.
A message saying [License unregistration.] appears on the mobile screen.	The license of the GOT Mobile function is unregistered to the GOT.	Register the license of the GOT Mobile function to the GOT. ➟GOT2000 Series User's Manual (Utility) GOT Mobile Function License for GT SoftGOT2000 Registration Instructions
The client is disconnected from the GOT after a lapse of 30 minutes.		
After displaying a mobile screen, the client becomes disconnected after a certain period of time.	The client is communicating with the server (GOT) using USB LAN conversion with [USB selective suspend setting] set to [Enable] in Windows.	Set [USB selective suspend setting] in Windows to [Disable] in the following procedure. 1. In Windows, select [Control Panel] - [Power Options]. 2. Click [Change plan settings] for the current power plan. 3. Click [Advanced settings]. 4. Select [USB settings] - [USB selective suspend setting] - [Disabled] and click the [OK] button.

Symptom	Details of error and cause	Corrective action
The mobile screen stops displaying after extended use.	The browser is using hardware acceleration.	• If the browser is using hardware acceleration, disable the feature. If the problem persists, reducing the number of on-screen objects or graph points may improve the situation. • Restart the browser and then reconnect to the server (GOT). • Specify the URL parameter [reloadtime] to reload the screen at regular intervals. 10.19.3 ■7 (1) (a) URL parameters

■2 Error messages on clients

(1) Errors before authentication

Error message	Cause	Corrective action
Unsupported browser. Check the operating environment.	The browser does not support the following items. • HTML5 • CSS3 • JavaScript • WebSocket Protocol(RFC 6455)	Use a browser that meets operating environment conditions. 10.19.2 ■1 (3) Client operating environment
JavaScript is disabled. Enable JavaScript and connect again.	JavaScript is disabled in the browser.	Enable JavaScript in the browser. 10.19.3 ■6 ■6 Setting on the client
Cookie is disabled. Enable Cookie and connect again.	Cookie is disabled in the browser.	Enable Cookie in the browser. 10.19.3 ■6 ■6 Setting on the client

(2) Errors at authentication

Error message	Cause	Corrective action
The operator name or password is incorrect. Please check the operator name or password and execute again.	An incorrect operator name or password has been entered at authentication.	Check the entered operator name and password.
The operator information is being edited in the destination device. Please wait for a while and connect again.	The operator authentication cannot be performed because the operator management information file is being edited on the server (GOT).	Perform the operator authentication again after the edit is completed.
Exceeding the maximum number of connections and the connection cannot be made. Please wait for a while and try again.	The connection failed because the number of clients has exceeded the maximum number of simultaneously connectable clients. 10.19.6 ■1 [Basic Setting]	• Reconnect to the GOT after any other client becomes disconnected from the GOT. • Check that no operator who has used the GOT Mobile function maintains a logged-in state.
Destination does not respond. Check the communication environment and connect again.	The client cannot communicate with the server (GOT) due to a radio disturbance or a failure in the information device.	Check that the communication environment between the server (GOT) and client is established properly.
The operator is locked or disabled and cannot log in. Please check with the administrator.	A locked operator account due to incorrect login attempts or a disabled operator account is used.	Ask your system administrator to unlock or enable the operator account.
Parameters specified in the URL is wrong. Please check parameters.	An incorrect URL parameter has been entered on the address bar in the browser.	Check the entered URL parameter. 10.19.3 ■7 (1) (a) URL parameters
Parameters specified in the URL is invalid. Please check the connection destination setting.	The URL parameter setting is inconsistent with the settings on GT Designer3 or the GOT.	Check that the settings are configured correctly on GT Designer3 and the GOT. 10.19.3 ■7 (1) (a) URL parameters
The client No. specified in the URL is in use and cannot be accessed. Please wait for a while and try again.	The connection failed because any other client is connecting to the GOT by using the specified client number.	Reconnect to the GOT after the client using the specified client number becomes disconnected from the GOT. 10.19.3 ■7 (1) (a) URL parameters
The operator does not meet the connection conditions and cannot log in. Please check with the administrator.	The connection with the operator authentication failed because the security level of the operator is insufficient.	Ask your system administrator to check the security level setting.
Your password has expired and cannot log in. Please change the password on the connection destination.	The connection with the operator authentication failed because the entered password has expired.	Change the password on the GOT.

(3) Errors in the process of monitoring

Error message	Cause	Corrective action
Trial time has expired. Connection disconnected.	The trial connection time has elapsed, and the client became disconnected from the server (GOT). This is because the license number of the GOT Mobile function is unregistered to the server (GOT).	Register the license of the GOT Mobile function to the GOT. ➟GOT2000 Series User's Manual (Utility) GOT Mobile Function License for GT SoftGOT2000 Registration Instructions
Connection with destination is disconnected. Check the communication path.	Communication between the server (GOT) and client has been lost.	Connect the client to the server (GOT) again. If connection cannot be established, check that the communication environment between the server (GOT) and client is established properly.
Destination has changed to a offline mode. The connection has been terminated.	The server (GOT) disconnected the client, because the server (GOT) entered the offline mode because of package data writing or others.	Connect the client to the server (GOT) again.
Mobile screen was not operated for a set period of time. Connection terminated.	The server (GOT) disconnected the client, because the automatic logout time elapsed. ➟10.19.6 ■1 [Basic Setting]	Connect the client to the server (GOT) again.
The operator information is being edited in the destination device. Please wait for a while and login and change password again.	You cannot log in using the operator authentication from the client. If you are already logged in, you cannot change your operator account password on the client. These are because the operator management information file is being edited on the server (GOT).	Perform the operator authentication again or change the password after the edit is completed.
You have been logged out. The connection has been terminated.	When you are logged in using the operator authentication, a logout is performed on the client.	Connect the client to the server (GOT) again.
Authentication method is set to the operator authentication. Operators cannot be changed.	The operator switching was denied because you are logged in using the operator authentication.	Log out of the operator account in use, and log in with another operator account.

11.USEFUL FUNCTIONS

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11.1 Searching for Utilizable Data (Utilize Data)

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When you create a project or screen, search a sample or existing project for utilizable data based on the specified search criteria, such as a keyword.
You can find utilizable data efficiently without the knowledge of the settings in the sample or existing project.

➥11.1.1 Specifications for the utilize data
11.1.2 How to use the utilize data
11.1.3 Precautions
11.1.4 [Utilize Data (Project)] dialog and [Search] dialog
11.1.5 [Utilize Data (Screen)] window
11.1.6 [Utilize] dialog
11.1.7 [Detail Screen Setting] dialog
11.1.8 Registering the add-on license

If you know the settings in a project to be utilized, you can specify data to be utilized from the project directly.

➥11.4 Utilizing Other Project Data

11.1.1 Specifications for the utilize data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 File formats of utilizable projects

The following shows the file formats of utilizable projects.

GOT	Project format
GOT2000 Series	• Workspace format • Single file format (*.GTX, *.GTXS) If a project is saved when [Include projects for the function of Utilize Data] is deselected in the [Project information] dialog, the project is not utilizable.

11.1.2 How to use the utilize data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Utilizing a project
■2 Utilizing a screen

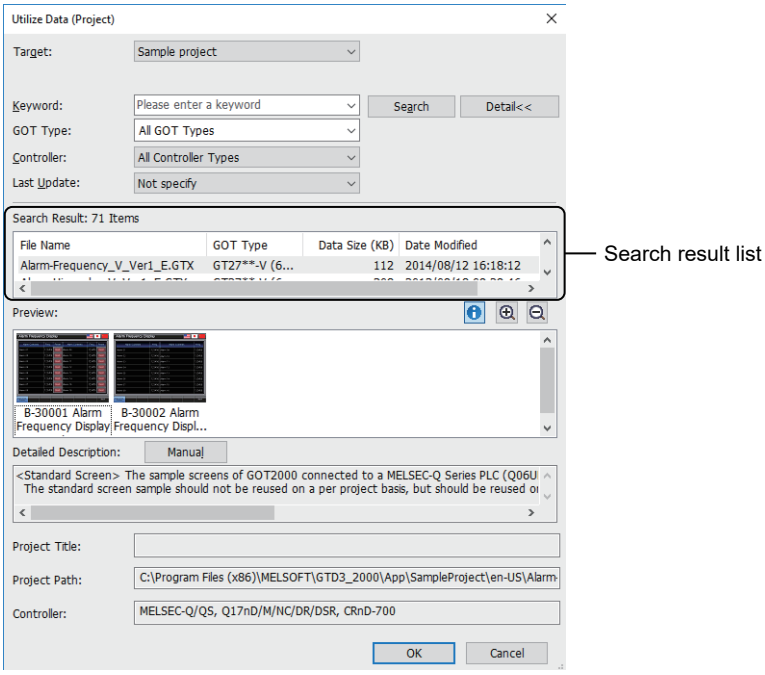
■1 Utilizing a project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Utilize Data] from the menu to display the [Utilize Data (Project)] dialog.

Step 2 Set the search criteria and click the [Search] button to list the search results.

➟11.1.4 [Utilize Data (Project)] dialog and [Search] dialog



Step 3 Select the utilizable project and click the [OK] button to create the project to be utilized.

■2 Utilizing a screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

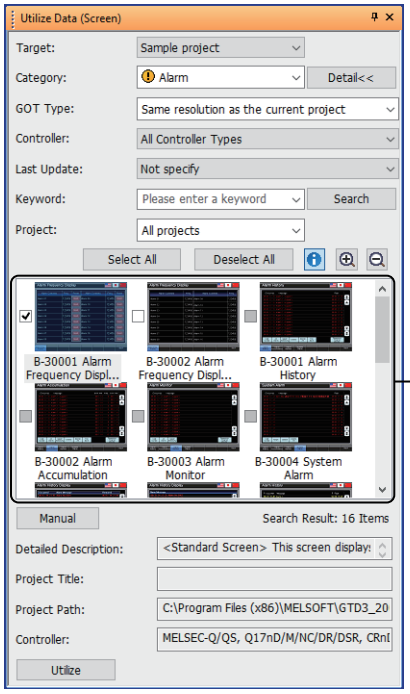
Step 1 Display the [Utilize Data (Screen)] window combined with GT Designer3.

(The [Utilize Data (Screen)] window combined with GT Designer3 by default.)
When the window is not displayed, operating any one of the following displays it.

- Select [Screen] → [Utilize Data] from the menu.
- Select [View] → [Docking Window] → [Utilize Data (Screen)] from the menu.

Step 2 Set the search criteria and click the [Search] button to list the search results.

➟11.1.5 [Utilize Data (Screen)] window



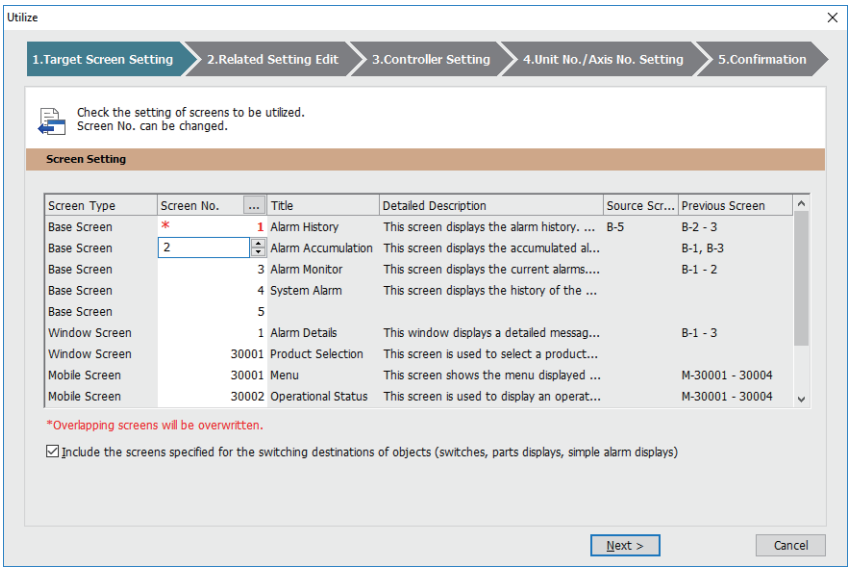
Step 3 Select the checkbox for a screen to be utilized and perform one of the following operations to display the [Utilize] dialog.

➟11.1.6 [Utilize] dialog

- Click the [Utilize] button.
- Drag a target screen to the work window from the search result list.

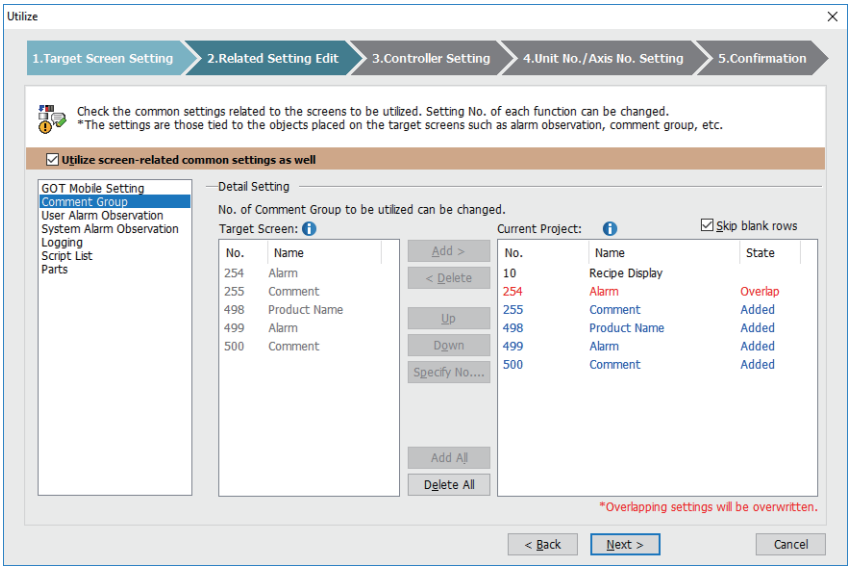
Step 4 Set a screen number to be assigned in the destination project, and click the [Next] button.

➟11.1.6 ■1 [Target Screen Setting]



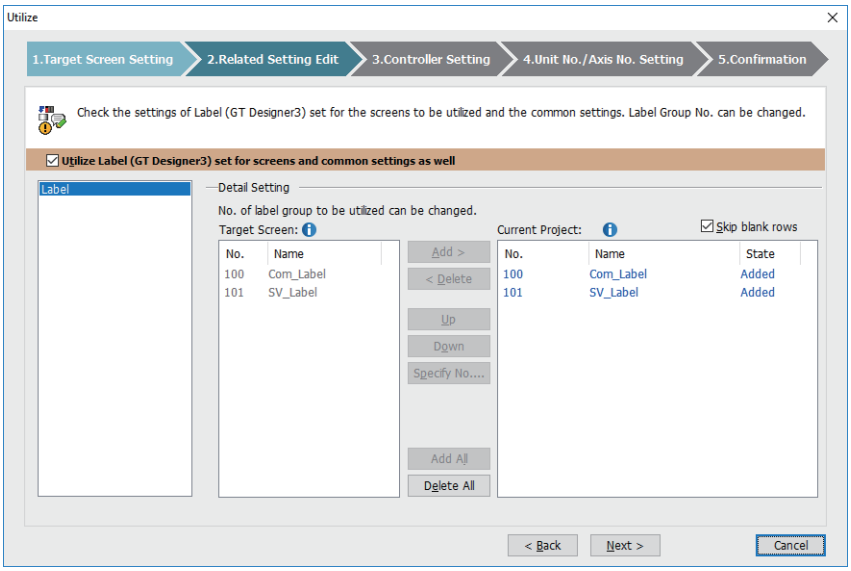
Step 5 Set whether to utilize the settings related to the target screen, assign the setting numbers, and click the [Next] button.

➟11.1.6 ■2 [Related Setting Edit]



Step 6 If labels (GT Designer3) are used in the target screen and the settings related to the screen, set whether to utilize the relevant label groups, assign label group numbers, and click the [Next] button.

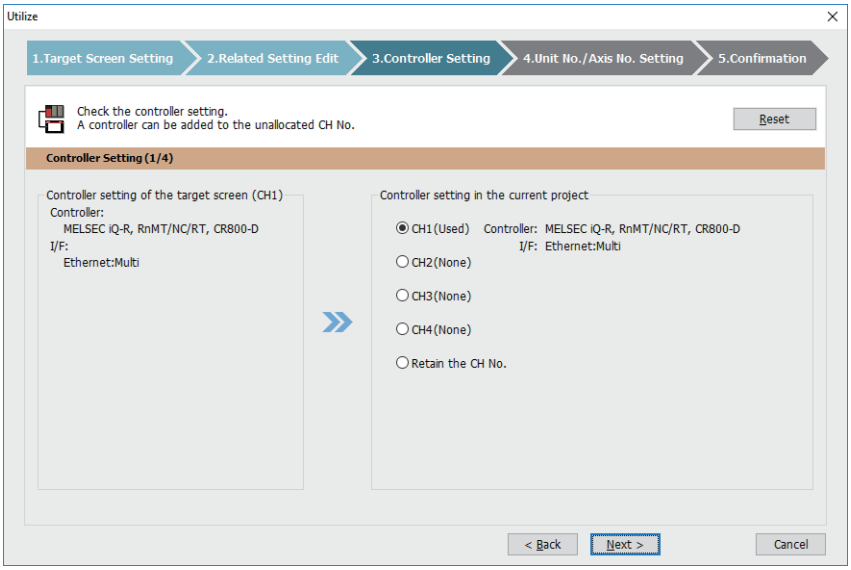
➟11.1.6 ■2 [Related Setting Edit]



Step 7 Select a channel for each controller type to be used in the destination project, and click the [Next] button.

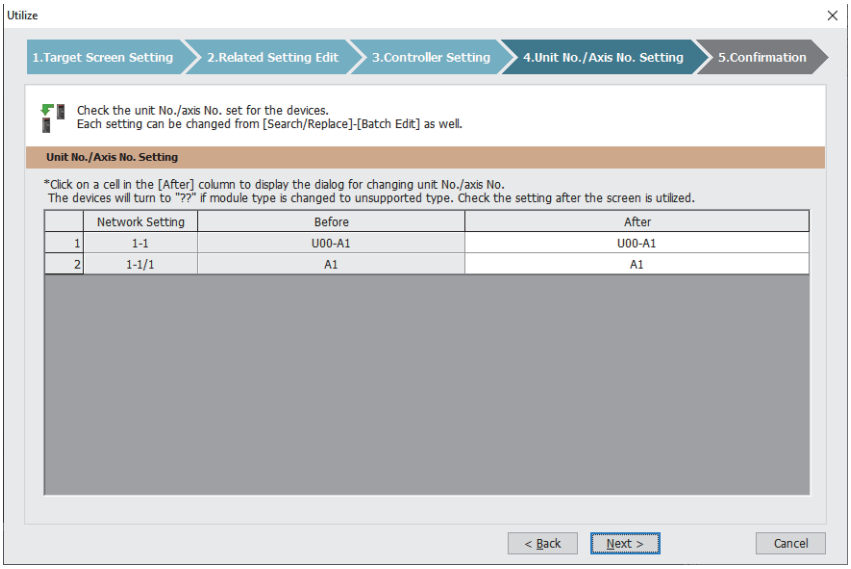
➟11.1.6 ■3 [Controller Setting]

If multiple channels are used in the source project, this step is repeated for each additional channel.



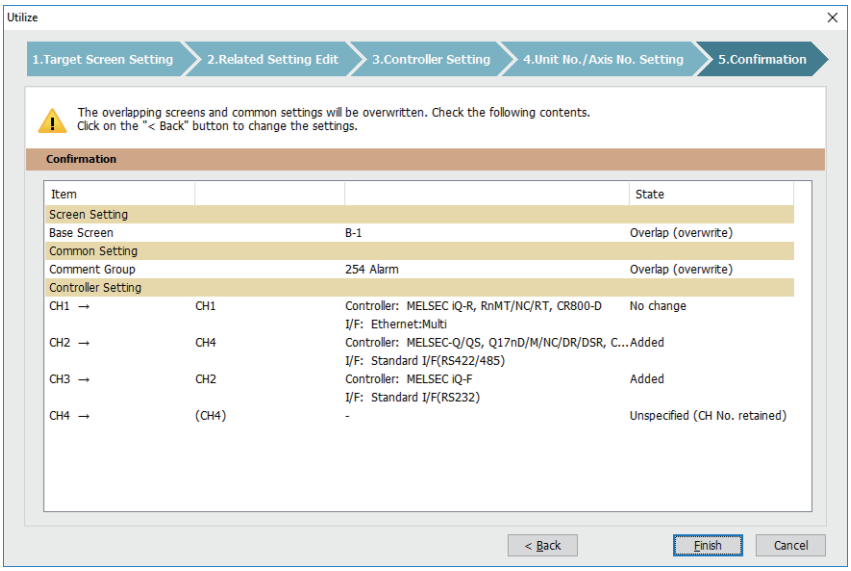
Step 8 If necessary, change the unit number and axis number specified for an applicable device used in the target screen, and click the [Next] button.

➟11.1.6 ■4 [Unit No./Axis No. Setting]



Step 9 Confirm the displayed contents and click the [Finish] button to execute the screen utilization.

➟11.1.6 ■5 [Confirmation]



11.1.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Utilizing the project protected with a security key

When the project to be searched is protected with a security key, the security key authentication is performed.
If the authentication fails, the project name is not displayed in the search result list.

➟2.12 Protecting a Project with a Security Key

■2 Utilizing the project protected with the project security

(1) User authentication for the project

When the project security is set in the search target project, user authentication is conducted.

➟2.13 Protecting a Project by Registering Users

When the project security is set in the project that is being edited, the search target project that can be authenticated is automatically authenticated by the logged-in username and password.

(2) Whether utilizing data by access privilege is available or not

(a) **Utilizing the project**

When the display of the entire project or a part of the screen is prohibited, the project cannot be utilized.
When the display of the entire project is prohibited, the project is not displayed on the [Utilize Data (Screen)] dialog.
When the screen where the display is prohibited exists, the preview is the dummy screen.

(b) **Utilizing data of a screen**

The screen where the display is prohibited cannot be utilized.
The preview of the screen where the display is prohibited is a dummy screen.

■3 Utilizing the project containing a different GOT type setting

Utilized data is converted according to the GOT type set in the destination project.
Functions that does not correspond to the GOT type of the destination project are not eliminated.

■4 Utilizing the project containing different controller settings

When [Retain the CH No.] is selected in the [Utilize] dialog ([Controller Setting]), the devices set for the objects on the utilized screens will be changed as shown below.

- The device name is changed according to the controller setting in the destination project.
- The device to which the controller setting in the destination project does not correspond is changed to [??] (except the devices in the script data)

Check the device setting and set it again.

■5 Utilizing the project read from the GOT

Right after the project is read from the GOT, the [Utilize Data (Project)] dialog and others do not display the screen images set in the project.
To display the screen images set in the project, open the project read from the GOT, and save the project again.

■6 Utilizing the project in which a system label is set

In the project being edited, when [Use system labels in conjunction with MELSOFT Navigator] of the [Type Setting] dialog is unchecked, the data of the screens from the project where a system label is set cannot be utilized.

➟5.1.5 [Type Setting] dialog

■7 Utilizing the project in which Windows fonts are used for comment groups

If the Windows fonts used for comment groups are not installed on the personal computer, the comments are displayed in different fonts.
To display the comments in the specified Windows fonts, make sure that the fonts are installed on the personal computer before utilizing the project.

■8 Utilizing the project created with GT Designer3 version earlier than 1.205P

When [Same resolution as the current project] is selected for [GOT Type] in the [Utilize Data (Screen)] window, if you search for the projects created with GT Designer3 version earlier than 1.205P, the results will be listed as shown below.

- All the projects matching the specified resolution are listed without distinction of the GOT installation orientation.
- If [GOT Type] is set to [GT SoftGOT2000] in the destination project, the projects for GT SoftGOT2000 are listed without distinction of the GOT resolution.
- If [GOT Type] is set to any item other than [GT SoftGOT2000] in the destination project, the projects for GT SoftGOT2000 are not listed.

To eliminate the above problems, save the relevant projects with GT Designer3 version 1.205P or later.

■9 Utilizing base screens for which the window preview is set

The window preview settings of the source project will be migrated to the destination project if [Apply to all base screens] is deselected in the [Window Preview] dialog in the destination project.
If [Apply to all base screens] is selected in the destination project, the window preview settings of the destination project will be applied.

➟2.9.2 Displaying the preview of a window screen on the screen editor

■10 Utilizing screen data from a project created with a different version of GT Designer3

If you use GT Designer3 version earlier than the version of GT Designer3 that has been used to create the source project, you cannot utilize the settings of controllers unsupported.
For the correspondences between GT Designer3 versions and supported controllers, refer to the following.

➟12.17 Upgraded Additional Function List

11.1.4 [Utilize Data (Project)] dialog and [Search] dialog

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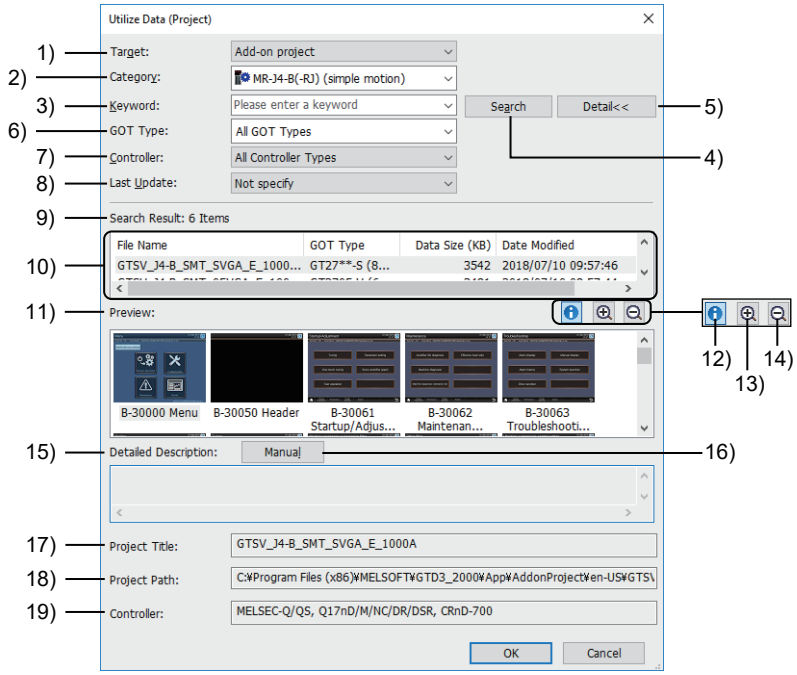
The dialog name varies with the display method.

- The [Utilize Data (Project)] dialog is displayed by selecting [Project] → [Utilize Data] from the menu.
- The [Search] dialog is displayed from the [Utilize Project] dialog.
  Add-on projects cannot be searched in the [Search] dialog.



1) **[Target]**
Select the target for a search.
The following shows the items to be selected.
- [Add-on project]:
  This item appears when the add-on license has been registered.
  ➟11.1.8 Registering the add-on license
  Searches the add-on projects.
- [Sample project]
  Search from the sample project installed with GT Designer3.
- [Recently edited project]
  Search from the recently edited project (up to 5 projects).
  When GT Designer3 is started from MELSOFT Navigator, the project edited with GT Designer3 is not included in the search targets.
- [Project folder]
  Search from the projects in the specified folder.
  The search target is up to the projects of the folder existing in the lower three hierarchy.
  Up to 1000 projects can be included in the search targets.
  Specify the holder from the [Browse] button.

2) **[Category]**
When [Target] is set to [Add-on project], select a project type.
The following shows the items to be selected.
- [MR-J4-B(-RJ) (Simple Motion)]
- [MR-J4-B(-RJ) (Motion Controller)]

3) **[Keyword]**
Specify the keyword for a search.
Two-byte and one-byte characters are recognized.
Specifying keywords delimited with one-byte or two-byte spaces enables you to narrow the scope of a search to

the projects containing the keywords.
Adding "!" before keywords can search the projects on which the specified keywords are not included.
Up to five history is displayed.

4) **[Search] button**
Searching

5) **[Detail >>] button and [Detail <<] button**
Switch displaying and not displaying the following setting items.
- [GOT Type]
- [Controller]
- [Last Update]

Even though the above setting items are not displayed, they can be included in the targets for a search.

6) **[GOT Type]**
Select a GOT type by which projects are searched.
The following shows the items to be selected.
- [All GOT Types]
- Options for [Type] in the [Type Setting] dialog

➟5.1.5 [Type Setting] dialog

7) **[Controller]**
Select the controller type for the project to be searched.
The items to be selected are the same as [Type] in setting the channel on the [Controller Setting] window.

➟12.2 Correspondence between the setting of [Controller Type] and the controller used

8) **[Last Update]**
Select the last update of the project to be searched.
The following shows the items to be selected.
- [Not specify]
- [Within the last 24 hour]
- [Within the last week]
- [Within the past month]
- [Within the past year]
- [Over a year ago]

9) **[Search Result]**
Number of searched projects

10) **Search result list**
List of searched projects

11) **[Preview]**
Screen images set in the projects selected in the search result list

12) **[Information] button**
Switch displaying and not displaying the following items.
- [Information]
- [Project Title]
- [Project Path]
- [Controller]

13) **[Zoom in] button**
Zoom in the display of [Preview].

14) **[Zoom out] button**
Zoom out the display of [Preview].

15) **[Detailed Description]**
Detail description of the project selected in the search result list

16) **[Manual] button**
Displays the PDF manual for add-on projects when [Target] is set to [Add-on project].
Displays the PDF manual for sample projects when [Target] is set to [Sample project].

17) **[Project Title]**
Title of the project selected in the search result list

18) **[Project Path]**
Save folder path of the project selected in the search result list

19) **[Controller]**
Controller setting(type) of the project selected in the search result list

11.1.5 [Utilize Data (Screen)] window

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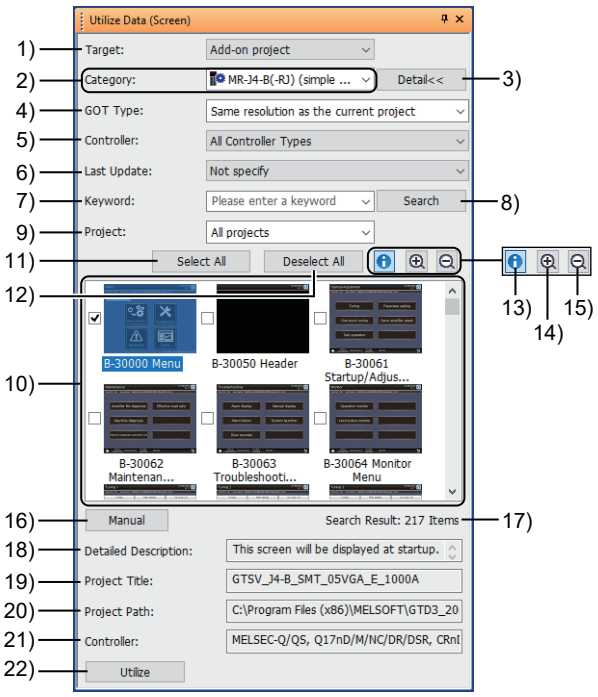

1) **[Target]**

Select the target for a search.

The following shows the items to be selected.

- [Add-on project]:

  This item appears when the add-on license has been registered.

  ➟11.1.8 Registering the add-on license

  Searches the add-on projects.
- [Sample project]

  Search from the sample project installed with GT Designer3.
- [Recently edited project]

  Search from the recently edited project (up to 5 projects).

  When GT Designer3 is started from MELSOFT Navigator, the project edited with GT Designer3 is not included in the search targets.
- [Project folder]

  Search from the projects in the specified folder.

  The search target is up to the projects of the folder existing in the lower three hierarchy.

  Up to 1000 projects can be included in the search targets.

  Specify the holder from the [Browse] button.

2) **[Category]**

When [Target] is set to [Add-on project] or [Sample project], select a project type.

The selectable items vary depending on the setting of [Target].

When [Target] is set to [Add-on project], the following items are selectable.

- [MR-J4-B(-RJ) (Simple Motion)]
- [MR-J4-B(-RJ) (Motion Controller)]

When [Target] is set to [Sample project], the following items are selectable.

- [All]
- [Alarm]
- [Recipe]
- [Logging]
- [GOT Mobile]
- [I/O Monitor]

- [CC-Link Network Monitor]
- [AnyWireASLINK Network Monitor]
- [iQSS Backup/Restoration]
- [Document Display (PDF Search)]
- [Script Error Monitor]
- [MITSUBISHI ELECTRIC (Programmable Controller)]
- [MITSUBISHI ELECTRIC (Servo)]
- [MITSUBISHI ELECTRIC (Inverter)]
- [MITSUBISHI ELECTRIC (Other)]
- [SMC]
- [YASKAWA]
- [IAI]
- [ORIENTAL MOTOR]
- [PATLITE]
- [Temperature Controller]
- [Want to display numerical data]
- [Want to display an alarm]
- [Want to display a figure/text]
- [Want to display the panel status]
- [Want to operate the panel]
- [Want to display a graph]
- [Want to copy a file to SD card]
- [Want to register a favorite screen]
- [Want to go to the screen most frequently displayed]

3) **[Detail >>] button and [Detail <<] button**

Switch displaying and not displaying the following setting items.

- [GOT Type]
- [Controller]
- [Last Update]

Even though the above setting items are not displayed, they can be included in the targets for a search.

4) **[GOT Type]**

Select a GOT type by which projects are searched.

The following shows the items to be selected.

- [All GOT types]:
  Selects all GOT types.
- [Same as the current project]:
  Selects the GOT type specified in the destination project.
- [Same resolution as the current project]:
  Selects the GOT type whose resolution and installation orientation are identical to the ones specified in the destination project.
- Options for [Type] in the [Type Setting] dialog

➟5.1.5 [Type Setting] dialog

5) **[Controller]**

Select the controller type for the project to be searched.

The items to be selected are the same as [Type] in setting the channel on the [Controller Setting] window.

➟12.2 Correspondence between the setting of [Controller Type] and the controller used

6) **[Last Update]**

Select the last update of the project to be searched.

The following shows the items to be selected.

- [Not specify]
- [Within the last 24 hour]
- [Within the last week]
- [Within the past month]
- [Within the past year]
- [Over a year ago]

7) **[Keyword]**

Specify the keyword for a search.

Two-byte and one-byte characters are recognized.
Specifying keywords with one-byte spaces between the keywords can search the screens on which the specified keywords are included.
Up to five history is displayed.

8) **[Search] button**
Conducts a search.

9) **[Project]**
Select a project, narrowing down the thumbnails of found screens in the search result list.
The following shows the items to be selected.
- [All projects]
- Individual projects

10) **Search result list**
Thumbnails of found screens.
Multiple screens are selectable from within the same project.

11) **[Select All] button**
Selects all the screens in the project which includes the screen selected in the search result list.

12) **[Deselect All] button**
Deselects all the screens selected in the search result list.

13) **[Information] button**
Displays or hides the following items.
- [Information]
- [Project Title]
- [Project Path]
- [Controller]

14) **[Zoom in] button**
Zoom in the display of search result list.

15) **[Zoom out] button**
Zoom out the display of search result list.

16) **[Manual] button**
Displays the PDF manual for add-on projects when [Target] is set to [Add-on project].
Displays the PDF manual for sample projects when [Target] is set to [Sample project].

17) **[Search Result]**
Number of found screens.

18) **[Detailed Description]**
Detail description of the screen selected in the search result list

19) **[Project Title]**
Title of the project including the screen selected in the search result list

20) **[Project Path]**
Save folder path of the project including the screen selected in the search result list

21) **[Controller]**
Controller setting(type) of the project including the screen selected in the search result list

22) **[Utilize] button**
Displays the [Utilize] dialog.

➡11.1.6 [Utilize] dialog

11.1.6 [Utilize] dialog

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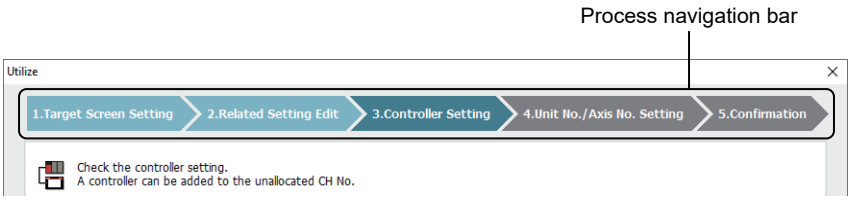
Configure the settings to utilize a screen.



In the process navigation bar, the color of each step represents the status of the step.

Display image	Status
2.Related Setting Edit	Active
2.Related Setting Edit	Done
2.Related Setting Edit	Undone

➞■1 [Target Screen Setting]
■2 [Related Setting Edit]
■3 [Controller Setting]
■4 [Unit No./Axis No. Setting]
■5 [Confirmation]

■1 [Target Screen Setting]

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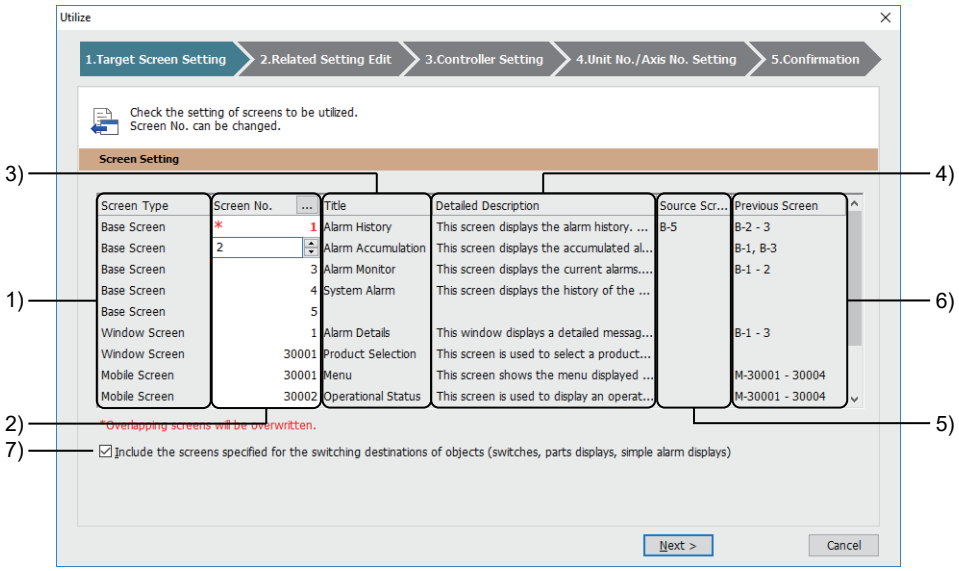
Set the screen number of a screen to be utilized in the destination project.



1) **[Screen Type]**
Type of a target screen.

2) **[Screen No.]**
Screen number of a target screen.
Change the screen number as necessary.
The screen number is displayed in red if it is used in the destination project.
Click the [...] button to display the [Detail Screen Setting] dialog.

➡11.1.7 [Detail Screen Setting] dialog

3) **[Title]**
Title of a target screen.

4) **[Detailed Description]**
Detailed description of a target screen.

5) **[Source Screen]**
If a target screen is specified as a called screen for the set overlay screen function, the screen number of the calling screen is displayed.

6) **[Previous Screen]**
If a target screen is specified as the screen to be switched to in a touch switch setting, the screen number of the switched screen is displayed.

7) **[Include the screens specified for the switching destinations of objects (switches, parts displays, simple alarm displays)]**
Utilizes the screen that is specified as the screen to be switched to in the setting of a touch switch, parts display, or simple alarm display.

■2 [Related Setting Edit]

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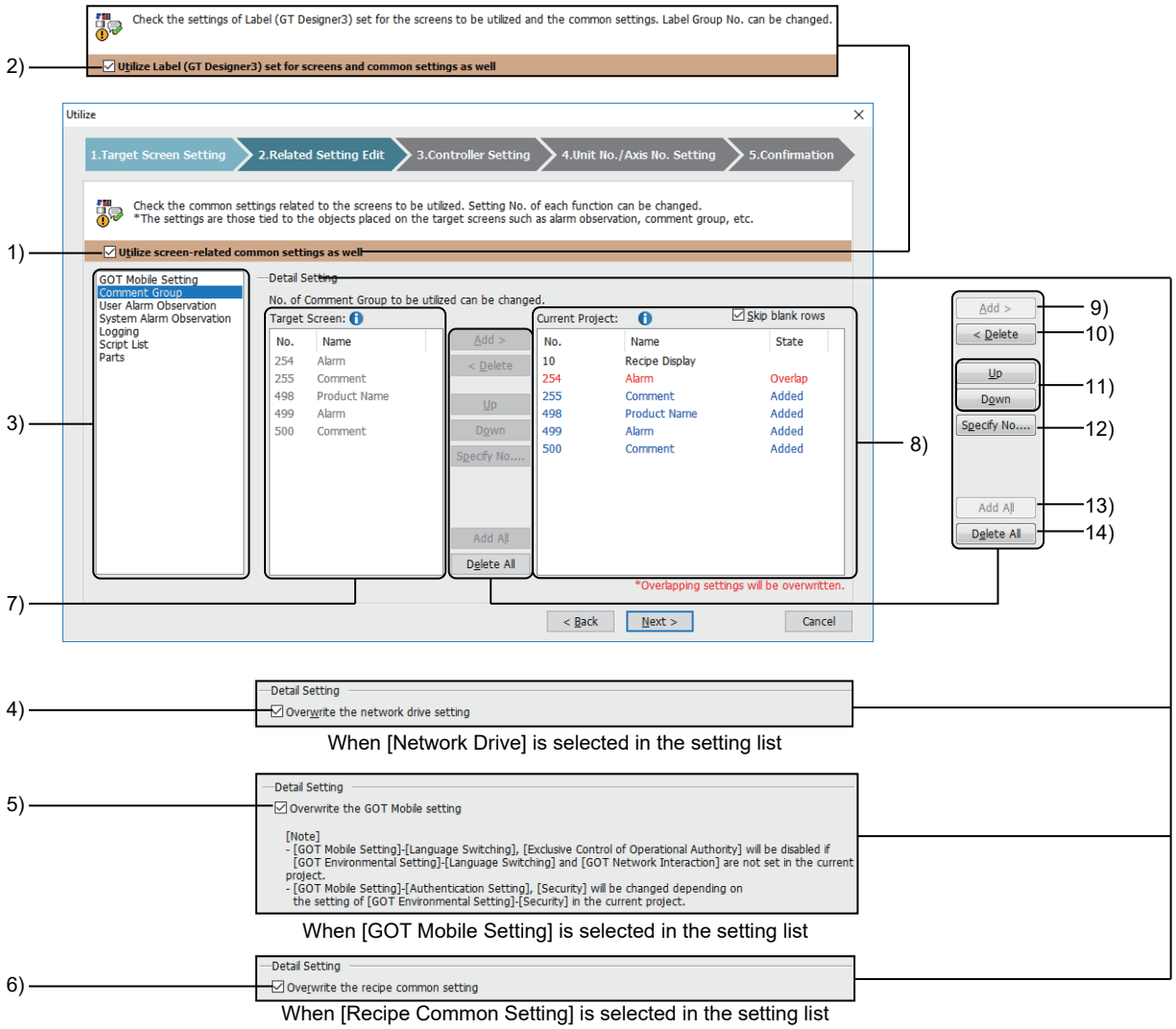
Set whether to utilize the settings related to the screen to be utilized, and assign setting numbers.



1) **[Utilize screen-related common settings as well]**
Utilizes the settings related to the target screen.

2) **[Utilize Label (GT Designer3) set for screens and common settings as well]**
This item appears when labels (GT Designer3) are used in the target screen and the settings related to the screen.
Utilizes the relevant label groups.
For information on how to display this item, refer to the following.

➟11.1.2 ■2 Utilizing a screen

3) **Setting list**
Lists the settings related to the target screen.
The existing settings are displayed only.

- [Network Drive]
- [GOT Mobile Setting]
- [Comment Group]
- [User Alarm Observation]
- [System Alarm Observation]
- [Logging]
- [Recipe Common Setting]
  This item appears when the target screen is included in an add-on project.
- [Recipe]

• [Script (Project)]
A project script is utilized when [Include this script in a screen-related setting when utilizing project/screen] is selected in the [Script Edit] dialog.
• [Script List]
• [Object Script Symbol]
• [Device Data Transfer]
This item appears when the target screen is included in an add-on project.
• [Trigger Action (Project)]
This item appears when the target screen is included in an add-on project.
• [Parts]
• [Sound File]

4) **[Overwrite the network drive setting]**
This item appears when [Network Drive] is selected in the setting list.
Utilizes the network drive settings.

5) **[Overwrite the GOT Mobile setting]**
This item appears when [GOT Mobile Setting] is selected in the setting list.
Utilizes the settings of the GOT Mobile function.

6) **[Overwrite the recipe common setting]**
This item appears when [Recipe Common Setting] is selected in the setting list.
Utilizes the recipe common settings.

7) **[Target Screen]**
Lists the utilizable settings.

Item	Description
[No.]	Number of each setting in the source project.
[Name]	Name of each setting in the source project.

The text color of a setting represents the status of the setting.

Text color	Description
Black	Setting that is not added to [Current Project]. To utilize a setting in the destination project, add the setting to [Current Project] with the [Add] button.
Gray	Setting added to [Current Project].

For mouse and keyboard operations, refer to the following.

➟(1) Mouse and keyboard operations

8) **[Current Project]**
Lists the settings in the destination project.

Item	Description
[Skip blank rows]	Only displays the rows where a setting is present.
[No.]	Number of each setting in the destination project.
[Name]	Name of each setting in the destination project.
[State]	Assignment status of each setting. • [Added]: Setting added from [Target Screen] • [Overlap]: Duplicate setting number in the destination project

The text color of a setting represents the status of the setting.

Text color	Description
Black	Setting existing in the destination project.
Blue	Setting added from [Target Screen].
Red	Duplicate setting number in the destination project.

In [Current Project], the assigned number is changeable with the [Up] button or the [Down] button.
For mouse and keyboard operations, refer to the following.

➟(1) Mouse and keyboard operations

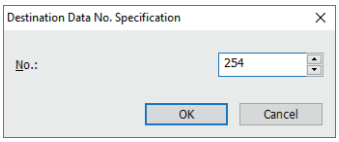
9) **[Add] button**
Adds the setting selected in [Target Screen] to the row selected in [Current Project].

If no row has been preselected in [Current Project], the [Destination Data No. Specification] dialog appears.
Specify a setting number to be assigned in the destination project.

10) **[Delete] button**
Deletes the setting selected in [Current Project].

11) **[Up] button, [Down] button**
Moves the setting selected in [Current Project] up or down.

12) **[Specify No.] button**
Displays the [Destination Data No. Specification] dialog.
Change the setting number of the setting selected in [Current Project].



• **[No.]**
Specify a setting number to be assigned in the destination project.
The setting range varies depending on the setting to be utilized.

13) **[Add All] button**
Adds all the settings listed in [Target Screen] to [Current Project].
The settings are added to the selected row and subsequent rows in [Current Project].
If no row has been preselected in [Current Project], each setting is added with its setting number unchanged.

14) **[Delete All] button**
Deletes all the added settings from [Current Project].

(1) Mouse and keyboard operations

The following shows the mouse and keyboard operations in [Target Screen] and [Current Project].

Operation	[Target Screen]	[Current Project]
Arrow (up, down)	Moves the cursor.	
[Shift] + Arrow (Up/Down)	Moves the row while selecting the row where the cursor is positioned The destination row of the cursor is also selected.	-
[Home]	Moves the cursor to the top row.	
[End]	Moves the cursor to the bottom row.	
[PageUp]	Moves the cursor up one page.	
[PageDown]	Moves the cursor down one page.	
[Shift] + [Home]	Selects the rows from the row where the cursor is positioned to the top row.	-
[Shift] + [End]	Selects the rows from the row where the cursor is positioned to the bottom row.	-
[Shift] + [PageUp]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.	-
[Shift] + [PageDown]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.	-
[Shift] + Click	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.	-
[Ctrl] + [Space]	Selects or deselects a row.	Selects or deselects a row.
[Ctrl] + Click		-

■3 [Controller Setting]

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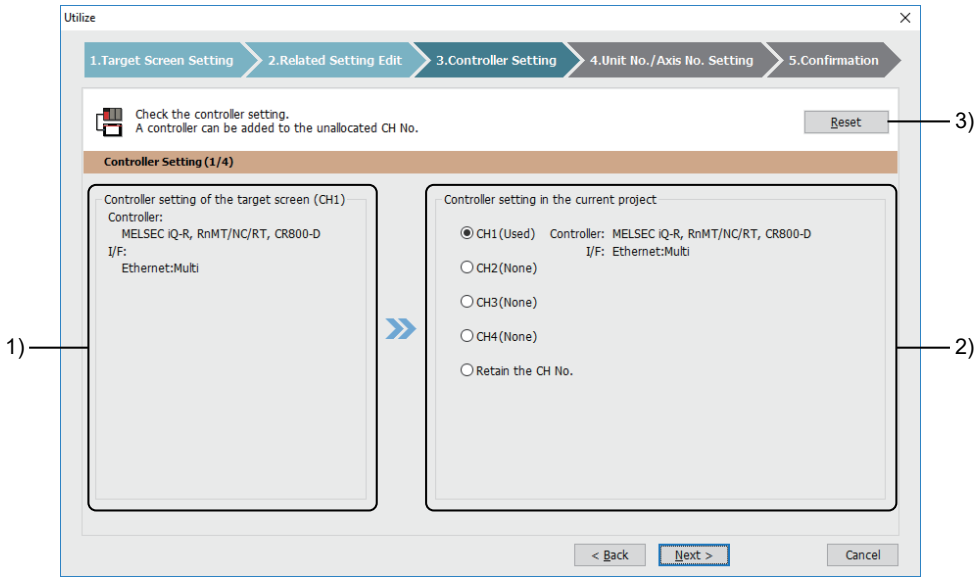
Select a channel for each controller type to be used in the destination project.



1) **[Controller setting of the target screen]**
Controller settings in the source project.

2) **[Controller setting in the current project]**
Controller settings in the destination project.
Select a channel for the controller type displayed in [Controller setting of the target screen].
The following shows selectable items.
Unavailable items are grayed out.

- [CH1]
- [CH2]
- [CH3]
- [CH4]
- [Retain the CH No.]

You can select the channel used for a different controller type in the destination project.
In this case, the channel number and controller type specified in the destination project will be applied.
Check the device setting after the utilization.

When [Type] is set to [GT SoftGOT2000] in the [Type Setting] dialog in the destination project, [CH2] to [CH4] are selectable if all the following conditions are satisfied.

- A controller that can be monitored by GT SoftGOT2000 is set, and the Ethernet connection or OPC UA client connection is set for the controller in the destination project.
- The Ethernet connection or OPC UA client connection is set for channel No. 1 in the destination project.

3) **[Reset] button**
Resets the settings in [Controller setting in the current project] for all channels.

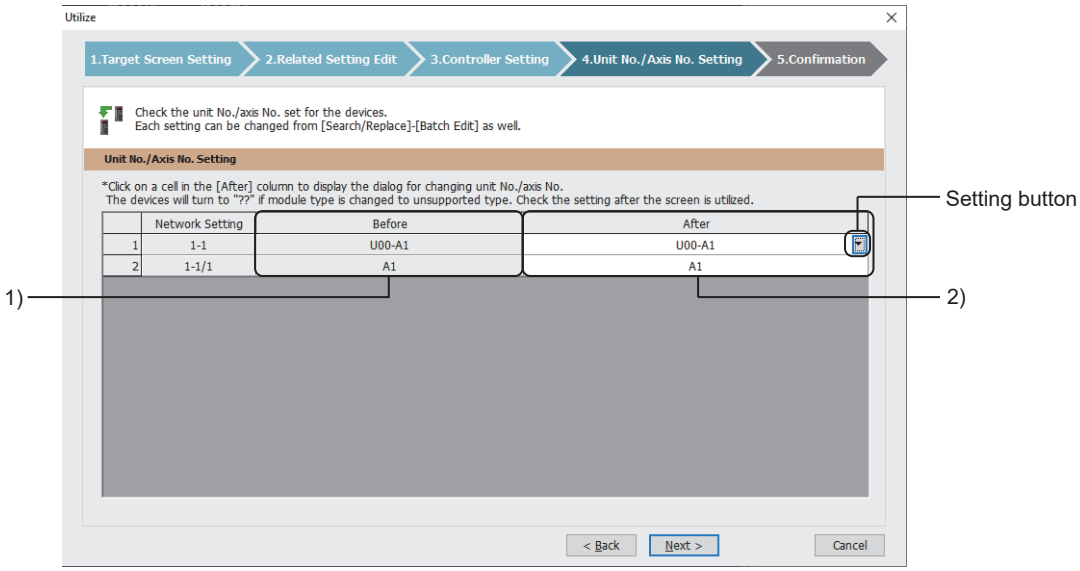
■4 [Unit No./Axis No. Setting]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

If necessary, change the unit number and the axis number (axis designation) set to an applicable device used in the target screens.

The settings are configurable in the [Unit No./Axis No. Batch Edit] dialog as well.

➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog



1) **[Before]**

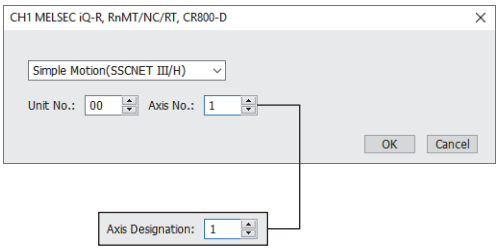
Unit number and axis number (axis designation) set to each applicable device used in the target screens.

2) **[After]**

If necessary, change the unit number and axis number (axis designation) to be used in the destination project.

Click the setting button to display the unit No./axis No. setting dialog.

The setting items vary according to the selected module.



- **Unit**
  Select a module to be routed to.
- **[Unit No.]**
  Specify a unit number.
- **[Axis No.]**
  Specify an axis number.
- **[Axis Designation]**
  Specify an axis.

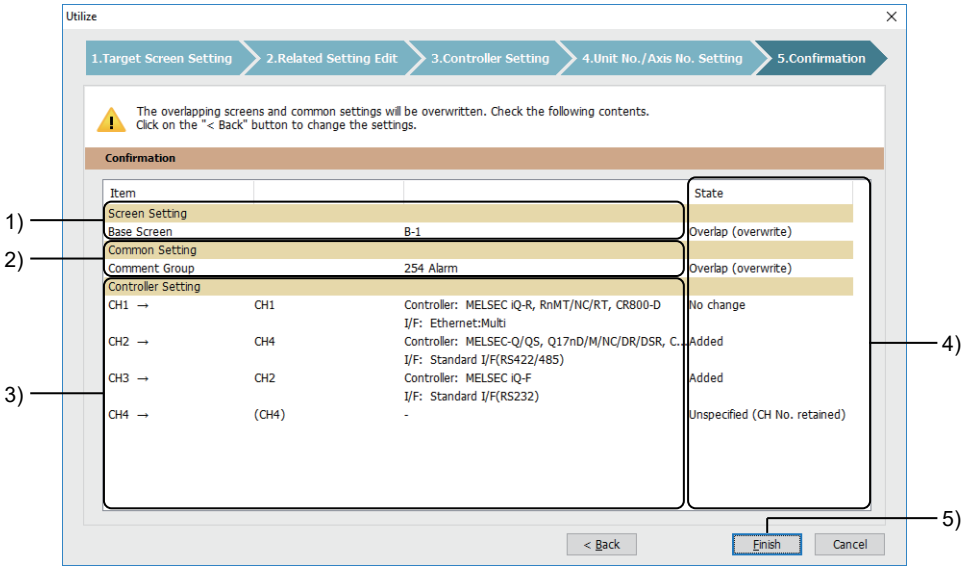
■5 [Confirmation]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following set contents are displayed.

- Duplicate screen number or setting number
- Controller setting

Confirm the set contents, and execute the screen utilization.
To change the settings, go back to the relevant step with the [Back] button or the process navigation bar.



1) **[Screen Setting]**
If a duplicate screen number exists in the destination project, the screen type and screen number are displayed.
➥■1 [Target Screen Setting]

2) **[Common Setting]**
If a duplicate setting number exists in the destination project, the setting type and setting number are displayed.
➥■2 [Related Setting Edit]

3) **[Controller Setting]**
Settings made in [Controller Setting].

4) **[State]**
Assignment status of each setting.
- [Overlap (overwrite)]
  A duplicate screen number or setting number exists in the destination project.
  If you click the [Finish] button without resolving of the duplication, the existing setting is overwritten.
- [CH No./controller change]
  The channel number and controller type are changed to the ones specified in the destination project.
- [Controller changed]
  The controller type is changed to the one specified in the destination project.
- [CH No. changed]
  The channel number is changed to the one specified in the destination project.
- [No change]
  The channel number and controller type remain unchanged.
- [Added]
  The controller settings are assigned to an unused channel in the destination project.
- [Unspecified (CH No. retained)]
  The channel number remains unchanged, and the controller type is changed to the one specified in the destination project.

5) **[Finish] button**
Executes the screen utilization.
If the script data storage destination is set to [Project Data (Internal Data)] in the source project and to [External File (External Data)] in the destination project, a dialog will appear asking where to save a script file.

Set a folder to save the script file.

➟9.9.5 ■4 [Option] tab

If a label (GT Designer3) error occurs after the screen utilization, the [Label Check] dialog will appear. Correct the setting of the relevant label (GT Designer3).

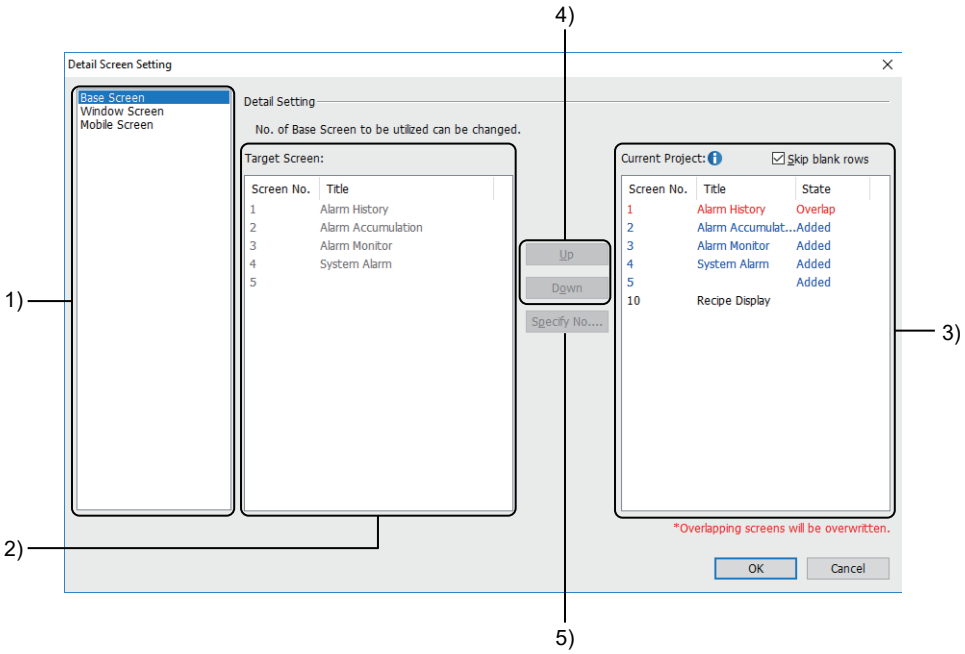
➟6.1.5 ■4 Label check

If you select a channel being used in the destination project, check the device settings after the screen utilization.

11.1.7 [Detail Screen Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Change the screen number of a screen to be utilized.



1) **Screen type**

The screen types of target screens are listed.

- [Base Screen]
- [Window Screen]
- [Mobile Screen]

2) **[Target Screen]**

Lists the utilizable screens.

Item	Description
[Screen No.]	Screen number of each screen in the source project.
[Title]	Title of each screen in the source project.

3) **[Current Project]**

Lists the settings in the destination project.

Item	Description
[Skip blank rows]	Only displays the rows where a screen setting is present.
[Screen No.]	Screen number of each screen in the destination project.
[Title]	Title of each screen in the destination project.
[State]	Assignment status of each screen setting. • [Added]: Screen setting added from [Target Screen] • [Overlap]: Duplicate screen number in the destination project

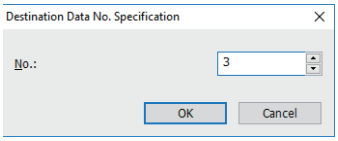
The text color of a screen setting represents the assignment status of the setting.

Text color	Description
Black	Screen setting existing in the destination project.
Blue	Screen setting added from [Target Screen].
Red	Duplicate screen number in the destination project.

In [Current Project], the assigned number is changeable with the [Up] button or the [Down] button.

4) **[Up] button, [Down] button**
Moves the screen setting selected in [Current Project] up or down.

5) **[Specify No.] button**
Displays the [Destination Data No. Specification] dialog.
Change the screen number of the screen selected in [Current Project].



• **[No.]**
Set the screen number of a screen to be utilized in the destination project.
The setting range is [0] to [32767].

11.1.8 Registering the add-on license

To utilize an add-on project, purchase and register the add-on license.
For details on purchasing the add-on license, contact your local sales office.
For details on registering the add-on license, refer to the following.

➟Instructions for Registering the GT Works3 Add-on License for GOT2000 Enhanced Drive Control (Servo) Project Data

11.2 Registering the Labels (GT Designer3) Created from Profile Data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Register the labels (GT Designer3) created from the profile (CSP+) data that is stored in the personal computer.
As label groups and labels (GT Designer3) are created automatically in the registration process, you do not need to perform these tasks manually.

➟11.2.1 Conditions to register the labels (GT Designer3) created from profile data
11.2.2 Specifications of the labels (GT Designer3) created from profile data
11.2.3 How to register the labels (GT Designer3) created from profile data
11.2.4 [Project Specification] dialog
11.2.5 [Label (GT Designer3) Auto Registration] dialog

11.2.1 Conditions to register the labels (GT Designer3) created from profile data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The labels (GT Designer3) created from profile data are registrable if all the following conditions are satisfied.

■1 GX Works3

(1) GX Works3 version

The required GX Works3 version depends on the GX Works3 project used.

GX Works3 project	GX Works3 version
Uncompressed project data	Version 1.045X or later
Compressed project data	Version 1.050C or later
Security version 2 project data	Version1.096A or later

(2) Profile registration

The personal computer has the profile data from which labels (GT Designer3) are created.
For information on how to register a profile, refer to the following.

➟Help for MELSOFT Navigator
GX Works3 Operating Manual

(3) Profile language

The profile language is English or the same as the language version of GT Designer3.

(4) Network specified in the target GX Works3 project

The CC-Link IE Field Network is specified in the target GX Works3 project.

■2 GT Designer3

(1) Controller setting

In the [Controller Setting] window, [Controller Type] is set to one of the following items.

- [MELSEC MX Controller]
- [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
- [MELSEC iQ-R, RnMT/RT, CR800-D]
- [MELIPC]

11.2.2 Specifications of the labels (GT Designer3) created from profile data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the basic specifications of labels (GT Designer3), refer to the following.

➟6.1.5 How to set labels (GT Designer3)

■1 Label group number

Label groups are numbered in descending order, starting from 200.
If any label group number already exists, the number is skipped.

■2 Label group name

A label group is named using the equipment name selected in the list of network-connected equipment.

➟11.2.5 ■2 [I/O Information Specification]

If a same-name label group already exists, an underscore character (_) and a number will be appended.
The following characters will be deleted from the equipment name to be a label group name.

- Numbers prefixed to the equipment name
- Symbols unavailable for a label name
- Excess characters when the maximum length of a label group name is exceeded

■3 Data types to be registered

The following shows the correspondences between the data types used in profile data and the ones of labels (GT Designer3) to be registered.

Data type used in profile data	Data type of a label (GT Designer3)
BOOL BIN1	Bit
BIN2 to BIN16	Unsigned BIN 16
BIN32	Unsigned BIN 32
BYTE WORD BIT_STRING2 to BIT_STRING15	Unsigned BIN 16
DWORD	Unsigned BIN 32
INT2 to 16	Signed BIN 16
INT32	Signed BIN 32
UINT2 to 16	Unsigned BIN 16
UINT32	Unsigned BIN 32
BCD4 BCD8 BCD12 BCD16	BCD16
BCD32	BCD32
STRUCT	Unsigned BIN 16

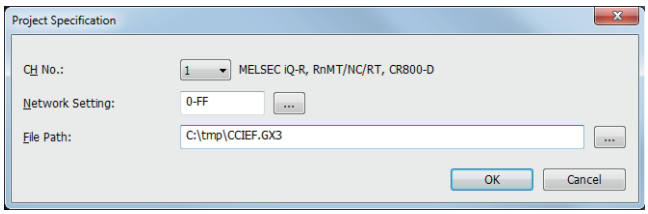
11.2.3 How to register the labels (GT Designer3) created from profile data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Project] → [Import Other Data] → [Profile (CSP+)] → [Label (GT Designer3) Auto Registration] from the menu to display the [Project Specification] dialog.

Specify the path to an applicable GX Works3 project.

➟11.2.4 [Project Specification] dialog

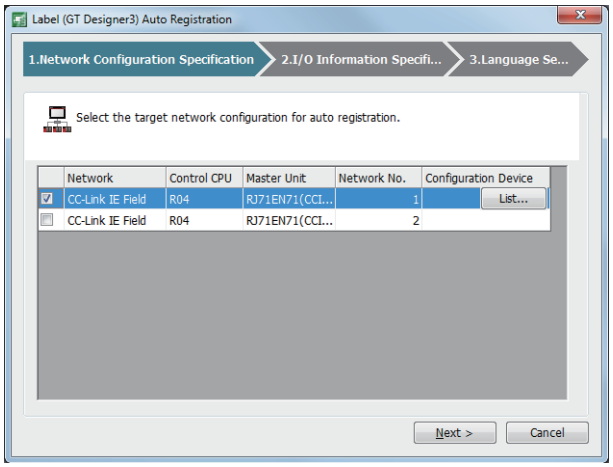


Step 2 Click the [OK] button to display the [Label (GT Designer3) Auto Registration] dialog.

➟11.2.5 [Label (GT Designer3) Auto Registration] dialog

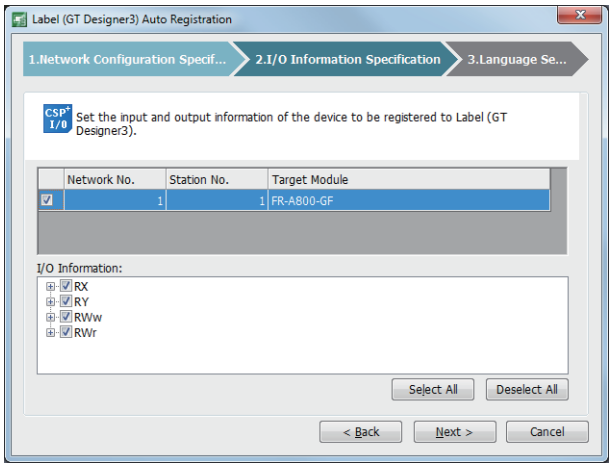
Step 3 Select a target network, and click the [Next] button.

➟11.2.5 ■1 [Network Configuration Specification]



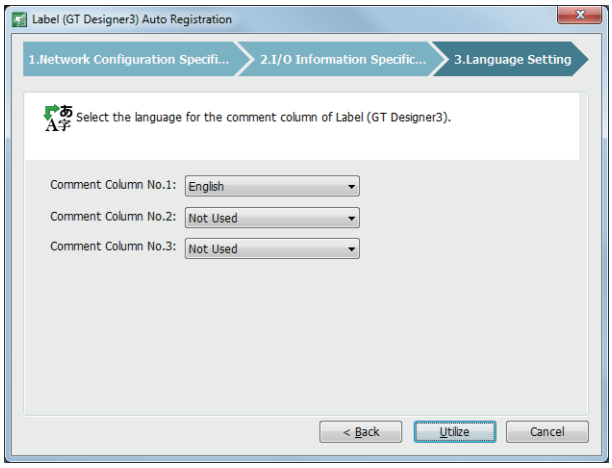
Step 4 Select the link devices that labels (GT Designer3) are based on, and click the [Next] button.

➟11.2.5 ■2 [I/O Information Specification]



Step 5 Select a language for the comments to be used for labels (GT Designer3), and click the [Utilize] button to register labels (GT Designer3).

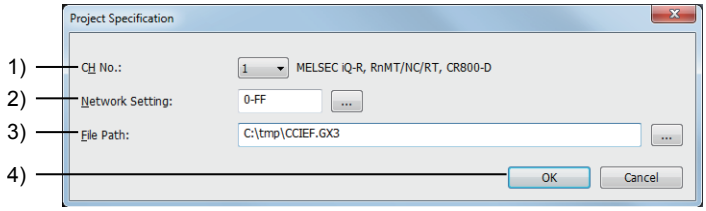
➟11.2.5 ■3 [Language Setting]



11.2.4 [Project Specification] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Project] → [Import Other Data] → [Profile (CSP+)] → [Label (GT Designer3) Auto Registration] from the menu to display the [Project Specification] dialog.



1) **[CH No.]**
Select a channel number to connect the controller that is specified in the target GX Works3 project.
Channels are selectable if one of the following controller types is selected in the [Controller Setting] window.
- [MELSEC MX Controller]
- [MELSEC iQ-R, RnMT/NC/RT, CR800-D]
- [MELSEC iQ-R, RnMT/RT, CR800-D]
- [MELIPC]

2) **[Network Setting]**
Specify the network that is set in the target GX Works3 project.

3) **[File Path]**
Specify the path to the target GX Works3 project.

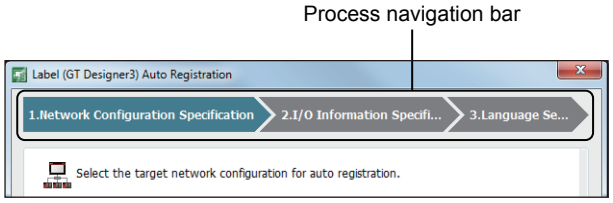
4) **[OK] button**
Confirms the entries, and displays the [Label (GT Designer3) Auto Registration] dialog.

➟11.2.5 [Label (GT Designer3) Auto Registration] dialog

11.2.5 [Label (GT Designer3) Auto Registration] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the [Project Specification] dialog, click the [OK] button to display the [Label (GT Designer3) Auto Registration] dialog. Configure the settings to register labels (GT Designer3) automatically.



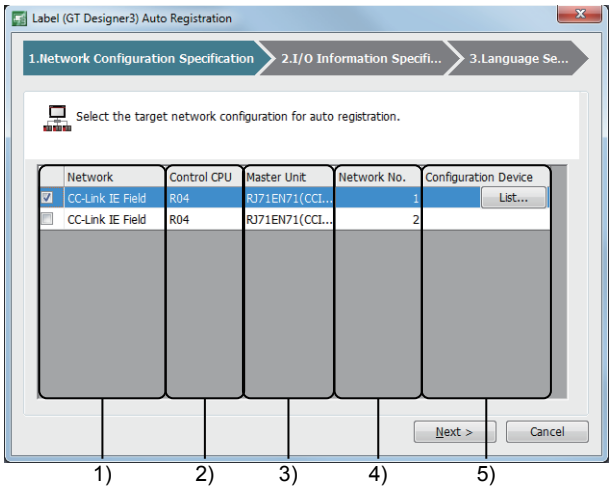
In the process navigation bar, the color of each step represents the status of the step.

Display image	Status
2.I/O Information Specification	Active
2.I/O Information Specific...	Done
2.I/O Information Specifi...	Undone

➟■1 [Network Configuration Specification]
■2 [I/O Information Specification]
■3 [Language Setting]

■1 [Network Configuration Specification]

Select a target network from the list.



1) **[Network]**
Type of a network.
Each row displays a network configuration.
Select a target network.

2) **[Control CPU]**
Model of the PLC CPU on the master station.

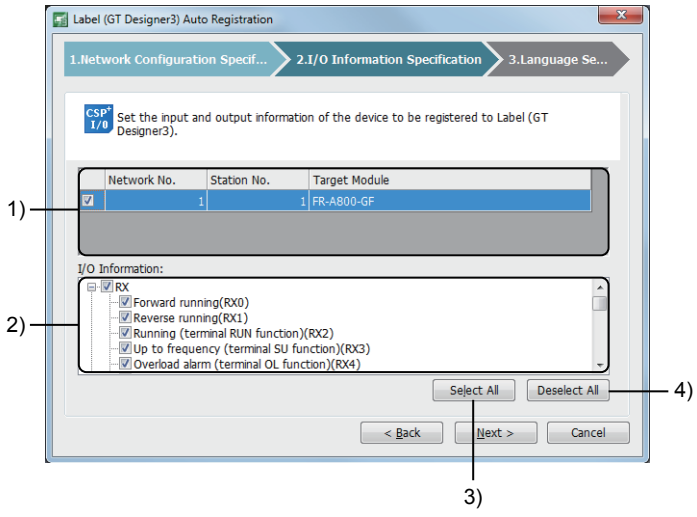
3) **[Master Unit]**
Model of a module on the master station.

4) **[Network No.]**
Number of a network.

5) **[Configuration Device]**
Select a row to display the [List] button.
Click the [List] button to display the [Configuration Device List] dialog where you can check the equipment on the relevant network.

■2 [I/O Information Specification]

Select the link devices that labels (GT Designer3) are based on.



1) **List of network-connected equipment**
Lists the equipment on the network that has been selected in [Network Configuration Specification].
Equipment with its profile unregistered is not listed.
Select equipment to display its link devices in [I/O Information].

2) **[I/O Information]**
Link devices set for the selected equipment.

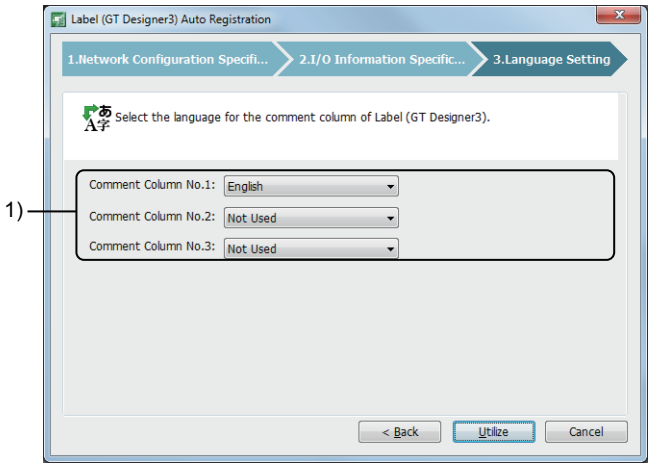
Select the link devices that labels (GT Designer3) are based on.

3) **[Select All] button**
Selects all items in [I/O Information].

4) **[Deselect All] button**
Deselects all items in [I/O Information].

■3 [Language Setting]

Select a language for the comments to be used for labels (GT Designer3).



1) **[Comment Column No.1], [Comment Column No.2], or [Comment Column No.3]**
Select a language for the comments to be used.
The comments are used from the profile data in the selected language.
The following shows selectable items.

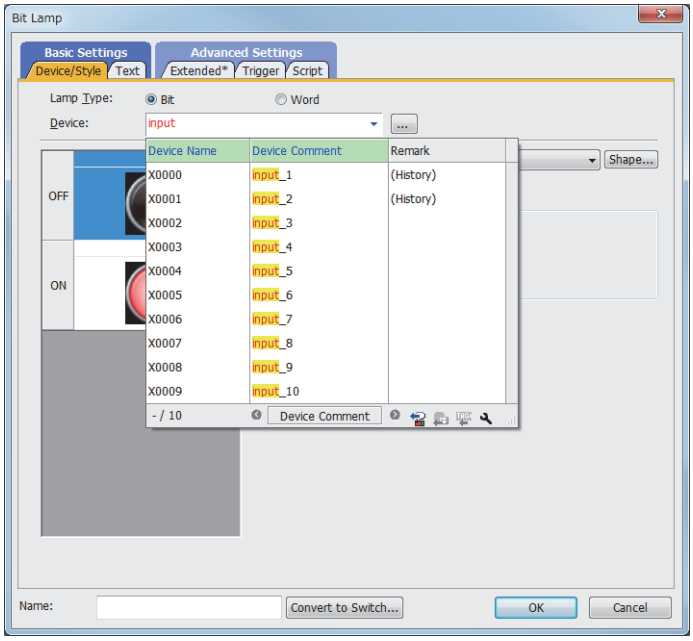
- [Not Used]
- [Japanese]
- [English]
- [Chinese(GB)]

If you select the language of an unregistered profile or [Not Used], the relevant comment column will be blank.

11.3 Setting Devices from Device Comments (Input Assist)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Search device comments and device definitions with keywords, and narrow down utilizable devices.
Without opening the setting dialog of the device, you can search and set devices with using the setting dialog for the object and others.
To search the device comments, importing the device comments is required.



➟11.3.1 Specifications of the input assist
11.3.2 How to use the input assist
11.3.3 Input assist window
11.3.4 [Input Assist Setting] dialog

11.3.1 Specifications of the input assist

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Search target
■2 Specifications of keywords

■1 Search target

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the search targets of keywords.

Search target	Description
Device comment	The device comments are searched. ➥6.1.6 ■1 Importing device comments and device definitions
Device definition	The device definitions are searched. ➥6.1.6 ■1 Importing device comments and device definitions
System label	The system labels are searched. ➥6.1.3 How to set system labels
Global label	The global labels are searched. GT21 and GS21 do not support global labels. ➥6.1.4 How to set global labels
Label (GT Designer3)	The labels (GT Designer3) are searched. ➥6.1.5 How to set labels (GT Designer3)
OMRON NJ/NX tag	The OMRON NJ/NX tags are searched. GT2105-Q does not support OMRON NJ/NX tags. ➥6.1.7 How to set OMRON NJ/NX tags
AB native tag	The AB native tags are searched. GT21 and GS21 do not support AB native tags. ➥6.1.9 How to set AB native tags
OPC UA tag	The OPC UA tags are searched. Only available to GT SoftGOT2000. ➥6.1.10 How to set OPC UA tags
Device	The device names and the device numbers are searched. Representation for devices of the GOT and controllers might be different. Uses device representation for the GOT for a search. ➥12.4 Device Range and Settings of Each Controller
Function name of the GOT internal devices	The function names of the GOT internal devices are searched. For the function name of each GOT internal device, refer to the following. ➥12.1 GOT Internal Device

■2 Specifications of keywords

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the characters specified for uses.

• @
Specify the channel No.with @n. (n indicates No.)
You can search devices of the given channel Nos.
Example) @2 indicates CH2.

• One-byte space
You can search with multiple keywords by specifying keywords with one-byte spaces between the keywords.

• "
You can search the keyword including @ or a one-byte space with using quotation marks around a keyword.
Example) Input "@" to search device comments including @.

11.3.2 How to use the input assist

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Preparation for the input assist
■2 Searching devices by a keyword to set a device
■3 Changing the sorting order of utilizable data
■4 Narrowing down the search target
■5 Switching available or unavailable for the input assist

■1 Preparation for the input assist

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Devices (device name and device No.) and function names of the GOT internal devices are the search target by default. ([Show the device comment/definition/label settings] or [Show the device comment/definition/label/tag settings] is selected by default in the [Input Assist Setting] dialog.)
To narrow a search to the device comments, device definitions, or others, set the following.

(1) Narrowing a search to device comments

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search device comments, satisfy all the following conditions.

- Import a device comment.

  ➟6.1.6 ■1 Importing device comments and device definitions
- Select [Show the device comment/definition/label settings] or [Show the device comment/definition/label/tag settings] in the [Input Assist Setting] dialog.

  ➟11.3.4 [Input Assist Setting] dialog

(2) Narrowing a search to device definitions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search device definitions, satisfy all the following conditions.

- Import the device definition of the station number to be used.(As station number 0 is always the search target, importing is not necessary.)
- Select [Show the device comment/definition/label settings] or [Show the device comment/definition/label/tag settings] in the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

For the following controllers, just selecting [Show the device comment/definition/label settings] or [Show the device comment/definition/label/tag settings] narrows a search to device definitions.

[Manufacturer]	[Controller Type]	Search target
[MITSUBISHI ELECTRIC]	[MELSEC MX Controller]	Device definitions (special relays and special registers only)
	[MELSEC iQ-R, RnMT/NC/RT, CR800-D] ([MELSEC iQ-R, RnMT/RT,CR800-D] for GT21 and GS21)	Device definitions (special relays and special registers only)
	[MELSEC iQ-L]	Device definitions (special relays and special registers only)
	[MELSEC iQ-F]	Device definitions (special relays and special registers only)
	[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700] ([MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700] for GT21 and GS21)	Device definitions (special relays and special registers only)
	[MELSEC-QnA, MELDAS C6*] ([MELSEC-QnA] for GT21 and GS21)	Device definitions (special relays and special registers only)
	[MELSEC-L]	Device definitions (special relays and special registers only)
	[MELSEC-A]	Device definitions (special relays and special registers only)
	[MELSEC-FX]	Device definitions (special relays and special registers only)
	[MELIPC]	Device definitions (special relays and special registers only)
	[MELSERVO-J2M-P8A]	Device definitions
	[MELSERVO-J2M-*DU]	Device definitions
	[MELSERVO-J2S-*A]	Device definitions
	[MELSERVO-J2S-*CP]	Device definitions
	[MELSERVO-J2S-*CL]	Device definitions
	[MELSERVO-J3-*A]	Device definitions
	[MELSERVO-J3-*T]	Device definitions
	[MELSERVO-J4-*A, -JE-*A]	Device definitions
	[MELSERVO-J4-*A-RJ]	Device definitions
	[MELSERVO-JE-*C]	Device definitions
	[MELSERVO-J5(W)-*G(-RJ), -JET-*G]	Device definitions
	[FREQROL 500/700/800, SENSORLESS SERVO]	Device definitions *1
	[FREQROL 800]	Device definitions
	[FREQROL 800/E700NE(Batch monitor)]	Device definitions
[IAI]	[IAI X-SEL Controller]	Device definitions
	[IAI ROBO CYLINDER]	Device definitions
[azbil]	[Azbil DMC50]	Device definitions

*1 The device definitions of the following controllers are searched for.

- FR-A800 series
- FR-A800 Plus series (FR-A8□0-CRN, FR-A8□2-CRN, FR-A8□0-R2R, FR-A8□2-R2R, FR-A8□0-E-CRN, FR-A8□2-E-CRN, FR-A8□0-E-R2R, FR-A8□2-E-R2R, FR-A8□0-AWH, FR-A8□0-E-AWH, FR-A8□0-LC, and FR-A8□0-E-LC)
- FR-F800 series
- FR-E800 series (FR-E8□0 and FR-E8□0-E)
- FR-D800 series
- FR-A700 series
- FR-F700 series
- FR-F700P series
- FR-F700PJ series
- FR-E700 series
- Sensorless servo (FR-E7□0EX)

(3) Narrowing a search to system labels

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search system labels, satisfy all the following conditions.

• Configure the setting so that the system labels can be used.

➟6.1.3 How to set system labels

• Select [Show the device comment/definition/label settings] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

(4) Narrowing a search to global labels

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search global labels, satisfy all the following conditions.

• Import global labels.

➟6.1.4 How to set global labels

• Select [Show the device comment/definition/label settings] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

(5) Narrowing a search to labels (GT Designer3)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search labels (GT Designer3), satisfy all the following conditions.

• Register labels (GT Designer3).

➟6.1.5 How to set labels (GT Designer3)

• Select [Show the device comment/definition/label settings] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

(6) Narrowing a search to OMRON NJ/NX tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

To search OMRON NJ/NX tags, satisfy all the following conditions.

• Import OMRON NJ/NX tags.

➟6.1.7 How to set OMRON NJ/NX tags

• Select [Show the device comment/definition/label/tag settings] in the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

(7) Narrowing a search to AB native tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000.

To search AB native tags, satisfy all the following conditions.

• Import AB native tags.

➟6.1.9 How to set AB native tags

• Select [Show the device comment/definition/label/tag settings] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

(8) Narrowing a search to OPC UA tags

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To search OPC UA tags, satisfy all the following conditions.

• Import OPC UA tags.

➟6.1.10 How to set OPC UA tags

• Select [Show the device comment/definition/label/tag settings] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

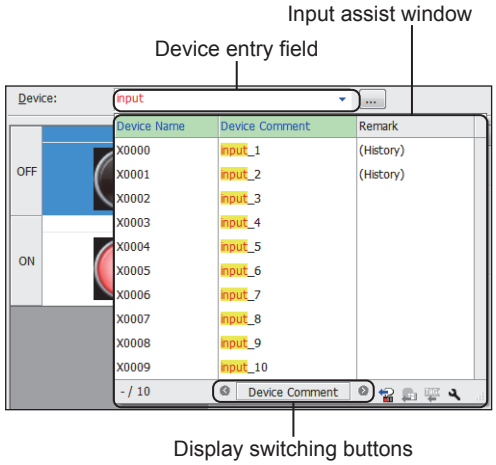
■2 Searching devices by a keyword to set a device

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Input a keyword in the device entry field in the setting dialog of the object and others to display the input assist window.

You can switch the contents displayed in the input assist window with the display switching buttons.

➟11.3.3 Input assist window



Step 2 Operate any one of the following to set the device in the device entry field.

- Click the device to be set.
- Select the device to be set with up and down arrow keys on the keyboard, and push the [Enter] key or the [Tab] key.

Using @ or one-byte spaces can search the devices for the given channels or use multiple keywords for a search.

➟11.3.1 ■2 Specifications of keywords

■3 Changing the sorting order of utilizable data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

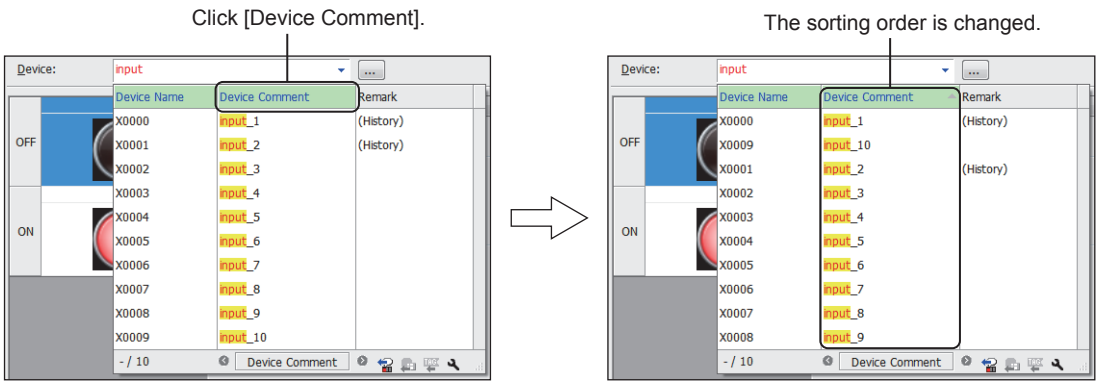
➟(1) Changing the sorting order with one condition
(2) Changing the sorting order with multiple conditions

(1) Changing the sorting order with one condition

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In the input assist window, click a column header to sort the devices in order of the item corresponding to the header. Each click switches to the ascending order, descending order, and no sort, in that order.

Example) Sorting the devices in ascending order of device comments

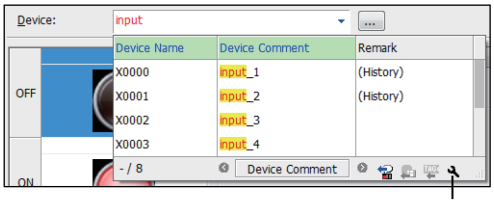


(2) Changing the sorting order with multiple conditions

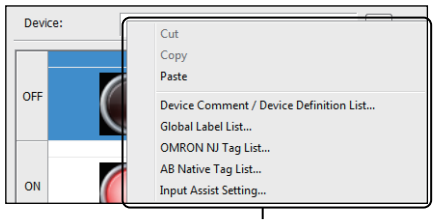
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations to display the [Input Assist Setting] dialog.

- Click the setting button for the input assist window.
- Right-click on the device entry field, and select [Input Assist Setting] from the menu.



Setting button



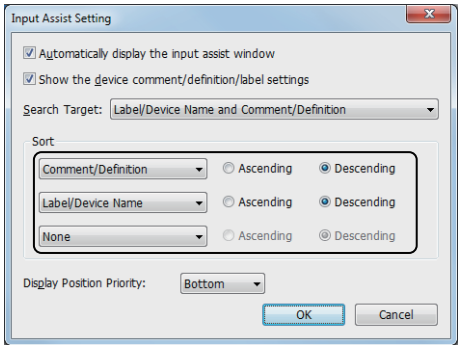
Right-click menu

Step 2 Set the sorting order with [Sort] of the [Input Assist Setting] dialog.

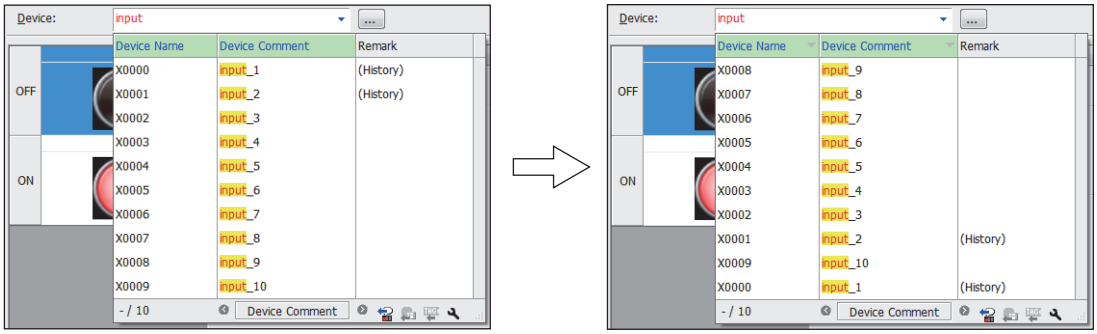
Up to three conditions for sorting order can be set and their priority is high from the top.

➟11.3.4 [Input Assist Setting] dialog

Example) Setting [Comment/Definition] for the first condition and [Label/Device Name] for the second condition



Step 3 Click the [OK] button to change the sorting order.

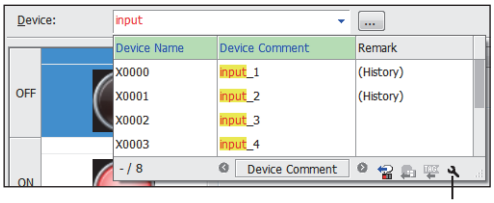


■4 Narrowing down the search target

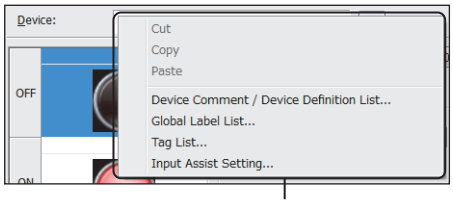
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations to display the [Input Assist Setting] dialog.

- Click the setting button for the input assist window.
- Right-click on the device entry field, and select [Input Assist Setting] from the menu.



Setting button

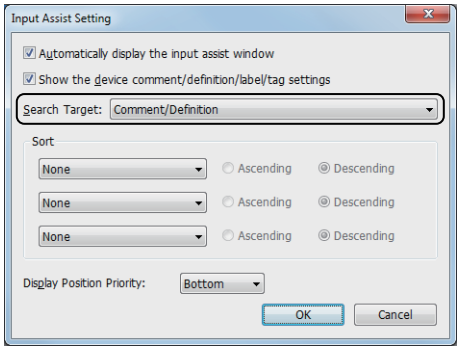


Right-click menu

Step 2 Change the search target with [Search Target] of the [Input Assist Setting] dialog.

➟11.3.4 [Input Assist Setting] dialog

Example) Changing the [Search Target] to [Comment/Definition]



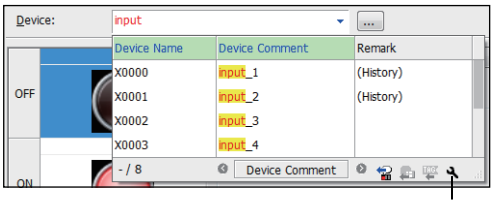
Step 3 Click the [OK] button to change the search target.

■5 Switching available or unavailable for the input assist

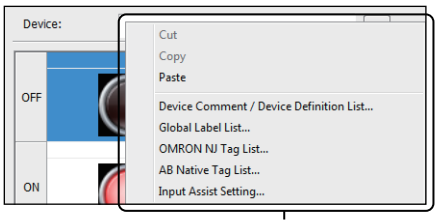
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations to display the [Input Assist Setting] dialog.

- Click the setting button for the input assist window.
- Right-click on the device entry field, and select [Input Assist Setting] from the menu.



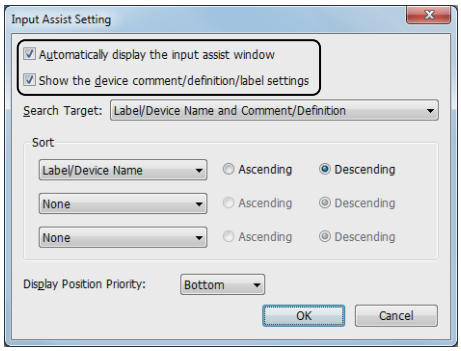
Setting button



Right-click menu

Step 2 In the [Input Assist Setting] dialog, set whether to automatically display the input assist window, and set the items to be displayed as required.

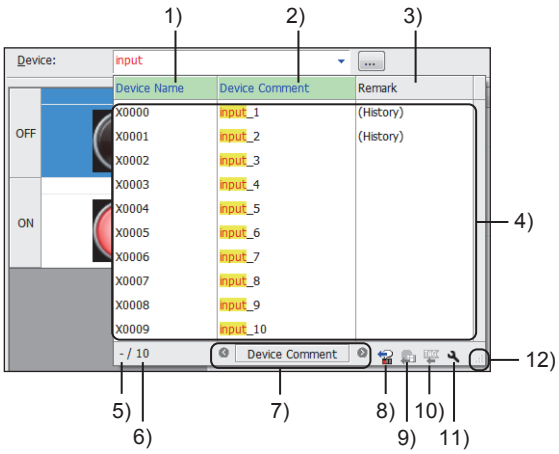
➟11.3.4 [Input Assist Setting] dialog



- [Automatically display the input assist window]
  Clear this item not to display the input assist window even though a keyword is entered in the device input field.
- [Show the device comment/definition/label settings] or [Show the device comment/definition/label/tag settings]
  Clear this item to display only the history of the device setting on the input assist window.

11.3.3 Input assist window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Device Name], [Label Name], [Tag Name]**
   Switch the ascending order, descending order, no sort in order every clicking the mouse.
2) **[Device Comment], [Device Definition], [Comment]**
   Switch the ascending order, descending order, no sort in order every clicking the mouse.
   Not displayed when [Show the device comment/definition settings] of the [Input Assist Setting] dialog is deselected.
   (When labels are available, [Show the device comment/definition/label settings] is displayed instead.)
3) **[Remark]**
   Display [(History)] in the devices saved in the setting history.
   Switch the ascending order, descending order, no sort in order every clicking the mouse.
4) **Utilizable data list**
   Searched devices
   Select the row to set the device.
   The contents on the display can be scrolled with a mouse or keyboard.
   Column width can be changed with a mouse.
5) **Selected device**
   Position (device) where the cursor is positioned to in the utilizable data list
   The selected device is displayed with the cursor by the keyboard.
6) **Number of Utilizable data**
   Number of utilizable data displayed on the utilizable data list
   The number of utilizable data displayed on the utilizable data list is changed with a scroll of the utilizable data list.
7) **Display switching buttons**

Switches the targets to be displayed in the list.
The text on the center button indicates the type of the data displayed in the utilizable data list.

- [Device Comment]
- [Device Definition]
- [System Label]
- [Global Label]
- [OMRON NJ/NX Tag]
- [AB Native Tag]
- [Label (GT Designer3)]
- [OPC UA Tag]

The targets can be switched by using short cut keys ([Ctrl] + [←] or [Ctrl] + [→]).

8) **[Device Comment / Device Definition List] button**

Displays the [Device Comment / Device Definition List] dialog.
Import the device comment and the device definition.

➟6.1.6 ■4 [Device Comment / Device Definition List] dialog

9) **[Global Label List] button**

Displays the [Global Label List] dialog.
Import global labels.

➟6.1.4 ■7 [Global Label List] dialog

10) **Tag list button**

Displays one of the following dialogs according to the controller setting.

- [OMRON NJ/NX Tag List] dialog
- [AB Native Tag List] dialog
- [OPC UA Tag List] dialog

For the dialogs, refer to the following.

➟6.1.7 How to set OMRON NJ/NX tags
6.1.9 How to set AB native tags
6.1.10 How to set OPC UA tags

11) **Setting button**

Display the [Input Assist Setting] dialog.
Select available or unavailable for the input assist, or the search target.

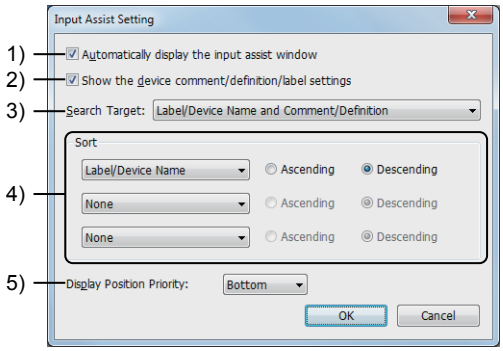
➟11.3.4 [Input Assist Setting] dialog

12) **Changing the window size**

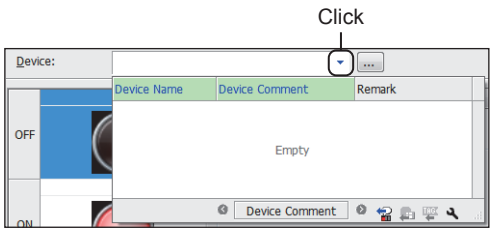
To change the size of the input assist window, move the mouse pointer to the lower right corner of the window where the pointer becomes a double-headed arrow, and drag the pointer.

11.3.4 [Input Assist Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Automatically display the input assist window]**
Automatically displays the input assist window when a keyword is entered in the device entry field in the object setting dialog and others.
Even though this item is cleared, you can display the input assist window by the following operation.



2) **[Show the device comment/definition/label settings], [Show the device comment/definition/label/tag settings]**
Displays the device comments, device definitions, and others as utilizable data in the input assist window.
Clear this item to display only the history of the device setting on the input assist window.

3) **[Search Target]**
Select the target for a search.
The following shows the items to be selected.
- [Label/Device Name and Comment/Definition] or [Device/Label/Tag Name and Comment/Definition]
- [Label/Device Name] or [Device/Label/Tag Name]
- [Comment/Definition]

4) **[Sort]**
Set the sorting order of the utilizable data list of the input assist window.
The following shows the items to be selected.
- [Label/Device Name] or [Device/Label/Tag Name]
- [Comment/Definition]
- [Remark]
- [None]

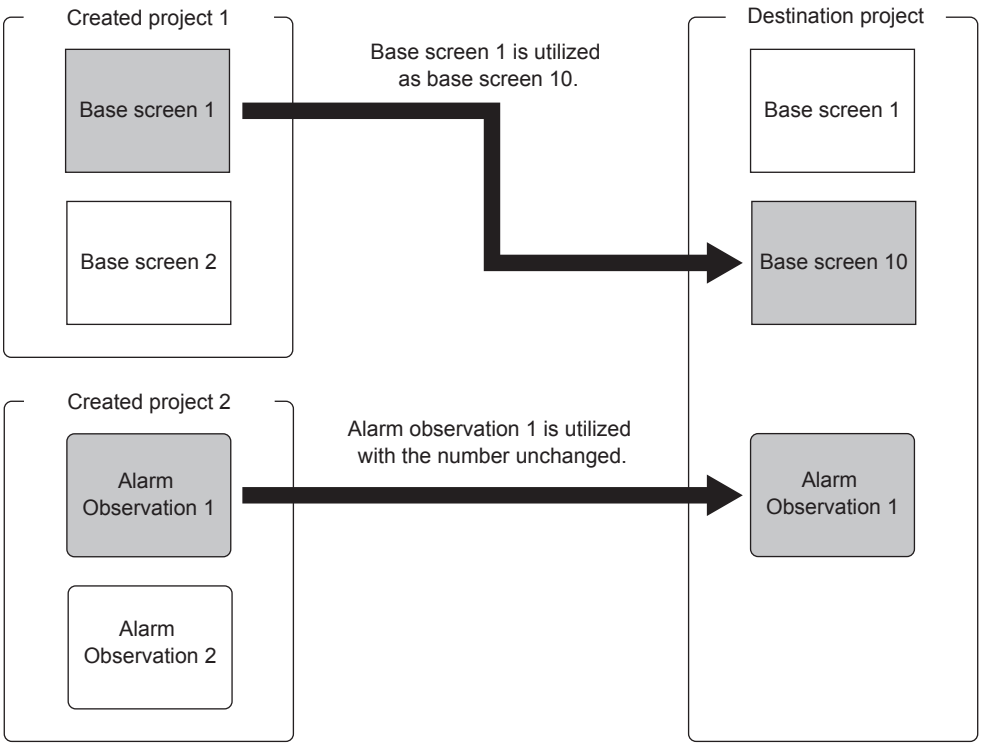
Up to three conditions for sorting order can be set and their priority is high from the top.
Select [Ascending] and [Descending] for each condition.

5) **[Display Position Priority]**
Select the display position of the input assist window against the device input field.
The following shows the items to be selected.
- [Bottom]
- [Top]
- [Right]
- [Left]

11.4 Utilizing Other Project Data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The settings for screens and functions can be read from a specified project (source) into the project (destination) being edited.
You can create a project efficiently by utilizing data of an existing project.



➟11.4.1 Specifications of the project utilization
11.4.2 How to use the project utilization
11.4.3 Precautions
11.4.4 [Utilize Project] dialog
11.4.6 [Select Project] dialog

11.4.1 Specifications of the project utilization

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Utilizable projects
■2 Utilizable data

■1 Utilizable projects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following table lists the utilizable projects.

GOT	Project format
GOT2000 Series	• Workspace format • A single file format (*.GTX, *.GTXS)

■2 Utilizable data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select data to utilize from [Source Project] of the [Utilize Project] dialog.

➟11.4.4 [Utilize Project] dialog

The following table lists the utilizable data.

[Source Project]		Utilizable data	Supported model
[GOT Environmental Setting / GOT Setup / GOT Ethernet Setting]	[GOT Environmental Setting / GOT Setup]	Utilizes the following settings. • [Environmental Setting] window (except the setting for [Operation Log]) • [GOT Setup] window • [GOT Ethernet Setting] window	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[CSP+ for iQSS Data Write]	Utilizes the setting for [iQSS Utility] in the [GOT Setup] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Operation Log]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Utilizes the setting for [Operation Log] in the [Environmental Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Network Drive]	Utilizes the settings of [Network Drive] in the [GOT Setup] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Controller Setting]	[Routing Information]	Utilizes the setting for [Routing Information] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Getaway Server]	Utilizes the setting for [Getaway Server] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Gateway Client]	Utilizes the setting for [Gateway Client] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Mail]	Utilizes the setting for [Mail] in the [Controller Setting] window.	
	[FTP Server]	Utilizes the setting for [FTP Server] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[File Transfer]	Utilizes the setting for [File Transfer] in the [Controller Setting] window.	
	[MELSEC Redundant]	Utilizes the setting for [MELSEC Redundant] in the [Controller Setting] window. The MELSEC redundant setting is not migrated if the corresponding channel is not set in the destination project.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Station No. Switching]	Utilizes the setting for [Station No. Switching] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Buffer Memory Unit No. Switching]	Utilizes the setting for [Buffer Memory Unit No. Switching] in the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Source Project]		Utilizable data	Supported model
[Peripheral Setting]	[Bar Code]	Utilizes the setting for the [Bar Code] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[RFID]	Utilizes the setting for the [RFID] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	
	[VNC Server]	Only available to GT2107-W for GT21. Only available to GS21-W-N for GS21. Utilizes the setting for the [VNC Server] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Video/RGB Input]	Utilizes the setting for the [Video/RGB Input] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Multimedia]	Utilizes the setting for the [Multimedia] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	
	[External I/O / Operation Panel]	Utilizes the setting for the [External I/O / Operation Panel] dialog (except the setting for [Destination I/F]). To utilize the setting for [Destination I/F], utilize [I/F Communication Setting].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Printer]	Utilizes the settings of the [Printer] dialog (except the setting of [Destination I/F]). To utilize the setting of [Destination I/F], utilize the settings of [I/F Communication Setting].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Network Interaction]		Utilizes the setting of the [GOT Network Interaction] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Mobile Setting]		Utilizes the setting of the [GOT Mobile Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[I/F Communication Setting]		Utilizes the following settings. • Interface setting for each channel The same channel No. set for the source project is required to be enabled for the destination project. • The setting for [Destination I/F] in the setting for each peripheral device	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Screen Design]		Utilizes the setting of the [Screen Design] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Base Screen]		Utilizes base screens. Screens to be utilized can be selected individually. The following settings for the screens to be utilized are also utilized. • Screen trigger action • Project script setting A project script is utilized when [Include this script in a screen-related setting when utilizing project/screen] is selected in the [Script Edit] dialog. • Screen script setting • Script symbol When utilized by the destination project, script data are associated with an existing script number + 1. To specify a script number to be used in utilization by the destination project, select [Script].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Source Project]		Utilizable data	Supported model
[Window Screen]		Utilizes window screens. Screens to be utilized can be selected individually. The following settings for the screens to be utilized are also utilized. • Screen trigger action • Project script setting A project script is utilized when [Include this script in a screen-related setting when utilizing project/screen] is selected in the [Script Edit] dialog. • Screen script setting • Script symbol When utilized by the destination project, script data are associated with an existing script number + 1. To specify a script number to be used in utilization by the destination project, select [Script].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Report Screen]		Utilizes report screens. Screens to be utilized can be selected individually. If the following settings are configured for the report screen to be utilized, the destination report screen will be utilized together. • [Output Destination] is set to [File]. • [Specification] is set to [Add to other report file].	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Mobile Screen]		Utilizes mobile screens. Screens to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Label Group]		Utilizes label groups. Label groups to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Comment]		Utilizes comment groups. Comment groups to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Alarm]	[Alarm Common Setting]	Utilizes the setting for the [Alarm Common Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[User Alarm Observation]	Utilizes the user alarm observation settings. User alarm observation settings to be utilized can be selected individually.	
	[System Alarm Observation]	Utilizes the setting for the [System Alarm Observation] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Alarm Popup Display]	Utilizes the setting for the [Alarm Popup Display] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Logging]		Utilizes logging settings. Logging settings to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Recipe]	[Recipe Common Setting]	Utilizes the setting for the [Recipe Common Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Recipe]	Utilizes recipe settings. Recipe settings to be utilized can be selected individually.	

[Source Project]		Utilizable data	Supported model
[Script]	[Script (Project, Symbol)]	Utilizes the following settings. • Project script setting • Script symbol The script of a utilized project script setting is executed after the script of an existing project script setting in the destination project is executed.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Registered script	Utilizes scripts. Scripts to be utilized can be selected individually.	
	[Object Script Symbol]	Utilizes the setting for the [Object Script Symbol] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Device Data Transfer]		Utilizes device data transfer settings. Device data transfer settings to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Trigger Action (Project)]		Utilizes the settings for the trigger actions commonly used in a project. To utilize the settings for the trigger actions of individual screens, utilize the screen for which the required trigger actions have been set.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Time Action]		Utilizes the setting for the time action.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Hard Copy]		Utilizes the setting for the [Hard Copy] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[MES Interface]		Utilizes the settings of the [MESInterface] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Parts]	[Parts Setting]	Utilizes the setting for the [Parts Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Registered parts	Utilizes parts. Parts to be utilized can be selected individually.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Sound Files]	[Touch Key Sound Setting]	Utilizes the setting for the [Touch Key Sound Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	Registered sound files	Utilizes sound files. Sound files to be utilized can be selected individually.	

11.4.2 How to use the project utilization

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Point

Before utilizing another project

When the [Utilize Project] dialog is displayed while the following windows are open, the settings for the windows cannot be utilized.

- [Environmental Setting] window
- [GOT Setup] window
- [Controller Setting] window

Before displaying the [Utilize Project] dialog, close the above windows.

Step 1 Select [Project] → [Utilize Project] from the menu to display the [Utilize Project] dialog.

➟11.4.4 [Utilize Project] dialog

Step 2 Click the [Browse] button to display the [Open Project] dialog or [Select Project] dialog.

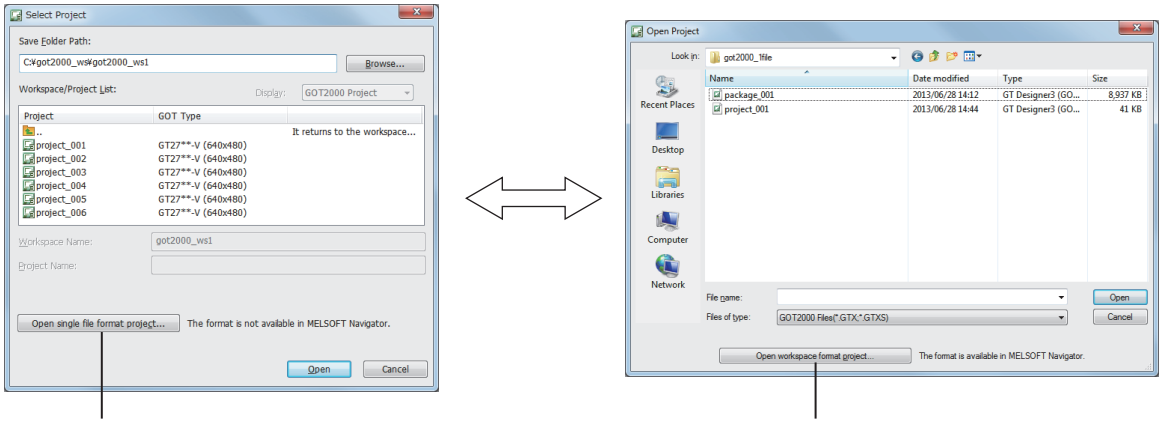
Switch the screens according to the format of the source project.

- Workspace format: Select in the [Select Project] dialog.

➟11.4.6 [Select Project] dialog

- A single file format: Select in the [Open Project] dialog.

➟2.3.2 ■5 [Open Project] dialog (single file format)



Switching to the [Open Project] dialog

Switching to the [Select Project] dialog

Step 3 In the [Open Project] dialog or [Select Project] dialog, select a source project and click the [Open] button.

The source project can be also set with the following methods

- In the [Utilize Project] dialog, click the [Search] button to display the [Utilize Data (Project)] dialog and search the source project.
- Enter the path to the [Source Project] and press the [Tab] key.

If project security has been set for the source project, the [User Authentication] dialog is displayed.
Enter a user name and the password.

Step 4 The path to the source project is set for [Source Project] in the [Utilize Project] dialog.

Select the settings to utilize in the [Source Project] tree.
When the following items are selected, the numbers set in [Destination] are enabled.

- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen]
- [Label Group]
- [Comment]
- [User Alarm Observation]
- [Logging]

• [Recipe]
• [Script]
• [Device Data Transfer]
• [Parts]
• [Sound Files]

For the settings of the numbers used by the destination project, refer to the following.

➟■1 Utilizing settings without changing the numbers set in the source project
■2 Specifying a start number in utilizing settings for the source destination with their order and differences retained
■3 Specifying numbers setting by setting in utilization

Step 5 Click the [Utilize] button to read the selected settings into the destination project.

Step 6 If data in another project need utilizing, proceed to step 2.

When you have completed the utilization, close the [Utilize Project] dialog.

■1 Utilizing settings without changing the numbers set in the source project

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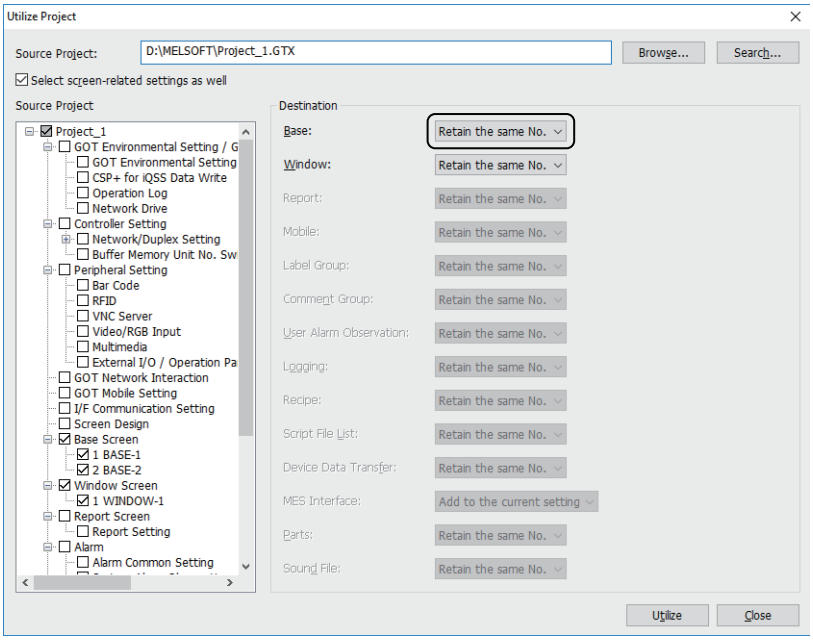
The following shows the procedure for utilizing settings for a source project as those for a destination project without changing the associated numbers that have been set in the source project.

Step 1 In [Destination] of the [Utilize Project] dialog, select [Retain the same No.].

Example) Utilizing a base screen



Step 2 Click the [Utilize] button to read the settings selected in the [Source Project] tree into the destination project.

Step 3 When you have completed the utilization, close the [Utilize Project] dialog.

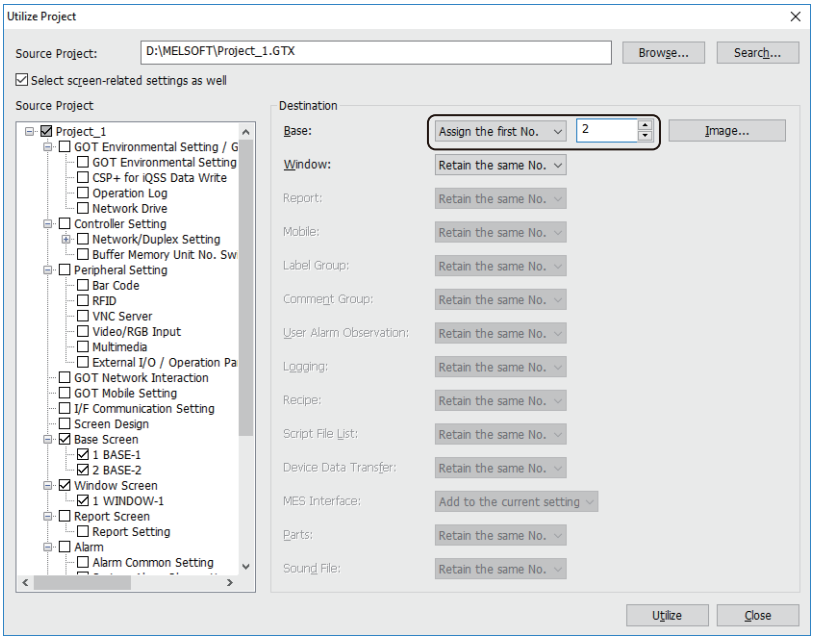
■2 Specifying a start number in utilizing settings for the source destination with their order and differences retained

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for specifying a start number in utilizing settings for a source project as those for a destination project with their order and differences retained.

Step 1 Select [Assign the first No.] in [Destination] of the [Utilize Project] dialog and set a start number.

Example) Utilizing a base screen



Step 2 Click the [Utilize] button to read the settings selected in the [Source Project] tree into the destination project.

Step 3 When you have completed the utilization, close the [Utilize Project] dialog.

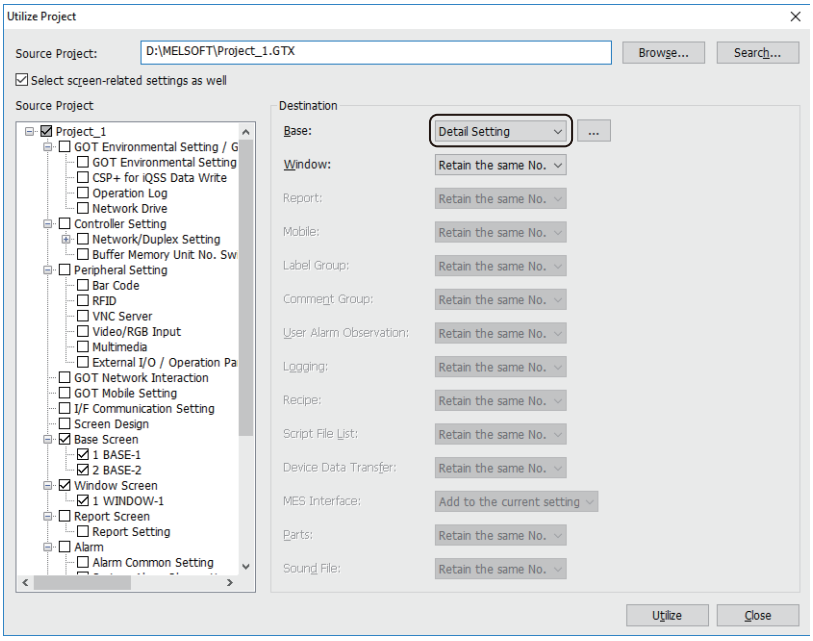
■3 Specifying numbers setting by setting in utilization

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for specifying numbers setting by setting in utilization, which are used by the destination project.

Step 1 Select [Detail Setting] in [Destination] of the [Utilize Project] dialog and click the [...] button to display the [Detail Setting] dialog.

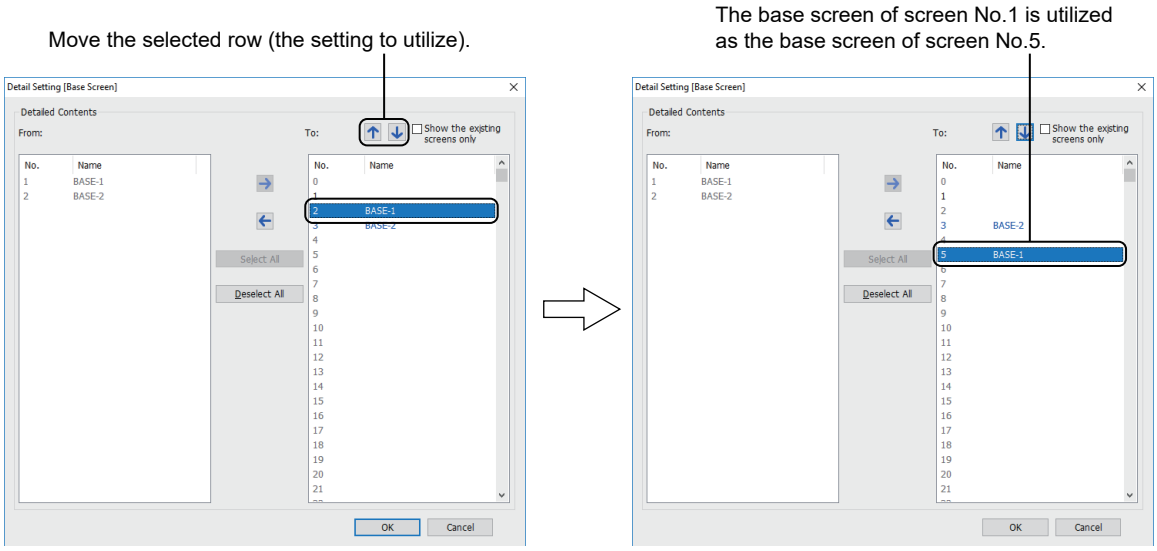
Example) Utilizing a base screen



Step 2 In [Destination], select the setting to utilize (in the row displaying the text in green).

Move the row you have selected with the [↑] or [↓] button into the row corresponding to the number used by the destination project.

Example) Utilizing a base screen of screen No.1 as that of screen No.5



➟11.4.5 [Detail Setting] dialog

Step 3 When you have completed the setting, click the [OK] button.

Step 4 Click the [Utilize] button in the [Utilize Project] dialog to read the settings selected in the [Source Project] tree into the destination project.

Step 5 When you have completed the utilization, close the [Utilize Project] dialog.

11.4.3 Precautions

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■1 Utilizing the project edited with a different version of GT Designer3

When the version of GT Designer3 being used is older than that used to edit the source project, the functions not supported by GT Designer3 being used are deleted.

For the relation between the version of GT Designer3 and supported functions, refer to the following.

➟12.17 Upgraded Additional Function List

■2 Utilizing the project protected with a security key

When the source project is protected with a security key, the security key authentication is performed.

If the authentication fails, the data cannot be utilized.

➟2.12 Protecting a Project with a Security Key

■3 Utilizing the project protected with the project security

If project security has been set for the source project, user authentication is performed.

Users for who display is disabled cannot utilize data.

■4 Utilizing the project containing a different GOT type setting

Utilized data are converted according to the GOT type set for the destination project.

The functions not supported by the GOT type set for the destination project are deleted.

■5 Utilizing the project containing different controller settings

Utilized data are converted according to the controller type set for the destination project.

According to the combination of the settings for the source project and those for the destination project, the devices set for utilized data are changed as described below.

- The devices are changed to the equivalents supported by the controller set for the destination project.
- The devices not supported by the controller set for the destination project are changed to [??] (except the devices in script data).

Check and change the device settings.

■6 Utilizing the project in which a system label is set

In the project being edited, when [Use system labels in conjunction with MELSOFT Navigator] of the [Type Setting] dialog is unchecked, the data of the screens from the project where a system label is set cannot be utilized.

➟5.1.5 [Type Setting] dialog

■7 Utilizing scripts

Even if the controller settings for the source project and destination project are different, the devices in script data are not automatically changed.

Check and change the device settings.

■8 Utilizing categories

Categories cannot be utilized.

When the categories set for figures and objects do not exist in the destination project, the categories are changed to [None] in utilization.

Before utilizing, add categories that exist in the source project into the destination project.

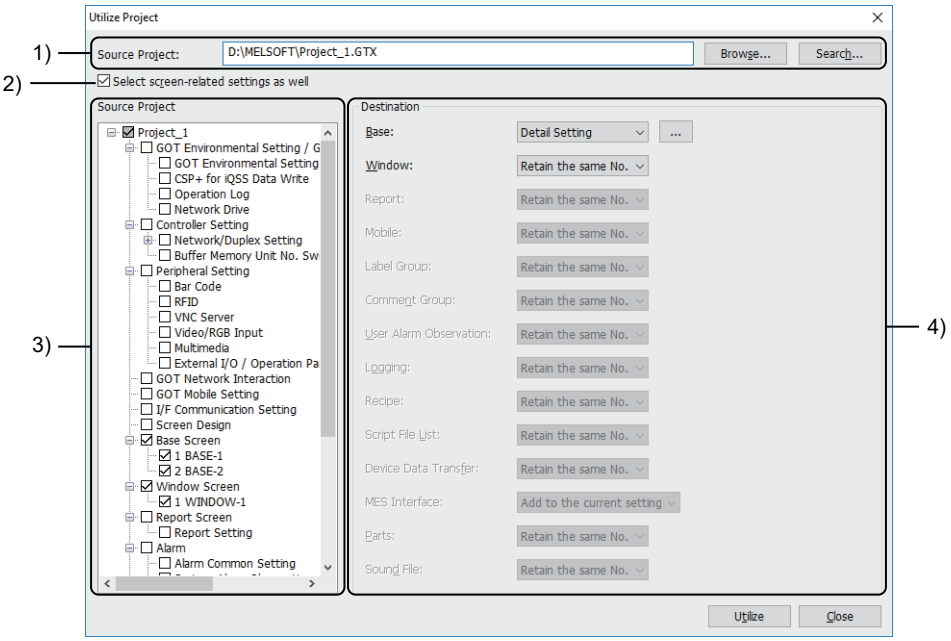
■9 Utilizing the project in which Windows fonts are used for comment groups

If the Windows fonts used for comment groups are not installed on the personal computer, the comments are displayed in different fonts.

To display the comments in the specified Windows fonts, make sure that the fonts are installed on the personal computer before utilizing the project.

11.4.4 [Utilize Project] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Source Project]**

Set the path to the source project.

Item	Description
[Browse] button	Displays the [Open Project] dialog or the [Select Project] dialog. Set the path to the source project. ➟11.4.6 [Select Project] dialog 2.3.2 ■5 [Open Project] dialog (single file format)
[Search] button	Displays the [Search] dialog. Searches projects that can be utilized. ➟11.1.4 [Utilize Data (Project)] dialog and [Search] dialog

2) **[Select screen-related settings as well]**

When items are selected in the [Source Project] tree, the relevant settings are also selected.

Example) If a base screen for which a screen script has been set is selected, the script is also selected.

3) **[Source Project]**

When a path is set for [Source Project], the utilizable source project settings are displayed in the tree structure. Select the settings to utilize.

➟11.4.1 ■2 Utilizable data

The settings nonexistent in the source project or destination project are not displayed in the tree structure.

When the following items are selected, the related settings in [Destination] become available to specify numbers or utilization methods.

- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen]
- [Label Group]
- [Comment]
- [User Alarm Observation]
- [Logging]
- [Recipe]
- [Script]
- [Device Data Transfer]
- [MES Interface]

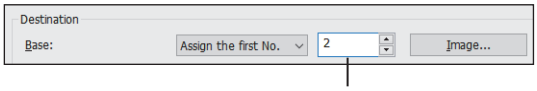
• [Parts]
• [Sound Files]

4) **[Destination]**

In each setting, specify a number to be used in the destination project or a utilization method.
The following shows selectable items.

• [Assign the first No.]

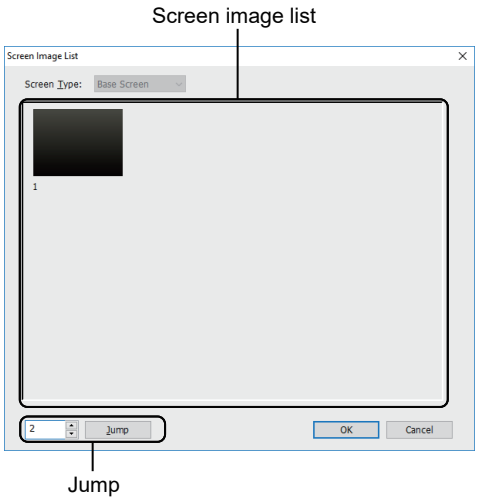
Specifies a start number in utilizing settings for the source project as those for the destination project with their order and differences retained.
Set a start number.
When a number falls out of the acceptable range, the setting associated with the number is not utilized.



Set a start number.

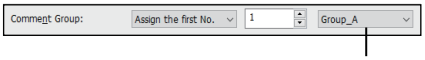
· [Base]: [0] to [32767]
· [Window]: [0] to [32767]
· [Report]: [1] to [99]
· [Mobile]: [1] to [32767]
· [Label Group]: [1] to [200]
· [Comment Group]: [1] to [500]
· [User Alarm Observation]: [1] to [32767]
· [Logging]: [1] to [32767]
· [Recipe]: [1] to [32767]
· [Script File List]: [1] to [32767]
· [Device Data Transfer]: [1] to [255]
· [Parts]: [1] to [32767]
· [Sound File]: [1] to [500]

Click the [Image] button of [Base], [Window], [Report], or [Mobile] to display the [Screen Image List] dialog.



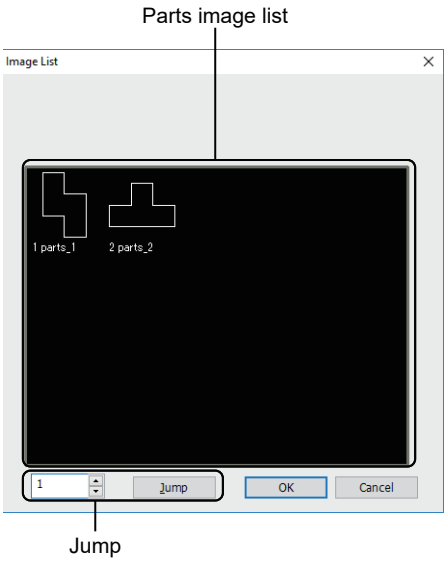
• **[Screen Type]**
Select the type of the screen.
• **Screen image list**
Displays screen images.
• **Jump**
Specify a screen number and click the [Jump] button to select the screen in the screen image list.

If the start number set for [Label Group], [Comment Group], [User Alarm Observation], [Logging], [Recipe], or [Device Data Transfer] is used in the destination project, the name of the setting is displayed.
Example) If comment group No.1 has been used



The name of comment group No.1 is displayed.

Click the [Image] button of [Parts] to display the [Image List] dialog.



- **Parts image list**
  Display the images of parts.
- **Jump**
  Set a part number and click the [Jump] button to display the images of the specified part on the parts image list.

Click the [Browse] button of [Sound File] to display the [Sound File List] dialog.
When the dialog is displayed from the [Utilize Project] dialog, sound files are not registered and deleted.
➟10.12.6 [Sound File List] dialog

- [Retain the same No.]
  Utilize settings for the source project as those for the destination project without changing the associated numbers that have been set in the source project.
- [Detail Setting]
  Specifies numbers setting by setting in utilization, which are used by the destination project.
  Click the [...] button to display the [Detail Setting] dialog.
  ➟11.4.5 [Detail Setting] dialog
- [Add to the current setting]
  Adds the settings that are unused in the destination project.
- [Overwrite all]
  Overwrites all settings of the destination project with those of the source project.

11.4.5 [Detail Setting] dialog

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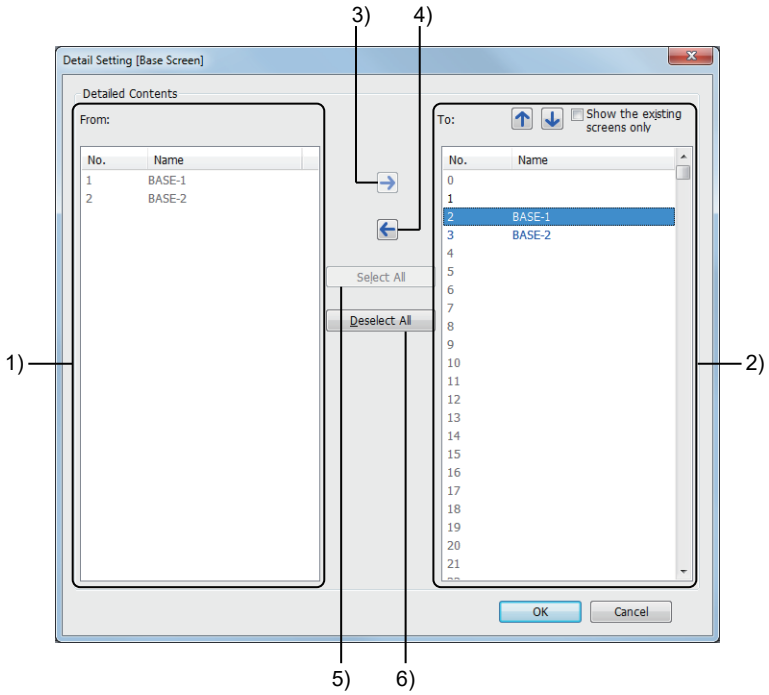


1) **[From]**

Lists the settings utilizable from the source project.

Item	Description
[No.]	Number of each setting in the source project.
[Name]	Name of each setting in the source project.

The text color of a setting represents the status of the setting.

Text color	Description
Black	Setting that is not added to [To]. To utilize a setting in the destination project, add the setting to [To] with the [→] button.
Gray	Setting added to [To].

For mouse and keyboard operations, refer to the following.

➟■1 Mouse and keyboard operations

2) **[To]**

Lists the settings in the destination project.

Item	Description
[↑] button, [↓] button	Moves the setting selected in [To] up or down.
[Show the existing screens only]	Only displays the rows where a setting is present.
[No.]	Number of each setting in the destination project.
[Name]	Name of each setting in the destination project.

The text color of a setting represents the status of the setting.

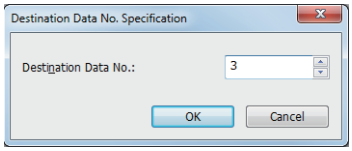
Text color	Description
Black	Setting existing in the destination project.
Blue	Setting added from [From].
Red	Duplicate setting number in the destination project.

The number of each setting in the destination project can be changed with the [↑] button or the [↓] button.
For mouse and keyboard operations, refer to the following.

➟■1 Mouse and keyboard operations

3) **[→] button**

Adds the setting selected in [From] to the row selected in [To].
If no row has been preselected in [To], the [Destination Data No. Specification] dialog appears.



• **[Destination Data No.]**
Specify a setting number to be assigned in the destination project.
The setting range varies depending on the setting to be utilized.

4) **[←] button**

Deletes the setting selected in [To].

5) **[Select All] button**

Adds all the settings listed in [From] to [To].
The settings are added to the selected row and subsequent rows in [To].
If no row has been preselected in [To], each setting is added with its setting number unchanged.

6) **[Deselect All] button**

Deletes all the added settings from [To].

■1 Mouse and keyboard operations

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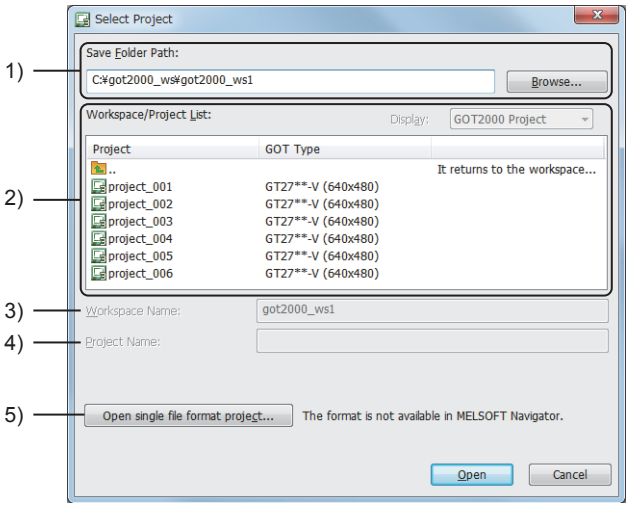
The following shows operating [From] and [To] with a mouse and keyboard.

Operation	[From]	[To]
Arrow (up, down)	Moves the cursor.	
[Shift] + Arrow (Up/Down)	Moves the row while selecting the row where the cursor is positioned The destination row of the cursor is also selected.	-
[Home]	Moves the cursor to the top row.	
[End]	Moves the cursor to the bottom row.	
[PageUp]	Moves the cursor up one page.	
[PageDown]	Moves the cursor down one page.	
[Shift] + [Home]	Selects the rows from the row where the cursor is positioned to the top row.	-
[Shift] + [End]	Selects the rows from the row where the cursor is positioned to the bottom row.	-
[Shift] + [PageUp]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.	-
[Shift] + [PageDown]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.	-
[Shift] + Click	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.	-
[Ctrl] + [Space]	Selects or deselects a row.	Selects or deselects a row.
[Ctrl] + Click		-

11.4.6 [Select Project] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Save Folder Path]**
   Set the destination path to save the project.
   The path can be set from the [Browse] button.
2) **[Workspace/Project List]**
   The workspaces and projects in the path set in the [Save Folder Path] are displayed.
   If a workspace is double-clicked, the projects in the workspace are displayed.
3) **[Workspace Name]**
   Displays the workspace name selected in [Workspace/Project List].
4) **[Project Path]**
   Displays the project name selected in [Workspace/Project List].
   Up to 200 characters can be used for the total number of the characters of [Save Folder Path], [Workspace Name], and [Project Name].
   "\" at the end of the project name is not counted as a character.
5) **[Open single file format project] button**
   Switches the dialog to the [Open Project] dialog.
   ➟2.3.2 ■5 [Open Project] dialog (single file format)

11.5 Verifying Project being Edited with Other Projects

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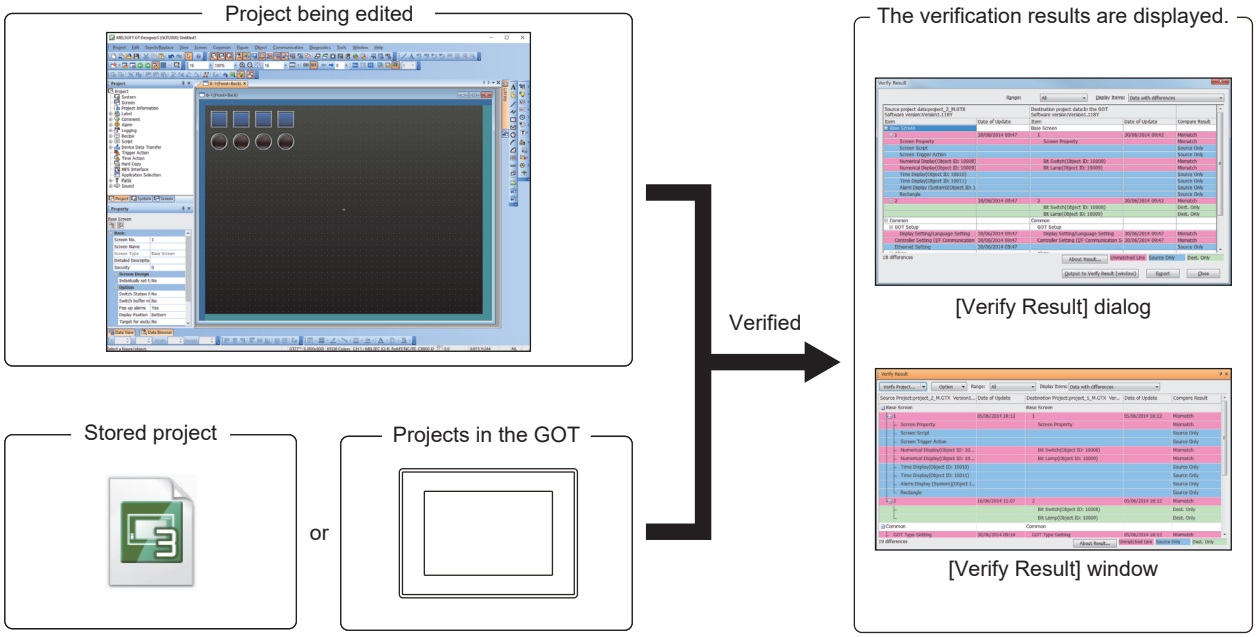
The project being edited by GT Designer3 can be verified against another project and the difference can be checked.



Verification is available for the following projects.

- Projects stored in a personal computer
- Projects in the GOT

➟11.5.1 Specification of verification
11.5.2 How to use verification
11.5.3 Precautions
11.5.4 [Verify Project] dialog
11.5.5 [Verify Result] window
11.5.6 [Verify Result] dialog
11.5.7 Details of the exported file

11.5.1 Specification of verification

➟■1 Verifiable projects
■2 Verification method

■1 Verifiable projects

➟(1) Verifying against a stored project in a personal computer
(2) Verifying against a project in the GOT

(1) Verifying against a stored project in a personal computer

The following shows the format of verifiable projects.

GOT	Project format
GOT2000 Series	• Workspace format • A single file format (*.GTX, *.GTXS)

Verification is unavailable between the projects that specify different GOT types.
If the verification target is a project with a system application, the system application is not verified.

(2) Verifying against a project in the GOT

Verification against the GOT in the GOT2000 series is available in communication with it.
Verification is unavailable between the projects that specify different GOT types.

■2 Verification method

The following shows the methods of verifying a project.

• Data check
This method verifies settings.

• Time stamp check
This method verifies time stamps of files.
This method can be selected only for verifying against a project in GOT.

The following shows the verification target items of each method.

➟11.5.5 ■1 Verification items for data check
11.5.5 ■2 Verification items for time stamp check

11.5.2 How to use verification

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➟■1 Verifying against a stored project
■2 Verifying against the GOT

■1 Verifying against a stored project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Perform one of the following operations to display the [Verify Project] dialog.

➟11.5.4 [Verify Project] dialog

- Select [Project] → [Verify Data] from the menu.
- In the [Verify Result] window, click the [Verify Project] button and select [Verify Project] from the pull-down menu.

Step 2 Set [Target Project] and click the [Verify] button.

If project security is set for the verification target, the [User Authentication] dialog is displayed.
Enter a user name and the password.
If different versions of GT Desiger3 are used for the project being edited and the verification target project, a dialog appears, confirming that a verification is executed according to the version of GT Designer3 used for the project being edited.
Click [Yes] button to execute the verification.

Step 3 The [Verify Result] window displays the verification results.

In the [Verify Result] window, double-click a verification result to display the corresponding figure, object, or setting dialog.

➟11.5.5 [Verify Result] window

■2 Verifying against the GOT

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For how to verify the project being edited against a project in GOT, refer to the following.

➟4.3.2 ■4 Verifying projects between the GOT and GT Designer3

11.5.3 Precautions

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■1 Verifying against a project protected with a security key

When the verification target project is protected with a security key, the security key authentication is performed.
If the authentication fails, verifying the project is not available.

➟2.12 Protecting a Project with a Security Key

■2 Verifying against a project for which project security has been set.

If security is set for the verification target project, user authentication is performed.
If display-disabled screens or scripts exist in the project being edited or the verification target project, verification of the project is unavailable.

■3 Verifying against a project edited by GT Designer3 of another version

If the version of GT Designer3 used to edit the verification target project and that being used for the project being edited are different, the verification results may be different from those obtained when the version is the same.

■4 Verifying the current project against the project stored in the GOT after writing package data to multiple GOTs in one go

When you write package data to multiple GOTs in one go, the individual identification information and the communication interface setting data are not written.
Accordingly, inconsistencies in the following settings may be detected as a result of the verification.

- [Individual Identification Information]
- [Controller Setting (I/F Communication Setting)]

11.5.4 [Verify Project] dialog

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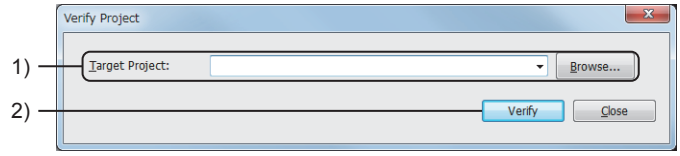


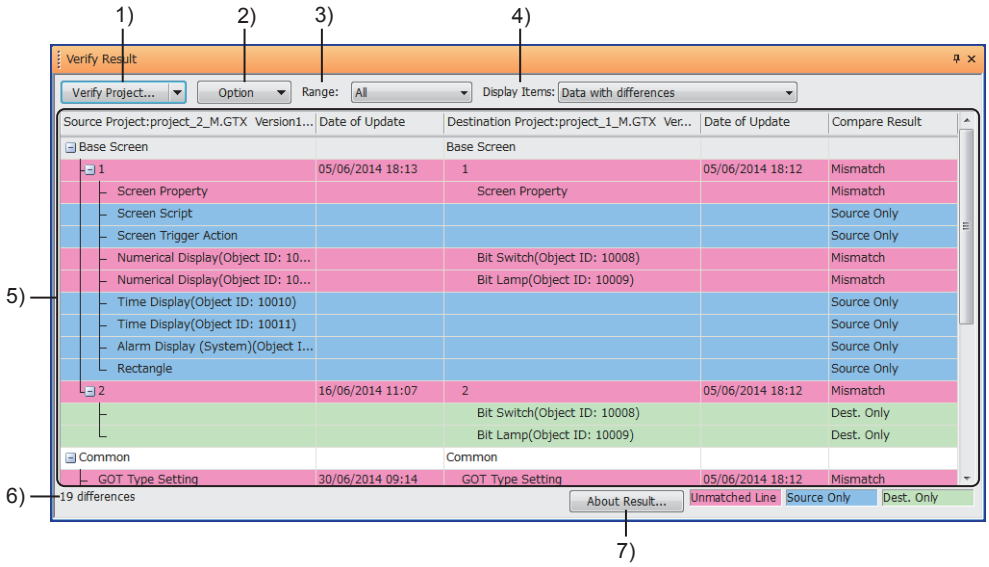
1) **[Target Project]**
Set the project being edited and the verification target project.
The path can be set from the [Browse] button.

2) **[Verify] button**
Starts verification and displays the [Verify Result] window.
The verification results can be checked.

➟11.5.5 [Verify Result] window

11.5.5 [Verify Result] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Verify Project] button**

Select an item from the pull-down menu to start a verification.

Item	Description
[Verify Project]	Verifies the project being edited against a project saved in the personal computer.
[Verify GOT]	Displays the [GOT Verification] tab of the [Communicate with GOT] dialog. ➡4.8.2 ■3 [GOT Verification] tab In the dialog, verify the project being edited against a project saved in the GOT.

2) **[Option] button**

Select an item from the pull-down menu to operate the [Verify Result] window.

Item	Description
[Export] button	Saves the verification results as a Unicode text file. Set [File name] and click the [Save] button in the displayed dialog. ➡11.5.7 Details of the exported file

3) **[Range]**

Narrow the displayed contents of the verification results by selecting a verification item.
The following shows selectable items.

- [All]
- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)
- [Common settings]

4) **[Display Items]**

Narrow the displayed contents of the verification results by selecting the type of differences.
The following shows selectable items.

- [All]
- [Data with differences]
- [Data that exists in the source only]
- [Data that exists in the destination only]
- [Mismatched data]

5) **Verification results**

Displays the results of verification.

In each row, the target item for verification is shown.
The item that has been set for neither the project being edited nor the verification target project is not displayed.
The verified items differ depending on the verification method.
(For the verification against a project stored in a personal computer, the verification method available is only the data check.)

➟■1 Verification items for data check

■2 Verification items for time stamp check

The background color of a row varies according to the type of a difference.

- Blue: The item exists only in the verification source project.
- Green: The item exists only in the verification target project.
- Red: The item exists in both projects and the data are not matched.

Double-click an item in the verification source project to select the corresponding object or others, or display the corresponding dialog.
For the behavior of double-clicking an item, refer to the following.

➟■1 Verification items for data check

Right-click a row and select [Open the Setting dialog] from the menu to display the corresponding setting dialog.
This function is not available to the row indicating an order mismatch and the data existing only in the verification target project.
The verification results are retained even if you close the [Verify Result] window.
To delete the verification results, close the project or convert the GOT type set in the project.

Item	Description
[Source Project]	Displays the information of the project being edited.
[Destination Project]	Displays the information of the verification target project.
[Compare Result]	Displays the presence/absence and the type of differences.

6) **Number of differences**

This item appears when any difference exists.
When the verification method is set to the data check, the item (screen number or title) immediately below the [Base Screen], [Window Screen], [Report Screen], or [Mobile Screen] row is not counted.

7) **[About Result] button**

Displays Help.

■1 Verification items for data check

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The following shows the items to be verified by the data check.
In the [Verify Result] window, double-clicking an item in the verification source project selects the corresponding object or others, or displays the corresponding dialog.

(1) [Screen Design]

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Double-click this item to display the [Screen Design] dialog.

(2) [Base Screen]

Verifies the base screens that exist in a project by screen No.
Also verifies the following items set in each screen.

[Item]	Remarks	Supported models
[Screen Property]	Double-clicking this item displays the corresponding screen and the [Screen Property] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Screen Script]	Double-clicking this item displays the [Screen] tab of the [Script] dialog.	
[Screen Trigger Action]	Double-clicking this item displays the [Screen] tab of the [Trigger Action] dialog.	
Figure/object type name (Object ID) (Name)	The figures or objects having the same object ID are verified. The figure IDs are controlled internally and cannot be checked. When you cut or copy a figure and then paste it to the location where the original figure has been placed, if the original and pasted figures have different IDs, the figures are handled as different data. The name appears when it is set for a figure or object. Double-clicking this item selects the corresponding figure or object on the screen editor.	
[(Unmatched figure/object stacking order)]	The placement orders of figures or objects, and the states of grouping are verified. This item appears when the numbers of placed figures or objects are the same. The verification starts from the rearmost figure or object. Double-clicking this item selects a figure or object in which the first placement order difference is detected. When the placement order of a figure or object is directly changed, double-clicking this item may select any figure or object whose placement order is affected by the change. The placement order also differs when figures or objects are grouped.	

(3) [Window Screen]

Verifies the window screens that exist in a project by screen No.
Also verifies the following items set in each screen.

[Item]	Remarks	Supported models
[Screen Property]	Double-clicking this item displays the corresponding screen and the [Screen Property] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Screen Script]	Double-clicking this item displays the [Screen] tab of the [Script] dialog.	
[Screen Trigger Action]	Double-clicking this item displays the [Screen] tab of the [Trigger Action] dialog.	
Figure/object type name (Object ID) (Name)	The figures or objects having the same object ID are verified. The figure IDs are controlled internally and cannot be checked. When you cut or copy a figure and then paste it to the location where the original figure has been placed, if the original and pasted figures have different IDs, the figures are handled as different data. The name appears when it is set for a figure or object. Double-clicking this item selects the corresponding figure or object on the screen editor.	
[(Unmatched figure/object stacking order)]	The placement orders of figures or objects, and the states of grouping are verified. This item appears when the numbers of placed figures or objects are the same. The verification starts from the rearmost figure or object. Double-clicking this item selects a figure or object in which the first placement order difference is detected. When the placement order of a figure or object is directly changed, double-clicking this item may select any figure or object whose placement order is affected by the change. The placement order also differs when figures or objects are grouped.	

(4) [Report Screen]

Verifies the report screens that exist in a project by screen No.
Also verifies the following items set in each screen.

[Item]	Remarks	Supported models
[Report Setting]	Double-clicking this item displays the [Report Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Screen Property]	Double-clicking this item displays the corresponding screen and the [Screen Property] dialog.	
Figure/object type name (Object ID) (Name)	The figures or objects having the same object ID are verified. The figure IDs are controlled internally and cannot be checked. When you cut or copy a figure and then paste it to the location where the original figure has been placed, if the original and pasted figures have different IDs, the figures are handled as different data. The name appears when it is set for a figure or object. Double-clicking this item selects the corresponding figure or object on the screen editor.	

(5) [Mobile Screen]

Verifies the mobile screens that exist in a project by screen No.
Also verifies the following items set in each screen.

[Item]	Remarks	Supported models
[Screen Property]	Double-clicking this item displays the corresponding screen and the [Screen Property] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Figure/object type name (Object ID) (Name)	The figures or objects having the same object ID are verified. The figure IDs are controlled internally and cannot be checked. When you cut or copy a figure and then paste it to the location where the original figure has been placed, if the original and pasted figures have different IDs, the figures are handled as different data. The name appears when it is set for a figure or object. Double-clicking this item selects the corresponding figure or object on the screen editor.	
[(Unmatched figure/object stacking order)]	The placement orders of figures or objects, and the states of grouping are verified. This item appears when the numbers of placed figures or objects are the same. The verification starts from the rearmost figure or object. Double-clicking this item selects a figure or object in which the first placement order difference is detected. When the placement order of a figure or object is directly changed, double-clicking this item may select any figure or object whose placement order is affected by the change. The placement order also differs when figures or objects are grouped.	

(6) [Common]

[Item]		Remarks	Supported models
[GOT Type Setting]		Double-clicking this item displays the [Type Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Environmental Setting]	[Screen Switching/Windows]	Double-clicking this item displays the corresponding setting screen of the [Environmental Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Language Switching]		
	[Dialog window]		
	[Key Window]		
	[System Information]		
	[Security]		
	[Operation Log]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
	[Internal Device Retention]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2103-P)
	[Kana-Kanji/Pinyin Conversion]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
	[Startup Logo]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Item]		Remarks	Supported models
[GOT Setup]	[Display Setting/Language Setting]	Double-clicking this item displays the corresponding setting screen of the [GOT Setup] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[GOT ID No]		
	[Operation Setting/Utility Call Key]		
	[USB Host]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT25HS-V) (Only available to GT2107-W for GT21)
	[Time Setting]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Transparent Mode Setting]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[GOT Internal Device Monitor]		
	[SoftGOT-GOT Link]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[VNC Server]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
	[Sequence Program Monitor]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Backup/Restoration]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT SoftGOT2000 (Multiple channels) for GT SoftGOT2000)
	[Wireless LAN Setting]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)

[Item]		Remarks	Supported models
[GOT Setup]	[System Launcher]	Double-clicking this item displays the corresponding setting screen of the [GOT Setup] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[iQSS Utility]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[CSP+ for iQSS Data Write]		
[Controller Setting (I/F Communication Setting)]		Double-clicking this item displays the [I/F Communication Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Controller Setting]		Double-clicking this item displays the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Ethernet Setting]		Double-clicking this item displays the [Controller Setting] window. Even when a setting difference is detected in any of the channels, the CH1 setting screen appears.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Network/Duplex Setting]	[Routing Information]	Double-clicking this item displays the corresponding setting screen of the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Getaway Server]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Getaway Client]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Mail]		
	[FTP Server]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[File Transfer]		
	[MELSEC Redundant]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Station No. Switching]		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Buffer Memory Unit No. Switching]		Double-clicking this item displays the [Buffer Memory Unit No. Switching] setting screen of the [Controller Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Item]		Remarks	Supported models
[Peripheral Setting] (excluding destination I/F)	[Bar Code]	Double-clicking this item displays the [Bar Code] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[RFID]	Double-clicking this item displays the [RFID] dialog.	
	[PC Remote Operation]	Double-clicking this item displays the [PC Remote Operation] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[VNC Server]	Double-clicking this item displays the [VNC Server] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
	[Video/RGB Input]	Double-clicking this item displays the [Video/RGB Input] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Multimedia]	Double-clicking this item displays the [Multimedia] dialog.	
	[External I/O / Operation Panel]	Double-clicking this item displays the [External I/O / Operation Panel] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT25-W, GT2505-V, and GT25HS-V)
	[Printer]	Double-clicking this item displays the [Printer] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2105-Q)
[GOT Network Interaction]		Double-clicking this item displays the [GOT Network Interaction] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[GOT Mobile Setting]		Double-clicking this item displays the [GOT Mobile Setting] window.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Label] (label (GT Designer3))		The data is verified by label group No. Double-clicking this item displays the [Label Group] window for the corresponding label group.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Comment]		The data is verified by comment group No. Double-clicking this item displays the [Comment List] window for the corresponding comment group.	

[Item]		Remarks	Supported models
[Alarm]	[Alarm Common Setting]	Double-clicking this item displays the [Alarm Common Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[User Alarm Observation]	The data is verified by alarm ID. Double-clicking this item displays the [User Alarm Observation] dialog for the corresponding alarm ID.	
	[System Alarm Observation]	Double-clicking this item displays the [System Alarm Observation] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Alarm Popup Display]	Double-clicking this item displays the [Alarm Popup Display] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Logging]		The data is verified by logging ID. Double-clicking this item displays the [Logging] dialog for the corresponding logging ID.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Recipe]	[Recipe Common Setting]	Double-clicking this item displays the [Recipe Common Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Recipe]	The data is verified by recipe No. Double-clicking this item displays the [Recipe] dialog for the corresponding recipe No.	
[Device Data Transfer]		The data is verified by device data transfer ID. Double-clicking this item displays the [Device Data Transfer] dialog for the corresponding device data transfer ID.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Trigger Action]		Double-clicking this item displays the [Project] tab of the [Trigger Action] dialog.	
[Time Action]		Double-clicking this item displays the [Time Action List] dialog.	
[Hard Copy]		Double-clicking this item displays the [Hard Copy] dialog.	
[Script]	[Script]	Double-clicking this item displays the [Project] tab of the [Script] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Script Text]	Double-clicking this item displays the [Script File List] dialog.	
	[Object Script Symbol]	Double-clicking this item displays the [Object Script Symbol] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[MES Interface]		Double-clicking this item displays the [MES Interface] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Application Setting]		Double-clicking this item displays the [System Application] tab of the [Application Selection] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Parts]	[Parts Setting]	Double-clicking this item displays the [Parts Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Parts]	The data is verified by registered part. Double-clicking this item displays the parts editor for the corresponding part.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Item]		Remarks	Supported models
[Sound Files]	[Touch Key Sound Setting]	Double-clicking this item displays the [Touch Key Sound Setting] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Sound Files]	The data is verified by registered sound file. Double-clicking this item displays the [Sound File List] dialog.	(Except GT2505-V and GT25HS-V)
[Project information]		The latest update date and the edit version history are not included in the verification targets. Double-clicking this item displays the [Project information] dialog.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(7) [Individual Identification Information]

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The following pieces of information are included in the individual identification information.

- [GOT ID]
- [GOT Net No.]
- [GOT Station]
- [GOT IP Address]
- [Subnet Mask]
- [Default Gateway]
- [Peripheral S/W Communication Port No.]
- [Transparent Port No.]
- [IP Filter Setting]
- [Restrict write from GT Designer3 of the older versions]

Double-clicking this item displays the [I/F Communication Setting] dialog.

(8) [Communication Settings with GOT / IP List]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Double-clicking this item displays the [Communication Configuration] dialog.

(9) [System Label]

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Displaying the setting dialog by double-clicking is not available.

■2 Verification items for time stamp check

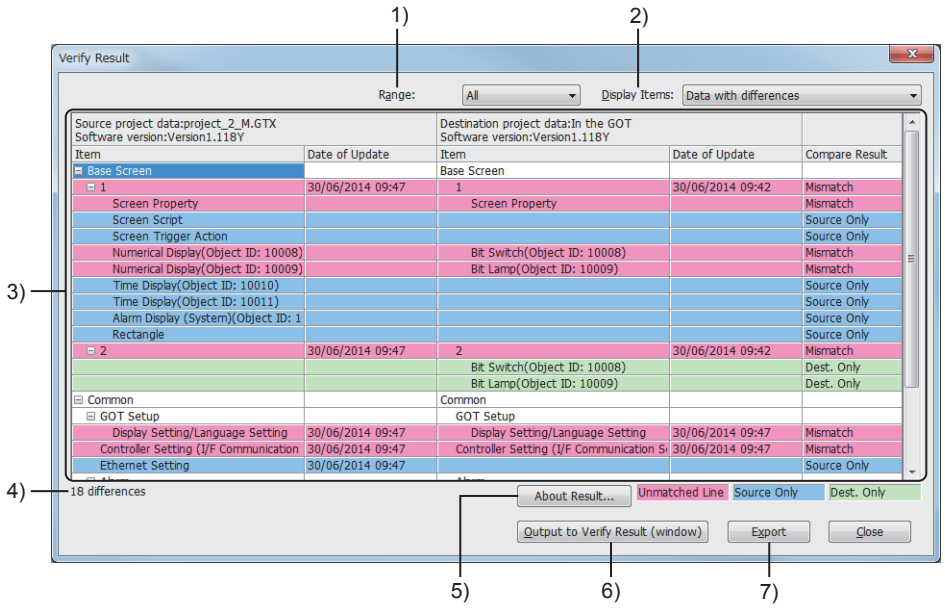
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the items to be verified by the time stamp check.
The time stamp check does not support displaying a setting dialog from a verification result.

[Item]	Remarks	Supported models
[Base Screen]	Verifies the base screens that exist in a project by screen No.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Window Screen]	Verifies the window screens that exist in a project by screen No.	
[Report Screen]	Verifies the report screens that exist in a project by screen No.	
[Mobile Screen]	Verifies the mobile screens that exist in a project by screen No.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

[Item]		Remarks	Supported models
[Common]		The following settings are also verified. • [Project information] Except the last update date and the edit history. • [Screen Design]	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Startup Logo]		-	
[GOT Setup]		If [Connection Type] is set to [Ethernet] in the [Printer] dialog, the printer settings are verified.	
[Controller Setting (I/F Communication Setting)]		-	
[Ethernet Setting]		-	
[Label] (label (GT Designer3))		The data is verified by label group No.	
[Comment]		The data is verified by comment group No.	
[Recipe]	[Recipe Common Setting]	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	[Recipe]	The data is verified by recipe No.	
[Device Data Transfer]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[MES Interface]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Application Setting]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Parts]		-	
[Sound]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Individual Identification Information]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Communication Settings with GOT / IP List]		-	
[System Label]		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
[Label] (label (GT Designer3))		-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

11.5.6 [Verify Result] dialog



1) **[Range]**
Narrow the displayed contents of the verification results by selecting a verification item.
The following shows selectable items.
- [All]
- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen] (GT27, GT25, and GS25)
- [Common settings]

2) **[Display Items]**
Narrow the displayed contents of the verification results by selecting the type of differences.
The following shows selectable items.
- [All]
- [Data with differences]
- [Data that exists in the source only]
- [Data that exists in the destination only]
- [Mismatched data]

3) **Verification results**
Displays the results of verification.
In each row, the target item for verification is shown.
The item that has been set for neither the project being edited nor the verification target project is not displayed.
The verified items differ depending on the verification method.
(For the verification against a project stored in a personal computer, the verification method available is only the data check.)

➟11.5.5 ■1 Verification items for data check
11.5.5 ■2 Verification items for time stamp check

The background color of a row varies according to the type of a difference.
- Blue: The item exists only in the verification source project.
- Green: The item exists only in the verification target project.
- Red: The item has a difference in its data.

Item	Description
[Source project data]	Displays the information of the project being edited.

Item	Description
[Destination project data]	Displays the information of the verification target project.
[Compare Result]	Displays the presence/absence and the type of differences.

4) **Number of differences**
This item appears when any difference exists.
When the verification method is set to the data check, the item (screen number or title) immediately below the [Base Screen], [Window Screen], [Report Screen], or [Mobile Screen] row is not counted.

5) **[About Result] button**
Displays Help.

6) **[Output to Verify Result (window)] button**
This item appears only when the verification method is set to the data check.
Displays the verification results in the [Verify Result] window.
The settings of [Range] and [Display Items] are retained.
Even if the [Verify Result] dialog is closed, you can check the verification results.

➟11.5.5 [Verify Result] window

7) **[Export] button**
Saves the verification results as a Unicode text file.
Set [File name] and click the [Save] button in the displayed dialog.

➟11.5.7 Details of the exported file

11.5.7 Details of the exported file

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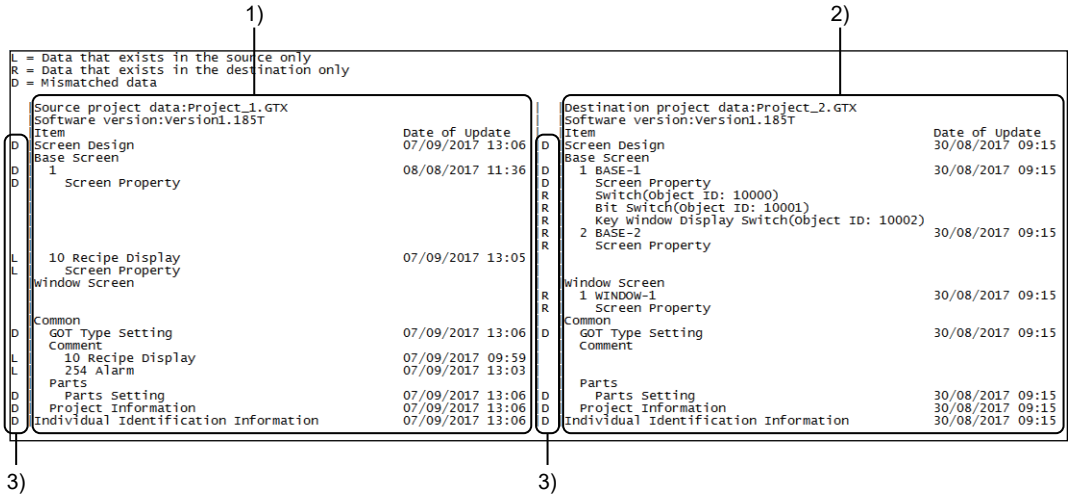
The following shows the details of the exported file of verification results.



1) **[Source project data]**
Displays the information of the project being edited.
In each row, the target item for verification is shown.

➟11.5.1 ■2 Verification method

2) **[Destination project data]**
Displays the information of the verification target project.
In each row, the target item for verification is shown.

➟11.5.1 ■2 Verification method

3) **Types of differences**
Displays the types of differences.

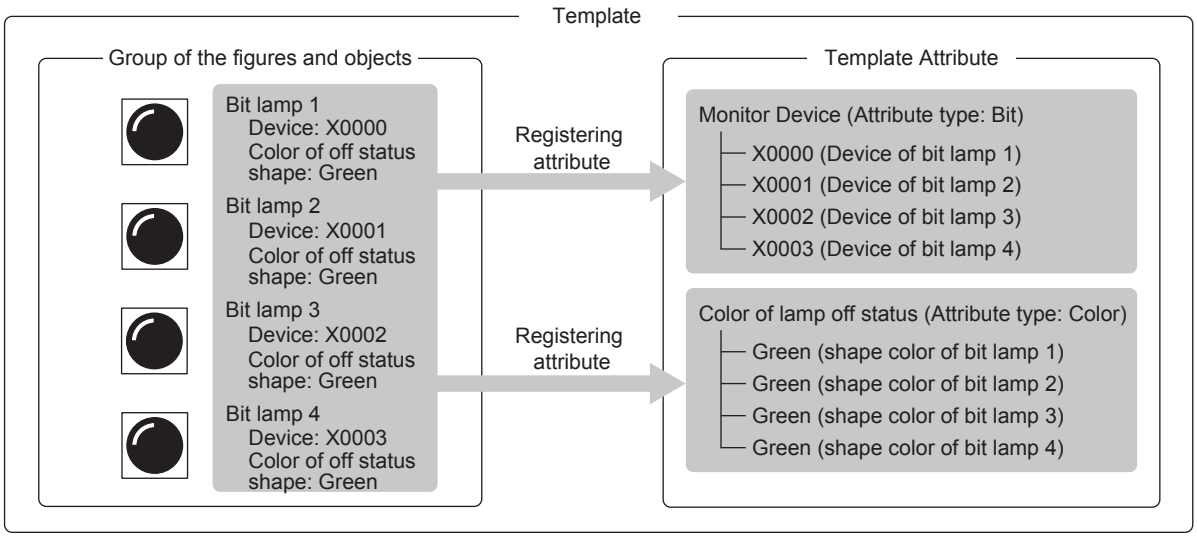
- [L]: The item exists only in the verification source project.
- [R]: The item exists only in the verification target project.
- [D]: The item has a difference in its data.

11.6 Efficient Drawing with Templates

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Templates are the combination of the following group and information.

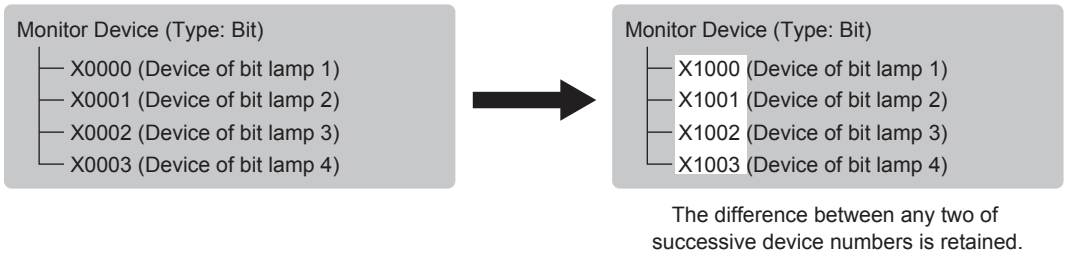
- Group of the figures and objects on the screen editor
- The attribute information for the above group (template attribute)



For the attributes registered into template attributes, the set values can be batch changed.
Because the attributes of figures and object do not need changing separately, drawing data can be utilized efficiently.

- Batch changing successive devices by changing the first device with the difference between any two of successive device numbers retained

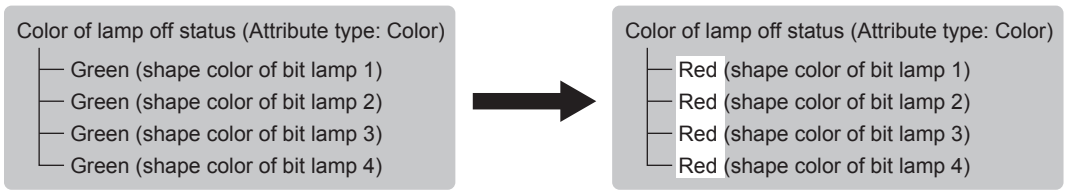
  Example) Changing the first device of the device range (X0000 to X0003) of a template attribute to X1000



The difference between any two of successive device numbers is retained.

- Batch changing the color

  Example) Changing the lamp color of a template attribute from green into red



The colors of all the lamps are changed to red.

If created templates are registered in the library, they can be utilized in creating another screen.

➟11.6.1 Specifications of the template
11.6.2 How to use the template
11.6.3 Precautions
11.6.4 [Edit Template Attribute] dialog
11.6.5 [Register to Template] dialog
11.6.6 [Property] window (when the template property is displayed)

11.6.1 Specifications of the template

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥■1 Figures and objects that can be registered in a template
■2 Template attributes and the types of attributes that can be registered
■3 Displaying templates on the screen editor

■1 Figures and objects that can be registered in a template

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The figures and objects on the same screen editor can be registered in a template.
Figures and objects that have been registered in a template cannot be registered in another template.

■2 Template attributes and the types of attributes that can be registered

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

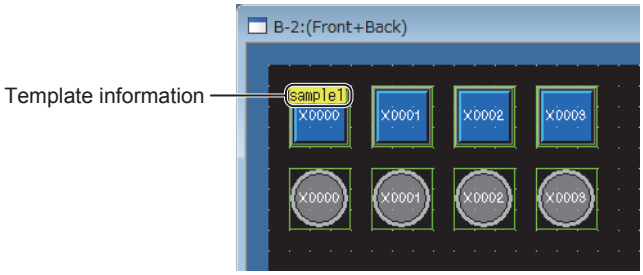
Up to 255 template attributes can be possessed by a single template.
The following shows the types of the attributes that can be registered as template attributes.

- Bit (device)
- Word (device)
- Numerical value
- Character string
- Color
- Figure
- Font
- Text size

■3 Displaying templates on the screen editor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

When a template is placed on the screen editor, a template information box that indicates the existence of the template is shown.



The template information box displays the template's name.
The information boxes can be used to rearrange the figures and objects registered in the template and to open the editor screen for the template.

(1) Displaying template information boxes

Template information boxes are displayed only on the screen editor of GT Designer3.
The boxes are not displayed in the [Screen Preview] window and [Data View] window of GT Designer3, and on the GOT display screen.

(2) Display settings for template information boxes

Display/hide template information boxes and change their background colors in the [View] tab of the [Options] tab.
The text of the template name is displayed in the color set for [Device/Object ID Text Color].

➥11.10.5 ■1 [Options] dialog ([View] tab)

(3) Operations on template information boxes

- Template information boxes can be moved as in the case of figures and objects.

To move a template information box simultaneously with registered figures and objects, select them together.
When a template information box is double-clicked, all the registered figures and objects are selected.

- When a copy and paste, replication, and consecutive copy operation are performed on a template information box, the registered figures and objects are also processed.
- Rotation, reversing, and part registration cannot be performed.

11.6.2 How to use the template

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Creating screens using templates
■2 Creating and editing templates
■3 Registering templates at the library
■4 Canceling template settings

■1 Creating screens using templates

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➟(1) Before utilizing templates
(2) Utilizing templates of the library
(3) Checking the attributes of the figures and objects in templates
(4) Batch changing the set values for attributes
(5) Changing by attribute

(1) Before utilizing templates

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Certain templates require settings necessary for the project in which the templates are utilized, such as the controller setting and Go To Screen switch setting.
Check the settings of the template to be utilized and set necessary items for the project.
The following shows the required settings for the project in which templates are utilized.

(a) **Controller setting**

Before pasting templates, set the items in the [Controller Setting] dialog.

➟5.5.1 ■4 [Controller Setting]

If the settings for a pasted template are not supported by the set controller, the device settings are changed as described below.

- The devices are changed to the equivalents supported by the controller.
- The devices not supported by the set controller (because the equivalents do not exist or they are outside the acceptable setting range) are changed to [??].

When setting a controller that does not support the settings for the template, check and change the device settings.

(b) **Common setting**

When utilizing templates in which user alarm displays and historical trend graphs are used, set necessary common setting items, such as user alarm observation and logging.

(c) **Go To Screen switch setting**

After pasting on a base screen a template in which a Go To Screen switch is placed, check and change [Screen No.] of the switch in consideration of the base screen No.

➟8.2.7 ■1 [Next Screen] tab

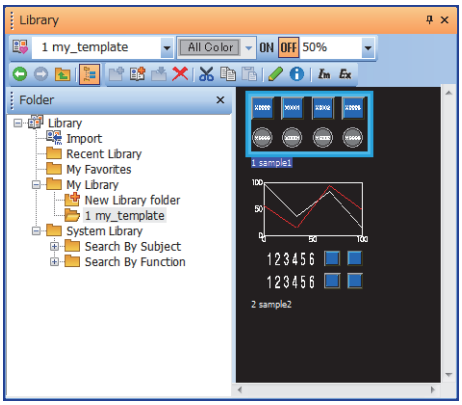
(2) Utilizing templates of the library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [View] → [Docking Window] → [Library List], [Library List (Template)] from the menu to display the [Library] window.

Step 2 Click the template to utilize, in the [Library] window.

➟8.1.4 [Library] window

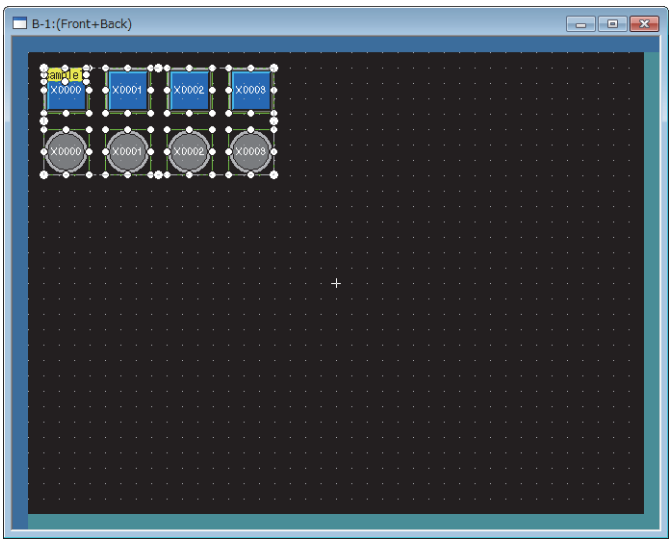


In My Library, you cannot check if the library data include the template.
Paste the template on the screen editor to check if the template information box is displayed.

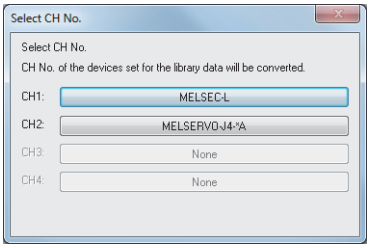
➟11.6.1 ■3 Displaying templates on the screen editor

Step 3 Click the screen editor to paste the template.

To change the sizes or positions of individual figures and objects, cancel the grouping.
Even if the grouping is canceled, the registration of the figures and objects in the template is not canceled.



For certain templates, the [Select CH No.] dialog is displayed when the templates are pasted.



Select the channel of the controller to monitor.
The controller devices that have been set for the template are changed as described below according to the controller on the selected channel.

- The devices are changed to the equivalents supported by the controller on the selected channel.
- The devices not supported by the controller on the selected channel (because the equivalents do not exist or they are outside the acceptable setting range) are changed to [??].

When selecting the channel of a controller that does not support the settings for the template, check and change the device settings.

(3) Checking the attributes of the figures and objects in templates

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

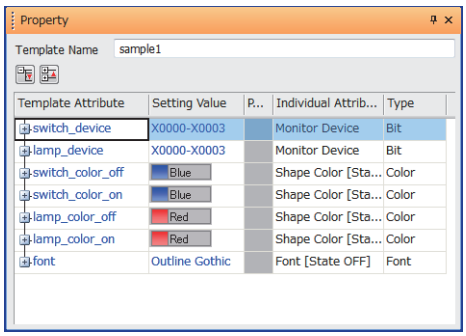
The following procedure shows how to check the set values for the attributes of the figures and objects in a template.

Step 1 When carrying out one of the following operations, the details of the settings for the template are displayed in the [Property] window.

- Double-click the template information box on the screen editor or in the [Data Browser] window.
- Right-click the template information box on the screen editor and select [Display Template Property] from the menu.
- On the screen editor or in the [Data Browser] window, select a figure or object that has been registered in the template and click the [Template Property] button displayed in the [Property] window.

Step 2 Check the set values for attributes in the [Property] window.

➟11.6.6 [Property] window (when the template property is displayed)



For the procedure for changing the set values, refer to the following.

➟(4) Batch changing the set values for attributes
(5) Changing by attribute

(4) Batch changing the set values for attributes

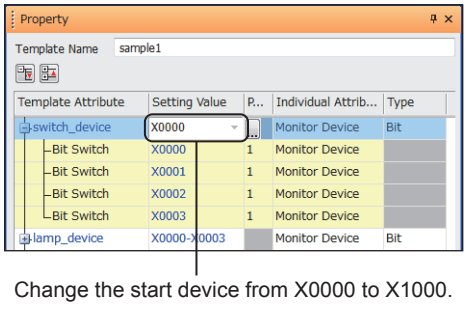
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the procedure for changing the set values for attributes in the [Property] window.
Example) When the template attribute is "Bit" and the same device is set for multiple registered attributes

Step 1 Display the details of the template with the [Property] window.

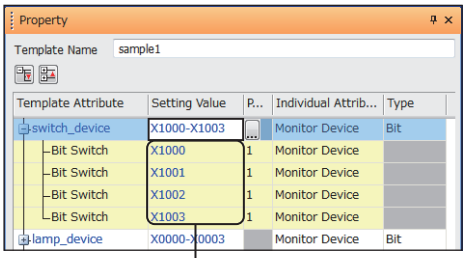
➟(3) Checking the attributes of the figures and objects in templates

Step 2 Change the set value for the attribute in the target template attribute row.



Change the start device from X0000 to X1000.

Step 3 The set values for the registered attributes in the template attribute are changed.



The set value for each attribute is changed according to the start device.

When a setting falls out of the input range as a result of the batch change, it causes an error.
If a set value falls out of the input range, the set values in the corresponding figure/object attribute row and the successive rows below are not changed.

The following describes the specifications of the batch change for each attribute.

(a) **Bit, word**

By changing the start device of the set values for attributes, the set values for the attributes below the start device can be batch changed. The difference between any two of successive device numbers is not changed.

Before

Template Attribute	Set value
Monitor device	X0000 to X001F
Bit lamp	X0000
Bit lamp	X0001
⋮	⋮
Bit lamp	X001F

Change the start device from X0000 to X1000.

After

Template Attribute	Set value
Monitor device	X1000 to X101F
Bit lamp	X1000
Bit lamp	X1001
⋮	⋮
Bit lamp	X101F

The set values are changed but the difference between any two of successive device numbers is not changed.

Devices' names can be also batch changed.

Before

Template Attribute	Set value
Monitor device	X0000 to X001F
Bit lamp	X0000
Bit lamp	X0001
⋮	⋮
Bit lamp	X001F

Change the start device's name from X to Y.

After

Template Attribute	Set value
Monitor device	Y0000 to Y001F
Bit lamp	Y0000
Bit lamp	Y0001
⋮	⋮
Bit lamp	Y001F

The device name is changed.

Batch change is enabled when the following conditions are satisfied.

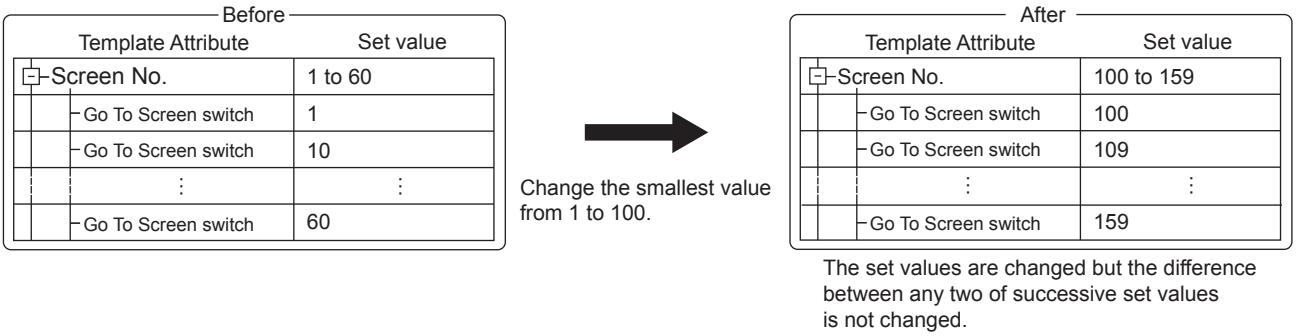
- Devices that have the same channel No., network No., station No., CPU No., and block No. are set for all the attributes.
- Devices that have the same name are set for all the attributes.

Even if the data types of the attributes are different, batch change is enabled.
To change the set values for all the attributes to the same device, change the set values for the attributes individually.

➟(5) Changing by attribute

(b) **Numerical value**

By changing the smallest of the set values for the attributes, the set values for the attributes can be batch changed. The difference between any two of successive set values is not changed.

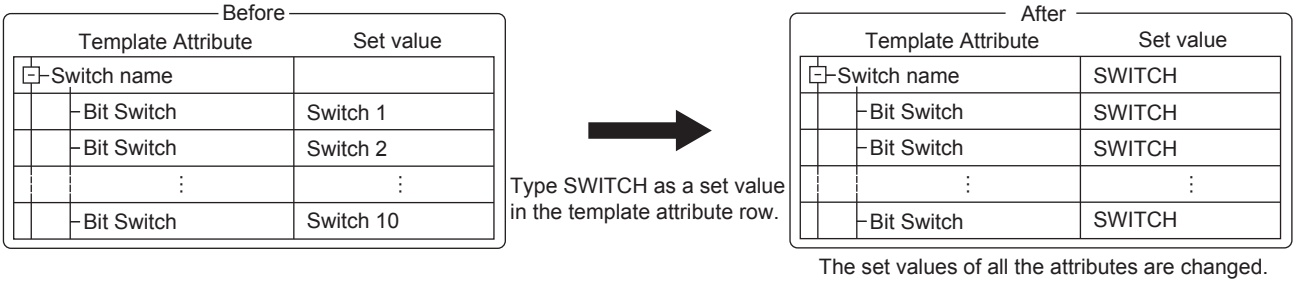


To change the set values for all the attributes to the same value, change the set values for the attributes individually.

➟(5) Changing by attribute

(c) **Character string**

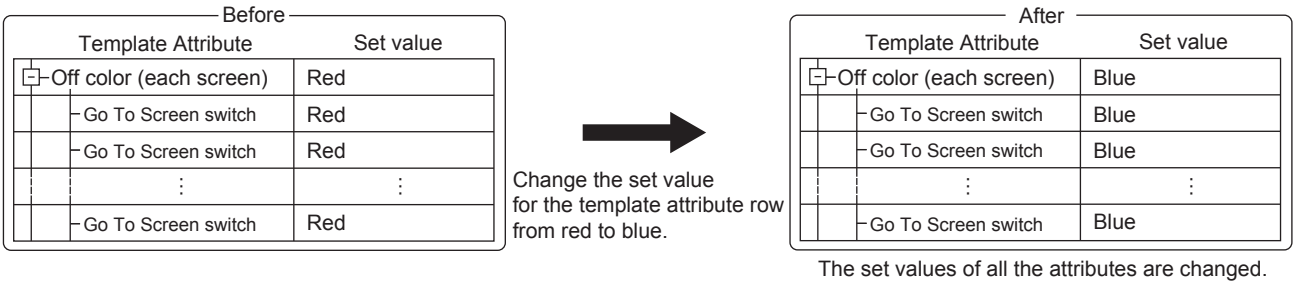
The set values for all the attributes can be batch changed to the same character string.



The maximum number of characters that can be typed in a single template attribute row is the same as the upper limit of the widest of all the acceptable input ranges for the registered attributes.
However, the maximum number of characters for each attribute is within the acceptable input range for each attribute.

(d) **Color**

The set values for all the attributes can be batch changed to the same color.



For the following attributes, different ways of setting colors are had. Hence if the attributes are mixed in the same template attribute, the colors are not batch changed.

- Text color of switches and lamps
- Color of the switches with their figures from the system library (color switching)
- Color of logo texts (color fill effect)

(e) **Figures, fonts, text sizes**

The set values for all the attributes can be batch changed to the same.

Example) When the type is text size

Before

Template Attribute	Set value
Text size	
Bit Switch	0.5×0.5 (width × length)
Bit Switch	1×1 (width × length)
⋮	⋮
Bit Switch	6×6 (width × length)

Change the set value for the template attribute row to 2×2 (width × length).

After

Template Attribute	Set value
Text size	2×2 (width × length)
Bit Switch	2×2 (width × length)
Bit Switch	2×2 (width × length)
⋮	⋮
Bit Switch	2×2 (width × length)

The set values of all the attributes are changed.

If the acceptable setting range for each attribute is the same, the sizes are batch changed.

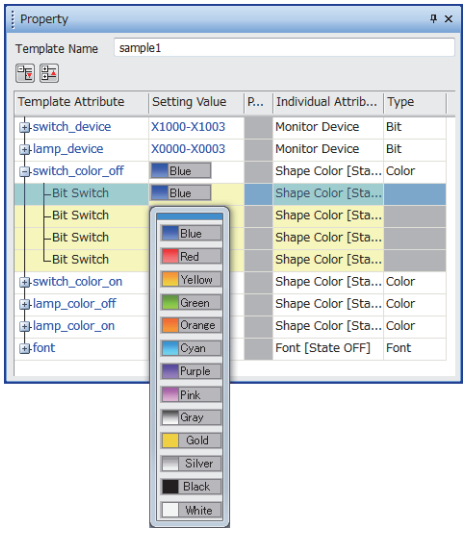
(5) Changing by attribute

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Display the details of the template with the [Property] window.

➟(3) Checking the attributes of the figures and objects in templates

Step 2 When the setting in a figure/object attribute row is changed, the set value for the attribute is changed.



If the model is a figure, the set value can be changed in the [Image List] dialog.

➟6.4.2 Color settings

■2 Creating and editing templates

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Creating templates and registering figures and objects into the templates

(2) Registering figures and objects into an existing template.

(3) Deleting figures and objects from a template

(4) Creating template attributes

(5) Deleting template attributes

(6) Registering attributes into template attributes

(7) Deleting attributes from the template attributes

(1) Creating templates and registering figures and objects into the templates

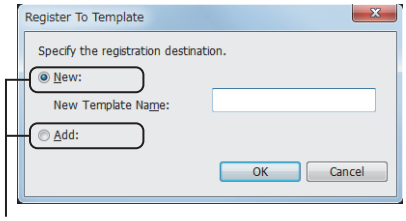
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 On the screen editor, select the figure or object to register in a template.

Step 2 Either of the following operations displays the [Register To Template] dialog.

• Select [Edit] → [Template Registration] → [Register to Template] from the menu.
• Right-click the figure or object and select [Template Registration] → [Register to Template] from the menu.

Step 3 Select [New] and set [New Template Name].



These items are not displayed
if there is no template on the screen editor.

Step 4 Click the [OK] button to display the [Edit Template Attribute] dialog.

➟11.6.4 [Edit Template Attribute] dialog

Step 5 Edit the template attribute then click the [OK] button to complete registering into the template.

When a new template is created, template attributes are displayed on the screen editor.
For the procedure for editing template attributes in the [Edit Template Attribute] dialog, refer to the following.

➟(4) Creating template attributes
(5) Deleting template attributes
(6) Registering attributes into template attributes
(7) Deleting attributes from the template attributes

(2) Registering figures and objects into an existing template.

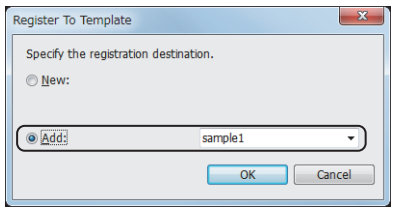
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 On the screen editor, select the figure or object to register in a template.

Step 2 Either of the following operations displays the [Register To Template] dialog.

• Select [Edit] → [Template Registration] → [Register to Template] from the menu.
• Right-click the figure or object and select [Template Registration] → [Register to Template] from the menu.

Step 3 Select [Add] then select the target template for registering.



Step 4 Click the [OK] button to display the [Edit Template Attribute] dialog.

➟11.6.4 [Edit Template Attribute] dialog

Step 5 Edit the template attribute then click the [OK] button to complete registering into the template.

For the procedure for editing template attributes in the [Edit Template Attribute] dialog, refer to the following.

➟(4) Creating template attributes
(5) Deleting template attributes
(6) Registering attributes into template attributes
(7) Deleting attributes from the template attributes

(3) Deleting figures and objects from a template

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 On the screen editor, select the figure or object to delete from the template.

Step 2 Either of the following operations deletes the figure or object from the template.

• Select [Edit] → [Template Registration] → [Deregister from Template] from the menu.
• Right-click the figure or object and select [Template Registration] → [Deregister from Template] from the menu.

(4) Creating template attributes

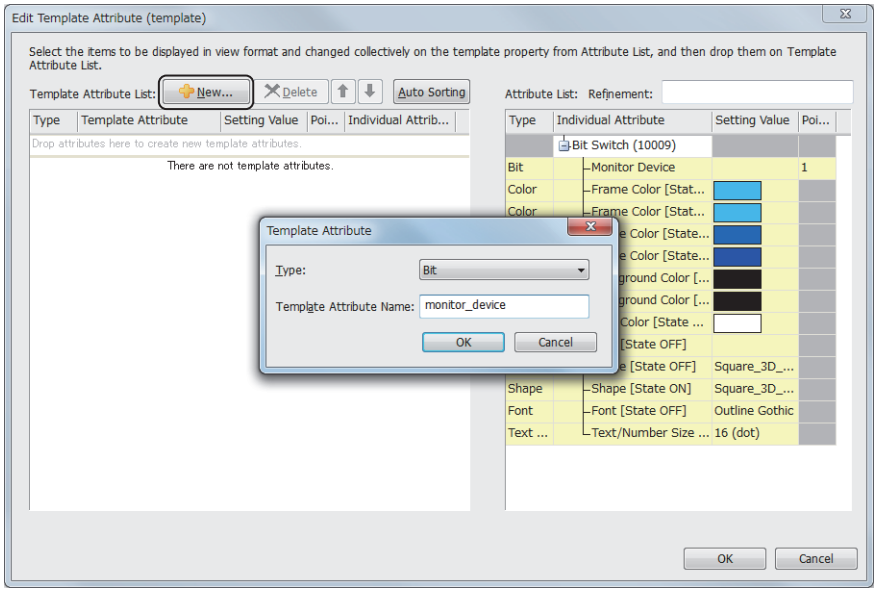
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Either of the following operations displays the [Edit Template Attribute] dialog.

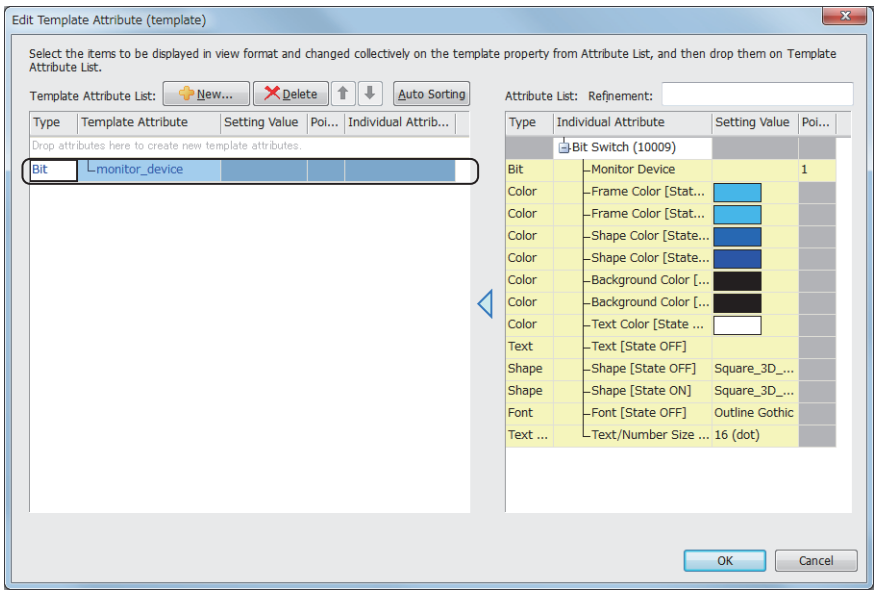
- Select the template information box or a figure/an object and select [Edit] → [Edit Template Attribute] from the menu.
- Right-click the template information box or the figure/object and select [Edit Template Attribute] from the menu.

➟11.6.4 [Edit Template Attribute] dialog

Step 2 Click the [New] button to display the [Template Attribute] dialog.



Step 3 Set [Type] and [Template Attribute Name] and click the [OK] button. The template attribute is created.



When the [Auto Sorting] button is clicked, the attributes in [Attribute List] are classified according to their types and are automatically registered in the automatically created corresponding template attributes.
Only the attributes in [Attribute List] are registered in the automatically created template attributes.
The target attributes for the automatic creation can be operated using [Refinement].
For the procedure for registering attributes in template attributes, refer to the following.

➟(6) Registering attributes into template attributes

(5) Deleting template attributes

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

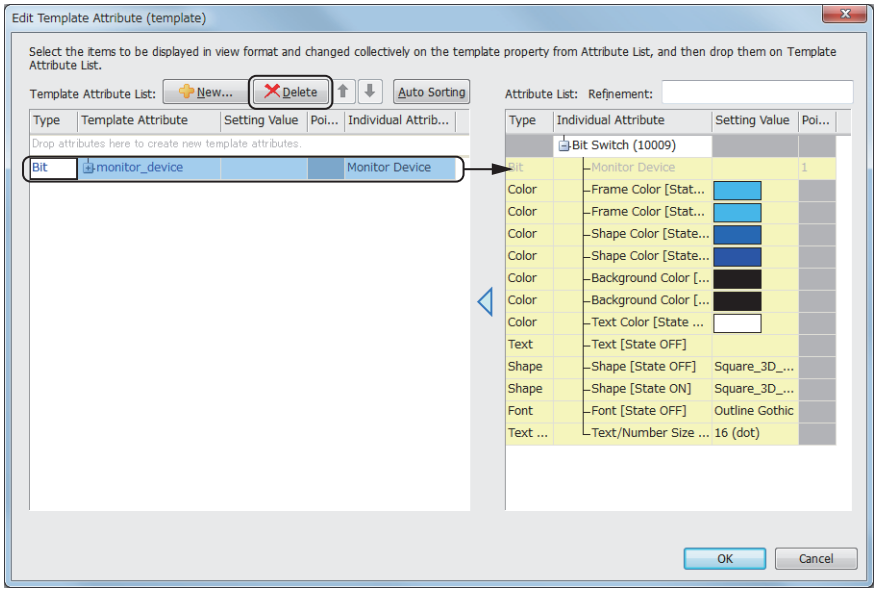
Step 1 Either of the following operations displays the [Edit Template Attribute] dialog.

- Select the template information box or a figure/an object and select [Edit] → [Edit Template Attribute] from the menu.
- Right-click the template information box or the figure/object and select [Edit Template Attribute] from the menu.

➟11.6.4 [Edit Template Attribute] dialog

Step 2 Either of the following operations deletes the template attribute.

- Drag the template attribute to delete from [Template Attribute List] to [Attribute List].
- Select the template attribute row to delete in [Template Attribute List] and click the [Delete] button.



The attributes that have been registered in the template attribute are also deleted.

(6) Registering attributes into template attributes

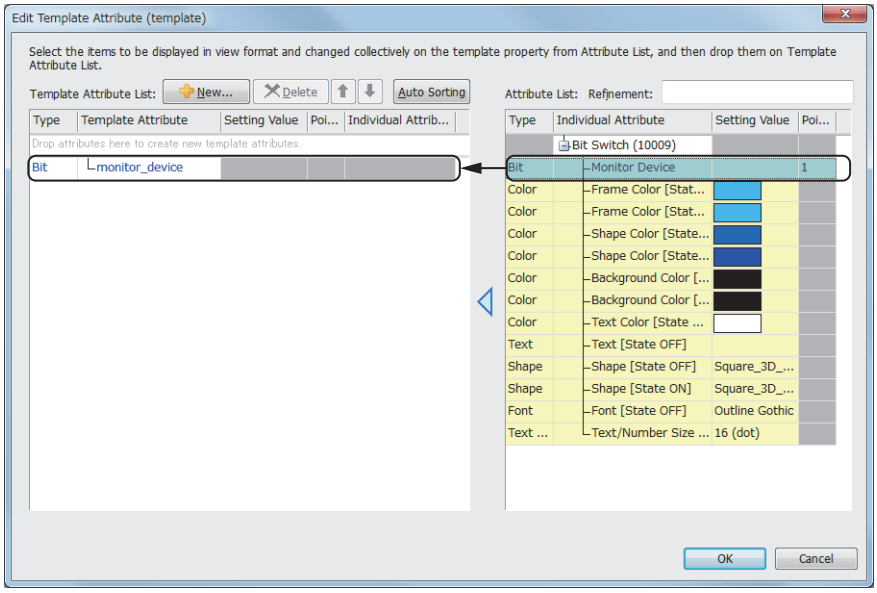
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Either of the following operations displays the [Edit Template Attribute] dialog.

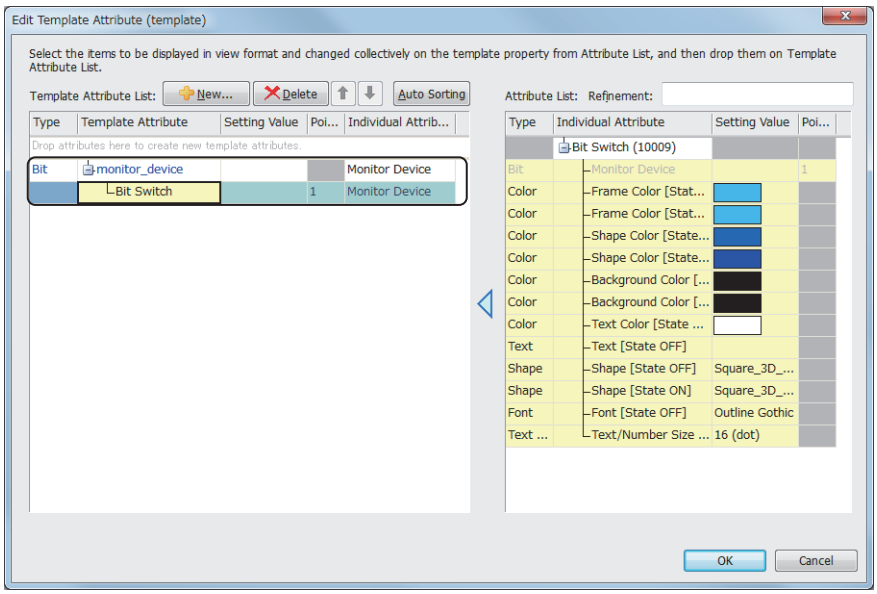
- Select the template information box or a figure/an object and select [Edit] → [Edit Template Attribute] from the menu.
- Right-click the template information box or the figure/object and select [Edit Template Attribute] from the menu.

➟11.6.4 [Edit Template Attribute] dialog

Step 2 Drag the target attribute from [Attribute List] into a template attribute row in [Template Attribute List].



Step 3 The dragged attribute is registered in the template attribute.



(7) Deleting attributes from the template attributes

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Either of the following operations displays the [Edit Template Attribute] dialog.

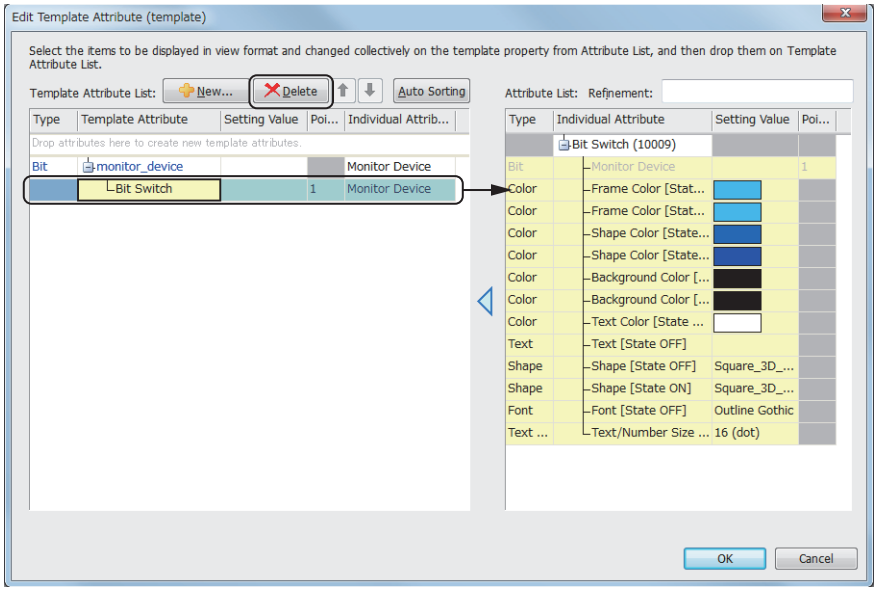
- Select the template information box or a figure/an object and select [Edit] → [Edit Template Attribute] from the menu.
- Right-click the template information box or the figure/object and select [Edit Template Attribute] from the menu.

➟11.6.4 [Edit Template Attribute] dialog

Step 2 Either of the following operations deletes the target attribute from the template attribute.

• Drag the attribute to delete from [Template Attribute List] to [Attribute List].

• Select the attribute row to delete in [Template Attribute List] and click the [Delete] button.



■3 Registering templates at the library

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

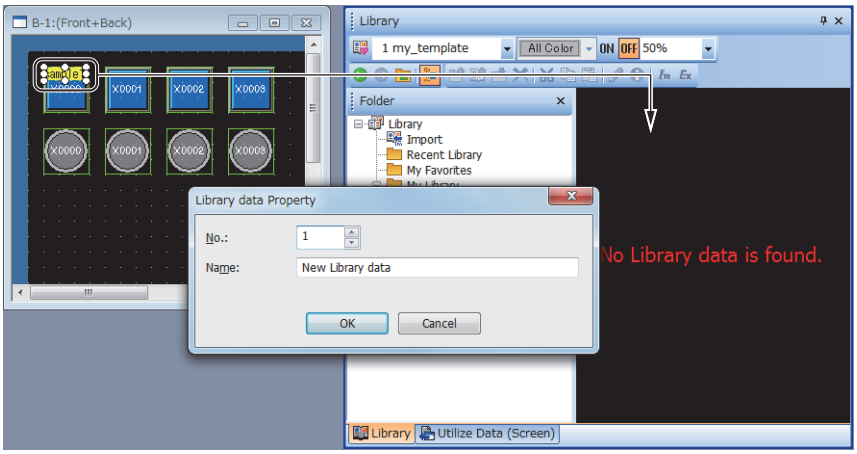
Step 1 Select [View] → [Docking Window] → [Library List] from the menu to display the [Library] window.

➟8.1.4 [Library] window

Step 2 In the [Library] window, display the folder into which the target template is registered.

The library folders into which templates can be registered are favorites and My Library.
To register into My Library, create a library folder in it.

Step 3 Drag into the [Library] window the template information box of the target template for registering into the library. The [Library data Property] dialog appears.



Step 4 In the [Library data Property] dialog, set [No.] and [Name], then click the [OK] button. The template is registered in the library.

■4 Canceling template settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 In the screen editor, select the template information box to delete.

Figures and objects selected together with the box are deleted simultaneously with the template.
When the template information box is double-clicked, all the registered figures and objects are selected.

Step 2 Either of the following operations cancels the target template setting.

• Select [Edit] → [Delete] from the menu.
• Right-click the template information box and select the [Delete] menu.

11.6.3 Precautions

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■1 Operations on figures and objects that have been registered in templates

(1) Registering into templates

Objects that have been registered in a template cannot be registered into another template.

(2) Replication operation

On figures and objects that have been registered in a template, a copy and paste, replication, and consecutive copy operation can be carried out.
However, replicas of figures and objects are not automatically registered into the template.

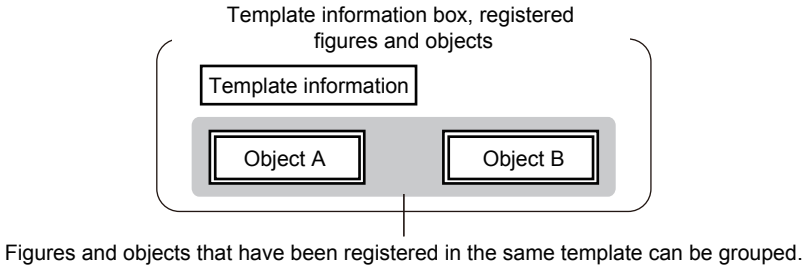
(3) Operations causing deletions from templates

When figures and objects that have been registered in a template are cut, deleted, or dragged onto another screen, they are deleted from the template.

(4) Grouping

Template information boxes and figures/objects that have been registered in templates are grouped only with the following combination.

• Figures and objects that have been registered in the same template



For the grouping method, refer to the following.

➟6.6.8 [Group], [Ungroup]

(5) Individual settings for figures and objects that have been registered in templates

The following describes the operations performed when the settings for figures and objects that have been registered in a template are changed individually in the setting dialog.

• When an attribute is added due to a change of the setting, the attribute is not automatically registered into the template attribute.
• When an attribute that has been registered in a template attribute is deleted due to a change of the setting, it is also deleted from the template attribute.
• After the setting is changed, if the change is canceled with [Undo], the registration status of the template attribute returns to the previous.

■2 Precautions of utilizing templates

The [Select CH No.] dialog is displayed only when the templates in the system library are utilized.
The dialog is not displayed when the templates that have been registered as favorites and in My Library. Also, Device conversion according to the controller setting is not carried out.

■3 Precautions of registering figures into a template

For cases where 10000 or more figures have been registered in a template, when the project is transferred to the GOT or data storage, the 10000th and those registered later are deleted from the template.
The project saved in the GOT or data storage is different from the one designed before the transfer. Exercise care when reading the project saved after the transfer.

11.6.4 [Edit Template Attribute] dialog

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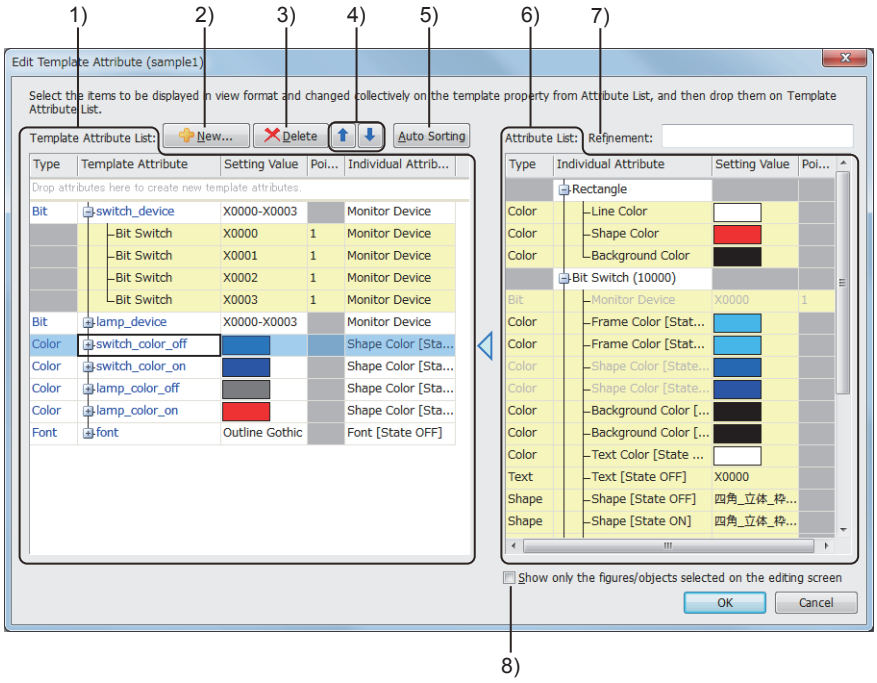
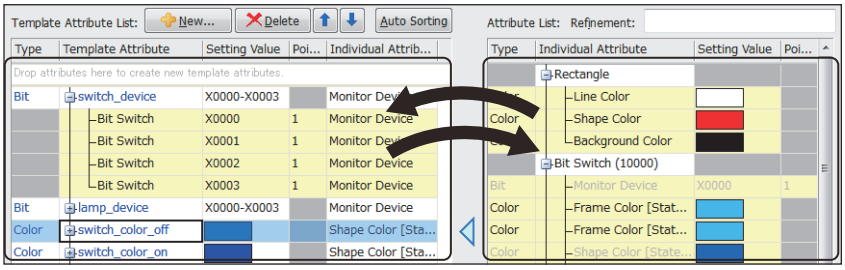


1) **[Template Attribute List]**

Lists template attributes.

Attributes can be dragged between [Template Attribute List] and [Attribute List] to register into/delete from the template attributes.

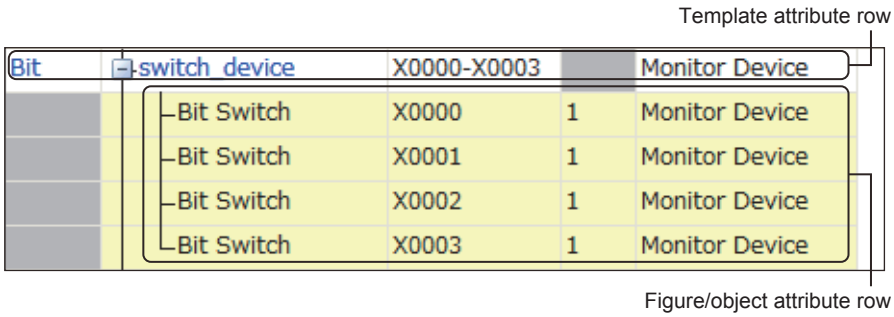


For the operations with the mouse or keyboard, refer to the following.

➥■1 Mouse and keyboard operations

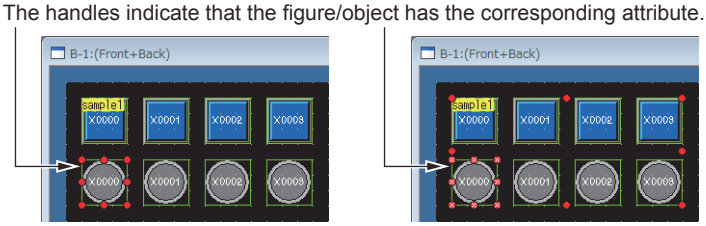
Up to 5000 figure/object attributes can be registered into a single template attribute.

The relation between a template attribute and the registered attributes are shown in a tree.



- Template attribute row: Displays template attributes.
- Figure/object attribute row: Displays the attributes of figures/objects that have been registered in the template attribute. When a row is selected, handles appear for the figure/object on the screen editor that has the corresponding attribute.

The handles indicate that the figure/object has the corresponding attribute.



If not grouped　　If grouped

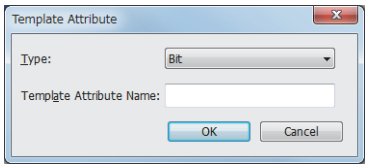
Item	Description
[Type]	Displays the types of the template attributes. To change the settings, double-click them. When the settings are changed, the registered attributes are deleted.
[Template Attribute]	Each row displays different contents. • Template attribute row: Displays the names of the template attributes. To change the settings, double-click them. Up to 128 characters can be set. • Figure/object attribute row: Displays the types of the figures or names of the objects. For the attributes of objects for which [Name] is not set, the types are displayed instead of the names.
[Setting Value]	Displays the set values for the attributes. They cannot be changed.
[Points]	Each [Type] displays different contents. • [Bit], [Word]: Displays the number of the consecutive devices. • [Number] having the consecutive or random setting: Displays the number of the consecutive values.
[Individual Attribute]	Each row displays different contents. • Template attribute row: Displays the names of the attributes that have been registered in the template attribute. Additionally, conditions are displayed if set. For a script part, the attribute name and execution order number of each script are displayed. • Figure/object attribute row: Displays the names of the figure/object attributes. Additionally, conditions are displayed if set. For a script part, the attribute name and execution order number of each script are displayed.

2) **[New] button**

Displays the [Template Attribute] dialog.

A template attribute can be created.

Up to 255 template attributes can be possessed by a single template.



- **[Type]**
  Select the type of the template attribute to create.
  The following shows selectable items.
  - [Bit]
  - [Word]
  - [Color]
  - [Number]
  - [Text]
  - [Shape]
  - [Font]
  - [Text Size]
- **[Template Attribute Name]**
  Set the name of the template attribute.
  Up to 128 characters can be set.

3) **[Delete] button**

Deletes a template attribute or attribute selected in [Template Attribute List].

When a template attribute is deleted, the attributes that have been registered in the template attribute are also deleted.

4) **[↑], [↓] button**

Moves a row selected in [Template Attribute List].

When a template attribute row is moved, the figure/object attributes that have been registered in the template attribute are also moved.

When multiple rows are selected, the difference between any two of successive rows is retained.

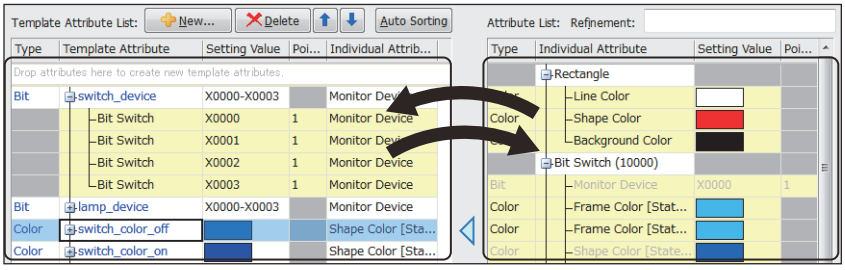
When a template attribute row is selected together with figure/object rows, they cannot be moved.

5) **[Auto Sorting] button**

Classifies all the attributes displayed in [Attribute List] according to set value and registers them into the template attributes automatically created in [Template Attribute List].
The classification method depends on [Type].

6) **[Attribute List]**

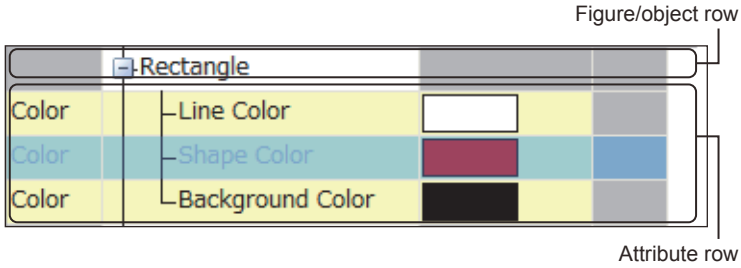
Lists the figures and objects that have been registered and those in the process of being registered.
Attributes can be dragged between [Template Attribute List] and [Attribute List] to register into/delete from the template attributes.



For the operations with the mouse or keyboard, refer to the following.

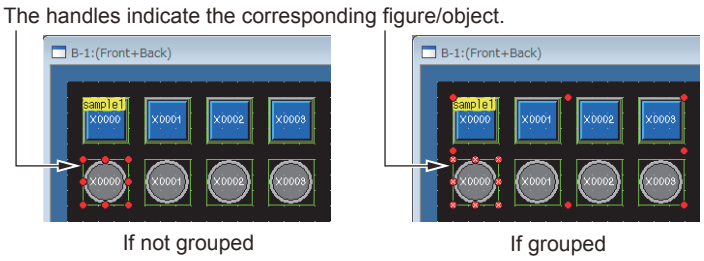
➟■1 Mouse and keyboard operations

The text color of the attributes that have already been registered becomes gray.
The relation between figures/objects and attributes are shown in a tree.



- Figure/object row: Displays the figures and objects.
- Attribute row: Displays the attributes the figures and objects have.

Clicking the top row sorts the results by item.
When a row is selected, the corresponding figure/object on the screen editor is displayed.



Item	Description
[Type]	Displays the types of the attributes.
[Individual Attribute]	Each row displays different contents. • Figure/object row: Displays the types of the figures or names of the objects and the object ID. For the attributes of objects for which [Name] is not set, the types are displayed instead of the names. • Attribute row: Displays the names of the figure/object attributes. Additionally, conditions are displayed if set. For a script part, the attribute name and execution order number of each script are displayed.
[Setting Value]	Displays the set values for the attributes. They cannot be changed.

Item	Description
[Points]	Each [Type] displays different contents. • [Bit], [Word]: Displays the number of the consecutive devices. • [Number] having the consecutive or random setting: Displays the number of the consecutive values.

7) **[Refinement]**
Narrows the displayed contents of [Attribute List] by keywords.
Up to 128 characters can be set.
This search operation is case-insensitive.
To narrow the contents using multiple keywords, separate each keyword with one-byte spaces.

8) **[Show only the figures/objects selected on the editing screen]**
Displays in [Attribute List] only the figures and objects selected on the screen editor when the [Edit Template Attribute] dialog is opened.
When the [Edit Template Attribute] dialog is opened for a newly created template, no entry is displayed.

■1 Mouse and keyboard operations

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(1) Operations for the lists on display

The following table describes the mouse and keyboard operations for [Template Attribute List] and [Attribute List] in the [Edit Template Attribute] dialog.

Operation	[Template Attribute List]	[Attribute List]
Arrow (Up/Down)	Moves the cursor.	Moves the focus upward or downward.
Arrow (Left)		• When a figure/object row is selected Folds an unfolded tree. If the tree has been folded, moves the focus upward. • When an attribute row is selected Moves the focus up to a figure/object row.
Arrow (Right)		• When a figure/object row is selected Unfolds a folded tree. If the tree has been unfolded, moves the focus downward. • When an attribute row is selected Moves the focus downward.
[Shift] + Arrow (Up/Down)	Moves the row while selecting the row where the cursor is positioned The destination row of the cursor is also selected.	Moves the row while selecting the row where the cursor is positioned The destination row of the cursor is also selected.
[+] (Numeric keypad)	Unfolds the tree of the template attribute row where the cursor was placed.	
[-] (Numeric keypad)	Folds the tree of the template attribute row where the cursor was placed.	
[Shift] + [+] (Numeric keypad)	Unfolds all the trees.	
[Shift] + [-] (Numeric keypad)	Folds all the trees.	
[Home]	Moves the cursor to the top row.	Selects the top row.
[End]	Moves the cursor to the bottom row.	Selects the bottom row.
[PageUp]	Moves the cursor up one page.	Moves the cursor up one page.
[PageDown]	Moves the cursor down one page.	Moves the cursor down one page.
[Shift] + [Home]	Selects the rows from the row where the cursor is positioned to the top row.	Selects the rows from the row where the cursor is positioned to the top row.
[Shift] + [End]	Selects the rows from the row where the cursor is positioned to the bottom row.	Selects the rows from the row where the cursor is positioned to the bottom row.
[Shift] + [PageUp]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.
[Shift] + [PageDown]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.
[Shift] + Click	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.
[Ctrl] + [Space]	Selects or deselects a row.	
[Ctrl] + click		

Operation	[Template Attribute List]	[Attribute List]
[F2]	Enables the cell where the cursor was placed to be edited. The target columns for editing are [Type] and [Template Attribute] in a template attribute row. ➟(2) Operations when a cell is edited	-
Double-click		
Drag	• Dragging from [Attribute List] to [Template Attribute List] Registers a dragged attribute into a template attribute. • Dragging from [Template Attribute List] to [Attribute List] Deletes a dragged attribute from a template attribute.	

(2) Operations when a cell is edited

The following table lists the keyboard operations for editing cells in [Template Attribute List].

Operation	[Template Attribute List]
[Enter]	Confirms and ends the edit.
[Esc]	Discards and ends the edit.

11.6.5 [Register to Template] dialog

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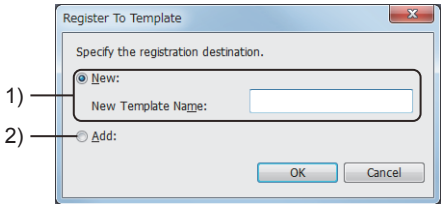

1) **[New]**

Newly creates a template into which figures and objects are registered.

Item	Description
[New Template Name]	Set the name of the template to create. Up to 128 characters can be set.

2) **[Add]**

Specifies an existing template as the target for registration.

Select the target template.

11.6.6 [Property] window (when the template property is displayed)

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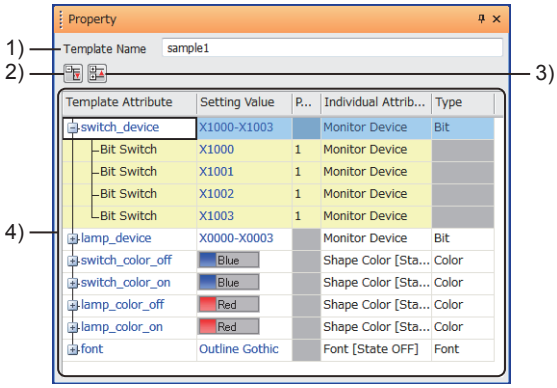
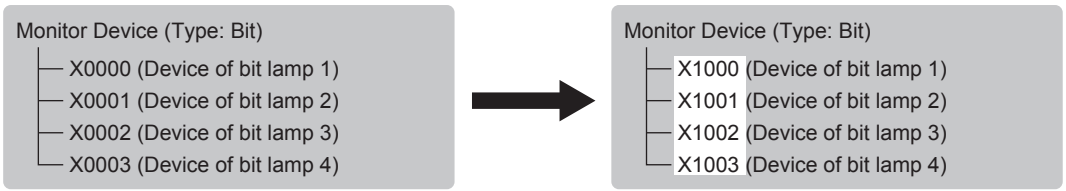
The following describes the screen layout shown when the template setting is displayed in the [Property] window.



1) **[Template Name]**
   Displays the template name.
   The name can be changed.
   Up to 128 characters can be set.
2) **[Unfold All] button**
   Expands all template attribute items.
3) **[Fold All] button**
   Collapses all template attribute items.
4) **Template attribute list**
   Lists template attributes.
   The set values for attributes can be batch changed by template attribute.
   Example) Changing the first device of the device range (X0000 to X0003) of a template attribute to X1000

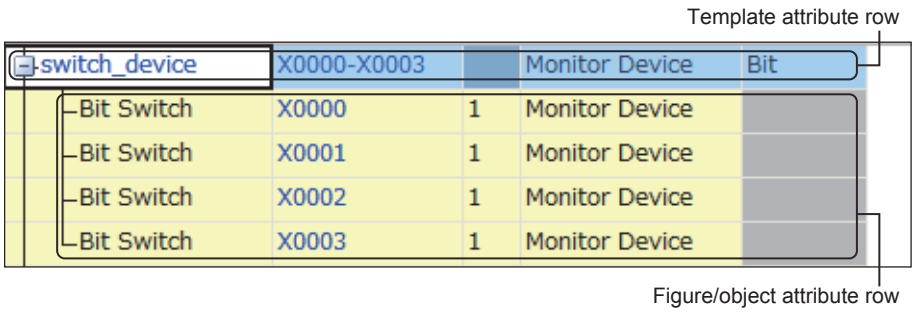


The difference between any two of successive device numbers is retained.

For the operations with the mouse or keyboard, refer to the following.

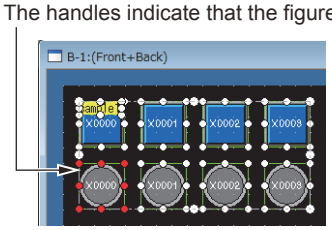
➟■1 Mouse and keyboard operations

The relation between a template attribute and the registered attributes are shown in a tree.

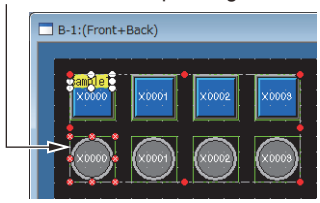


- Template attribute row: Displays the template attribute rows.
- Figure/object attribute row: Displays the attributes of figures/objects that have been registered in the template attribute.
  Clicking the top row sorts the results by item.
  When a row is selected, handles appear for the figure/object on the screen editor that has the corresponding attribute.

The handles indicate that the figure/object has the corresponding attribute.



If not grouped



If grouped

When a figure/object attribute row is double-clicked, the setting dialog of the corresponding figure/object is displayed.

Item	Description
[Template Attribute]	Each row displays different contents. • Template attribute row: Displays the names of the template attributes. To change the settings, double-click them. Up to 128 characters can be set. • Figure/object attribute row: Displays the types of the figures or names of the objects. For the attributes of objects for which [Name] is not set, the types are displayed instead of the names.
[Setting Value]	Each row displays different contents. • Template attribute row: Displays the background color of set values in white when the conditions for batch change are satisfied. Displays the background color of set values in gray when the conditions for batch change are not satisfied. For the conditions for batch change and the procedure for the change, refer to the following. ➟11.6.2 ■1 (4) Batch changing the set values for attributes • Figure/object attribute row: Displays the set values for figures and objects.
[Points]	Each [Type] displays different contents. • [Bit], [Word]: Displays the number of the consecutive devices. • [Number] having the consecutive or random setting: Displays the number of the consecutive values.
[Individual Attribute]	Each row displays different contents. • Template attribute row: Displays the names of the attributes that have been registered in the template attribute. Additionally, conditions are displayed if set. For a script part, the attribute name and execution order number of each script are displayed. • Figure/object attribute row: Displays the names of the figure/object attributes. Additionally, conditions are displayed if set. For a script part, the attribute name and execution order number of each script are displayed.
[Type]	Displays the types of the template attributes.

■1 Mouse and keyboard operations

(1) Operations for the lists on display

The following table shows how to operate the template attribute list in the [Property] window with the mouse or keyboard.

Operation	Action
Arrow (Up/Down/Left/Right)	Moves the cursor.
[Shift] + Arrow (Up/Down)	Moves the row while selecting the row where the cursor is positioned The destination row of the cursor is also selected.
[+] (Numeric keypad)	Unfolds the tree of the template attribute row where the cursor was placed.
[-] (Numeric keypad)	Folds the tree of the template attribute row where the cursor was placed.
[Shift] + [+] (Numeric keypad)	Unfolds all the trees.
[Shift] + [-] (Numeric keypad)	Folds all the trees.
[Home]	Moves the cursor to the top row.
[End]	Moves the cursor to the bottom row.
[PageUp]	Moves the cursor up one page.
[PageDown]	Moves the cursor down one page.

Operation	Action
[Shift] + [Home]	Selects the rows from the row where the cursor is positioned to the top row.
[Shift] + [End]	Selects the rows from the row where the cursor is positioned to the bottom row.
[Shift] + [PageUp]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.
[Shift] + [PageDown]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.
[Shift] + Click	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.
[Ctrl] + [Space]	Selects or deselects a row.
[Ctrl] + Click	
[Tab]	Moves the cursor to the right cell.
[Shift] + [Tab]	Moves the cursor to the left cell.
[Enter]	Moves the cursor downward by one row.
[Alt] + [Enter]	Displays the setting dialog for the figure/object corresponding to the figure/object attribute row where the cursor was placed.
[Ctrl] + [C]	• Template attribute row Copies the set value in the cell of [Template Attribute] where the cursor was placed as a character string. • Figure/object attribute row Copies the cell of [Setting Value] where the cursor was placed.
[Ctrl] + [V]	• Template attribute row Pastes a character string in the cell of [Template Attribute] being edited. • Figure/object attribute row Pastes in the cell of [Setting Value] where the cursor was placed.
[F2]	Enables the cell where the cursor was placed to be edited. The target columns for editing are [Template Attribute] (template attribute rows only) and [Setting Value]. ➟(2) Operations when a cell is edited
Double-click	• Columns of [Template Attribute] (template attribute rows only) and [Setting Value] Enables the cell to be edited. • Any cell other than above Displays the setting dialog for the shape/object having attributes. ➟(2) Operations when a cell is edited
Drag	• Dragging from [Attribute List] to [Template Attribute List] Registers a dragged attribute into a template attribute. • Dragging from [Template Attribute List] to [Attribute List] Deletes a dragged attribute from a template attribute.

(2) Operations when a cell is edited

The following table lists the keyboard operations for editing cells in [Template Attribute List].

Operation	Action
[Enter]	Confirms and ends the edit.
[Esc]	Discards and ends the edit.
[Tab]	Confirms the edit and moves the cursor to the right cell.
[Shift] + [Tab]	Confirms the edit and moves the cursor to the left cell.
[Alt] + [Enter]	Inserts a line feed when text is input.

11.7 Managing figures and objects by category

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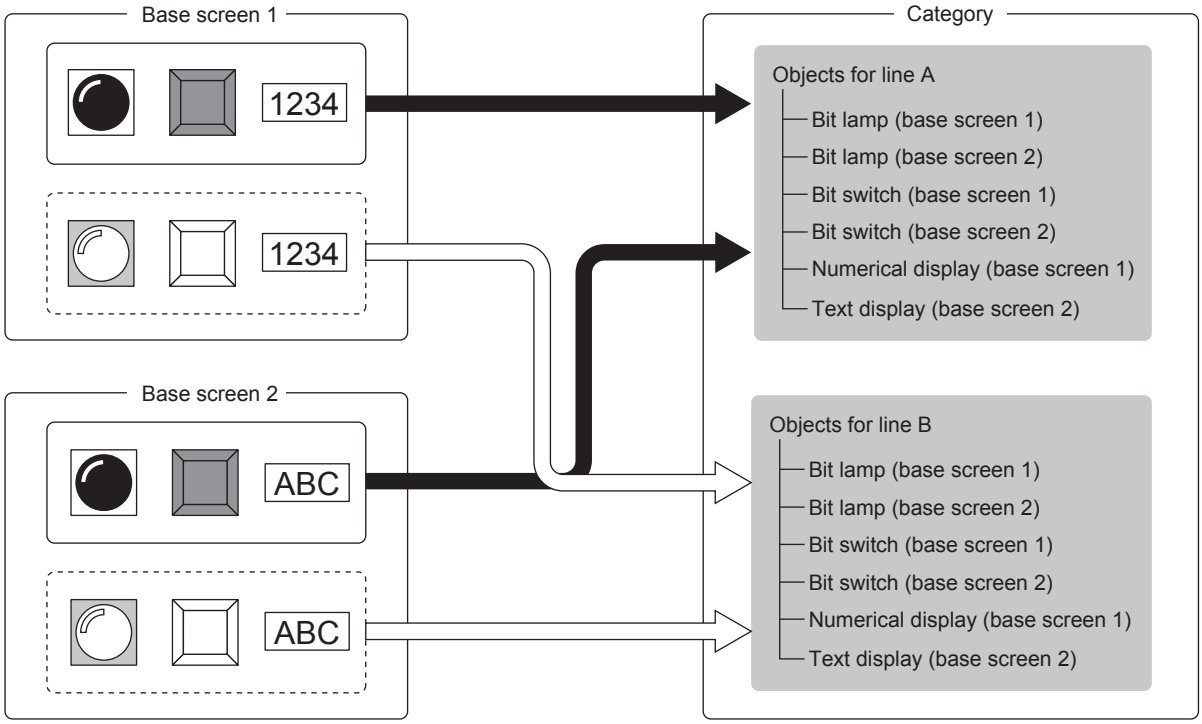
Figures and objects can be managed by grouping them into categories according to the usage.



The devices and shapes set for figures or objects can be changed by category in a batch.

➟11.7.1 Specifications of the category
11.7.2 How to use the category
11.7.3 Precautions
11.7.4 [Category List] window

11.7.1 Specifications of the category

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➟■1 Category type
■2 Registering into categories
■3 Operations which can be performed by category

■1 Category type

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[Switch], [Lamp], and [Other] are provided as default categories.
Categories can be created by a user.

■2 Registering into categories

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Each figure and object can be registered to one category.
One figure/object cannot be registered to multiple categories.
When figures and objects are placed on the screen editor, they are registered to the default categories as described below.

- Switch: Registered to [Switch].
- Lamp: Registered to [Lamp].
- Other than the above: Registered to [Other].

■3 Operations which can be performed by category

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The following shows the operations which can be performed on registered figures and objects on a category basis.

- Device batch edit:
  Change devices in a batch.
- Unit No./axis No. batch edit:
  Change unit numbers and axis numbers in a batch.
- Network batch edit:
  Change the network settings in a batch, such as the network number, station number, and CPU number.
- CH No. batch edit:
  Change channel numbers in a batch.
- Color batch edit:
  Change colors in a batch.
- Shape batch edit:
  Change the shapes of touch switches and lamps in a batch.

11.7.2 How to use the category

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Creating categories
■2 Changing the destination category for registering figures and objects
■3 Batch changing the settings by category

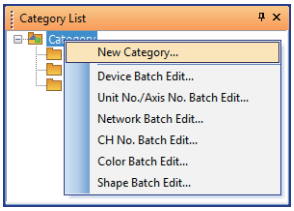
■1 Creating categories

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

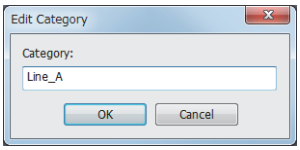
Step 1 Select [View] → [Docking Window] → [Category List] from the menu to display the [Category List] window.

➟11.7.4 [Category List] window

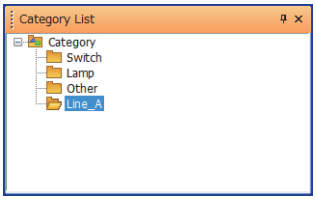
Step 2 Right-click any one of the categories and select [New Category] from the menu to display the [Edit Category] dialog.



Step 3 Set the name of a new category and click the [OK] button.
Up to 32 characters can be set.



Step 4 A category is created.



Creating a new category and registering a figure or an object to the category can be performed simultaneously.

➟11.7.2 ■2 (2) Changing from the menu
11.7.2 ■2 (3) Changing in the setting dialog of figure or object

■2 Changing the destination category for registering figures and objects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Changing in the [Category List] window
(2) Changing from the menu
(3) Changing in the setting dialog of figure or object

(1) Changing in the [Category List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

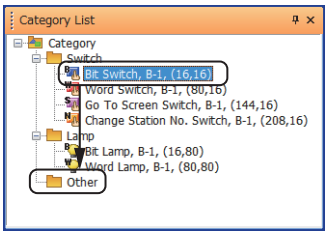
Step 1 Select [View] → [Docking Window] → [Category List] from the menu to display the [Category List] window.

➟11.7.4 [Category List] window

Figures and objects in a closed screen are not displayed in the [Category List] window.
Open the screen on which the target figure or object for putting into another category has been placed.

➟2.5.2 ■1 Opening screens

Step 2 Drag the target figure or object into the destination category. The category is changed.



(2) Changing from the menu

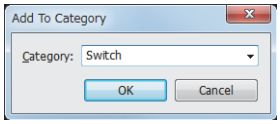
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select the target figure or object for placing into another category on the screen editor, then select [Edit] → [Add to Category] from the menu, and then select any one of the following categories.

- [Switch]
  Changes the destination category for registration to [Switch].
- [Lamp]
  Changes the destination category for registration to [Lamp].
- [Other]
  Changes the destination category for registration to [Other].
- [User-defined Category]
  Displays the [Add to Category] dialog.
  Change or create a category.
  Proceed to step 2.

Step 2 Set the destination category for registration for [Category] and click the [OK] button to change the category of the figure or object.

If [None] is selected, the figure or object is not registered to any categories.
If a nonexistent category is set, the category is newly created and the target is registered.
Up to 32 characters can be set.



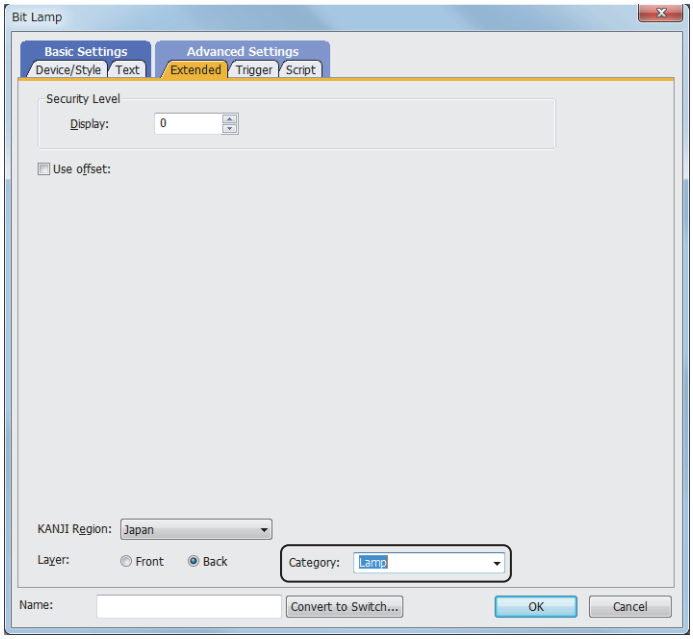
(3) Changing in the setting dialog of figure or object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 On the screen editor, double-click the target figure or object for placing into another category to display the setting dialog.

Step 2 Set the destination category for registration for [Category] and click the [OK] button to change the category of the figure or object.

If [None] is selected, the figure or object is not registered to any categories.
If a nonexistent category is set, the category is newly created and the target is registered.
Up to 32 characters can be set.
Example) The setting dialog of a bit lamp



■3 Batch changing the settings by category

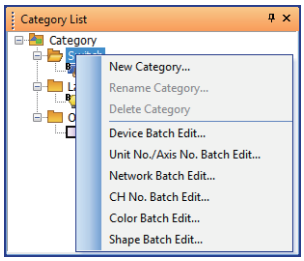
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [View] → [Docking Window] → [Category List] from the menu to display the [Category List] window.

➟11.7.4 [Category List] window

Step 2 Right-click any one of the categories and select the following menus according to the target settings for batch change.

- [Device Batch Edit]: Change devices in a batch.
- [Unit No./Axis No. Batch Edit]: Change unit numbers and axis numbers in a batch.
- [Network Batch Edit]: Change the network settings in a batch, such as the network number, station number, and CPU number.
- [CH No. Batch Edit]: Change channel numbers in a batch.
- [Color Batch Edit]: Change colors in a batch.
- [Shape Batch Edit]: Change the shapes of touch switches and lamps in a batch.



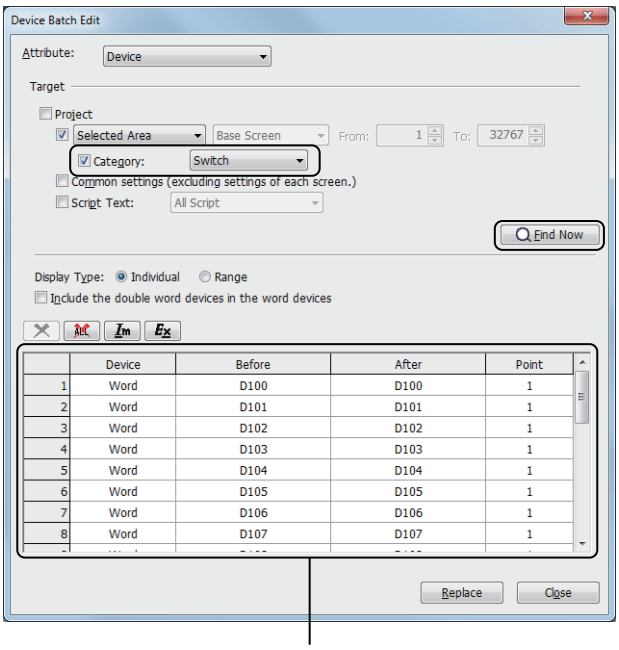
Step 3 The setting dialog which is corresponding to the selected menu is displayed.

For the description of each setting dialog, refer to the following.

➟11.8.4 ■3 [Device Batch Edit] dialog
11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog
11.8.4 ■5 [Network Batch Edit] dialog
11.8.4 ■6 [CH No. Batch Edit] dialog
11.8.4 ■7 [Color Batch Edit] dialog
11.8.4 ■8 [Shape Batch Edit] dialog

Step 4 Select the search target in [Category] and click the [Find Now] button to display the settings for which batch change is enabled.

Example) [Device Batch Edit] dialog



Settings for which batch change is enabled

Step 5 Change the settings in [After] and click the [Replace] button to apply the settings collectively.

11.7.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Project for which project security is set

If a login user does not have access to edit projects, the user cannot create or change any categories.

■2 Precautions for batch change

(1) Figures and objects not displayed in the [Category List] window

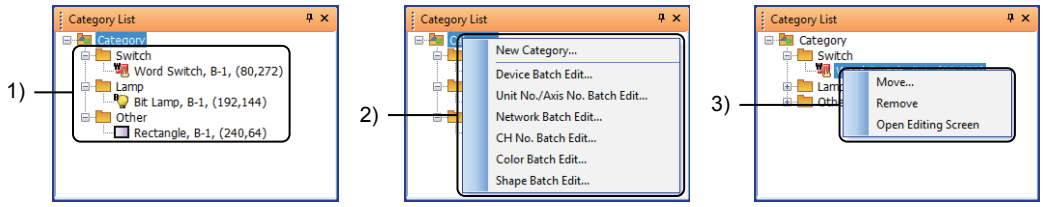
Figures and objects in a closed screen are not displayed in the [Category List] window.
However, figures and objects that have been registered in categories are identified as the targets for batch change even if the figures and objects are not displayed in the [Category List] window.

(2) Other precautions

➟11.8.4 ■2 Precautions

11.7.4 [Category List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

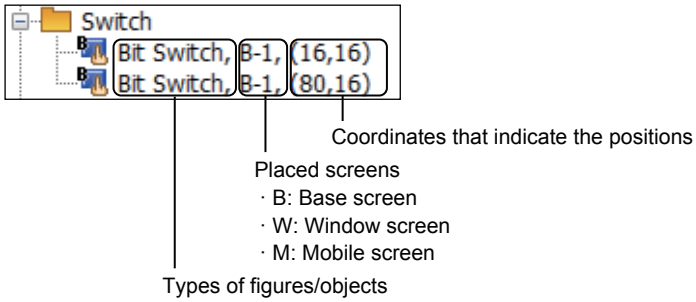


1) **Category list**

Lists the categories in the project.

[Switch], [Lamp], and [Other] are default categories.

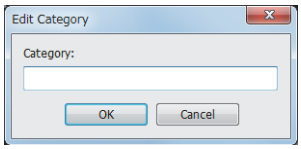
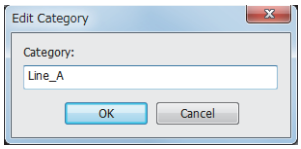
Registered figures and objects in each category are displayed in a tree view.



A category of figures and objects can be changed by dragging them to another category.

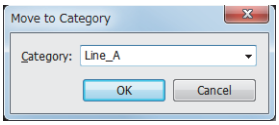
Right-click a category, a figure, or an object to display a menu for operating a category.

2) **Right-click menu of category**

Item	Description
[New Category]	Displays the [Edit Category] dialog. Create a new category.  **• Category I** Set a category's name. Up to 32 characters can be set.
[Rename Category]	Displays the [Edit Category] dialog. Change the name of the right-clicked category. The names of [Switch], [Lamp], [Other] cannot be changed.  **• Category I** Set a category's name. Up to 32 characters can be set.
[Delete Category]	Deletes the right-clicked category. The registered figures, objects are deleted from the category. [Switch], [Lamp], [Other] cannot be deleted.
[Device Batch Edit]	Displays the [Device Batch Edit] dialog. Change devices in a batch. ➟11.8.4 ■3 [Device Batch Edit] dialog

Item	Description
[Unit No./Axis No. Batch Edit]	Displays the [Unit No./Axis No. Batch Edit] dialog. Change unit numbers and axis numbers in a batch. ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog
[Network Batch Edit]	Displays the [Network Batch Edit] dialog. Change the network settings in a batch, such as the network number, station number, and CPU number. ➟11.8.4 ■5 [Network Batch Edit] dialog
[CH No. Batch Edit]	Displays the [CH No. Batch Edit] dialog. Change channel numbers in a batch. ➟11.8.4 ■6 [CH No. Batch Edit] dialog
[Color Batch Edit]	Displays the [Color Batch Edit] dialog. Change colors in a batch. ➟11.8.4 ■7 [Color Batch Edit] dialog
[Shape Batch Edit]	Displays the [Shape Batch Edit] dialog. Change the shapes of touch switches and lamps in a batch. ➟11.8.4 ■8 [Shape Batch Edit] dialog

3) Right-click menu of a figure or an object

Item	Description
[Move]	Displays the [Move to Category] window. Change the destination category for registration of the right-clicked figure or object.  • **Category I** Change the destination category for registration. If [None] is selected, the figure or object is not registered to any categories. If a nonexistent category is set, the category is newly created and the target is registered. Up to 32 characters can be set.
[Remove]	Deletes the right-clicked figure or object from the category.
[Open Editing Screen]	Selects the right-clicked figure or object on the screen editor.

11.8 Searching for and Editing Settings of Projects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟11.8.1 Searching for a device (Device search)
11.8.2 Listing devices (Device list)
11.8.3 Listing strings (Text list)
11.8.4 Changing the set values in a batch (Batch Edit)
11.8.5 Searching for and editing a specific setting (Data Browser)
11.8.6 Checking the IP addresses in the list (IP address list)

11.8.1 Searching for a device (Device search)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Search the current project for devices, labels, or tags.
You can perform a keyword search, identify which functions use the found devices, and change the related settings.

➟■1 How to use the device search
■2 Precautions for the device search
■3 [Device Search] window

■1 How to use the device search

➟(1) Searching the project for matching devices
(2) Changing or deleting the settings related to a found device
(3) Exporting the search result list data

(1) Searching the project for matching devices

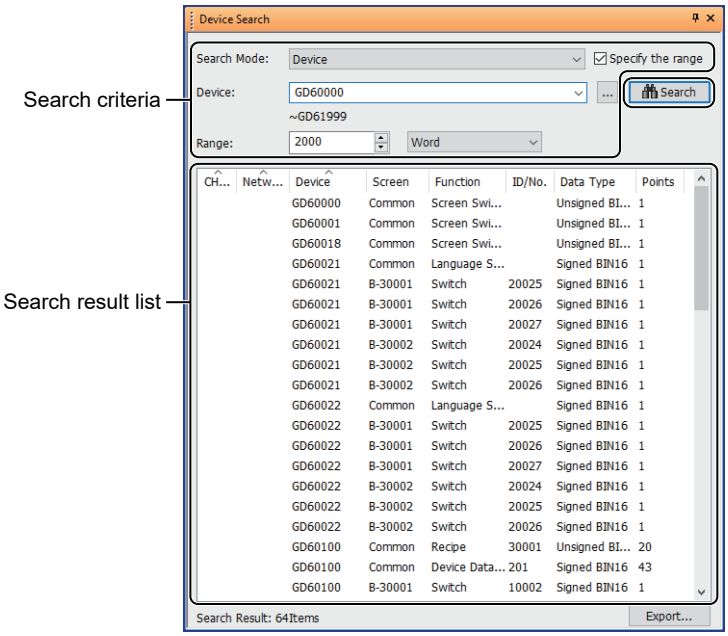
Step 1 Perform one of the following operations to display the [Device Search] window.

- Press the [Ctrl] + [F] key combination.
- Select [Search/Replace] → [Device Search] from the menu.
- Select [View] → [Docking Window] → [Device Search] from the menu.
- Click the [Device Search] button on the toolbar.
- Select [Device Search] from the right-click context menu.

➟■3 [Device Search] window

Step 2 Set the search criteria and click the [Search] button to display the found devices, labels, or tags in the search result list.

When [Search Mode] is set to [Keyword (Label/Tag)], [Keyword (Label)], or [Keyword (Device)], if [Keyword] is left blank, clicking the [Search] button lists all the devices, labels, or tags used in the project.



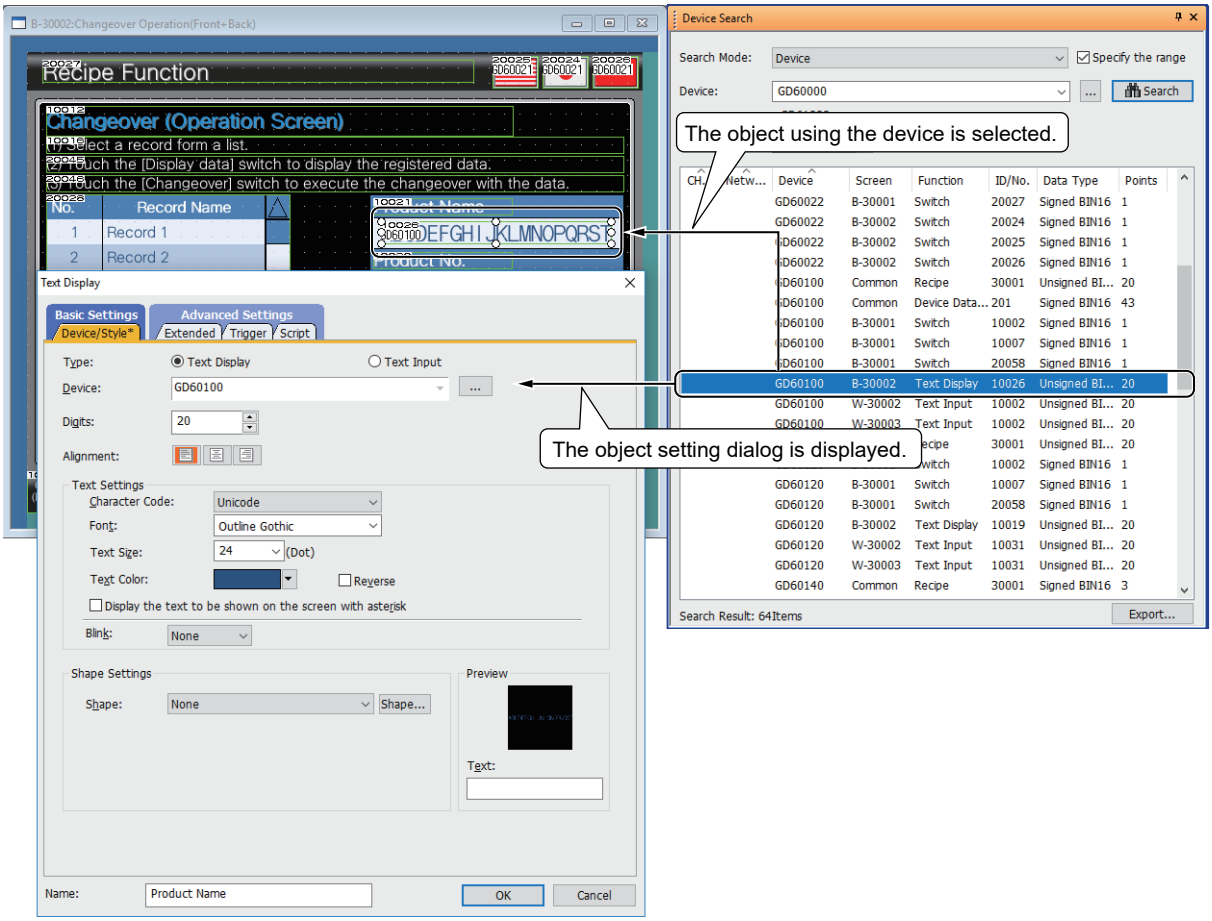
(2) Changing or deleting the settings related to a found device

Step 1 Search for devices in the [Device Search] window.

➟(1) Searching the project for matching devices

Step 2 Double-click a found device in the search result list to display the setting dialog for the figure, object, or common setting where the device is specified.

Change or delete settings as necessary.



Step 3 Click the [Search] button again to apply setting changes to the search result list.

(3) Exporting the search result list data

Step 1 Search for devices in the [Device Search] window.

➟(1) Searching the project for matching devices

Step 2 Click the [Export] button to display the [Save As] dialog.

Step 3 Set [File name] and [Save as type] and click the [Save] button to export the search result list.

■2 Precautions for the device search

(1) Unsupported devices

The following devices are not listed in the [Device Search] window.

- Devices used for the display-prohibited screens or scripts in a project protected with the project security
- Devices used for the MES interface function
- Devices assigned to script symbols

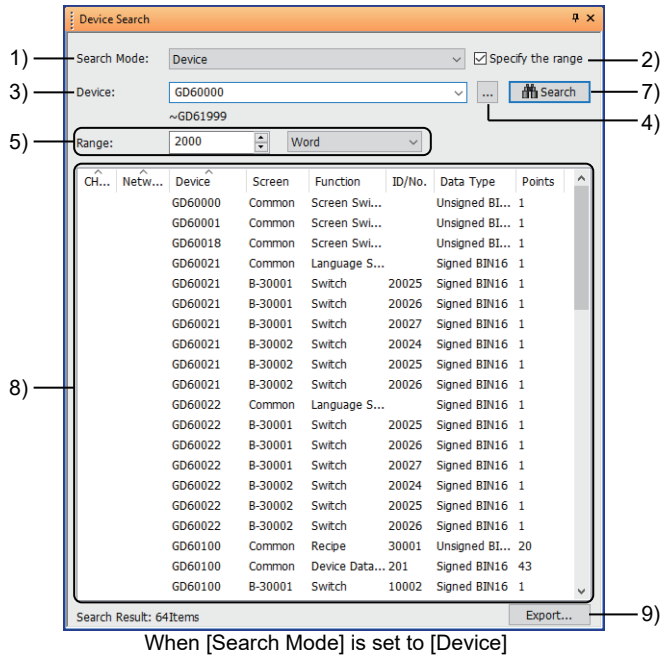
(2) Searching for the devices of non-Mitsubishi Electric equipment

Among the devices of non-Mitsubishi Electric equipment, some bit devices and word devices are used for the same purpose, but have different device names.

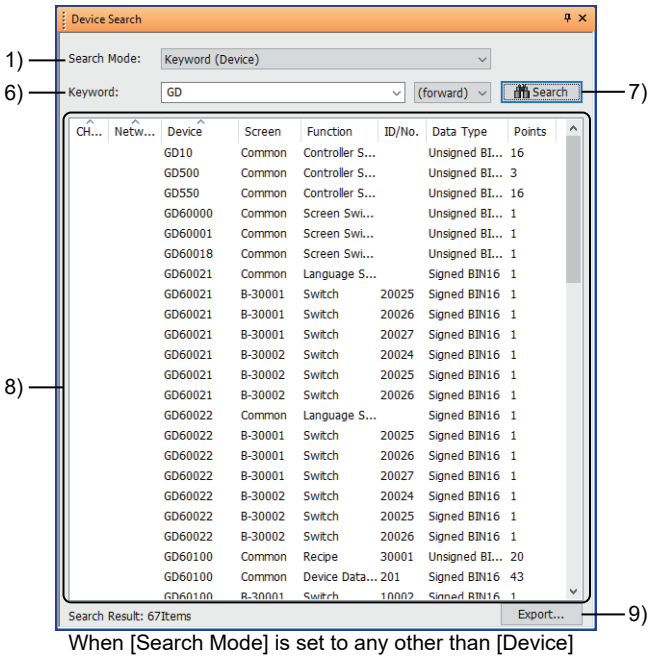
When [Search Mode] is set to [Device], the search result list will display the specified device and other devices that are used for the same purpose as the specified device.

To find the specified device only, select [Keyword (Device)] for [Search Mode].

■3 [Device Search] window



When [Search Mode] is set to [Device]



When [Search Mode] is set to any other than [Device]

1) **[Search Mode]**

Select a search mode.

The following shows selectable items.

- [Device]

  Searches for the device that matches the specified device, channel number, and network setting.

  If one of consecutive devices is specified, the start device of the consecutive devices is searched for.
- [Keyword (Label/Tag)] (for GT27, GT25, GT23, GT21 except GT2105-Q, GT SoftGOT2000, GS25, and GS21)

  Searches for labels and tags containing the specified keyword.
- [Keyword (Label)] (for GT2105-Q only)

  Searches for labels containing the specified keyword.
- [Keyword (Device)]

  Searches for devices containing the specified keyword.

2) **[Specify the range]**

This item appears when [Search Mode] is set to [Device].

Enables the setting to specify the scope of a search.

3) **[Device]**

This item appears when [Search Mode] is set to [Device].

Specify a device, channel number, and network setting.

If you specify no channel number and network setting, channel No. 1 and 0-FF (host station) are assumed.

The search result list will display the device matching the specified conditions or the start device of consecutive devices containing the matching device.

The device, channel number, and network setting are settable in the [Setting] dialog alternatively.

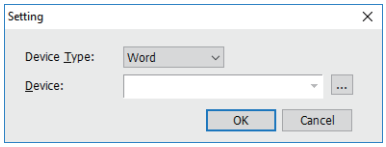
4) **[...] button**

This item appears when [Search Mode] is set to [Device].

Displays the [Setting] dialog.

Specify a device, channel number, and network setting.

If you specify no channel number and network setting, channel No. 1 and 0-FF (host station) are assumed.

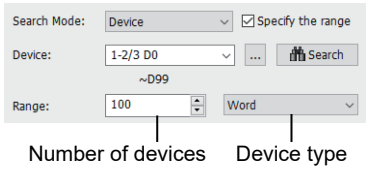


• [Device Type]
Select the data type of a device.
The following shows selectable items.
• [Bit]
• [Byte]
• [Word]
• [Double Word]
• [Quad Word]

• [Device]
Specify a device, channel number, and network setting.
➟6.1.2 How to set devices

5) **[Range]**

This item appears when [Specify the range] is selected.
Specify the number of devices and the device type.



The consecutive devices starting from the specified device are searched for.
The maximum number of devices varies depending on the device name.
The following shows selectable device types.

• [Bit]
• [Byte]
• [Word]
• [Double Word]
• [Quad Word]

6) **[Keyword]**

This item appears when [Search Mode] is set to [Keyword (Label/Tag)], [Keyword (Label)], or [Keyword (Device)].
Specify a search keyword.
The labels, tags, or devices containing the specified keyword will be listed in the search result list.
To specify multiple keywords, enter a one-byte space between them.

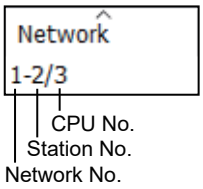
7) **[Search] button**

Performs a search.
The hits will be listed in the search result list.
If two or more objects and figures are selected on the screen editor, the devices, labels, or tags specified for the objects and figures will be searched.
In this case, the title bar of the window displays [selected range].

8) **Search result list**

Lists the search results.
Right-click the column header of the list to select columns to be displayed.

Column	Description
[Label/Tag], [Label]	Labels or tags that contain the string specified with [Keyword]
[Device]	• When [Search Mode] is set to [Device] Device matching the specified device, channel number and network setting, or the start device of consecutive devices containing the matching device • When [Search Mode] is set to [Keyword (Label/Tag)] or [Keyword (Label)] Devices assigned to the found labels or tags • When [Search Mode] is set to [Keyword (Device)] Devices that contain the string specified with [Keyword]
[CH No.]	Channel numbers specified for the devices listed

Column	Description
[Network]	Network numbers, station numbers, and CPU numbers that are specified for the devices listed Example) When network No. 1, station No. 2, and CPU No. 3 are set 
[Screen]	Locations where the devices listed are set "n" represents a screen number. • [Common]: Common setting • [B-n]: Base screen • [W-n]: Window screen • [R-n]: Report screen • [M-n]: Mobile screen
[Function]	Functions that use the devices listed
[ID/No.]	Object IDs of the objects where the devices listed are set, or setting numbers of the functions where the devices listed are set
[Data Type]	Data types of the devices listed
[Points]	Number of consecutive devices

9) **[Export] button**

Exports the contents of the [Device Search] window to a CSV file or Unicode text file.
The exported file does not include information on the search criteria used, so take a note of the information as necessary.

(1) Mouse and keyboard operations

The following shows the mouse and keyboard operations for the search result list in the [Device Search] window.

Operation	Description
Arrow (up or down)	Move the cursor.
[Enter]	Move the cursor down one row.
[Home] [Ctrl] + Arrow (up)	Move the cursor to the top row.
[End] [Ctrl] + Arrow (down)	Move the cursor to the bottom row.
[PageUp]	Move the cursor up one page.
[PageDown]	Move the cursor down one page.
Click	Select the figure or object where the selected device is set, on the screen editor.
Double click	Open the setting dialog for the figure, object, or common setting where the selected device is set.

11.8.2 Listing devices (Device list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The devices and labels used in the project are displayed in a list.
You can narrow the targets displayed in the list, jump to the location where a selected device is used, and export the device list.

➟■1 How to use the device list
■2 Precautions
■3 [Device List] window
■4 Details of the exported file

■1 How to use the device list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Listing the devices used in the project
(2) Searching for a device or jumping to the location where a selected device is used
(3) Exporting the device list

(1) Listing the devices used in the project

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

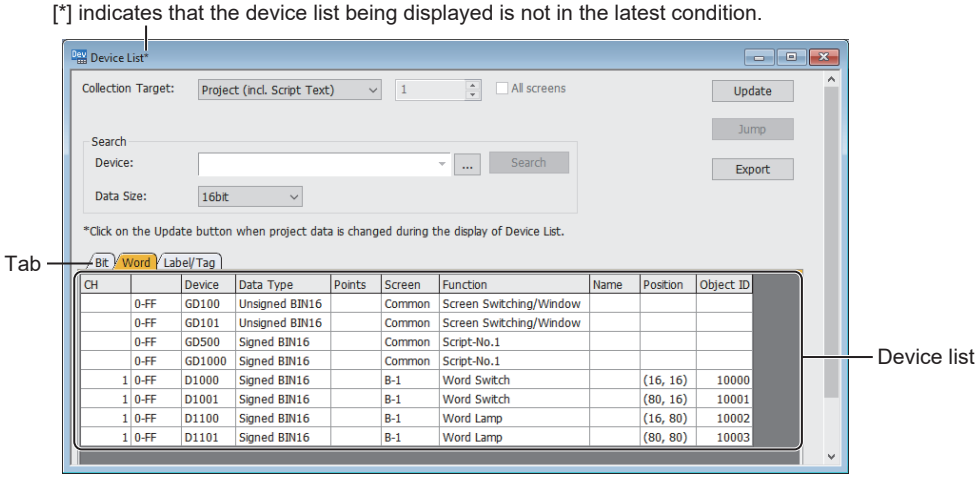
Step 1 Select [Search/Replace] → [Device List] from the menu then select either of the following items to display the [Device List] window.

➟11.8.2 ■3 [Device List] window

- [Screen]:
  Displays the [Device List] window and sets the currently selected screen editor as the target for collecting devices.
- [Project]:
  Displays the [Device List] window and sets the whole project (including script texts) as the target for collecting devices.
- [Script Text]:
  Displays the [Device List] window and sets all script texts as the target for collecting devices.

Step 2 After selecting any item for [Collection Target], click the [Update] button to update the device list.

To switch the display of bit devices, word devices, labels, and others, switch the tabs.



Even though any device setting is changed while the [Device List] window is displayed, the device list is not automatically updated.
If the device list being displayed is not in the latest condition, [*] is displayed in the title bar.
Click the [Update] button to update the list.

Point

Cross reference function for MELSOFT Navigator (iQ Works only)

To search a system label used for another project in a workspace, use the cross reference function for MELSOFT Navigator.

➟Help on MELSOFT Navigator

(2) Searching for a device or jumping to the location where a selected device is used

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Display the [Device List] window.

➟(1) Listing the devices used in the project

Step 2 Select a target in which the device you search for is included for [Collection Target] and click the [Update] button.

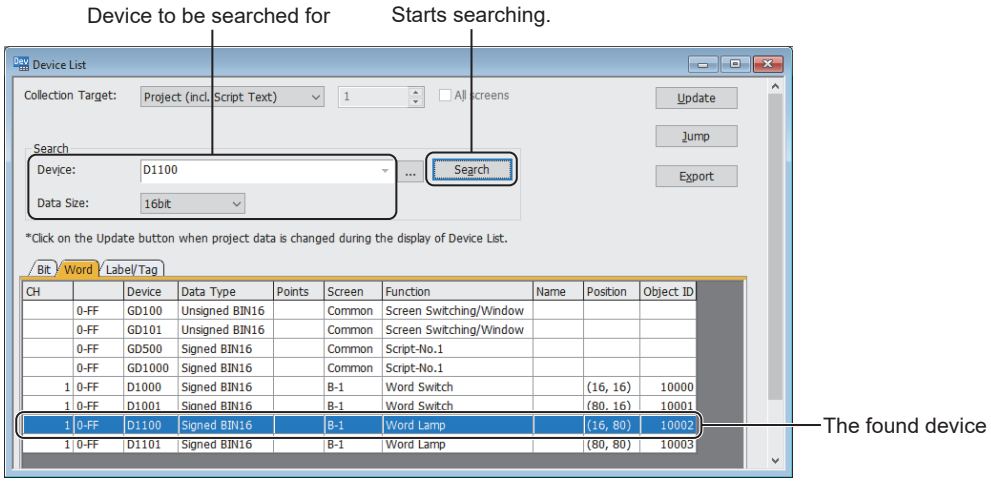
Step 3 Switch the following tabs according to the target you search for.

- [Bit] tab: Displays bit devices.
- [Word] tab: Displays word devices.
- [Label/Tag] tab ([Label] tab for GT2105-Q): Displays labels or tags.

Step 4 Set a device or label you search for and click the [Search] button.

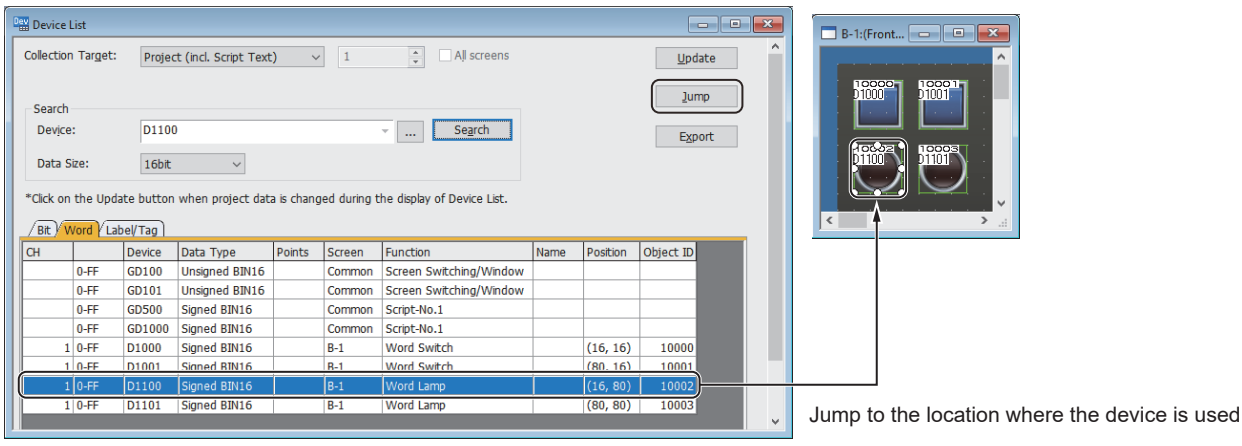
- [Bit] tab: Set [Device].
- [Word] tab: Set [Device] and [Data Size].
- [Label/Tag] tab ([Label] tab for GT2105-Q): Set [Label/Tag Name] or [Label Name].

Step 5 The corresponding device is selected in the device list.



Step 6 If you select a device in the device list and click the [Jump] button, a figure or an object for which the selected device is used is selected on the screen editor.

If any device which has been used for something other than figures and objects is selected, the [Jump] button is disabled.



(3) Exporting the device list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Display the [Device List] window.

➟(1) Listing the devices used in the project

Step 2 Click the [Export] button to display the [Save As] dialog.

Step 3 Set [File name] and [Save as type] and click the [Save] button to export the device list.

➟■4 Details of the exported file

■2 Precautions

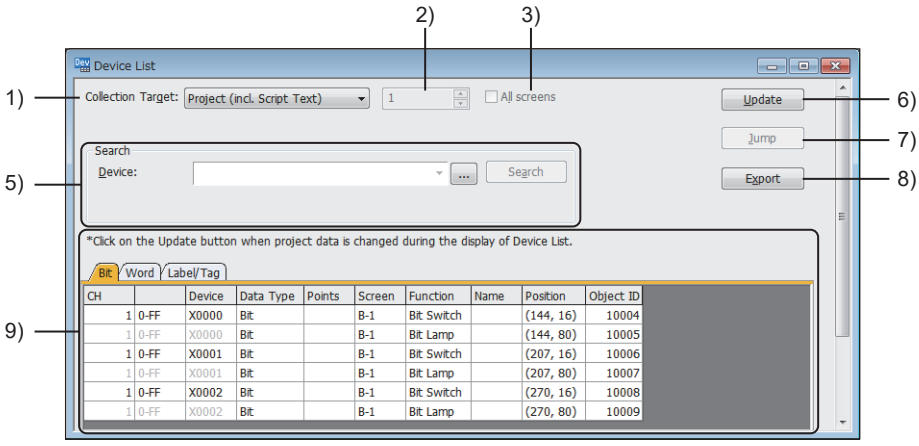
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Project for which project security is set

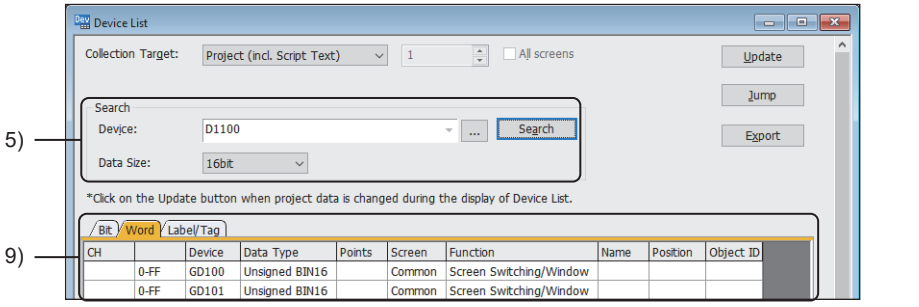
The devices used for display-disabled screens or scripts are not displayed in the [Device List] window.

■3 [Device List] window

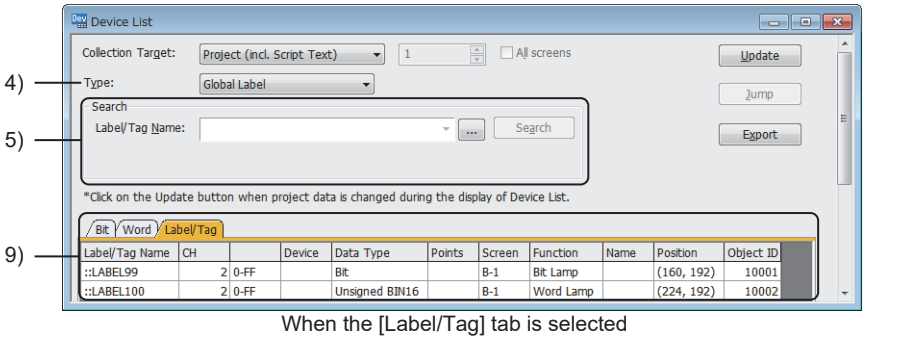
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



When the [Bit] tab is selected



When the [Word] tab is selected



When the [Label/Tag] tab is selected

1) **[Collection Target]**

Select a target to be displayed in the device list.

After changing any device setting, click the [Update] button to update the device list.
The following shows selectable items.

- [Project (incl. Script Text)]
- [Project (excl. Script Text)]
- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)
- [All Script Text]
- [Script List]
- [Project/Screen Script Text]
- [Object Script Text] (Not available to GT21 and GS21)
- [Script Parts Script Text]

2) **Target screen number**

When [Base Screen], [Window Screen], [Report Screen], or [Mobile Screen] is selected for [Collection Target], set the screen number to be searched for.
The following shows the setting range.

- [Base Screen], [Window Screen], or [Mobile Screen]: [0] to [32767]
- [Report Screen]: [1] to [99]

3) **[All screens]**

When [Base Screen], [Window Screen], [Report Screen], or [Mobile Screen] is selected for [Collection Target], all the screens of the selected screen type are targeted for collection.
If you check this item, the target screen number is disabled.

4) **[Type] ([Label Type] for GT2105-Q)**

Select the type of the labels or tags displayed in the device list.
The following shows selectable items.

- [All]
- [System Label]
- [Label (GT Designer3)]
- [Global Label] (Not available to GT21 and GS21)
- [OMRON NJ/NX Tag]
- [AB Native Tag]
- [OPC UA Tag]

5) **[Search]**

Set search conditions.

Item	Description
[Device]	Set a device you search for.
[Data Size]	This item is displayed when the [Word] tab is selected. Set a data size of the device you search for. The following shows selectable items. • [16bit] • [32bit] • [64bit] • [8bit]
[Label/Tag Name] ([Label Name] for GT2105-Q)	This item is displayed when the [Label/Tag] tab or the [Label] tab is selected. Set the label name or tag name you search for.

Item	Description
[...] button	Displays the device setting dialog when the [Bit] tab or the [Word] tab is selected. When the [Label/Tag] tab or the [Label] tab is selected, the dialog to appear varies with the selection for [Type] as shown below. • When [System Label] is selected for [Type], the [Import System Labels to Project] appears. ➟6.1.3 ■3 System label setting • When [Label (GT Designer3)] is selected for [Type], the [Select Label (GT Designer3)] dialog appears. ➟6.1.5 ■9 [Select Label (GT Designer3)] dialog • When [Global Label] is selected for [Type], the [Select Global Label] dialog appears. ➟6.1.4 ■8 [Select Global Label] dialog • When [OMRON NJ/NX Tag] is selected for [Type], the [Select OMRON NJ/NX Tag] dialog appears. ➟6.1.7 ■8 [Select OMRON NJ/NX Tag] dialog • When [OPC UA Tag] is selected for [Type], the [Select OPC UA Tag] dialog appears. ➟6.1.10 ■6 [Select OPC UA Tag] dialog
[Search] button	Starts searching.

6) **[Update] button**

Updates the device list.

If the device list being displayed is not in the latest condition, [*] is displayed in the title bar of the [Device List] window.

7) **[Jump] button**

Displays a figure or object for which the device selected in the device list is used.

If any device which is used for something other than figures and objects is selected, the [Jump] button is disabled.

8) **[Export] button**

Saves the device list as a CSV file or Unicode text file.

Set [File name] and [Save as type] in the displayed dialog and click the [Save] button.

➟■4 Details of the exported file

9) **Device list**

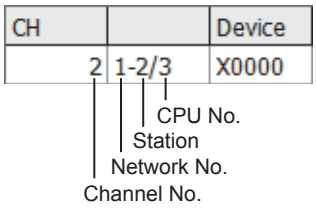
The list of the devices used in the project.

Each tab displays different contents.

Switch the following tabs according to the contents to be checked.

- [Bit] tab: Displays the list of bit devices.
- [Word] tab: Displays the list of word devices.
- [Label/Tag] tab ([Label] tab for GT2105-Q): Displays the list of labels or tags.

Dragging each column enables changing the width of column.

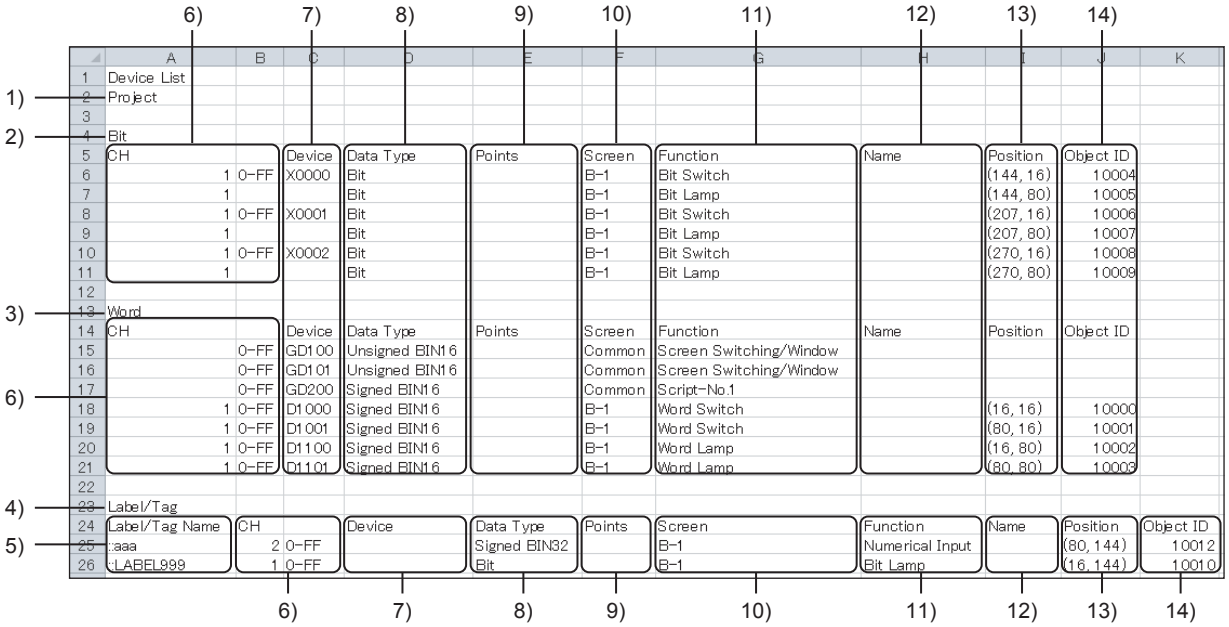
Item	Description
[Label/Tag Name] ([Label Name] for GT2105-Q)	This item is displayed on the [Label/Tag] tab or the [Label] tab. Label names or tag names
[CH], network No., station number, CPU No.	Channel Nos., network Nos., station numbers, and CPU Nos. Example) For the device with the channel No. 2, network No. 1, station number 2, and CPU No. 3  If the same device is consecutively displayed, the text color of the second row and later rows is gray.
[Device]	Devices If the same device is consecutively displayed, the text color of the second row and later rows is gray.
[Data Type]	Data type of the devices
[Points]	Number of devices which are consecutively set

Item	Description
[Screen]	Screens for which the devices are used • [Common]: Common setting • [B-n]: Base screen ("n" indicates the screen number.) • [W-n]: Window screen ("n" indicates the screen number.) • [R-n]: Report screen ("n" indicates the screen number.) • [M-n]: Mobile screen ("n" indicates the screen number.)
[Function]	Function names for which the devices are used
[Name]	Names of figures and objects
[Position]	Coordinates where the figures and objects are placed
[Object ID]	Object IDs of the figures and objects

■4 Details of the exported file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the details of the exported file of the device list.



1) **Collection target**
   The setting of the collection target
2) **[Bit]**
   The details of the [Bit] tab
3) **[Word]**
   The details of the [Word] tab
4) **[Label/Tag] ([Label] for GT2105-Q)**
   The details of the [Label/Tag] tab or the [Label] tab
5) **[Label/Tag Name] ([Label Name] for GT2105-Q)**
   Label names or tag names
6) **[CH], network No., station number, CPU No.**
   Channel Nos., network Nos., station numbers, and CPU Nos.
   If the same device is consecutively displayed, the second row and later row in this column are blank.
7) **[Device]**
   Devices
   If the same device is consecutively displayed, the text color of the second row and later rows is gray.
8) **[Data Type]**
   Data type of the devices
9) **[Points]**
   Number of devices which are consecutively set
10) **[Screen]**
    Screens for which the devices are used

- [Common]:
  Common setting
- [B-n]:
  Base screen
  "n" indicates the screen number.
- [W-n]:
  Window screen
  "n" indicates the screen number.
- [R-n]
  Report screen
  "n" indicates the screen number.
- [M-n]
  Mobile screen
  "n" indicates the screen number.

11) **[Function]**
Function names for which the devices are used

12) **[Name]**
Names of figures and objects

13) **[Position]**
Coordinates where the figures and objects are placed

14) **[Object ID]**
Object IDs of the figures and objects

11.8.3 Listing strings (Text list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The strings used in the current project are listed.
You can narrow the targets displayed in the list and jump to the location where a selected text is used.

➟■1 How to use the text list
■2 Precautions
■3 [Text List] window

■1 How to use the text list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Listing the strings used in the project
(2) Searching for a text or jumping to the location where a selected text is used

(1) Listing the strings used in the project

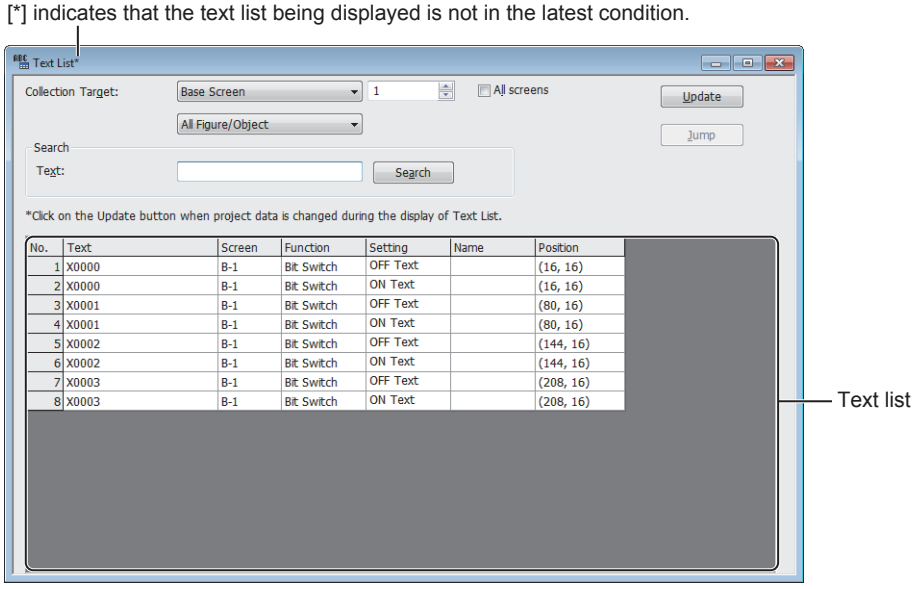
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Text List] from the menu to display the [Text List] window.

➟11.8.3 ■3 [Text List] window

Step 2 After selecting any item for [Collection Target], click the [Update] button to update the text list.

[*] indicates that the text list being displayed is not in the latest condition.



Even though any text setting is changed while the [Text List] window is displayed, the text list is not automatically updated.
If the text list being displayed is not in the latest condition, [*] is displayed in the title bar.
Click the [Update] button to update the list.

(2) Searching for a text or jumping to the location where a selected text is used

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

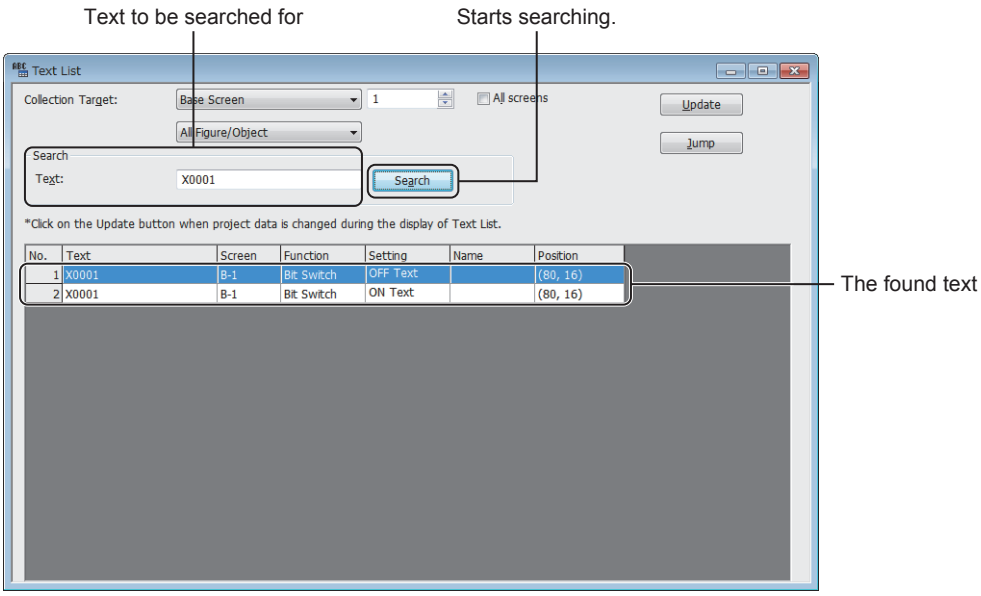
Step 1 Display the [Text List] window.

➟(1) Listing the strings used in the project

Step 2 Select a target in which the text you search for is included for [Collection Target] and click the [Update] button.

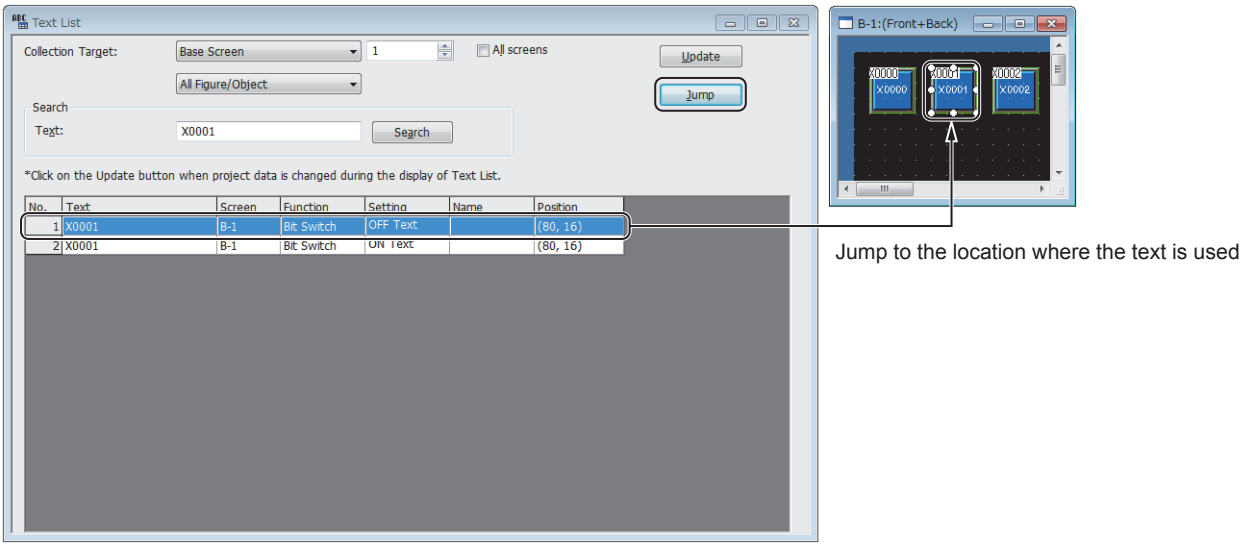
Step 3 Set the text you search for in [Text] and click the [Search] button.

Step 4 The corresponding text is displayed in the text list.



Step 5 If you select a text in the text list and click the [Jump] button, a figure or an object for which the selected text is used is used on the screen editor.

If any text which is used for something other than figures and objects is selected, the [Jump] button is disabled.



■2 Precautions

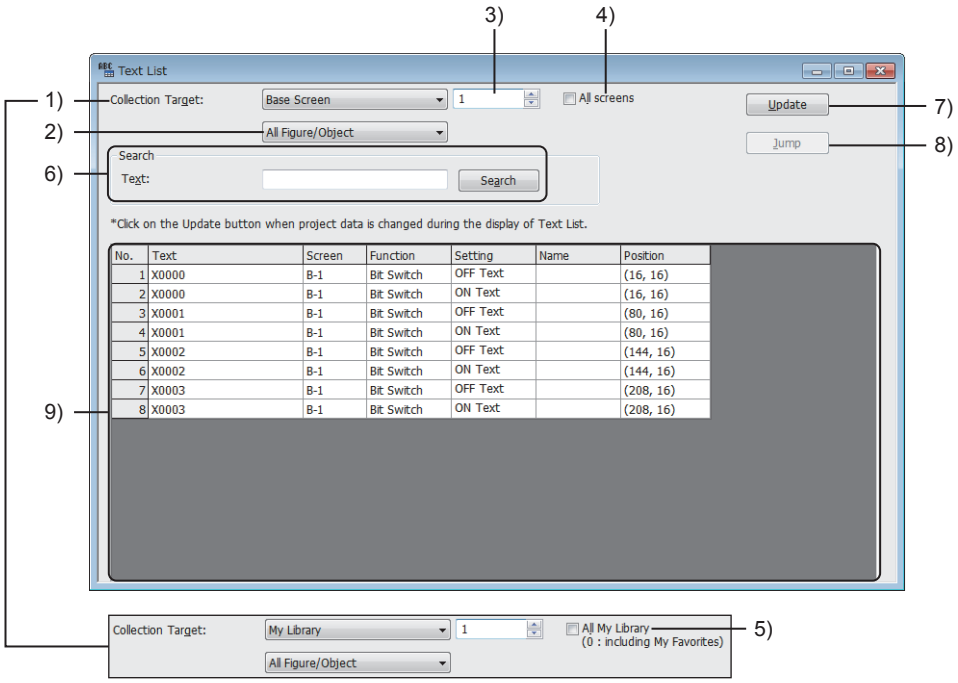
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Project for which project security is set

The text used for display-disabled screens is not displayed in the [Text List] window.

■3 [Text List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Collection Target]**

Select a target to be displayed in the text list.

After changing any text setting, click the [Update] button to update the text list.

The following shows selectable items.

- [Project]
- [Base Screen]
- [Window Screen]
- [Report Screen]
- [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)
- [Parts]
- [My Library]

2) **Additional condition**

Select an additional condition to narrow the collection target.

The following shows selectable items.

- [All Figure/Object]
- [Text Figure]
- [Logo Text Figure]
- [Switch]
- [Lamp]
- [Bit Comment]
- [Panelmeter]
- [Graphical Meter]
- [Hyperlink] (GT27, GT25, GT SoftGOT2000, and GS25)

3) **Target number**

Depending on the selection for [Collection Target], the setting item differs.

- [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen]

  Set a screen number as the collection target.

  The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767].

  The setting range of [Report Screen] is [1] to [99].
- [Parts]

  Set a parts number as the collection target.

  The setting range is [1] to [32767].

• [My Library]
Set a library folder number as the collection target.
The setting range is [0] to [512].

4) **[All screens]**
Depending on the selection for [Collection Target], the setting item differs.
If you check this item, the target number is disabled.
• [Base Screen], [Window Screen], [Report Screen], and [Mobile Screen]
Sets all screens with the screen type selected in [Collection Target] as the collection target.
• [Parts]
Sets all parts as the collection target.

5) **[All My Library]**
Sets all library folders as the collection target.

6) **[Search]**
Set search conditions.

Item	Description
[Text]	Set a text you search for.
[Search] button	Starts searching.

7) **[Update] button**
Updates the text list.
If the text list being displayed is not in the latest condition, [*] is displayed in the title bar of the [Text List] window.

8) **[Jump] button**
Displays the location where the text selected in the text list is used.

9) **Text list**
The list of the texts used in the project.
Dragging each column enables changing the width of column.

Item	Description
[Text]	Texts.
[Screen]	The screens for which the texts are used. • [B-n]: Base screen ("n" indicates the screen number.) • [W-n]: Window screen ("n" indicates the screen number.) • [R-n]: Report screen ("n" indicates the screen number.) • [M-n]: Mobile screen ("n" indicates the screen number.) • [P-n]: Part ("n" indicates the parts number.) • [L x n], [L x-y n]: Folder of the my library ("x" indicates the folder number which is one level lower than My Library. "y" indicates the folder number which is two levels lower than My Library. "n" indicates the data number.)
[Function]	Function names for which the texts are used
[Setting]	Settings for which the texts are used
[Name]	Names which are set for the figures and objects
[Position]	Coordinates where the figures and objects are placed

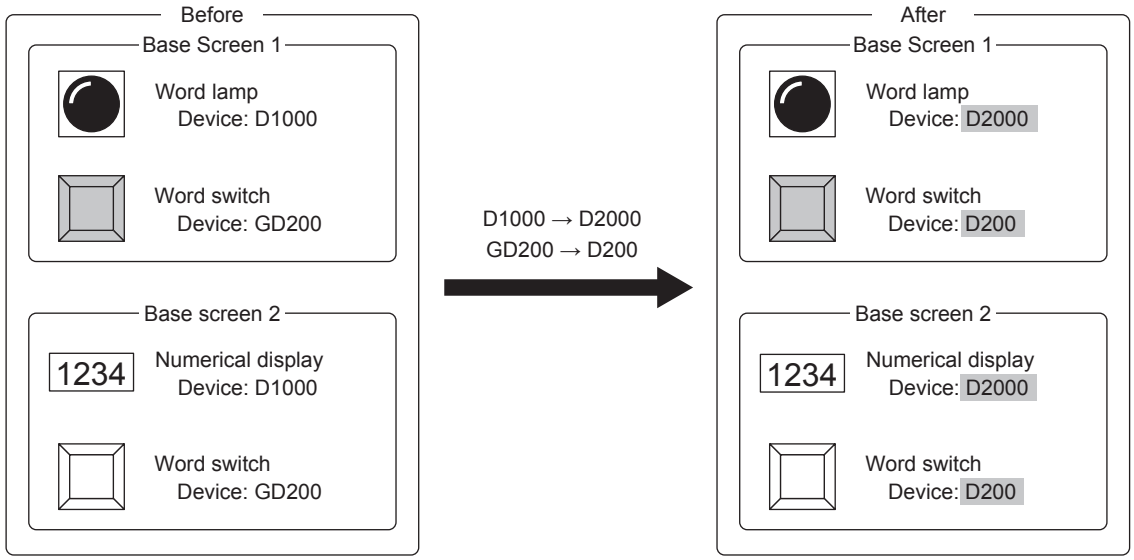
11.8.4 Changing the set values in a batch (Batch Edit)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The settings including the device settings and the figure settings can be changed in a batch.
The following shows the settings which can be changed in a batch.

- Device, label, OMRON NJ/NX tag, AB native tag, or OPC UA tag
- Unit No. and axis No.
- Network setting (Network No., station number, and CPU No.)
- Channel No.
- Color of a figure or object
- Shape of a touch switch or lamp

The settings of different figures and objects can be changed in a batch.
Example) Changing devices in a batch



➥■1 How to use the Batch Edit
■2 Precautions
■3 [Device Batch Edit] dialog
■4 [Unit No./Axis No. Batch Edit] dialog
■5 [Network Batch Edit] dialog
■6 [CH No. Batch Edit] dialog
■7 [Color Batch Edit] dialog
■8 [Shape Batch Edit] dialog

■1 How to use the Batch Edit

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Changing devices in a batch
(2) Changing unit numbers and axis numbers in a batch
(3) Changing the network settings in a batch
(4) Changing channel numbers in a batch
(5) Changing the colors of figures and objects in a batch
(6) Changing the shapes of touch switches and lamps in a batch

(1) Changing devices in a batch

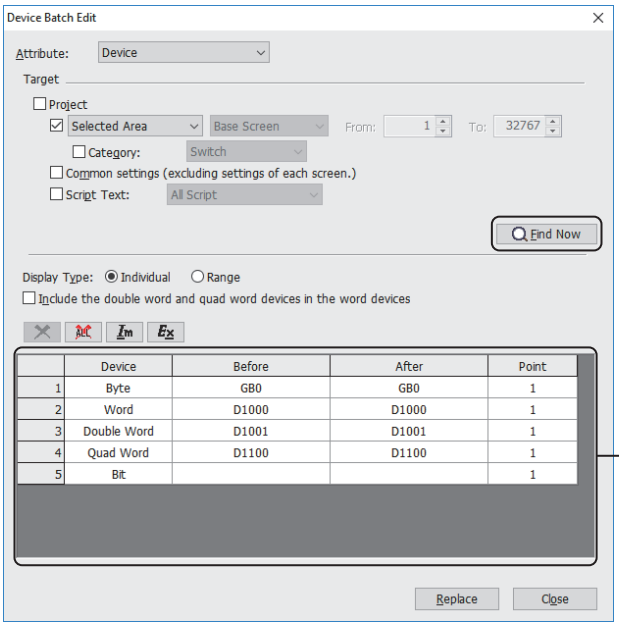
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [Device] from the menu to display the [Device Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [Device Batch Edit] dialog displays the settings of the selected figures and objects in the search result list.

➟11.8.4 ■3 [Device Batch Edit] dialog

Step 2 Set [Target] and [Display Type] and click the [Find Now] button to list search results.



Step 3 In the search result list, double-click a cell in the [After] column, and set a new value.

➟6.1.2 How to set devices

Step 4 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

(2) Changing unit numbers and axis numbers in a batch

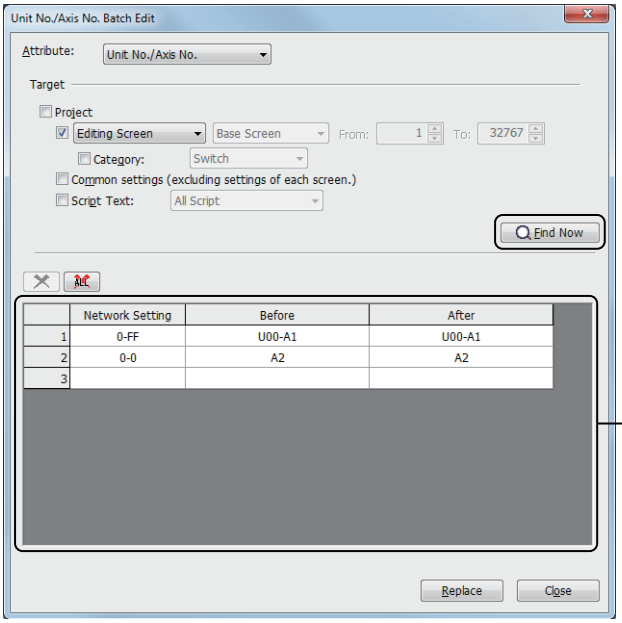
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [Unit No./Axis No.] from the menu to display the [Unit No./Axis No. Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [Unit No./Axis No. Batch Edit] dialog displays the settings of the selected figures and objects in the search result list.

➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog

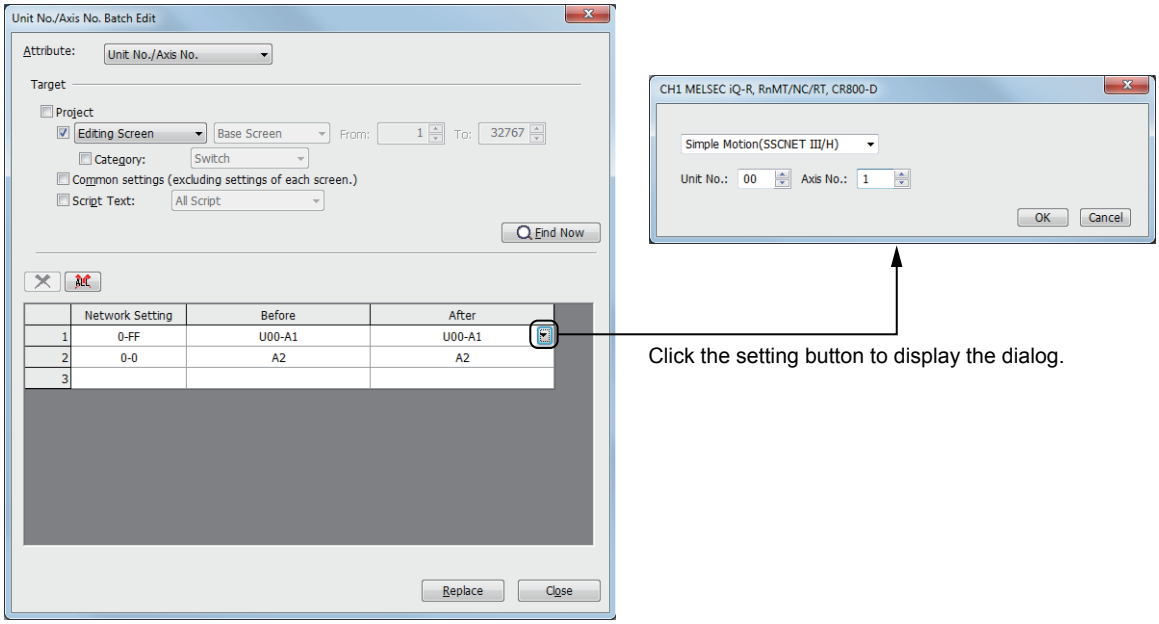
Step 2 Set [Target] and click the [Find Now] button to display the found settings in the search result list.



Step 3 In the search result list, click a cell in the [After] column to display the setting button.

Step 4 Click the setting button to display the unit No./axis No. setting dialog.

Set a value to be applied after the batch edit, and click the [OK] button.



Step 5 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

(3) Changing the network settings in a batch

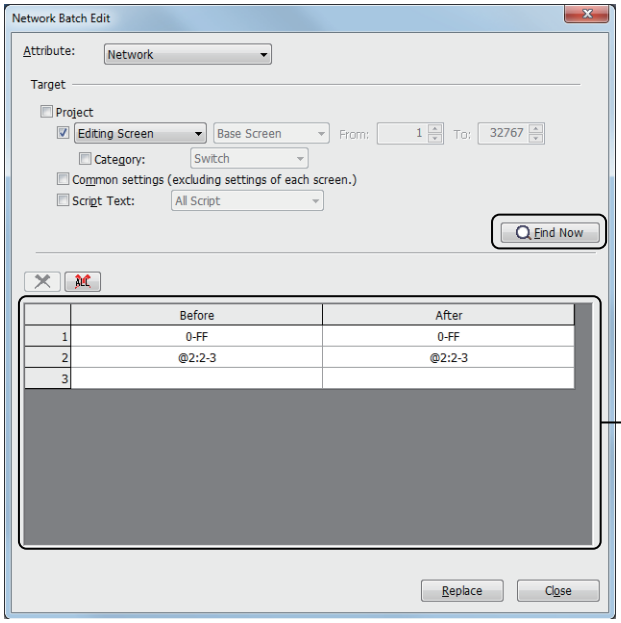
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [Network] from the menu to display the [Network Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [Network Batch Edit] dialog display the settings of the selected figures and objects in the search result list.

➟11.8.4 ■5 [Network Batch Edit] dialog

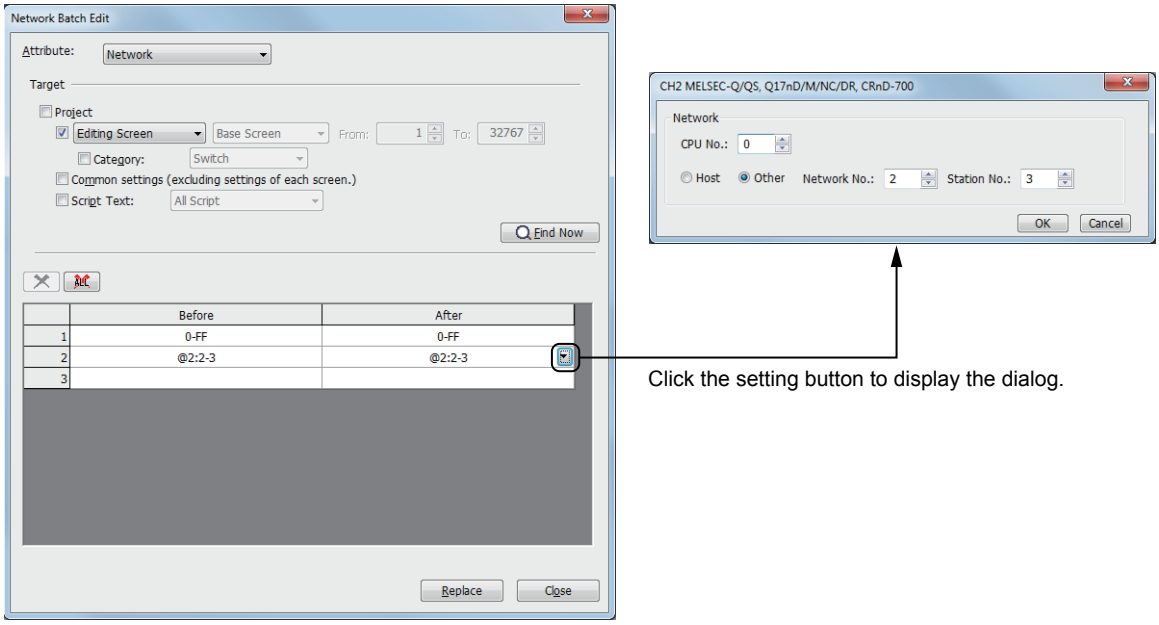
Step 2 Select a target to execute the batch edit for [Target] and click the [Find Now] button to display the found settings in the search result list.



Step 3 In the search result list, click a cell in the [After] column to display the setting button.

Step 4 Click the setting button to display the network setting dialog.

Set a setting value after the batch edit and click the [OK] button.



Step 5 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

(4) Changing channel numbers in a batch

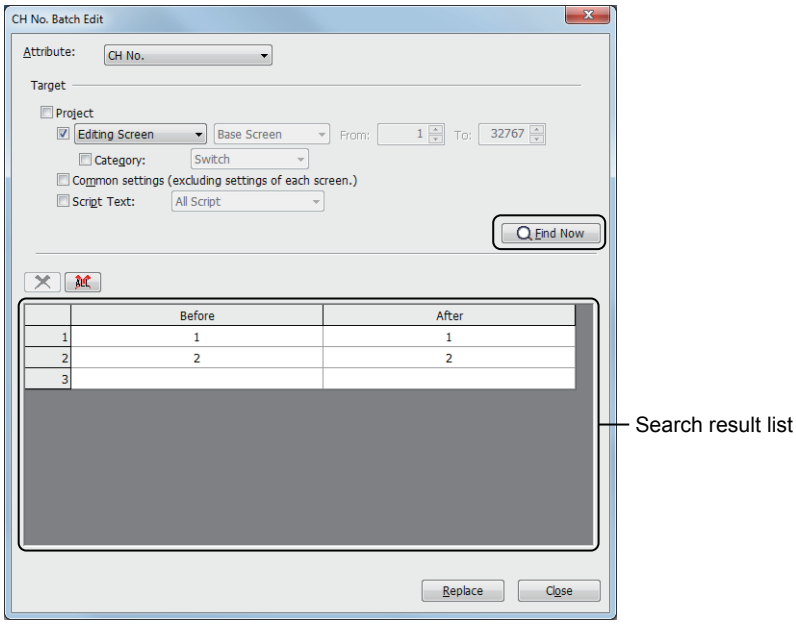
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [CH No.] from the menu to display the [CH No. Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [CH No. Batch Edit] dialog displays the settings of the selected figures and objects in the search result list.

➟11.8.4 ■6 [CH No. Batch Edit] dialog

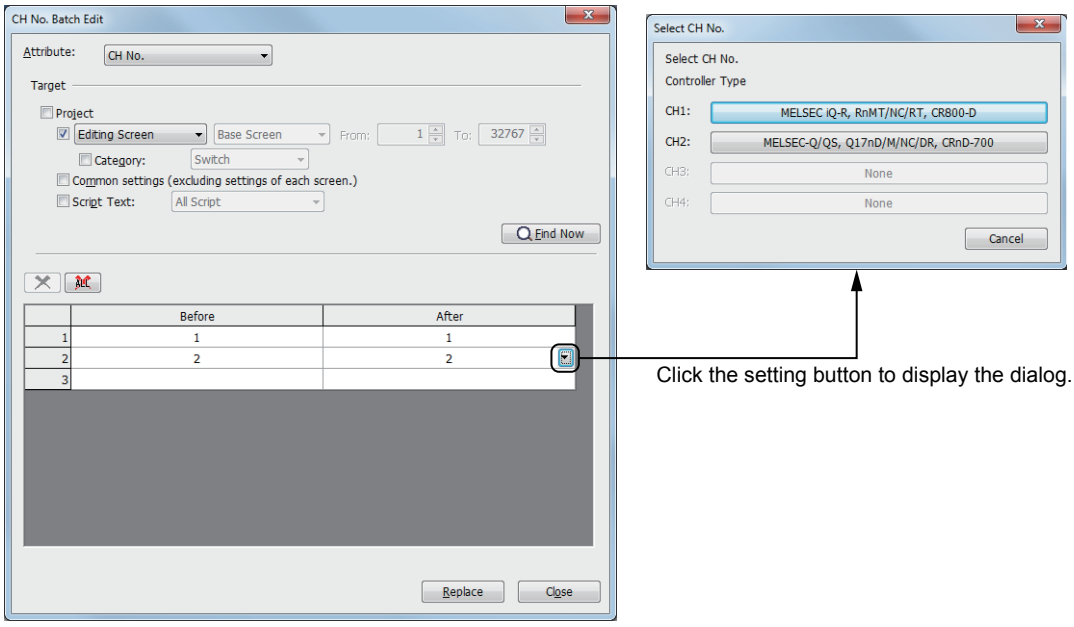
Step 2 Select a target to execute the batch edit for [Target] and click the [Find Now] button to display the found settings in the search result list.



Step 3 In the search result list, click a cell in the [After] column to display the setting button.

Step 4 Click the setting button to display the [Select CH No.] dialog.

Select a channel No. after the batch change and click the [OK] button.



Step 5 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

(5) Changing the colors of figures and objects in a batch

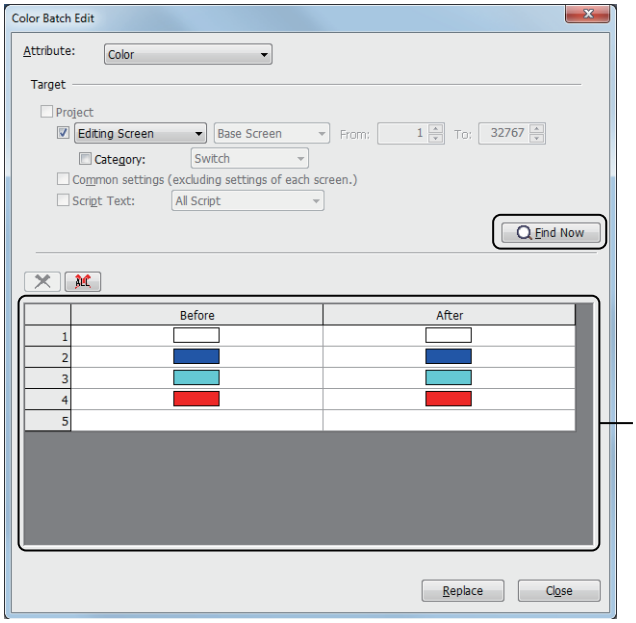
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [Color] from the menu to display the [Color Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [Color Batch Edit] dialog displays the settings of the selected figures and objects in the search result list.

➟11.8.4 ■7 [Color Batch Edit] dialog

Step 2 Select a target to execute the batch edit for [Target] and click the [Find Now] button to display the found settings in the search result list.

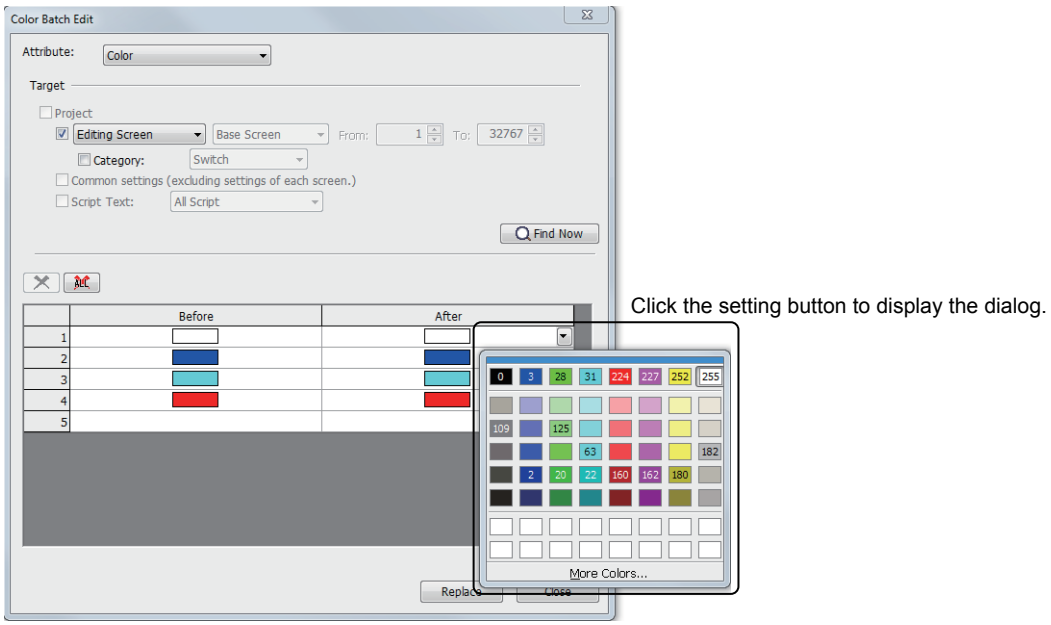


Step 3 In the search result list, click a cell in the [After] column to display the setting button.

Step 4 Click the setting button to display the color palette.

Set a color after the batch edit.

➟6.4.2 Color settings



Step 5 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

(6) Changing the shapes of touch switches and lamps in a batch

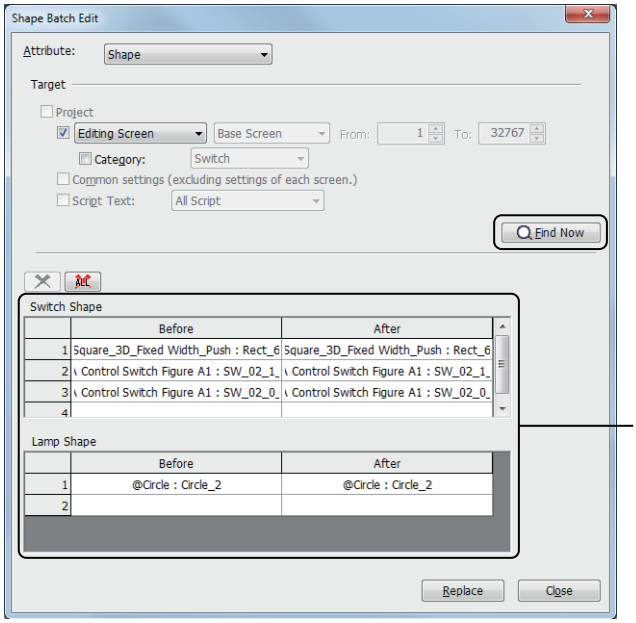
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Search/Replace] → [Batch Edit] → [Shape] from the menu to display the [Shape Batch Edit] dialog.

If you have selected figures and objects on the screen editor before selecting the menu, the [Shape Batch Edit] dialog displays the settings of the selected figures and objects in the search result list.

➟11.8.4 ■8 [Shape Batch Edit] dialog

Step 2 Select a target to execute the batch edit for [Target] and click the [Find Now] button to display the found settings in the search result list.

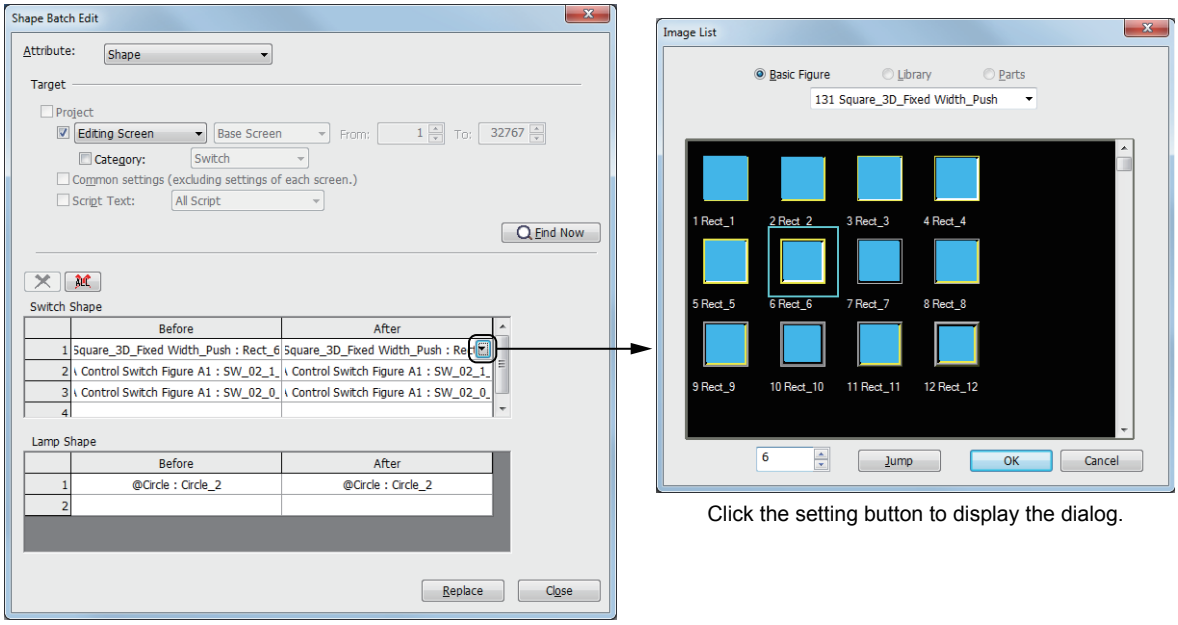


Step 3 In the search result list, click a cell in the [After] column to display the setting button.

Step 4 Click the setting button to display the [Image List] dialog.

The image types of figures ([Basic Figure], [Library] and [Parts]) cannot be changed.

Select a figure after the batch edit and click the [OK] button.



Step 5 Click the [Replace] button to replace the settings in the [Before] column with the settings in the [After] column.

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) Precautions for changing devices in a batch

(a) **Changing devices into different device types**

The devices for which the settable device types are fixed (including bit devices and word devices) cannot be changed into different device types.

(b) **Changing consecutive devices**

The start device of consecutive devices cannot be changed to a device which is out of the device range.

(c) **Changing a device of the object for which the offset function is enabled**

The device of the object for which the offset function is enabled cannot be changed to a bit device specified as a word device.

(d) **Changing system labels**

You cannot change a system label to the following invalid system labels.

- System labels that are not registered in the system label database
- System labels without devices assigned

(e) **Changing to global labels**

For collectively changing to global labels, the data type consistency check is not performed automatically between the global labels and the objects or others where the global labels are used.
You are recommended to check the data type consistency by comparing the contents between the device list on GT Designer3 and the global labels exported with GX Works3.

(f) **Changing to labels (GT Designer3)**

For collectively changing to labels (GT Designer3), the data type consistency check is not performed automatically between the labels (GT Designer3) and the objects or others where the labels (GT Designer3) are used.
You are recommended to check the data type consistency by comparing the contents between the device list on GT Designer3 and the labels (GT Designer3) exported with GT Designer3.
You cannot change the devices of objects or others to the following invalid labels (GT Designer3).

- Labels (GT Designer3) unregistered in label groups

(g) **Changing to OMRON NJ/NX tags**

For collectively changing to OMRON NJ/NX tags, the data type consistency check is not performed automatically between the OMRON NJ/NX tags and the objects or others where the tags are used.
You are recommended to check the data type consistency by comparing the contents between the device list on GT Designer3 and the OMRON NJ/NX tags exported from Sysmac Studio.

(h) **Changing to AB native tags**

For collectively changing to AB native tags, the data type consistency check is not performed automatically between the AB native tags and the objects or others where the AB native tags are used.
You are recommended to check the data type consistency by comparing the contents between the device list on GT Designer3 and the AB native tags exported from RSLogix 5000.

(i) **Changing to OPC UA tags**

For collectively changing to OPC UA tags, the data type consistency check is not performed automatically between the OPC UA tags and the objects or others where the OPC UA tags are used.
You are recommended to check the data type consistency by comparing the device list in GT Designer3 with the tag information in GT OPC UA Client.

(j) **Collectively changing double-word devices**

Double-word devices are collectively changed in units of two words.
When the start device number is an even number, only the devices whose device number is an even number are changed collectively.
When the start device number is an odd number, only the devices whose device number is an odd number are changed collectively.
Example)
For five double-word devices (D0 to D9), D0, D2, D4, D6, and D8 are changed collectively.
D1, D3, D5, D7, and D9 are not changed.
To collectively change word and double-word devices, select [Include the double word and quad word devices in the word devices] in the [Device Batch Edit] dialog.

(k) **Collectively changing quad word devices**

Quad word devices are collectively changed in units of four words.

Example)

For five quad word devices (D0 to D19), D0, D4, D8, D12, and D16 are changed collectively.

The other devices are not changed collectively.

To collectively change word and quad word devices, select [Include the double word and quad word devices in the word devices] in the [Device Batch Edit] dialog.

(l) **Collectively changing the string-type labels and tags**

When the string-type and non-string type devices, labels, and tags are set as the batch edit targets, the string-type labels and tags cannot be changed collectively.

(m) **Collectively changing the string-type labels and tags**

In the [Device Batch Edit] dialog, when values are directly entered in [Before] and [After] without using the [Find Now] button or the values are imported, the data is handled as signed 16-bit binary data.

String-type labels and tags cannot be set in these cases.

Even though the [Find Now] button is used, if string-type data and non-string type data both exist, string-type labels and tags may not be selected.

(2) Precautions for collectively changing module numbers and axis numbers

For the global labels imported from Motion Control Setting Function, the module numbers and axis numbers are not changed collectively.

(3) Precautions for changing channel numbers in a batch

If a channel No. is set for a device which does not exist in the controller after the batch edit and the CH No. Batch Edit is executed, the device is displayed as [??].

After changing channel numbers in a batch, check that all the devices set in the project are not displayed as [??].

(4) Precautions for using the color batch edit

When you select a shape in a given color from the system library for an object, the object is excluded from the target of the color batch edit.

(5) Project for which project security is set

The settings for display-disabled screens and scripts are not displayed in the batch edit dialog.

■3 [Device Batch Edit] dialog

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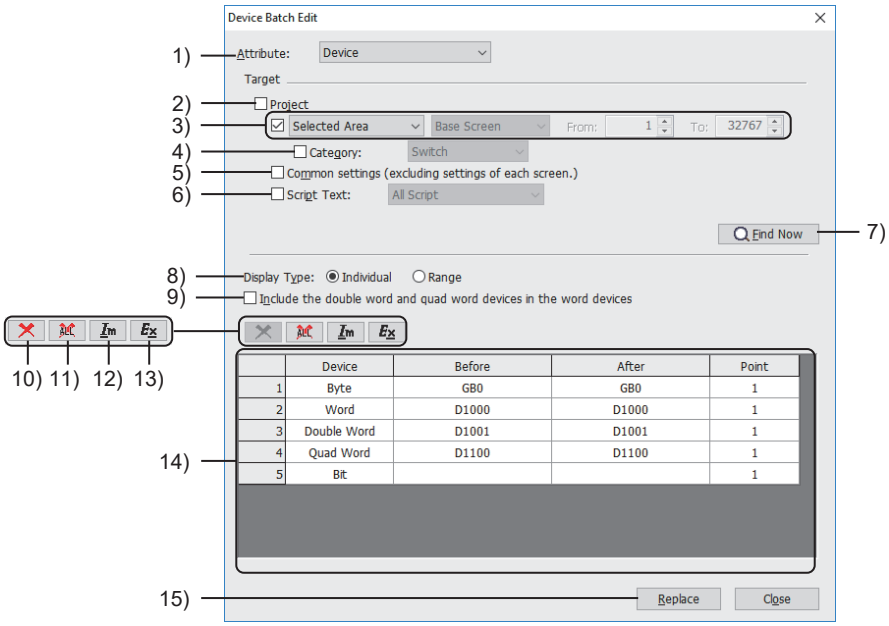


1) **[Attribute]**

Select an attribute to change in a batch.

The dialog to be displayed differs depending on the selected item.

- [Device]:

Displays the [Device Batch Edit] dialog.

➟11.8.4 ■3 [Device Batch Edit] dialog

- [Unit No./Axis No. Batch Edit]:

  Displays the [Unit No./Axis No. Batch Edit] dialog.

  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog

- [Network]:

  Displays the [Network Batch Edit] dialog.

  ➟11.8.4 ■5 [Network Batch Edit] dialog

- [CH No.]:

  Displays the [CH No. Batch Edit] dialog.

  ➟11.8.4 ■6 [CH No. Batch Edit] dialog

- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog

- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **[Project]**

Searches the whole project.

3) **Search target screens**

The specified screens are searched.

The following shows selectable items.

- [All screens]:

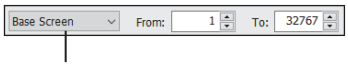
  Searches all screens.

- [Editing screen]:

  Searches the screen editor displayed in the foreground.

- [Screen range]:

  Searches the screens of the specified type and screen numbers.



- Screen type

  Set a screen type as the search target.
  The following shows selectable items.
  - [Base Screen]
  - [Window Screen]
  - [Report Screen]
  - [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

- [From], [To]

  Set the range of the screen numbers to search.
  The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767].
  The setting range of [Report Screen] is [1] to [99].

- [Selected area]:

  Searches the figures and objects selected on the screen editor before the [Device Batch Edit] dialog is opened.
  This item is enabled only when figures and objects have been selected on the screen editor.

4) **[Category]**

Searches the specified category.

The following shows selectable items.

- [Switch]
- [Lamp]
- [Other]
- User-created category

➟11.7 Managing figures and objects by category

5) **[Common settings (excluding settings of each screen)]**

Searches the common settings.

6) **[Script Text]**

Searches the scripts of the specified type.

The following shows selectable items.

- [All Script]
- [Script List]

• [Project/Screen Script]
• [Object Script]
• [Script Parts]

7) **[Search] button**
Conducts a search based on the setting of [Target].
Search results are displayed in the search result list.

8) **[Display Type]**
Select the display type of the search results.
• [Individual]
Lists devices individually.
• [Range]
Lists devices collectively by device type.

9) **[Include the double word and quad word devices in the word devices]**
Displays double-word and quad word devices in word devices, which are collectively changed in word units.

10) **[Delete] button**
Deletes the row selected in the search result list.

11) **[Clear] button**
Clears all the contents in the search result list.

12) **[Import] button**
Reads the device batch edit settings from a Unicode text file or CSV file.

13) **[Export] button**
Saves the device batch edit settings to a Unicode text file or CSV file.
➟(1) Details of the exported file
For the precautions for using a Unicode text file or CSV file, refer to the following.
➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

14) **Search result list**
Lists the search results.
Double-clicking each cell enables changing the settings.
You can also directly set [Device], [Before], [After], and [Point] without a search to execute the batch edit.

Item	Description
[Device]	Device types ([Bit], [Byte], [Word], [Double Word], [Quad Word])
[Before]	The setting values of the found settings
[After]	Set a device applied after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching. Double-clicking each cell of the [After] column enables changing the devices. If you change a device in the [After] column and then change the setting of [Display Type], the last-minute device change is discarded. ➟6.1.2 How to set devices
[Points]	Number of devices which are consecutively set In a detail setting row where a system label is set in [Before] or [After], [Points] is fixed to [1], and the cell color of [Points] changes to gray.

15) **[Replace] button**
Executes the batch edit with the settings in the search result list.

(1) Details of the exported file

The following shows the details of the exported file of the search results.

	A	B	C	D
1	Device Batch Edit			
2				
3	Device	Before	After	Point
4	Bit	X0000	GB1 000	1
5	Bit	X0001	GB1 001	1
6	Bit	X0002	GB1 002	1
7	Bit	X0003	GB1 003	1

1) 2) 3) 4)

1) **[Device]**
Device types.

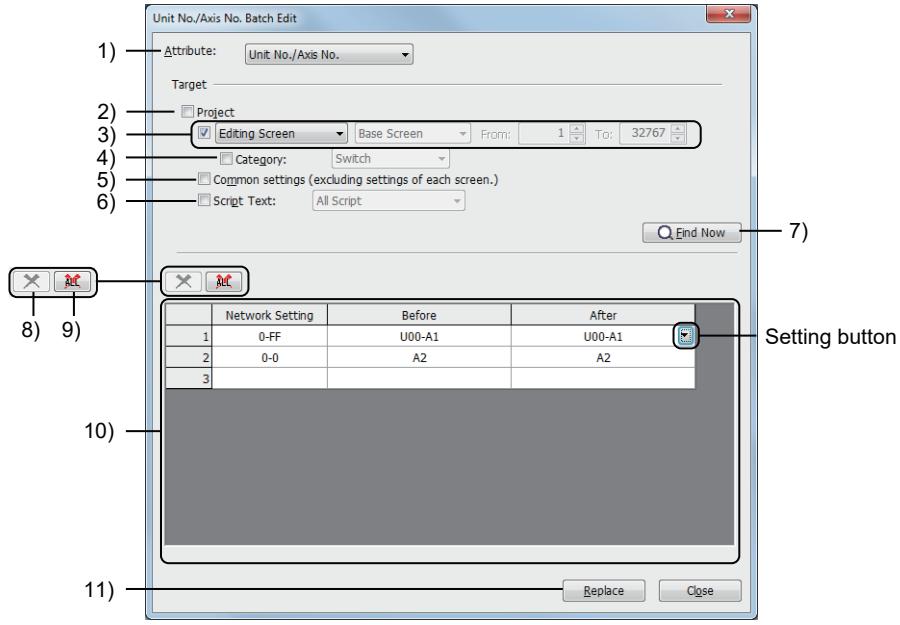
2) **[Before]**
Devices before the change.

3) **[After]**
Devices after the change.
When [Range] is selected for [Display Type], only the start device is exported.

4) **[Point]**
Number of devices.

■4 [Unit No./Axis No. Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Attribute]**
Select an attribute to change in a batch.
The dialog to be displayed differs depending on the selected item.

- [Device]:
  Displays the [Device Batch Edit] dialog.
  ➟11.8.4 ■3 [Device Batch Edit] dialog
- [Unit No./Axis No. Batch Edit]:
  Displays the [Unit No./Axis No. Batch Edit] dialog.
  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog
- [Network]:
  Displays the [Network Batch Edit] dialog.
  ➟11.8.4 ■5 [Network Batch Edit] dialog
- [CH No.]:

Displays the [CH No. Batch Edit] dialog.

➟11.8.4 ■6 [CH No. Batch Edit] dialog

- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog

- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **[Project]**

Searches the whole project.

3) **Search target screens**

The specified screens are searched.

The following shows selectable items.

- [All screens]:

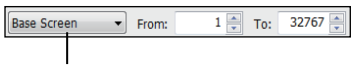
  Searches all screens.

- [Editing screen]:

  Searches the screen editor displayed in the foreground.

- [Screen range]:

  Searches the screens of the specified type and screen numbers.



- Screen type

  Set a screen type as the search target.
  The following shows selectable items.
  - [Base Screen]
  - [Window Screen]
  - [Report Screen]
  - [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

- [From], [To]

  Set the range of the screen numbers to search.
  The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767].
  The setting range of [Report Screen] is [1] to [99].

- [Selected area]:

  Searches the figures and objects selected on the screen editor before the [Unit No./Axis No. Batch Edit] dialog is opened.

  This item is enabled only when figures and objects have been selected on the screen editor.

4) **[Category]**

Searches the specified category.

The following shows selectable items.

- [Switch]
- [Lamp]
- [Other]
- User-created category

➟11.7 Managing figures and objects by category

5) **[Common settings (excluding settings of each screen)]**

Searches the common settings.

6) **[Script Text]**

Searches the scripts of the specified type.

The following shows selectable items.

- [All Script]
- [Script List]
- [Project/Screen Script]
- [Object Script]
- [Script Parts]

7) **[Search] button**

Conducts a search based on the setting of [Target].

Search results are displayed in the search result list.

8) **[Delete] button**

Deletes the row selected in the search result list.

9) **[Clear] button**

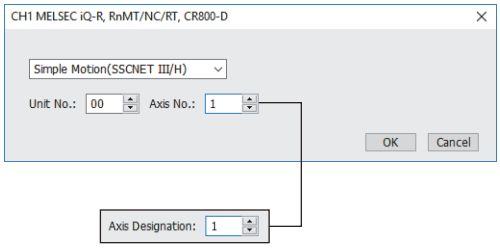
Clears all the contents in the search result list.

10) **Search result list**

Lists the search results.

Click the setting button of a cell in the [After] column to display the unit No./axis No. setting dialog.

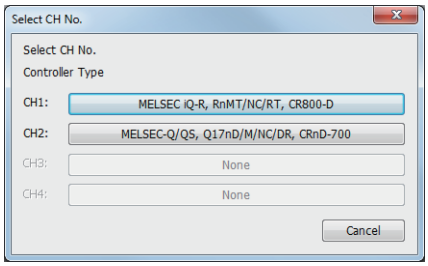
The setting items vary according to the selected module.



- Unit
  Select a module to be routed to.
- [Unit No.]
  Specify a unit number.
- [Axis No.]
  Specify an axis number.
- [Axis Designation]
  Specify an axis.

You can also directly set [Network Setting], [Before], and [After] without conducting a search, and then execute the batch edit.

Click the setting button of a blank cell to display the [Select CH No.] dialog.



- [Controller Type]
  Select a channel.
  Click a channel button to display the network setting dialog or the unit No./axis No. setting dialog.
  The number of channels varies by GOT model.

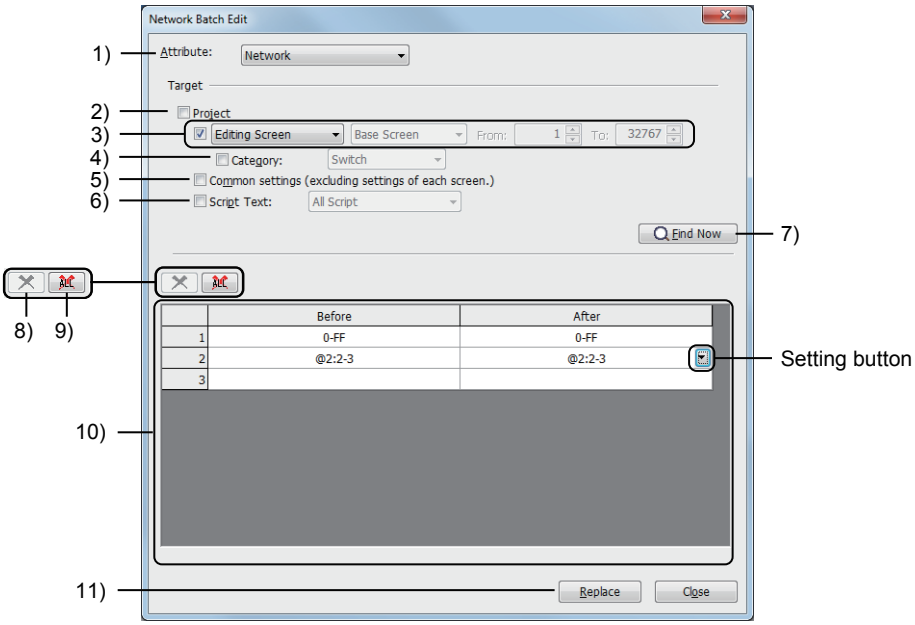
Item	Description
[Network Setting]	Current network settings of the found settings.
[Before]	The setting values of the found settings
[After]	Configure the setting values after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching.

11) **[Replace] button**

Executes the batch edit with the settings in the search result list.

■5 [Network Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Attribute]**

Select an attribute to change in a batch.

The dialog to be displayed differs depending on the selected item.

- [Device]:

  Displays the [Device Batch Edit] dialog.

  ➟11.8.4 ■3 [Device Batch Edit] dialog

- [Unit No./Axis No. Batch Edit]:

  Displays the [Unit No./Axis No. Batch Edit] dialog.

  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog

- [Network]:

  Displays the [Network Batch Edit] dialog.

  ➟11.8.4 ■5 [Network Batch Edit] dialog

- [CH No.]:

  Displays the [CH No. Batch Edit] dialog.

  ➟11.8.4 ■6 [CH No. Batch Edit] dialog

- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog

- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **[Project]**

Searches the whole project.

3) **Search target screens**

The specified screens are searched.

The following shows selectable items.

- [All screens]:

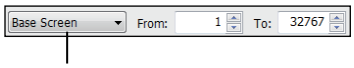
  Searches all screens.

- [Editing screen]:

  Searches the screen editor displayed in the foreground.

- [Screen range]:

  Searches the screens of the specified type and screen numbers.



Screen type

- Screen type

  Set a screen type as the search target.
  The following shows selectable items.
  - [Base Screen]
  - [Window Screen]
  - [Report Screen]
  - [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

- [From], [To]

  Set the range of the screen numbers to search.
  The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767].
  The setting range of [Report Screen] is [1] to [99].

- [Selected area]:

  Searches the figures and objects selected on the screen editor before the [Network Batch Edit] dialog is opened.

  This item is enabled only when figures and objects have been selected on the screen editor.

4) **[Category]**

Searches the specified category.

The following shows selectable items.

- [Switch]
- [Lamp]
- [Other]
- User-created category

➟11.7 Managing figures and objects by category

5) **[Common settings (excluding settings of each screen)]**

Searches the common settings.

6) **[Script Text]**

Searches the scripts of the specified type.

The following shows selectable items.

- [All Script]
- [Script List]
- [Project/Screen Script]
- [Object Script]
- [Script Parts]

7) **[Search] button**

Conducts a search based on the setting of [Target].

Search results are displayed in the search result list.

8) **[Delete] button**

Deletes the row selected in the search result list.

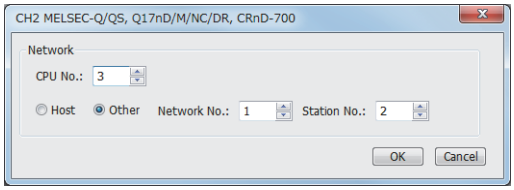
9) **[Clear] button**

Clears all the contents in the search result list.

10) **Search result list**

Lists the search results.

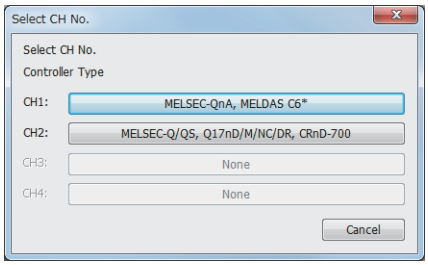
Click the setting button in a cell of the search result list to display the network setting dialog.



- **[CPU No.]**
  Set a CPU No.
- **[Host], [Other]**
  Select [Host] or [Other].
  When [Other] is selected, set [Network No.] and [Station No.].

You can also directly set [Before] and [After] without a search to execute the batch edit.

Click the setting button in a blank cell to display the [Select CH No.] dialog.



- **[Controller Type]**
  Select a channel.
  Click each channel button to display the network setting dialog.
  The number of channels depends on the GOT model.

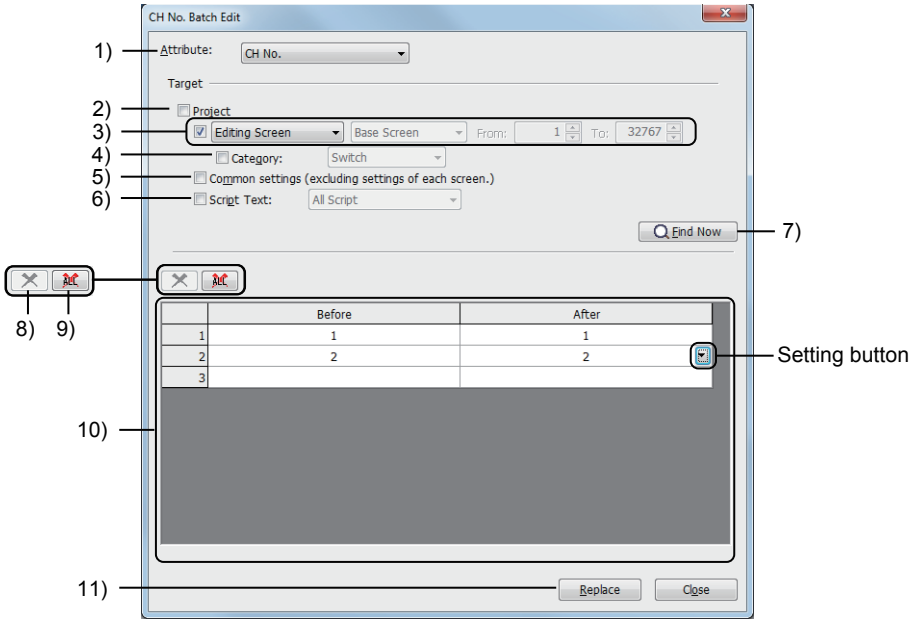
Item	Description
[Before]	The setting values of the found settings
[After]	Configure the setting values after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching.

11) **[Replace] button**

Executes the batch edit with the settings in the search result list.

■6 [CH No. Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Attribute]**

Select an attribute to change in a batch.

The dialog to be displayed differs depending on the selected item.

- [Device]:

  Displays the [Device Batch Edit] dialog.

  ➟11.8.4 ■3 [Device Batch Edit] dialog

- [Unit No./Axis No. Batch Edit]:

  Displays the [Unit No./Axis No. Batch Edit] dialog.

  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog

- [Network]:

  Displays the [Network Batch Edit] dialog.

  ➟11.8.4 ■5 [Network Batch Edit] dialog

- [CH No.]:

  Displays the [CH No. Batch Edit] dialog.

  ➟11.8.4 ■6 [CH No. Batch Edit] dialog

- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog

- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **[Project]**

Searches the whole project.

3) **Search target screens**

The specified screens are searched.

The following shows selectable items.

- [All screens]:

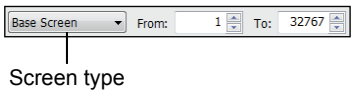
  Searches all screens.

- [Editing screen]:

  Searches the screen editor displayed in the foreground.

- [Screen range]:

Searches the screens of the specified type and screen numbers.



• Screen type
Set a screen type as the search target.
The following shows selectable items.
  • [Base Screen]
  • [Window Screen]
  • [Report Screen]
  • [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

• [From], [To]
Set the range of the screen numbers to search.
The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767].
The setting range of [Report Screen] is [1] to [99].

• [Selected area]:
Searches the figures and objects selected on the screen editor before the [CH No. Batch Edit] dialog is opened.
This item is enabled only when figures and objects have been selected on the screen editor.

4) **[Category]**
Searches the specified category.
The following shows selectable items.
  • [Switch]
  • [Lamp]
  • [Other]
  • User-created category

➟11.7 Managing figures and objects by category

5) **[Common settings (excluding settings of each screen)]**
Searches the common settings.

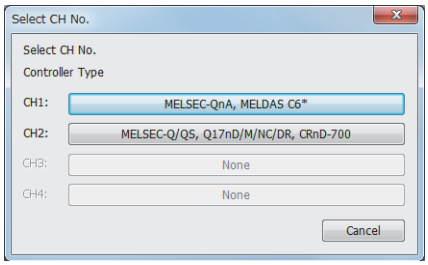
6) **[Script Text]**
Searches the scripts of the specified type.
The following shows selectable items.
  • [All Script]
  • [Script List]
  • [Project/Screen Script]
  • [Object Script]
  • [Script Parts]

7) **[Search] button**
Conducts a search based on the setting of [Target].
Search results are displayed in the search result list.

8) **[Delete] button**
Deletes the row selected in the search result list.

9) **[Clear] button**
Clears all the contents in the search result list.

10) **Search result list**
Lists the search results.
Click the setting button in a cell of the search result list to display the [Select CH No.] dialog.



• **[Controller Type]**
Select a channel.
The number of channels depends on the GOT model.

You can also directly set [Before] and [After] without a search to execute the batch edit.

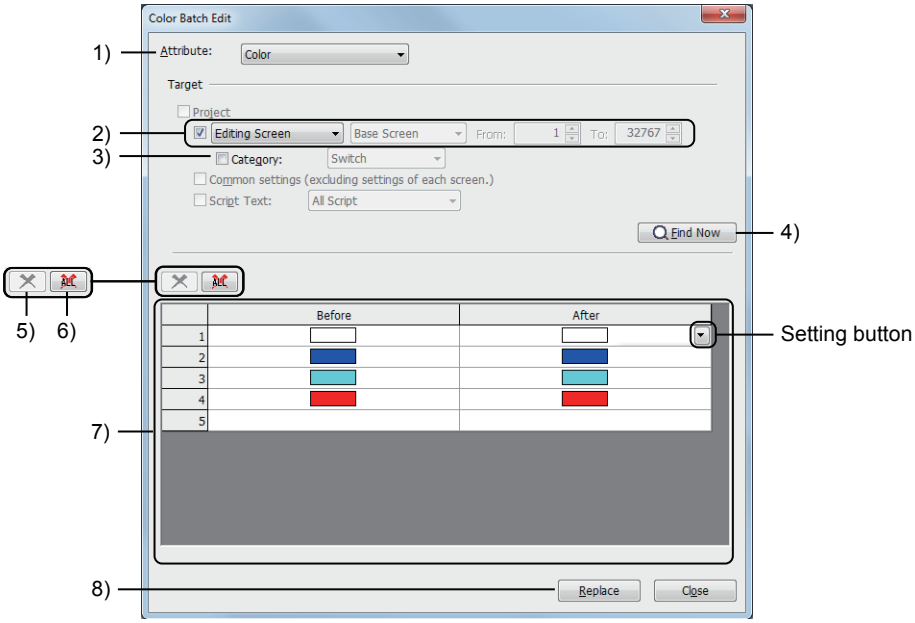
Item	Description
[Before]	The setting values of the found settings
[After]	Configure the setting values after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching.

11) **[Replace] button**

Executes the batch edit with the settings in the search result list.

■7 [Color Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Attribute]**

Select an attribute to change in a batch.

The dialog to be displayed differs depending on the selected item.

- [Device]:

  Displays the [Device Batch Edit] dialog.

  ➟11.8.4 ■3 [Device Batch Edit] dialog
- [Unit No./Axis No. Batch Edit]:

  Displays the [Unit No./Axis No. Batch Edit] dialog.

  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog
- [Network]:

  Displays the [Network Batch Edit] dialog.

  ➟11.8.4 ■5 [Network Batch Edit] dialog
- [CH No.]:

  Displays the [CH No. Batch Edit] dialog.

  ➟11.8.4 ■6 [CH No. Batch Edit] dialog
- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog
- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **Search target screens**

The specified screens are searched.

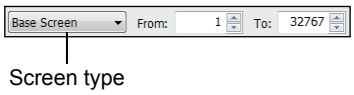
The following shows selectable items.

- [All screens]:

  Searches all screens.
- [Editing screen]:

  Searches the screen editor displayed in the foreground.
- [Screen range]:

Searches the screens of the specified type and screen numbers.



• Screen type
Set a screen type as the search target.
The following shows selectable items.
  • [Base Screen]
  • [Window Screen]
  • [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

• [From], [To]
Set the range of the screen numbers to search.
The setting range is [0] to [32767].

• [Selected area]:
Searches the figures and objects selected on the screen editor before the [Color Batch Edit] dialog is opened.
This item is enabled only when figures and objects have been selected on the screen editor.

3) **[Category]**
Searches the specified category.
The following shows selectable items.
  • [Switch]
  • [Lamp]
  • [Other]
  • User-created category

➟11.7 Managing figures and objects by category

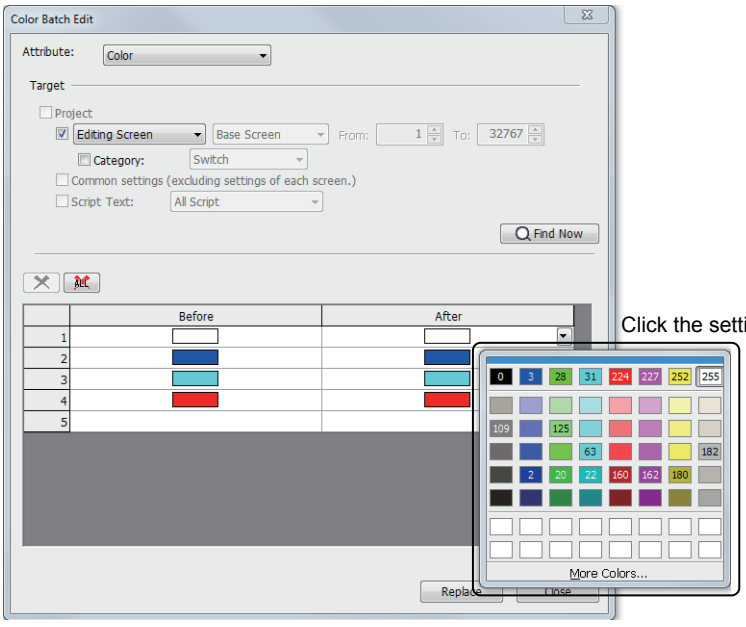
4) **[Search] button**
Conducts a search based on the setting of [Target].
Search results are displayed in the search result list.

5) **[Delete] button**
Deletes the row selected in the search result list.

6) **[Clear] button**
Clears all the contents in the search result list.

7) **Search result list**
Lists the search results.
Click the setting button in a cell to display the color palette.

➟6.4.2 Color settings



Click the setting button to display the dialog.

You can directly set [Before] and [After] and execute the batch edit without searching.

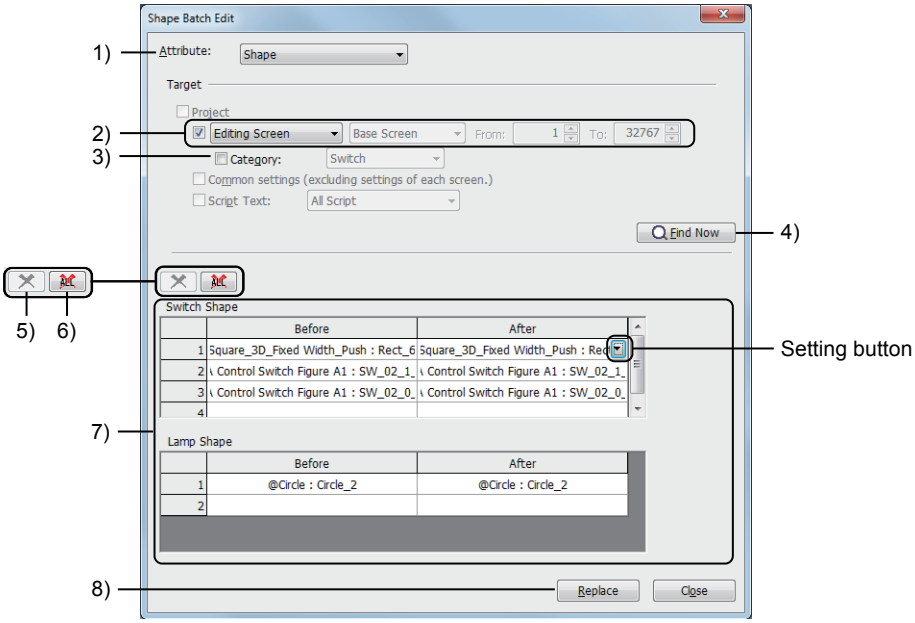
Item	Description
[Before]	The setting values of the found settings
[After]	Configure the setting values after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching.

8) **[Replace] button**

Executes the batch edit with the settings in the search result list.

■8 [Shape Batch Edit] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Attribute]**

Select an attribute to change in a batch.

The dialog to be displayed differs depending on the selected item.

- [Device]:

  Displays the [Device Batch Edit] dialog.

  ➟11.8.4 ■3 [Device Batch Edit] dialog
- [Unit No./Axis No. Batch Edit]:

  Displays the [Unit No./Axis No. Batch Edit] dialog.

  ➟11.8.4 ■4 [Unit No./Axis No. Batch Edit] dialog
- [Network]:

  Displays the [Network Batch Edit] dialog.

  ➟11.8.4 ■5 [Network Batch Edit] dialog
- [CH No.]:

  Displays the [CH No. Batch Edit] dialog.

  ➟11.8.4 ■6 [CH No. Batch Edit] dialog
- [Color]:

  Displays the [Color Batch Edit] dialog.

  ➟11.8.4 ■7 [Color Batch Edit] dialog
- [Shape]:

  Displays the [Shape Batch Edit] dialog.

  ➟11.8.4 ■8 [Shape Batch Edit] dialog

2) **Search target screens**

The specified screens are searched.

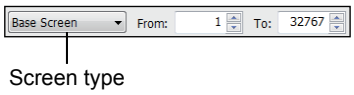
The following shows selectable items.

- [All screens]:

  Searches all screens.
- [Editing screen]:

  Searches the screen editor displayed in the foreground.
- [Screen range]:

Searches the screens of the specified type and screen numbers.



• Screen type
Set a screen type as the search target.
The following shows selectable items.
  • [Base Screen]
  • [Window Screen]
  • [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25)

• [From], [To]
Set the range of the screen numbers to search.
The setting range is [0] to [32767].

• [Selected area]:
Searches the figures and objects selected on the screen editor before the [Shape Batch Edit] dialog is opened.
This item is enabled only when figures and objects have been selected on the screen editor.

3) **[Category]**
Searches the specified category.
The following shows selectable items.
  • [Switch]
  • [Lamp]
  • [Other]
  • User-created category

➟11.7 Managing figures and objects by category

4) **[Search] button**
Conducts a search based on the setting of [Target].
Search results are displayed in the search result list.

5) **[Delete] button**
Deletes the row selected in the search result list.

6) **[Clear] button**
Clears all the contents in the search result list.

7) **Search result list**
Lists the search results.
Click the setting button in a cell of the search result list to display the [Image List] dialog.
The image types of figures ([Basic Figure], [Library] and [Parts]) cannot be changed.

➟6.5.5 ■1 (3) [Image List] dialog

You can also directly set [Before] and [After] without a search to execute the batch edit.

Item	Description
[Switch Shape]	Shapes set for touch switches
[Lamp Shape]	Shapes set for lamps
[Before]	The setting values of the found settings
[After]	Configure the setting values after the batch edit. The setting values before the batch edit are displayed in the [After] column right after the searching.

8) **[Replace] button**
Executes the batch edit with the settings in the search result list.

11.8.5 Searching for and editing a specific setting (Data Browser)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The common setting, figures, and objects set in the project are displayed in a list.
You can narrow the targets displayed in the list by specifying conditions with keywords.
You can change the settings separately or in a batch in the [Data Browser] window.

➟■1 How to use the data browser
■2 Precautions
■3 [Data Browser] window
■4 [Range/Target Setting] dialog
■5 [Display Item Setting] dialog
■6 [Text Replacement] dialog
■7 Details of the exported file

■1 How to use the data browser

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Displaying the [Data Browser] window
(2) Displaying the settings in the project
(3) Changing the targets to be displayed in the data browser
(4) Changing the items to be displayed in the data browser
(5) Changing the settings displayed in the data browser separately
(6) Changing the settings displayed in the data browser in a batch
(7) Exporting the data collected in the data browser

(1) Displaying the [Data Browser] window

Perform either of the following operations to display the [Data Browser] window.

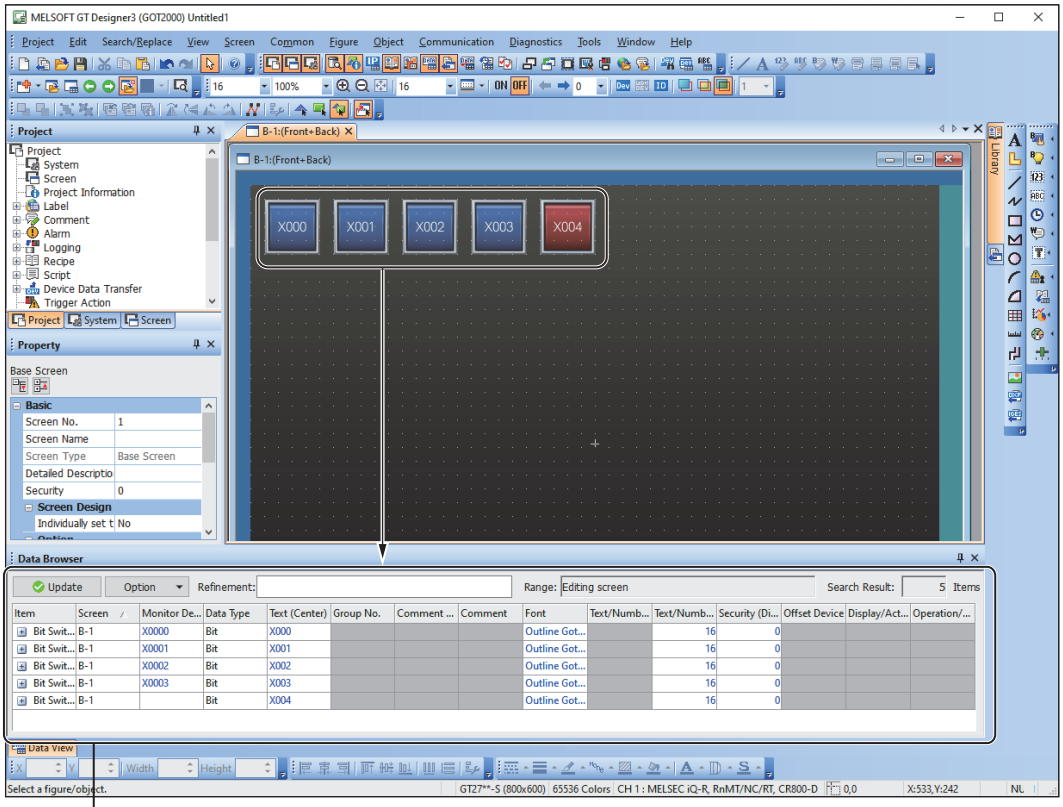
- Select [Search/Replace] → [Data Browser] from the menu.
- Select [View] → [Docking Window] → [Data Browser] from the menu.

➟11.8.5 ■3 [Data Browser] window

(2) Displaying the settings in the project

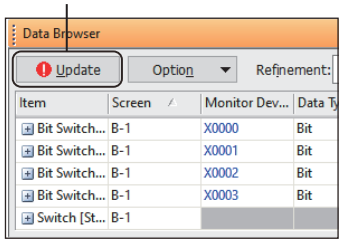
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The search result list in the [Data Browser] window displays the search results according to the setting of the search range.
Example) When [Editing screen] is selected for [Range]
When the [Data Browser] window is displayed, the settings of the screen editor displayed at the topmost position are displayed.

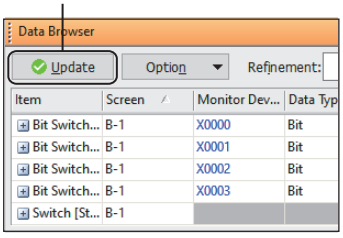


If any setting in the project is changed while the [Data Browser] window is displayed, the search result list is not automatically updated.
Click the [Update] button to update the search result list.

When the search result list is not in the latest condition



When the search result list is in the latest condition



To change the targets or items displayed in the [Data Browser] window, refer to the following.

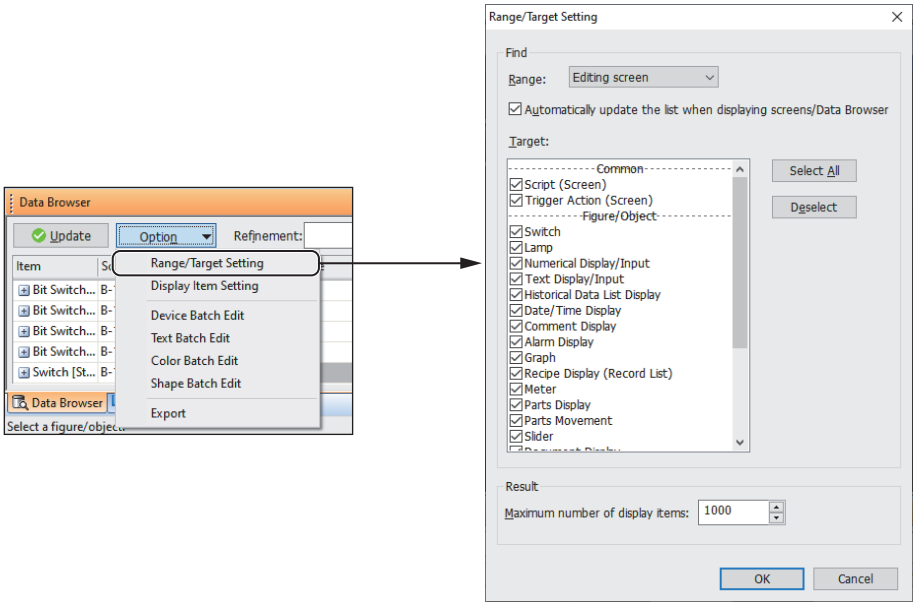
➟(3) Changing the targets to be displayed in the data browser
(4) Changing the items to be displayed in the data browser

(3) Changing the targets to be displayed in the data browser

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Click the [Option] button and select [Range/Target Setting] from the pull-down menu.

The [Range/Target Setting] dialog appears.



Step 2 Set [Range] and [Target].

➟11.8.5 ■4 [Range/Target Setting] dialog

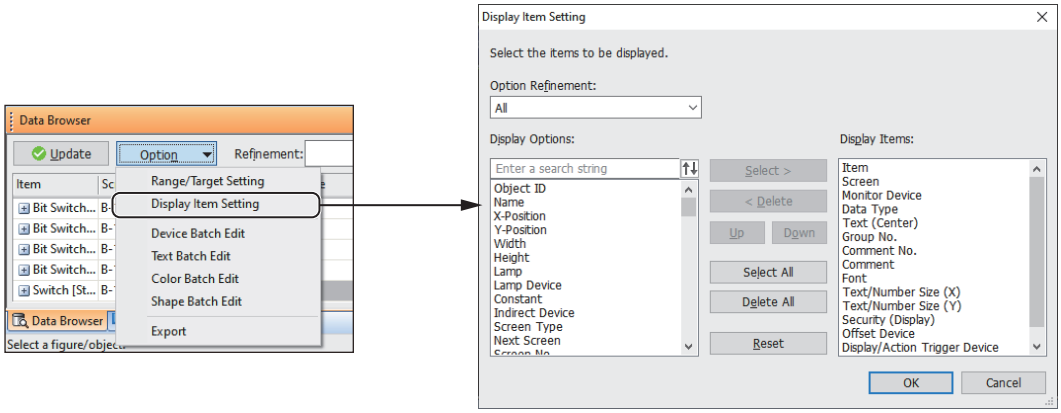
Step 3 Click the [OK] button to reflect the setting to the [Data Browser] window.

(4) Changing the items to be displayed in the data browser

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Click the [Option] button and select [Display Item Setting] from the pull-down menu.

The [Display Item Setting] dialog appears.



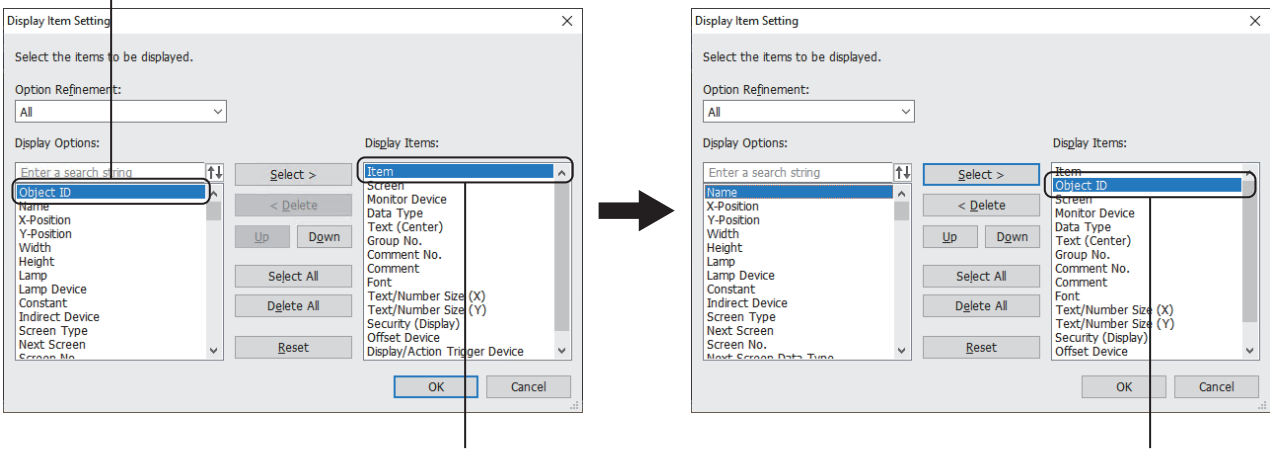
Step 2 Use the [Select] button and the [Delete] button to determine the items listed in [Display Items].

For the details of the operation buttons, refer to the following.

➟11.8.5 ■5 [Display Item Setting] dialog

Example 1) Setting [Object ID] as the display target

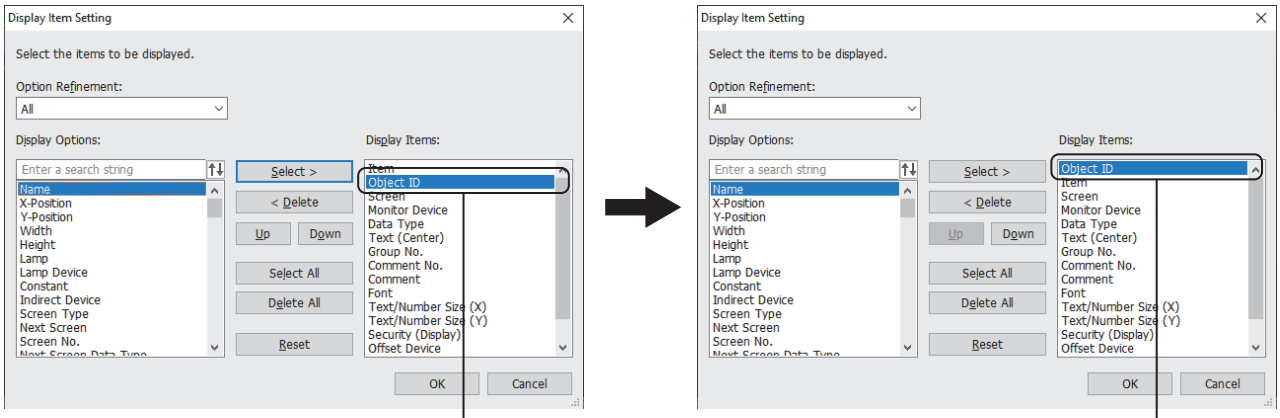
Select an item to move.



Select the destination to insert the item to be moved from [Display Options].
(The item is inserted just below the selected item.)

Clicking the [Select] button moves the item.

Example 2) Moving up the order of [Object ID]



Select an item to change the order.

Clicking the [Up] button moves up the item.

Step 3 Click the [OK] button to reflect the setting to the [Data Browser] window.

(5) Changing the settings displayed in the data browser separately

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 The text color of each cell in the search result list indicates whether you can edit the cell or not in the [Data Browser] window.

Double-click a cell whose text color is blue and edit the setting.

• When the text color is blue:

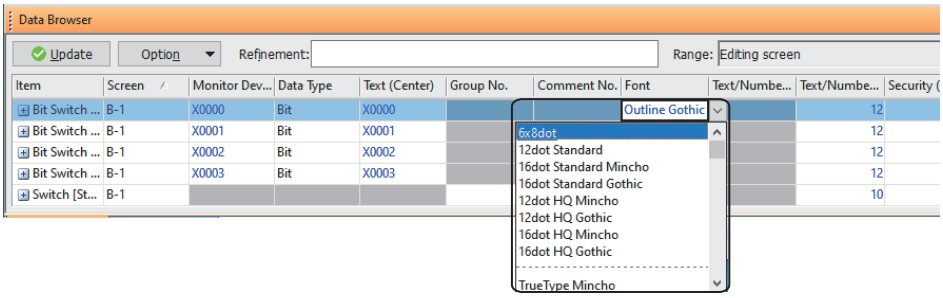
The setting can be edited in the [Data Browser] window.
Double-click each cell to edit the setting.

• When the text color is black:

The setting cannot be edited in the [Data Browser] window.
Double-click each cell to display the setting dialog.

The setting method differs depending on the setting to be edited.

Example) Changing a font



For the operation with a mouse and keyboard, refer to the following.

➟11.8.5 ■3 (1) Mouse and keyboard operations

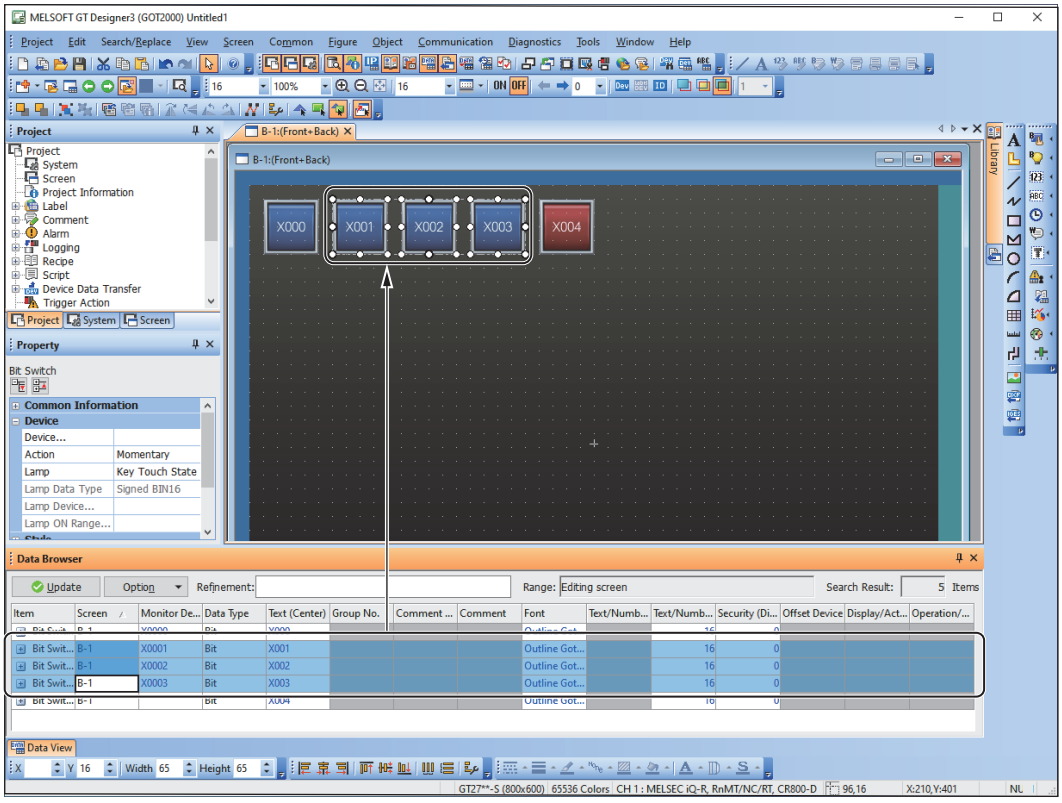
(6) Changing the settings displayed in the data browser in a batch

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select targets (rows) for which the batch edit is executed in the search result list.

Multiple rows can be selected by either of the following methods.

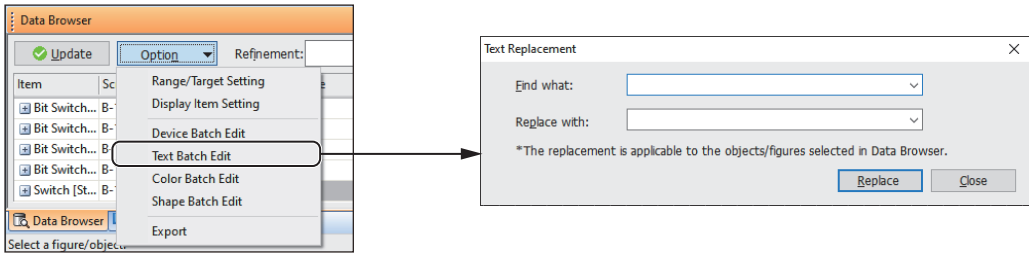
- [Shift] + click:
  Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.
- [Ctrl] + Click
  Selects or deselects a row.
- [Shift] + Arrow (Up/Down):
  Moves the cursor while selecting the row where the cursor was placed.
  The destination row of the cursor is also selected.



The figures and objects corresponding to the rows selected in the search result list are selected on the screen editor.

Step 2 Click the [Option] button, and select [Device Batch Edit], [Text Batch Edit], [Color Batch Edit], or [Shape Batch Edit] from the pull-down menu.

The batch edit dialog to change each setting appears.
Example) When the [Text Batch Edit] is selected from the menu



Step 3 Set each item in the displayed dialog and click the [Replace] button to execute the batch edit with the configured settings.

- [Device Batch Edit] dialog

➟11.8.4 ■3 [Device Batch Edit] dialog

• [Text Replacement] dialog

➟11.8.5 ■6 [Text Replacement] dialog

• [Color Batch Edit] dialog

➟11.8.4 ■7 [Color Batch Edit] dialog

• [Shape Batch Edit] dialog

➟11.8.4 ■8 [Shape Batch Edit] dialog

Step 4 Click the [OK] button to close the batch edit dialog.

Step 5 Click the [Update] button to update the search result list.

(7) Exporting the data collected in the data browser

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Click the [Option] button and select [Export] from the pull-down menu.

The [Save As] dialog appears.

Step 2 Set [File name] and [Save as type] and click the [Save] button to export the search result list.

➟11.8.5 ■7 Details of the exported file

■2 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(1) The operations which cannot be restored by [Undo]

The settings which were changed by either of the following operations cannot be restored even though [Edit] → [Undo] is selected from the menu.

Before changing the settings, check the contents to be changed.

• Changing the settings with the Text Batch Edit, Device Batch Edit, or Color Batch Edit

• Changing the settings of the figures and objects placed on a screen editor which is not opened

• Changing the common setting

(2) The settings which cannot be edited while the corresponding screen is closed

Some settings (including the settings of X-coordinates, Y-coordinates, and logo texts) cannot be edited while the corresponding screens are closed.

If you change those settings in the [Data Browser] window, open a screen on which the figures and objects to be edited are placed.

(3) Project for which project security is set

When editing the project is prohibited, the settings cannot be changed in the [Data Browser] window.

The settings for display-disabled screens and scripts are not displayed in the [Data Browser] window.

Although the settings for edit-disabled screens and scripts are displayed in the [Data Browser] window, the settings cannot be changed and deleted.

(4) Changing the settings of [Range Setting] and [Input Range Setting]

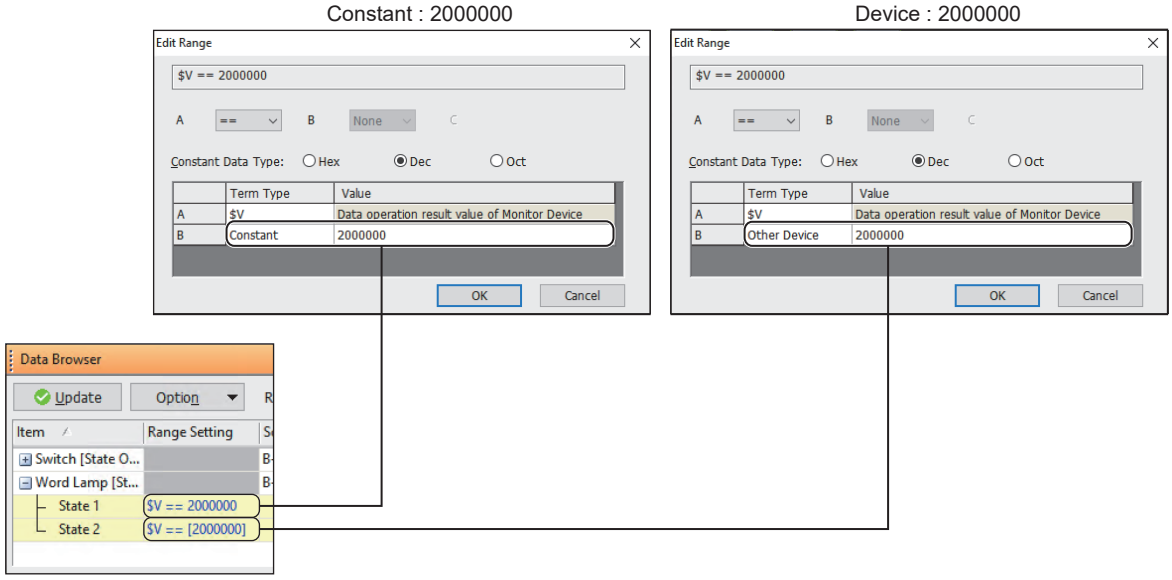
When you directly enter any item shown below for [Range Setting] or [Input Range Setting], enclose the item in square brackets.

• Device name with only numbers

• OPC UA tag name

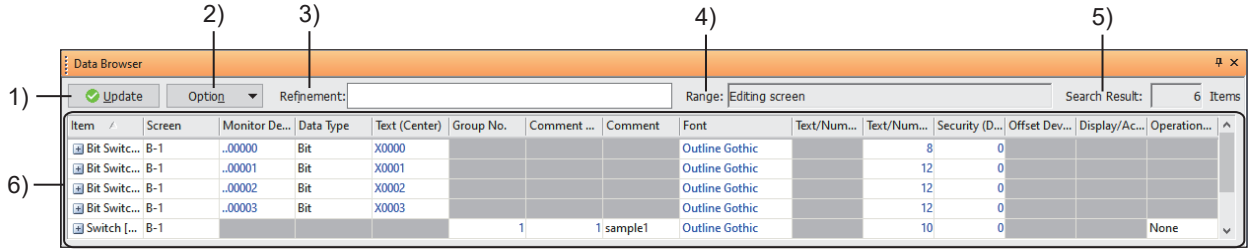
A name that is not enclosed in square brackets will not be recognized as a device or OPC UA tag.

Example) Specifying the device (2000000) of the SHARP equipment for [Range Setting]



■3 [Data Browser] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

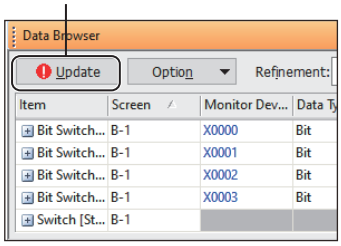


1) **[Update] button**

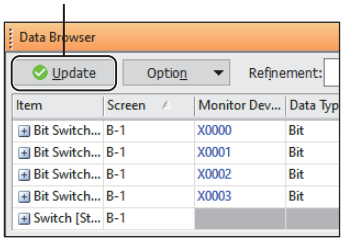
Updates the search result list.

The display of the [Update] button differs depending on the status of the search result list.

When the search result list is not in the latest condition



When the search result list is in the latest condition



2) **[Option] button**

Operates the [Data Browser] window from the pull-down menu.

Item	Description
[Range/Target Setting]	Displays the [Range/Target Setting] dialog. Set a target to be displayed in the search result list. ➡11.8.5 ■4 [Range/Target Setting] dialog

Item	Description
[Display Item Setting]	Displays the [Display Item Setting] dialog. Set an item to be displayed in the search result list. ➟11.8.5 ■5 [Display Item Setting] dialog
[Device Batch Edit]	Displays the [Device Batch Edit] dialog. The device settings selected in the search result list can be edited in a batch. ➟11.8.4 ■3 [Device Batch Edit] dialog
[Text Batch Edit]	Displays the [Text Batch Edit] dialog. The text settings selected in the search result list can be edited in a batch. ➟11.8.5 ■6 [Text Replacement] dialog
[Color Batch Edit]	Displays the [Color Batch Edit] dialog. The color settings selected in the search result list can be edited in a batch. ➟11.8.4 ■7 [Color Batch Edit] dialog
[Shape Batch Edit]	Displays the [Shape Batch Edit] dialog. The shape settings selected in the search result list can be edited in a batch. ➟11.8.4 ■8 [Shape Batch Edit] dialog
[Export]	Saves the search result list as a CSV file or a Unicode text file. Set [File name] and [Save as type] in the displayed dialog and click the [Save] button. ➟11.8.5 ■7 Details of the exported file

3) **[Refinement]**
Narrows the displayed contents of the search result list by keywords.
Up to 128 characters can be set.
To narrow the contents using multiple keywords, separate each keyword with one-byte spaces.

4) **[Range]**
Range selected in [Range] of the [Range/Target Setting] dialog

5) **[Search Result]**
The number of the targets displayed in the search result list

6) **Search result list**
Displays the search result.
Clicking the top row sorts the results by item.
If you select a row, the corresponding figure or object is also selected on the screen editor.
You can edit the settings of some items.
The text color of each cell indicates whether you can edit the cell or not in the [[Data Browser] window.

- When the text color is blue:
  The setting can be edited in the [Data Browser] window.
  Double-click each cell to edit the setting.
  The setting method differs depending on the setting to be edited.
- When the text color is black:
  The setting cannot be edited in the [Data Browser] window.
  Double-click each cell to display the setting dialog.

For the operations with the mouse or keyboard, refer to the following.
➟(1) Mouse and keyboard operations

(1) Mouse and keyboard operations

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

(a) Operations for the list display

The following table shows how to operate the search result list in the [Data Browser] window with the mouse or keyboard.

Operation	Action
Arrow (Up/Down/Left/Right)	Moves the cursor.
[Shift] + Arrow (Up/Down/Left/Right)	Move the cursor while selecting the cell with the cursor. The cell to which the cursor is moved is also selected.
[+] (Numeric keypad)	Unfolds the tree of the row with the cursor.
[-] (Numeric keypad)	Folds the tree of the row with the cursor.
[Shift] + [+] (Numeric keypad)	Unfolds all the trees.
[Shift] + [-] (Numeric keypad)	Folds all the trees.

Operation	Action
[Home]	Moves the cursor to the top row.
[End]	Moves the cursor to the bottom row.
[PageUp]	Moves the cursor up one page.
[PageDown]	Moves the cursor down one page.
[Shift] + [Home]	Selects the rows from the row where the cursor is positioned to the top row.
[Shift] + [End]	Selects the rows from the row where the cursor is positioned to the bottom row.
[Shift] + [PageUp]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves up one page.
[Shift] + [PageDown]	Selects the rows from the row where the cursor is positioned to the row where the cursor moves down one page.
[Shift] + Click	Selects the rows from the row where the cursor is positioned to the row where the mouse is clicked.
[Ctrl] + [Space]	Selects or deselects a row.
[Ctrl] + Click	
[Tab]	Moves the cursor to the right cell.
[Shift] + [Tab]	Moves the cursor to the left cell.
[Enter]	Moves the cursor downward by one row.
[Alt] + [Enter]	Displays the setting dialog for the figure or object corresponding to the row with the cursor.
[F3]	
[Ctrl] + [C]	• When selecting a cell in the [Item] column The figure or object corresponding to the selected row is copied. When multiple cells are selected, only the figures and objects placed on the same screen editor are copied. • When selecting a cell in a column other than the [Item] column The setting value of the cell with the cursor is copied. When multiple cells are selected, the setting values of all the selected cells are copied.
[Ctrl] + [X]	Cuts the figure or object corresponding to the row with the cursor.
[Ctrl] + [V]	• When copying a cell in the [Item] column The copied figure or object is pasted on the screen editor. • When copying a cell in a column other than the [Item] column The copied text is pasted on the cell with the cursor. The value which is out of the setting range cannot be pasted.
[Ctrl] + [D]	Pastes a copy of the figure or object corresponding to the row with the cursor on the screen editor.
[Ctrl] + [A]	Selects all the figures and objects placed on the screen editor displayed at the topmost position.
[Ctrl] + [U]	Cancels the grouping of the figures and objects corresponding to the rows with the cursor.
[Delete]	Clears the value in the cell with the cursor. (This operation is available for the cells for which can be edited directly.) Clearing the items for which numerical values are set makes the setting values to zero.
[Back space]	Enables the cell where the cursor was placed to be edited. When the cell which can be edited directly is selected, the setting value is cleared and editing is enabled. ➟(b) Operations when a cell is edited
Character keys	When a cell which can be edited directly is selected with the cursor, editing the cell is enabled by inputting any character with the keys. ➟(b) Operations when a cell is edited
[F2]	Enables the cell where the cursor was placed to be edited. You can edit only the cells whose text color is blue. ➟(b) Operations when a cell is edited
Double-click	• Any cell whose text color is blue Enables the cell to be edited. • Any cell other than above Double-clicking a cell displays the setting dialog for a figure or an object corresponding to the selected cell. ➟(b) Operations when a cell is edited
Drag	Selects multiple cells.

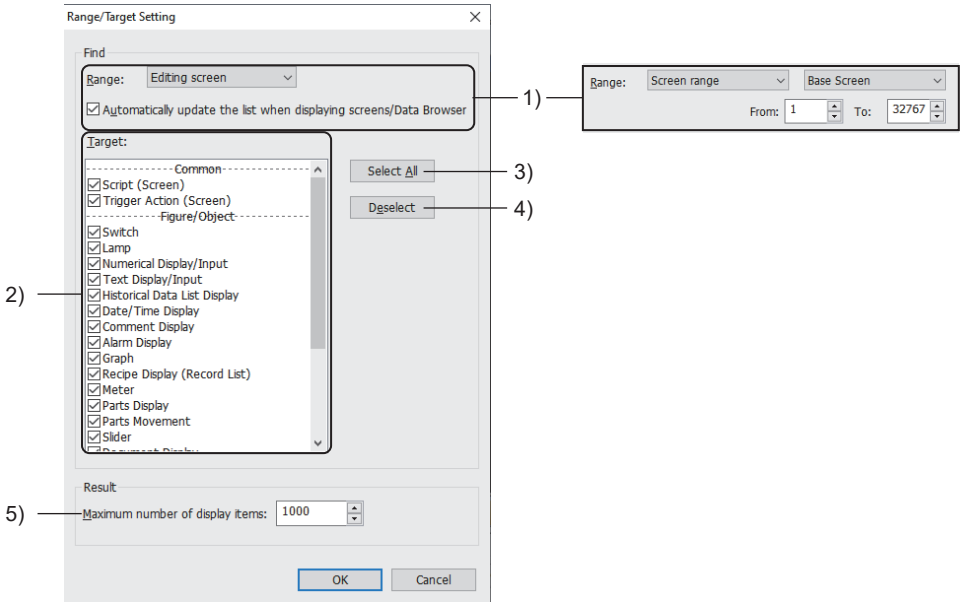
(b) **Operations when a cell is edited**

The following table shows the keyboard operation for when a cell in the search result list is edited.

Operation	Action
[Enter]	Confirms and ends the edit.
[Esc]	Discards and ends the edit.
[Tab]	Confirms the edit and moves the cursor to the right cell.
[Shift] + [Tab]	Confirms the edit and moves the cursor to the left cell.
[Alt] + [Enter]	Inserts a line feed when text is input.

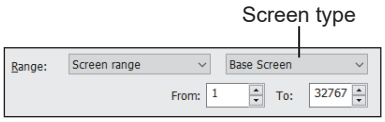
■4 [Range/Target Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Range]**

Selects the range to be displayed in the [Data Browser] window.
The following shows selectable items.

Item	Description
[All screens]	Searches all screens.
[Editing screen]	Searches the screen editor displayed in the foreground. • [Automatically update the list when displaying screens/Data Browser] Updates the display contents of the [Data Browser] window upon any of the following operations. ·Displaying or switching a screen editor ·Displaying the [Data Browser] window hidden by the auto-hiding function
[Screen range]	The specified screens are searched.  • **Screen type** Set a screen type as the search target. The following shows selectable items. • [Base Screen] • [Window Screen] • [Report Screen] • [Mobile Screen] (GT27, GT25, GT SoftGOT2000, and GS25) • **[From], [To]** Set the range of the screen numbers to search. The setting range of [Base Screen], [Window Screen], or [Mobile Screen] is [0] to [32767]. The setting range of [Report Screen] is [1] to [99].

2) **[Target]**

Set the target to be displayed in the [Data Browser] window.

3) **[Select All button**

Selects all the items in [Target].

4) **[Deselect] button**

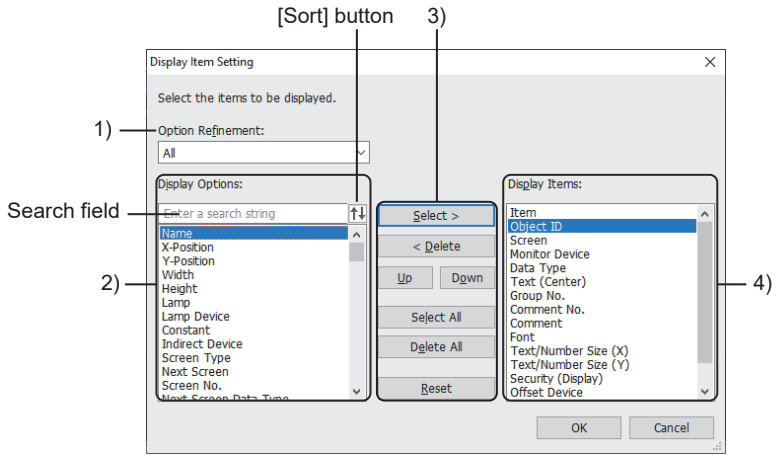
Deselects all the items in [Target].

5) **[Maximum number of display items]**

Sets the maximum number of data to be displayed in the search result list.
The setting range is [1] to [10000].

■5 [Display Item Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



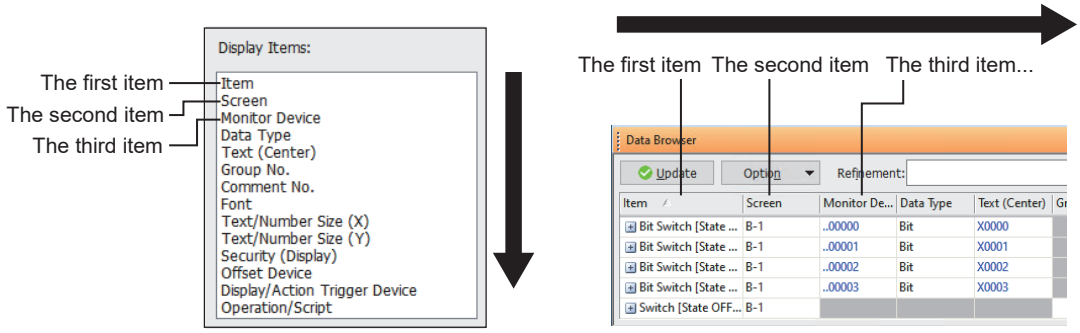
1) **[Option Refinement]**
Narrows the items displayed in [Display Options].

2) **[Display Options]**
Options of the items displayed in the search result list
Select an item and click the [Select] button to move the item to [Display Items].
To narrow down the list, enter a string in the search field.
To sort the list in ascending or descending order, click the [Sort] button.

3) **Operation buttons**

Item	Description
[Select] button	Moves the item selected in [Display Options] to [Display Items].
[Delete] button	Moves the item selected in [Display Items] to [Display Options].
[Up] button, [Down] button	Move the item selected in [Display Items] upward or downward.
[Select All] button	Moves all the items in [Display Options] to [Display Items].
[Delete All] button	Moves all the items other than [Item] in [Display Items] to [Display Options].
[Reset] button	Restores the items in [Display Items] to the default ones.

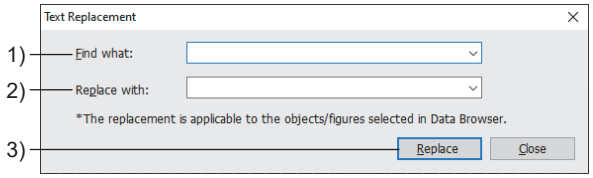
4) **[Display Items]**
Items to be displayed in the search result list
If any item is selected and the [Delete] button is clicked, the selected item is moved to [Display Options].
The items in the search result list are displayed in the order set for [Display Items].



If any item is selected and the [Up] button or the [Down] button is clicked, the position of the selected item is moved upward or downward.

■6 [Text Replacement] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Find what]**
Set a text before the replacement.
Up to 512 characters can be set.
Capital letters and small letters are distinguished.

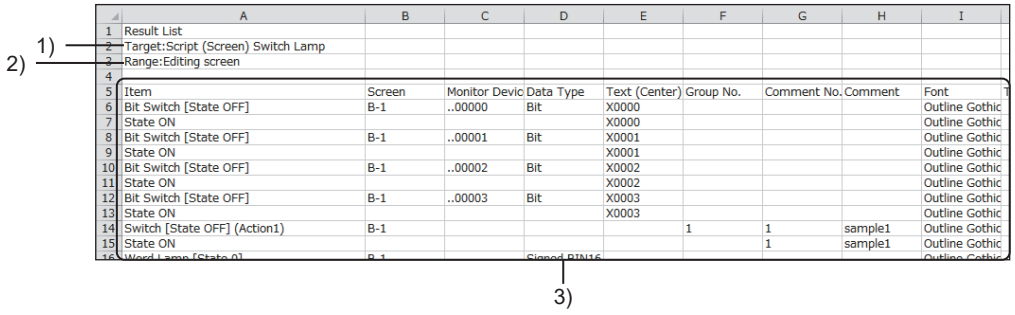
2) **[Replace with]**
Set a text after the replacement.
Up to 512 characters can be set.
Capital letters and small letters are distinguished.

3) **[Replace] button**
The text set in [Find what] is replaced with the text set in [Replace with].

■7 Details of the exported file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the details of the exported file of the corrected data in the data browser.



	A	B	C	D	E	F	G	H	I
1	Result List								
2	Target:Script (Screen) Switch Lamp								
3	Range:Editing screen								
4									
5	Item	Screen	Monitor Devic	Data Type	Text (Center)	Group No.	Comment No.	Comment	Font
6	Bit Switch [State OFF]	B-1	..00000	Bit	X0000				Outline Gothic
7	State ON				X0000				Outline Gothic
8	Bit Switch [State OFF]	B-1	..00001	Bit	X0001				Outline Gothic
9	State ON				X0001				Outline Gothic
10	Bit Switch [State OFF]	B-1	..00002	Bit	X0002				Outline Gothic
11	State ON				X0002				Outline Gothic
12	Bit Switch [State OFF]	B-1	..00003	Bit	X0003				Outline Gothic
13	State ON				X0003				Outline Gothic
14	Switch [State OFF] (Action1)	B-1				1	1	sample1	Outline Gothic
15	State ON						1	sample1	Outline Gothic

1) **[Target]**
Target to be displayed in the [Data Browser] window

2) **[Range]**
Target to be displayed in the [Data Browser] window

3) **Item**
Item set in the [Display Item Setting]

11.8.6 Checking the IP addresses in the list (IP address list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The IP addresses registered in the project are displayed in the list.
You can narrow your search, or jump to an IP address setting window.

➥■1 IP addresses to be displayed
■2 How to use the IP address list
■3 [IP Address List] window
■4 [Display Item Setting] dialog (IP address list)

■1 IP addresses to be displayed

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The IP addresses are displayed in the IP address list depending on the settings as shown below.

Displayed	Not displayed
• [GOT Setup] window ([Time Setting]) • [GOT Setup] window ([Network Drive]) • [GOT Ethernet Setting] window ([GOT IP Address Setting]) • [Controller Setting] window*1 • [Multimedia] dialog • [Printer] dialog • [GOT Network Interaction] dialog • [Communication Configuration] dialog (the IP address of the PLC side I/F only)	• [MES Interface] dialog • [Switch] dialog • [Special Function Switch] dialog

*1 Not displayed when a DNS server is used and the POP3 server is specified with the host name in the mail settings.

■2 How to use the IP address list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

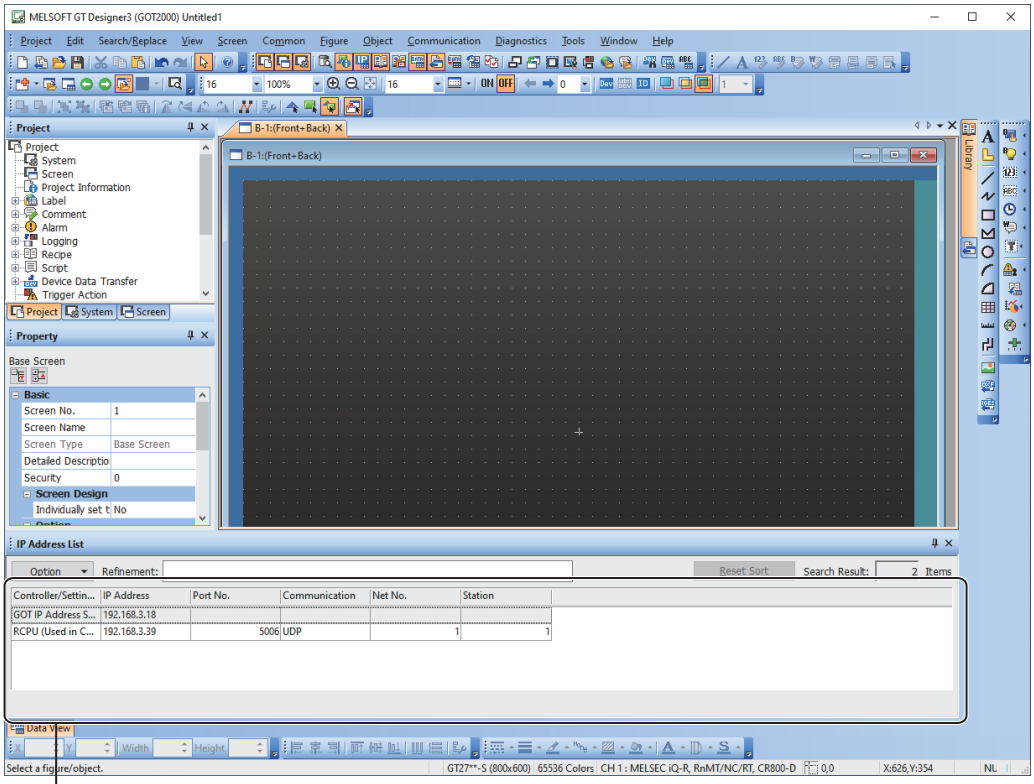
➥(1) Displaying the IP addresses registered in a project
(2) Changing the items to be displayed in the IP address list
(3) Changing an IP address displayed in the IP address list
(4) Exporting the search results displayed in the IP address list

(1) Displaying the IP addresses registered in a project

Perform one of the following operations to display the [IP Address List] window.

- Select [Search/Replace] → [IP Address List] from the menu.
- Select [View] → [Docking Window] → [IP Address List] from the menu.
- Click the [IP Address List] button on the toolbar.

➟■3 [IP Address List] window



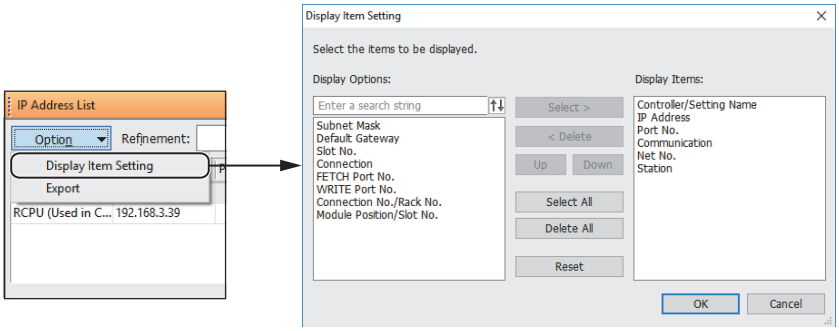
The search result list in the [IP Address List] window displays the search results according to the items selected for display.

For selecting the items to be displayed, refer to the following.

➟(2) Changing the items to be displayed in the IP address list

(2) Changing the items to be displayed in the IP address list

Step 1 Click the [Option] button in the [IP Address List] window and select [Display Item Setting] from the pull-down menu to display the [Display Item Setting] dialog.



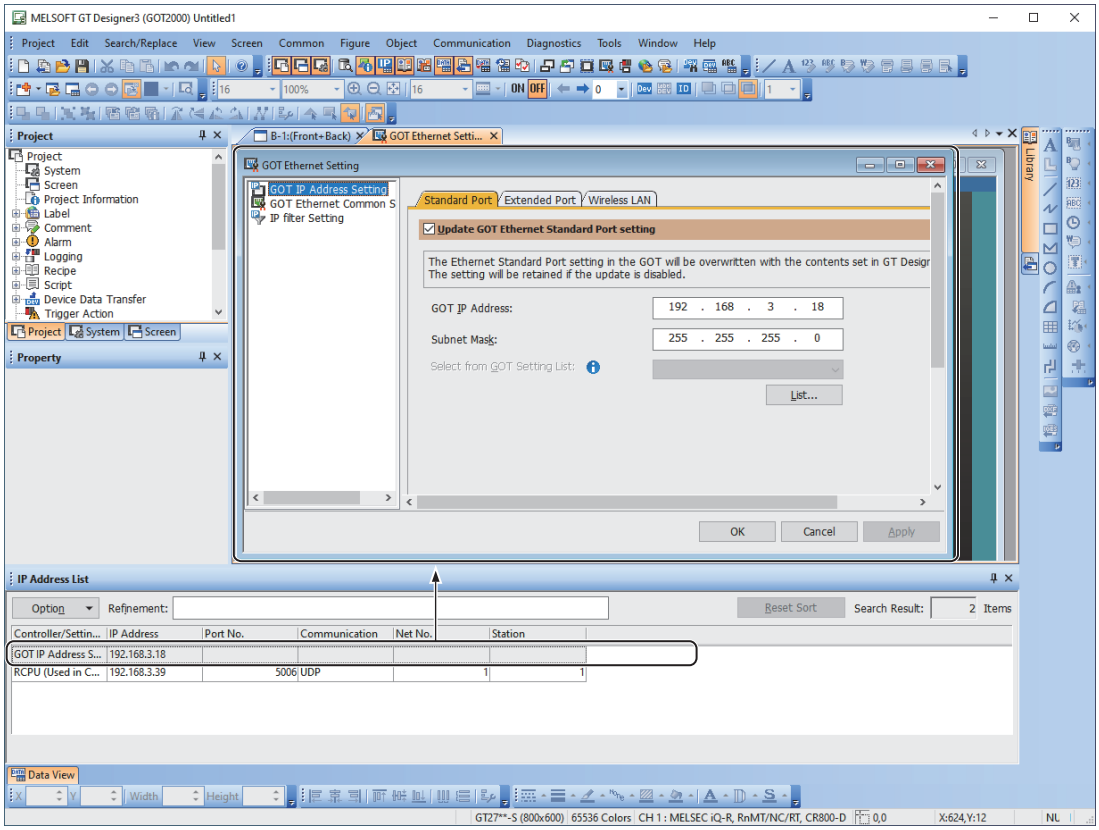
Step 2 Select the items to be displayed in the [IP Address List] window, and specify their display order.

For details on the operation buttons, refer to the following.

➟■4 [Display Item Setting] dialog (IP address list)

(3) Changing an IP address displayed in the IP address list

Step 1 Double-click the row of the IP address to be changed in the search result list in the [IP Address List] window to display its setting window.



Step 2 Edit the setting and click the [OK] button to apply the new setting.

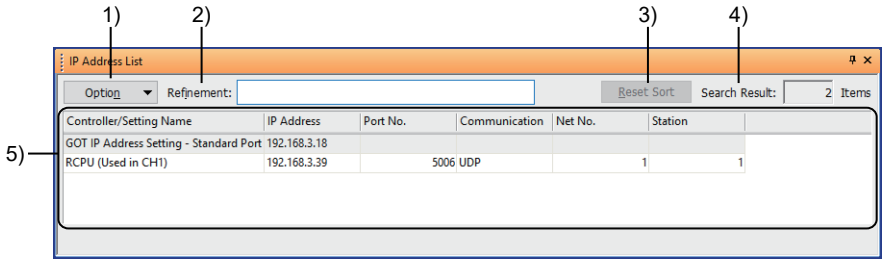
(4) Exporting the search results displayed in the IP address list

Step 1 Click the [Option] button and select [Export] from the pull-down menu to display the [Save As] dialog.

Step 2 Set [File name] and [Save as type] and click the [Save] button to export the search result list.

■3 [IP Address List] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Option] button**

Select a setting item from the pull-down menu.

[Display Item Setting]	Displays the [Display Item Setting] dialog. Select the items to be displayed in the search result list. ➟■4 [Display Item Setting] dialog (IP address list)
[Export]	Saves the search result list as a CSV file or a Unicode text file. Set [File name] and [Save as type] in the displayed dialog and click the [Save] button to export the search result list.

2) **[Refinement]**

Narrows the displayed contents of the search result list by keywords.
Up to 128 characters can be set.
To narrow the contents using multiple keywords, separate each keyword with one-byte spaces.

3) **[Reset Sort]**

Changes the sorting order of [Controller/Setting Name] to the order of GT Designer3 menus.

4) **[Search Result]**

The number of the targets displayed in the search result list.

5) **Search result list**

Displays the search result.
Click the item name to sort the list by the item.
Colored cells represent the following.

- Yellow:

  The IP address has already existed in the project.
  If the IP address is the same as one of the IP addresses that are not displayed in the list, the cell is not colored in yellow.

  ➟■1 IP addresses to be displayed

- Green:

  The IP address is set using MELSOFT Navigator.

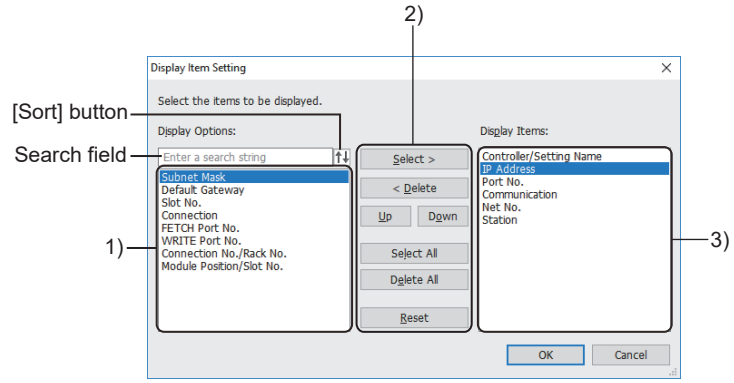
(1) Mouse and keyboard operations

The following shows the mouse and keyboard operations for the search result list in the [IP Address List] window.

Operation	Action
Arrow (Up/Down/Left/Right)	Moves the cursor.
[Home]	Moves the cursor to the top row.
[End]	Moves the cursor to the bottom row.
[PageUp]	Moves the cursor up one page.
[PageDown]	Moves the cursor down one page.
[Enter]	Moves the cursor downward by one row.
[Ctrl] + [Space]	Selects or deselects a row.
Double-click	Displays the setting window corresponding to the row where the cursor is positioned.
[Alt] + [Enter]	
[F3]	

■4 [Display Item Setting] dialog (IP address list)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Display Options]**

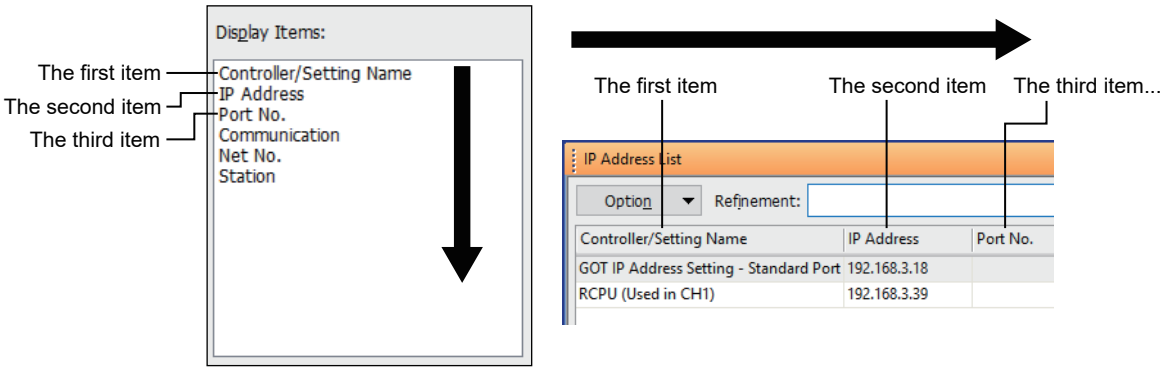
Options of the items displayed in the search result list.
Select an item and click the [Select] button to move the item to [Display Items].
To narrow down the list, enter a string in the search field.
To sort the list in ascending or descending order, click the [Sort] button.

2) **Operation buttons**

Item	Description
[Select] button	Moves the item selected in [Display Options] to [Display Items].
[Delete] button	Moves the item selected in [Display Items] to [Display Options].
[Up] button, [Down] button	Move the item selected in [Display Items] upward or downward.
[Select All] button	Moves all the items in [Display Options] to [Display Items].
[Delete All] button	Moves all the items other than [Controller/Setting Name] in [Display Items] to [Display Options].
[Reset] button	Restores the items in [Display Items] to the default ones.

3) **[Display Items]**

Items to be displayed in the search result list.
If any item is selected and the [Delete] button is clicked, the selected item is moved to [Display Options].
The items in the search result list are displayed in the order set for [Display Items].

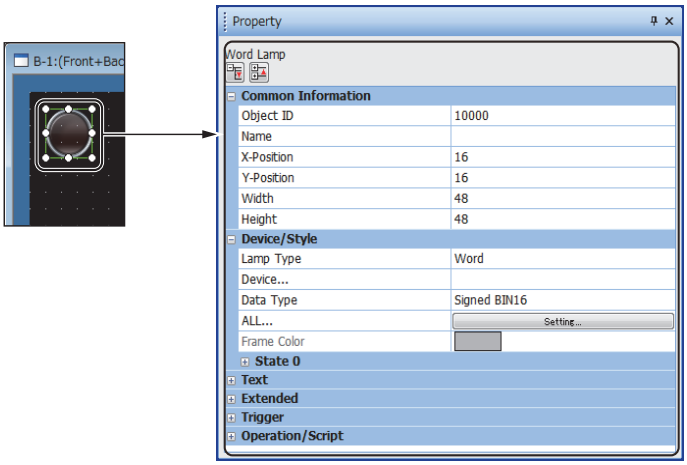


If any item is selected and the [Up] button or the [Down] button is clicked, the position of the selected item is moved upward or downward.

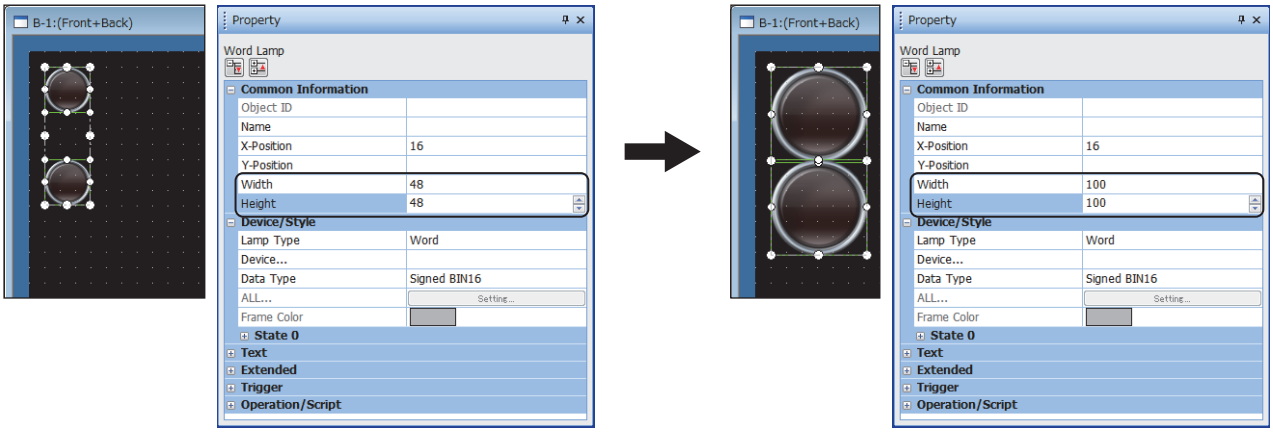
11.9 Checking and Editing Settings of Screens and Objects (Property Sheet)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The list of attributes and set values of a selected screen, figure, or object can be displayed.
Settings can be checked or changed without opening the setting dialog.
Example) Selecting a word lamp



Set values can be changed collectively by selecting multiple figures or objects on the same screen.
Example) Collectively changing the width and height of bit switches



➟11.9.1 Specifications of the property sheet
11.9.2 How to use the property sheet
11.9.3 Precautions
11.9.4 [Property] window

11.9.1 Specifications of the property sheet

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Targets for the display of the [Property] window

The following shows the targets for displaying the list of attributes in the [Property] window.

- Base screen
- Window screen
- Report Screen
- Mobile Screen
- Figure
- Object
- Template

When multiple figures and objects on the same screen are selected, the attributes of them are displayed on the same sheet.
When a group is selected, all the grouped figures and objects are identified as the targets for the property sheet.

■2 Batch change of attributes

The batch change is applicable to the attributes that are common to the selected figures or objects.

■3 Width and height of a figure or object

The following shows the setting ranges of the width and height of a figure or object.

Item	Setting range
[Width]	[1] to [2000]
[Height]	[1] to [1600]

In the [Property] window, the width and height of a grouping of figures or objects are not changeable.

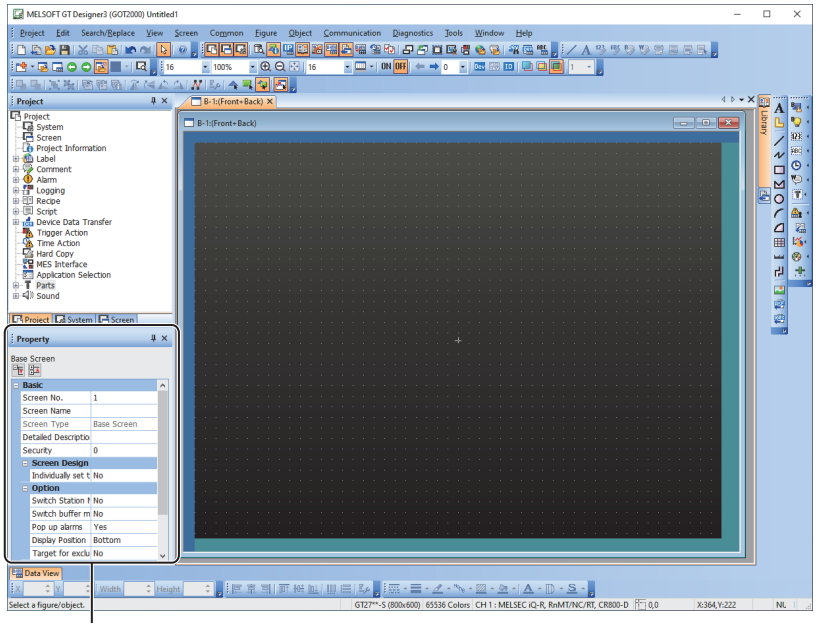
11.9.2 How to use the property sheet

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Click [View] → [Docking Window] → [Propertysheet] from the menu to display the [Property] window.

In the default setting, the [Property] window is docked with GT Designer3.

➡11.9.4 [Property] window



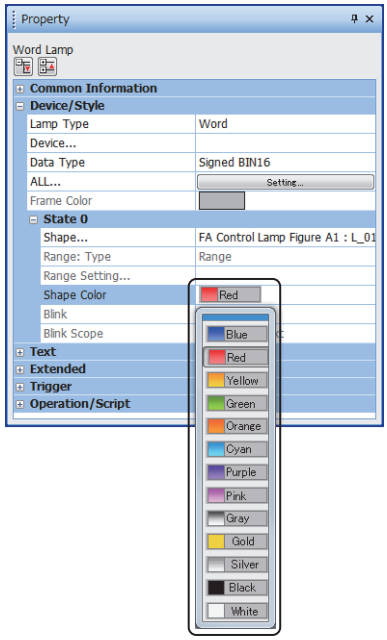
[Property] window

Step 2 Select the target screen, figure, or object to display the attributes of the target in the [Property] window.

Step 3 To change an attribute, change the set value in the attribute list of the [Property] window.

The method of setting each attribute is the same as that applied to each setting dialog.

Example) Changing the color



11.9.3 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Batch change performed when multiple targets are selected

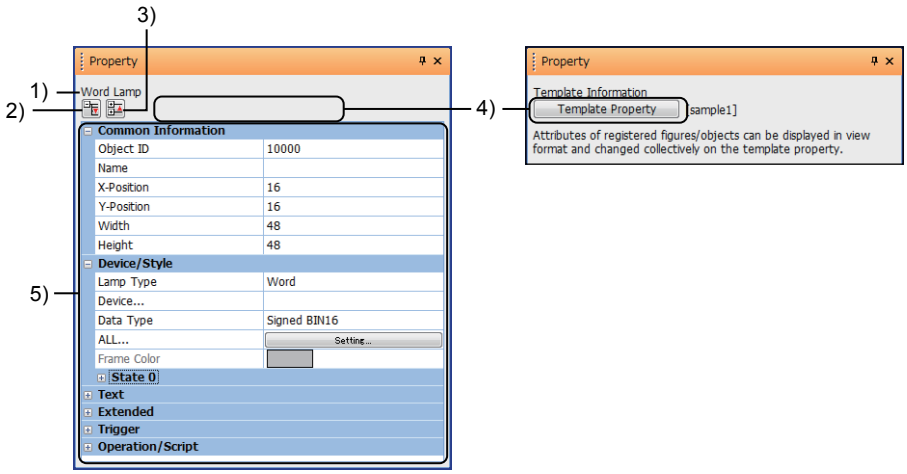
A change of a set value in the [Property] window is reflected in the attribute of all the selected figures and objects.
To avoid an unintentional change, select only the targets that need the change.

■2 Shape settings of objects

In the [Property] window, the shape of objects cannot be changed to [None].
Change the shape of objects to [None] in the setting dialog for each object if necessary.

11.9.4 [Property] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **Display target**
Displays the target that gets its attributes displayed in the [Property] window.

2) **[Unfold All] button**
Expands all attribute items.

3) **[Fold All] button**
Collapses all attribute items.

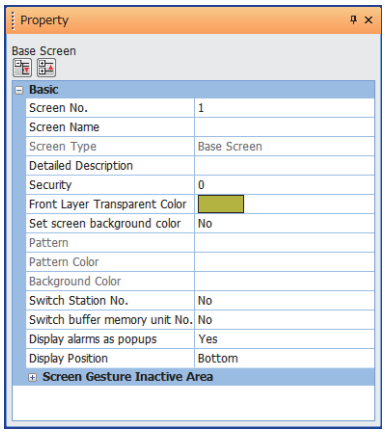
4) **[Template Property] button**
Appears when a template information box is selected.
Switches the [Property] window to the one for template attributes.

➟11.6.6 [Property] window (when the template property is displayed)

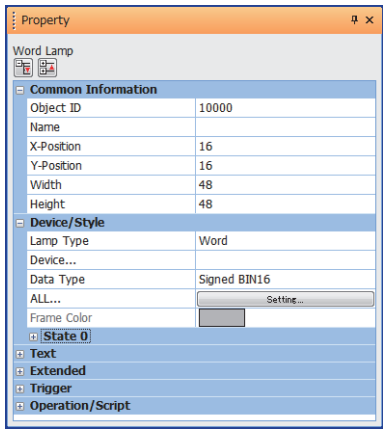
5) **Attribute list**
Lists the attributes the target has had.
The contents displayed depend on the target.

- Base screens, window screens, report screens and mobile screens
  The same contents as those in the [Basic] tab in the [Screen Property] dialog are displayed.
- Figures and objects
  The coordinates (X, Y), size (width, height), and the same contents as those in each setting dialog are displayed.
- Templates
  The template attributes are displayed.

➟11.6.6 [Property] window (when the template property is displayed)



When a base screen is selected



When a word lamp is selected

If multiple figures and objects on the same screen are selected, certain attributes can be changed collectively.
If multiple different figures and objects are selected, the attribute list is displayed as follows.

- If a figure is included in the selection

  The attribute list is displayed on the basis of the attributes of the figure in the back most layer.
- If no figure is included in the selection

  The attribute list is displayed on the basis of the attributes of the object of the smallest object ID number.

If the set values of attributes common to multiple selected figures and objects differ among the figures and objects, the fields of the set values turn blank.
The attributes that cannot be changed are displayed with the text color in gray.

11.10 Customizing GT Designer3

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟11.10.1 Customizing the toolbar
11.10.2 Customizing the docking window
11.10.3 Customizing the operation
11.10.4 Customizing the settings related to editing operations
11.10.5 Customizing the display
11.10.6 Customizing the default value
11.10.7 Interaction with iQ Works

11.10.1 Customizing the toolbar

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The position of the toolbars for GT Designer3 can be changed and a toolbar can be created in collecting frequently used functions.

➟■1 Changing the position of toolbars
■2 Adding/deleting buttons to/from a toolbar
■3 Resetting toolbars
■4 Creating toolbars
■5 Deleting toolbars
■6 [Customize] dialog

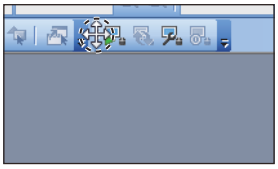
For the details of toolbar types and the method of switching between displaying and hiding toolbars, refer to the following.

➟2.2.2 Toolbar and shortcut keys

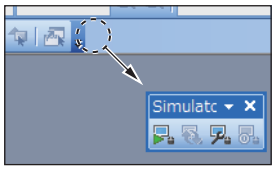
■1 Changing the position of toolbars

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 When the mouse cursor is moved over the left end of the toolbar to move, the shape of the mouse cursor changes as shown below.



Step 2 Drag the toolbar to the destination while holding it clicked. The toolbar moves.



■2 Adding/deleting buttons to/from a toolbar

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Adding buttons
(2) Deleting buttons

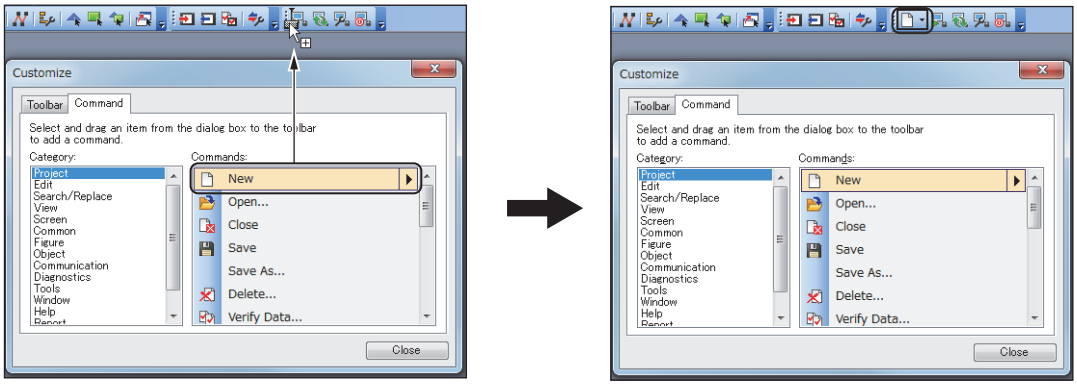
(1) Adding buttons

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Customize] from the menu to display the [Customize] dialog.

Step 2 Select [Category] in the [Command] tab and drag the command to add from [Command] to the toolbar to which the corresponding button is added.

The button corresponding to the dragged command is added.



➟11.10.1 ■6 (2) [Command] tab

Step 3 When you have completed making necessary changes, close the [Customize] dialog.

Changes made to the default toolbars can be reset in the [Toolbar] tab.

➟11.10.1 ■6 (1) [Toolbar] tab

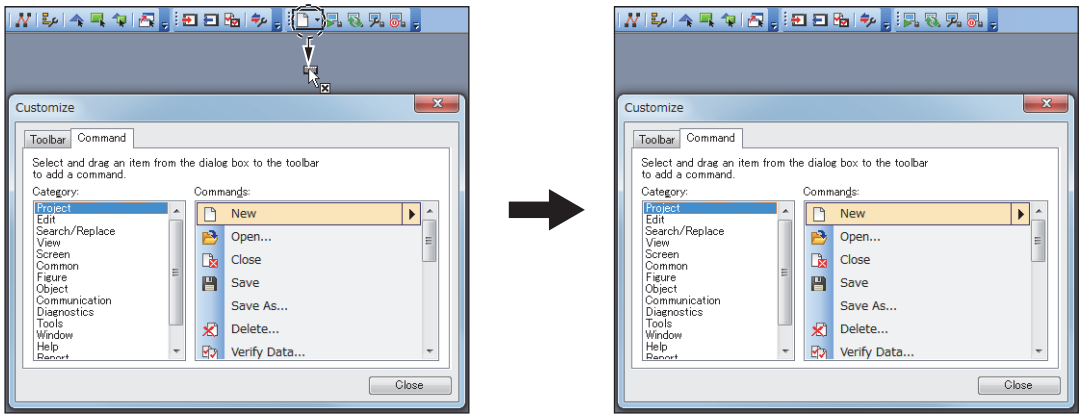
(2) Deleting buttons

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Customize] from the menu to display the [Customize] dialog.

Step 2 While the [Customize] dialog is displayed, drag out of the toolbar the button to delete from the toolbar.

The dragged button is deleted.



Step 3 When you have completed making necessary changes, close the [Customize] dialog.

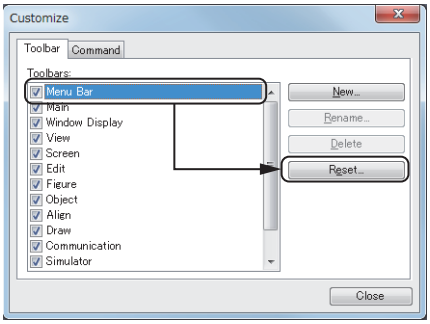
■3 Resetting toolbars

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Customize] from the menu to display the [Customize] dialog.

Step 2 Select the toolbar to reset in the [Toolbar] tab and click the [Reset] button to reset the toolbar.

Only the default toolbars can be reset.



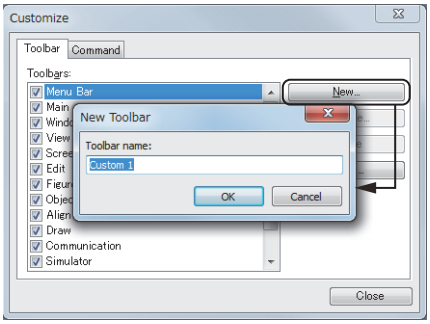
Step 3 When you have completed making necessary changes, close the [Customize] dialog.

■4 Creating toolbars

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Customize] from the menu to display the [Customize] dialog.

Step 2 Click the [New] button in the [Toolbar] tab to display the [New Toolbar] dialog.



Step 3 Set [Toolbar name] and click the [OK] button to create a new toolbar.

Add buttons in the [Command] tab.

➟11.10.1 ■2 (1) Adding buttons

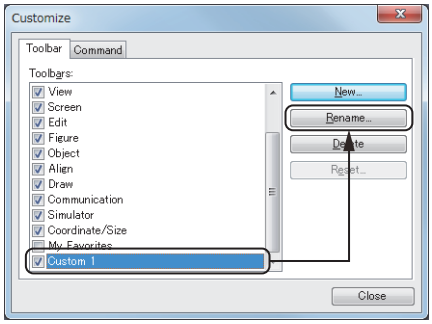
■5 Deleting toolbars

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Customize] from the menu to display the [Customize] dialog.

Step 2 Select the toolbar to delete in the [Toolbar] tab and click the [Delete] button to display the toolbar.

Only the toolbars created by a user can be deleted.



Step 3 When you have completed making necessary changes, close the [Customize] dialog.

■6 [Customize] dialog

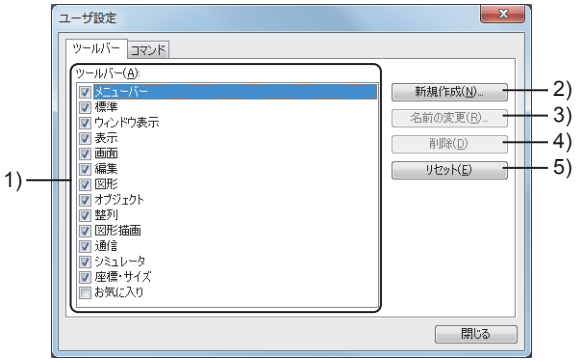
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) [Toolbar] tab

(2) [Command] tab

(1) [Toolbar] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Toolbars]**

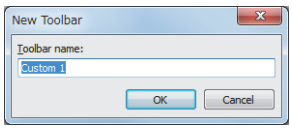
Lists the toolbars.

Switches between displaying and hiding each toolbar.

2) **[New] button**

Displays the [New Toolbar] dialog.

Creates a new toolbar.



• **[Toolbar name]**

Set the name of the toolbar to create.

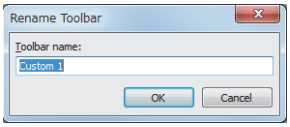
Up to 255 characters can be set.

3) **[Rename] button**

Displays the [Rename Toolbar] dialog.

Changes the name of the toolbar selected in [Toolbars].

The names of the default toolbars cannot be changed.



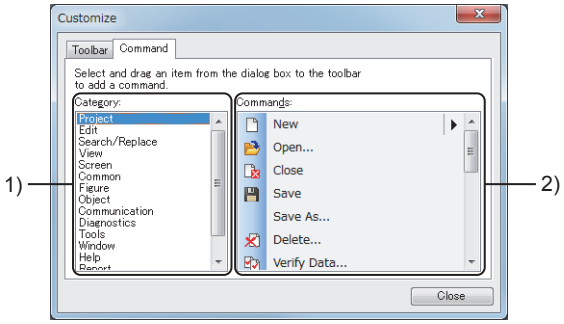
• **[Toolbar name]**
Set the new name of the toolbar used after the change.
Up to 255 characters can be set.

4) **[Delete] button**
Deletes the toolbar selected in the [Toolbars].
The default toolbars cannot be deleted.

5) **[Reset] button**
Resets the contents of the toolbar selected in [Toolbars] to the initial status.
Only the default toolbars can be reset.

(2) [Command] tab

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **Category I**
Lists the categories of commands.
Switches the contents displayed in [Command].

2) **[Command]**
Display the commands to add to the toolbars.
Drag a command to a toolbar to add a button in the toolbar.

11.10.2 Customizing the docking window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

With this function, the position of docking windows can be changed and multiple docking windows can be combined into a single window.
Docking windows can be displayed or hidden as required.
Customized docking windows are saved and retained for the next startup.

➟■1 Screen layout of the docking windows
■2 Changing the position of docking windows

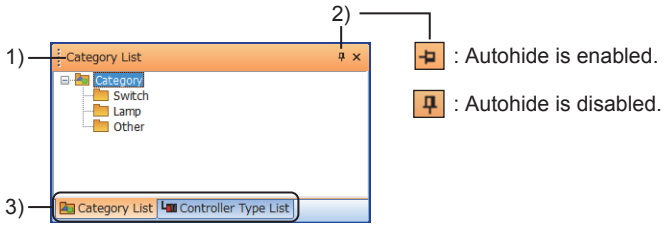
For the details of docking window types, and the method of switching between displaying and hiding the docking windows, refer to the following.

➟2.2 Screen Layout of GT Designer3
2.2.2 Toolbar and shortcut keys

■1 Screen layout of the docking windows

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

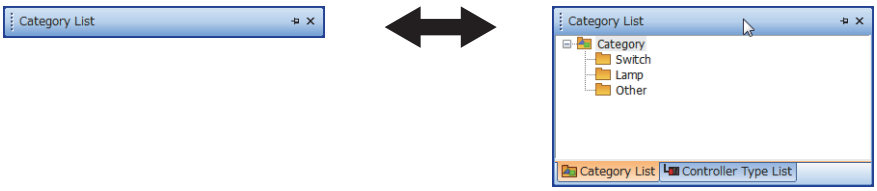
The following shows the screen layout common to the docking windows.
Example) [Category List] window



1) **Title bar**
Displays the title of the docking window.
Drag this bar to display the docking guide on the screen.

➟11.10.2 ■2 (1) Docking

2) **Autohide button**
The contents of the docking window are displayed only when the mouse cursor is moved over the title bar of the docking window.



3) **Docking tabs**
Switches docking windows.
The tabs are displayed when docking windows are docked.
To extract a docking window from the dock window, drag the corresponding tab out of the dock window.

■2 Changing the position of docking windows

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

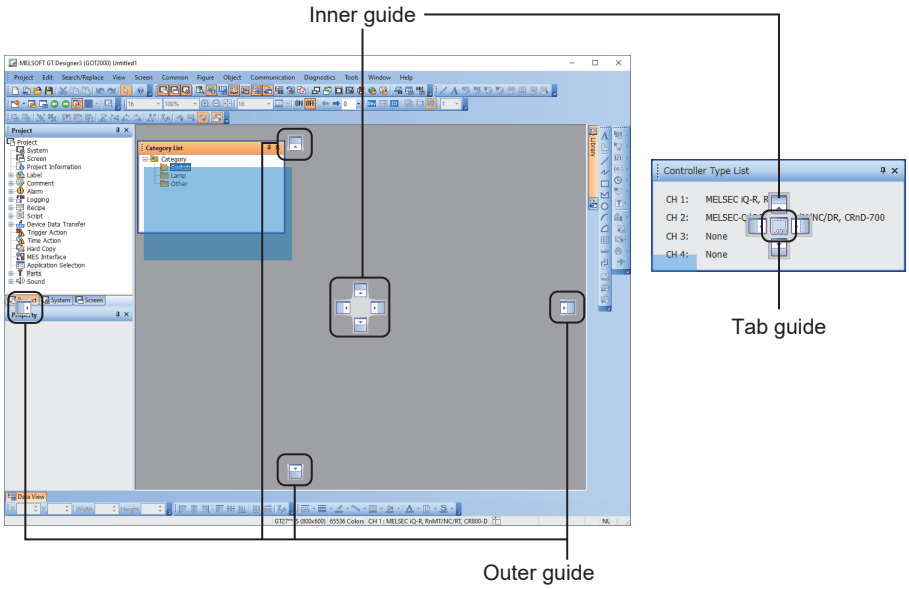
➟(1) Docking
(2) Extracting docking windows from a dock window

(1) Docking

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Example) Docking the [Category List] window with the main screen.

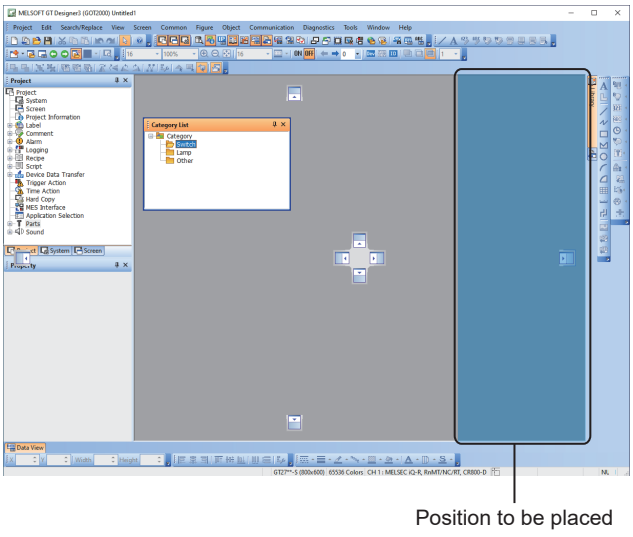
Step 1 Drag the title bar of the docking window to dock over the main screen to display the docking guides.



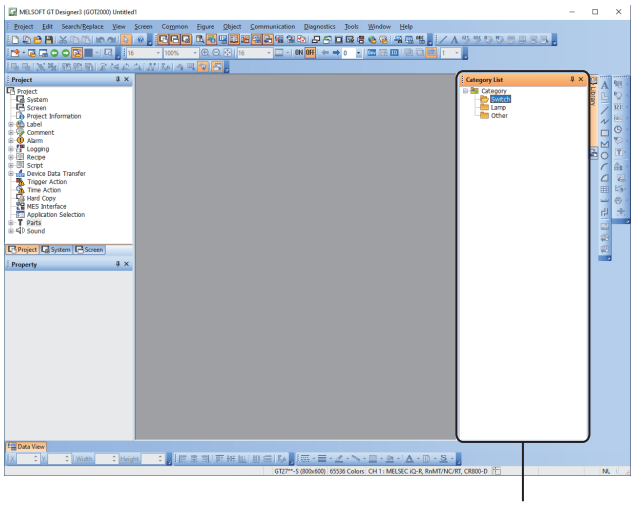
The following shows the types of the docking guides.

- Inner guide (Right/Left/Up/Down)
  Docks the window in a position nearer to the center than where the other docking windows have been already docked.
- Tab guide
  Appears in the center of the inner guide when the docking window is dragged over another docking window. Docks the docking window with another docking window.
- Outer guide (Right/Left/Up/Down)
  Docks the window in a position farther from the center than where the other docking windows have been already docked.

Step 2 Move the mouse cursor over a docking guide while dragging the docking window over to display the indication of the position where the docking window is placed when it is docked.



Step 3 Drop the window while the mouse cursor is on the docking guide to dock the docking window.

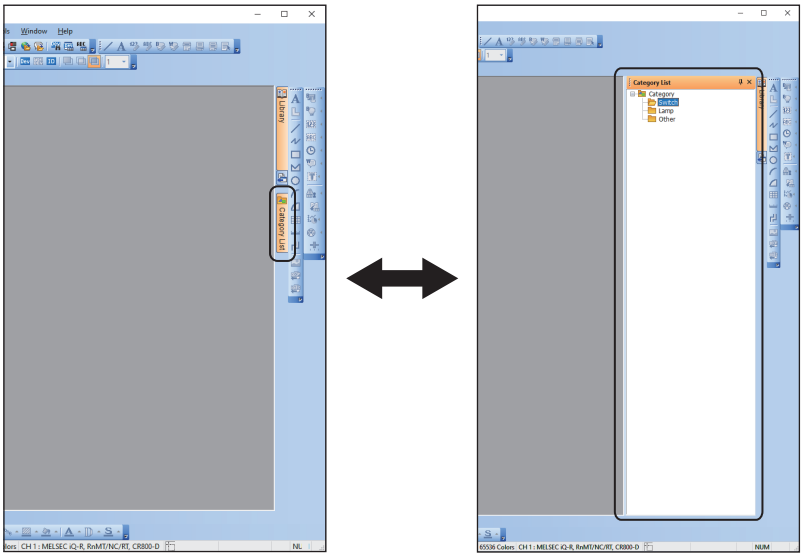


A docking window has been docked.

Step 4 Enable autohide with the autohide button to display the tab of the docking window.

➟11.10.2 ■1 Screen layout of the docking windows

Place the mouse cursor over the tab to display the docking window.



To change the size of the docking window, place the mouse cursor over and drag the docking window frame.

(2) Extracting docking windows from a dock window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Disable autohide of the docking window with the autohide button.

➟11.10.2 ■1 Screen layout of the docking windows

Step 2 Drag the corresponding tab or the title bar out of the dock window to extract the docking window from the dock window.

Double-clicking the title bar or the tab also extracts the window.

11.10.3 Customizing the operation

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can customize settings related to the operations of GT Designer3.

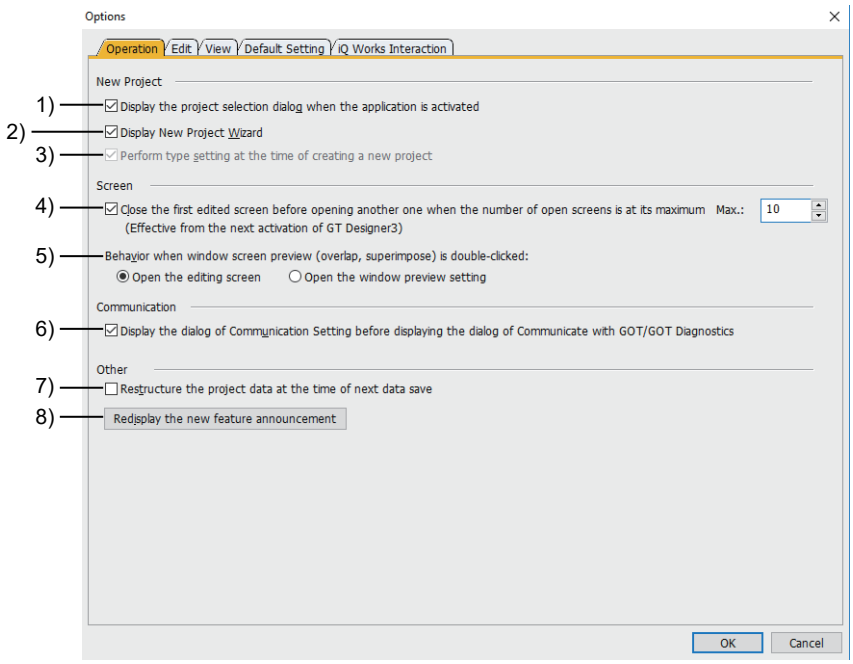
Step 1 Select [Tools] → [Option] from the menu to display the [Options] dialog.

Step 2 Change the settings of the [Operation] tab and click the [OK] button to get the settings reflected.

➟■1 [Option] dialog ([Operation] tab)

■1 [Option] dialog ([Operation] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Display the project selection dialog when the application is activated]**
Displays the [Select Project] dialog at the startup of GT Designer3.

➟2.1.1 Starting GT Designer3

2) **[Display New Project Wizard]**
Displays the wizard for a new project when it is created.

➟2.3.1 ■1 Using the wizard

3) **[Perform type setting at the time of creating a new project]**
Displays the [Type Setting] dialog when a project is created.
When the [Display New Project Wizard] is selected, this operation is disabled.

➟2.3.1 ■2 Without using the wizard

4) **[Close the first edited screen before opening another one when the number of open screens is at its maximum]**
Closes the first-opened screen when a new editor is opened after the number of screen editors being opened reaches its maximum.
The setting is enabled at the next start-up of GT Designer3.

Item	Description
[Max]	Set the maximum number of screens which can be opened. The setting range is [1] to [25].

5) **[Behavior when window screen preview (overlap, superimpose) is double-clicked]**
Select what will appear when the window position objects for the following window screens are double-clicked on base screens.

- Overlap window

• Superimpose window

The following shows the items to be selected.

• [Open the editing screen]
  Displays the screen editor for the window screen.
• [Open the window preview setting]
  Displays the [Window Preview] dialog.

If a window screen preview is not displayed for the placed window position object, double-clicking the object displays the [Window Preview] dialog regardless of what is selected.

The [Window Preview] dialog is displayed by one of the following operations as well.

• Select [Display] → [Window Preview] → [Setting] from the menu.
• Right-click a window position object on a base screen, and select [Setting].
• Select a window position object on a base screen, and press the [Alt] key and the [Enter] key simultaneously.

6) **[Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT/GOT Diagnostics]**

Displays the [Communication Configuration] dialog before displaying the [Communicate with GOT] dialog or the [GOT Diagnostics] dialog.

7) **[Restructure the project data at the time of next data save]**

Deletes unnecessary data from a project data to reduce the project data size when the project data is saved.
After the project data is saved, this item is automatically deselected.
Therefore, this setting is not maintained after the project data is saved.
When restructuring the project data, note the following.

• If the personal computer, which the project data is saved and restructured in, does not have Windows fonts used in the project data, each Windows font is changed to the default font of each object.
• The verification results of the project data before and after a restructuring may have inconsistencies.
• When the restructured project data is written to the GOT again, all the screen data are rewritten.

8) **[Redisplay the new feature announcement] button**

Redisplays the dismissed [New Feature Announcement] dialog.
This item appears when [Do not show this message again] is selected in the [New Feature Announcement] dialog.

11.10.4 Customizing the settings related to editing operations

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Customize the settings related to editing operations on GT Designer3.

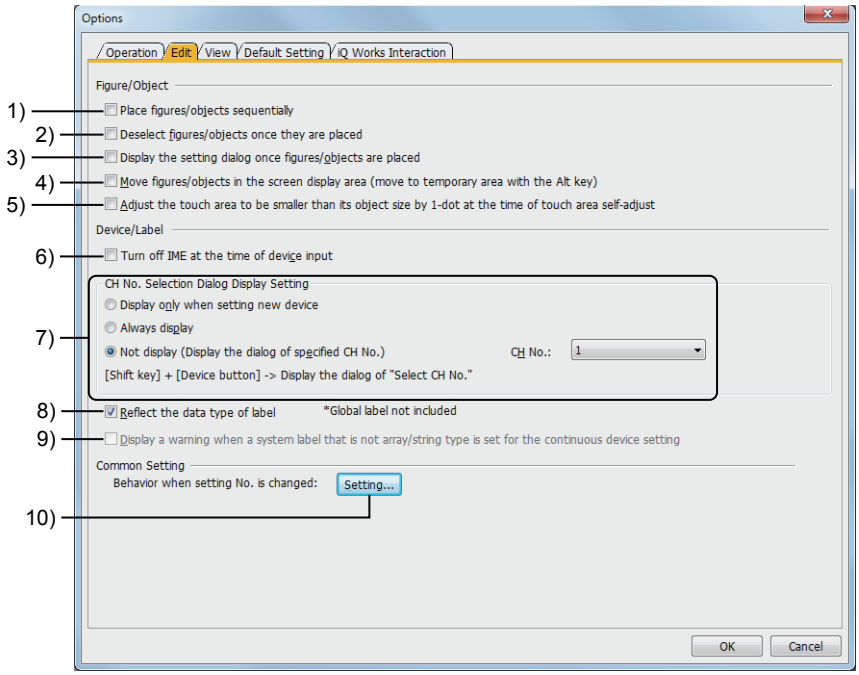
Step 1 Select [Tools] → [Option] from the menu to display the [Options] dialog.

Step 2 Customize the settings on the [Edit] tab and click the [OK] button to apply changes.

➟■1 [Options] dialog ([Edit] tab)

■1 [Options] dialog ([Edit] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Place figures/objects sequentially]**
Retains the control of the arrangement mode after a figure or an object is placed. The same figure or object can be placed repeatedly without selecting it from the menu.
To cancel the arrangement mode, right-click or press the [ESC] key.

2) **[Deselect figures/objects once they are placed]**
Deselects figures and objects after they are placed.

3) **[Display the setting dialog once figures/objects are placed]**
Displays the setting dialog automatically every time a figure or an object is placed.

4) **[Move figures/objects in the screen display area (move to temporary area with the Alt key)]**
Limits the area where figures and objects can be placed to the screen display area on the screen editor.
If figures and objects are operated while the [ALT] key is pressed, they can be also placed in the temporary area.

5) **[Adjust the touch area to be smaller than its object size by 1-dot at the time of touch area self-adjust]**
Reduces the touch area to be inside the object area at the time of the touch area self-adjustment. The edge of the touch area becomes 1 dot away from the edge of the object area.
For the touch area self-adjustment, refer to the following.

➟6.6.14 [Edit Touch Area]

6) **[Turn off IME at the time of device input]**
Disables IME to enter only one-byte characters to specify a device.

7) **[CH No. Selection Dialog Display Setting]**
Select whether to display or hide the [Select CH No.] dialog at the device setting.
The [Select CH No.] dialog is displayed when two or more channels are set.

➟6.1.2 How to set devices

The following shows selectable items.

• [Display only when setting new device]
  Displays the [Select CH No.] dialog only when a device is newly set.
• [Always display]
  Always displays the [Select CH No.] dialog at the device setting.
• [Not display (Display the dialog of specified CH No.)]
  Does not display the [Select CH No.] dialog at the device setting.

Displays the device setting dialog of the channel set for [CH No.].

Item	Description
[CH No.]	Set these items when [Not display (Display the dialog of specified CH No.)] is selected. The following shows selectable items. • [System Label]: Displays the [Import System Labels to Project] dialog. • [Label (GT Designer3)]: Displays the [Select Label (GT Designer3)] dialog. • [Global Label]: Displays the [Select Global Label] dialog. • [OMRON NJ/NX Tag]: Displays the [Select OMRON NJ/NX Tag] dialog. • [OPC UA Tag]: Displays the [Select OPC UA Tag] dialog. • [1], [2], [3], [4]: Displays the device setting dialog of a set channel. • [Latest]: Displays the device setting dialog of the same channel as that of the latest device setting.

8) **[Reflect the data type of label]**

Makes date types of objects or others reflect those of the following labels used in the device setting.

• System label
• Label (GT Designer3)

For the correspondence of data types between the system labels and the devices on GT Designer3, refer to the following.

➟6.1.3 ■2 Applicable system labels

9) **[Display a warning when a system label that is not array/string type is set for the continuous device setting]**

Displays a message when the [Import] button is clicked in the [Import System Labels to Project] dialog if a non-array-type or non-string-type system label is set for any of consecutive devices.

10) **[Setting] button**

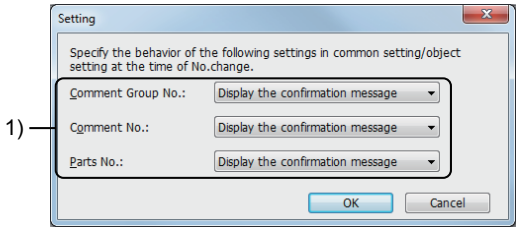
Displays the [Setting] dialog.

Select whether to reflect a number change to the related common settings and object settings.

➟■2 [Setting] dialog (for customizing the settings related to editing operations)

■2 [Setting] dialog (for customizing the settings related to editing operations)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Comment Group No.], [Comment No.], and [Parts No.]**

Select whether to reflect a number change to the related common settings and object settings if the registered number of the following items are changed.

- Comment group
- Comment
- Part

The following shows selectable items.

- [Always reflect]
  Reflects a number change to the related common settings and object settings.
- [Not reflect]
  Does not reflect a number change to the related common settings and object settings.
- [Display the confirmation message]
  Displays a confirmation dialog with each number change.
  Select whether to reflect a number change to the related common settings and object settings.

11.10.5 Customizing the display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can customize the settings related to the display of GT Designer3.

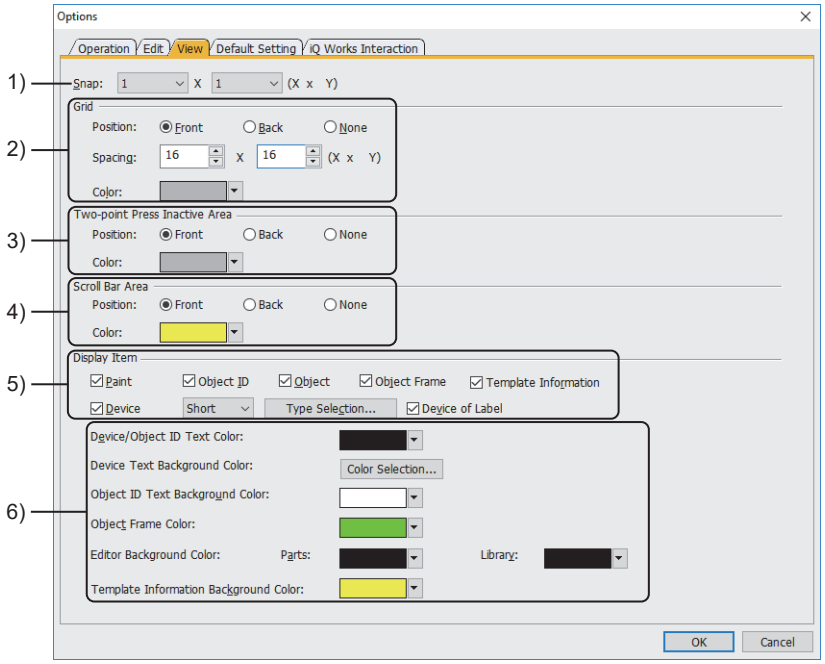
Step 1 Select [Tools] → [Option] from the menu to display the [Options] dialog.

Step 2 Change the setting of the [View] tab and click the [OK] button to get the setting reflected.

➟■1 [Options] dialog ([View] tab)

■1 [Options] dialog ([View] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Snap]**

Select the interval (in dots) between figures and objects when they are placed or moved on the screen editor.
The following shows selectable items.

- [1]
- [2]
- [4]
- [8]
- [16]

2) **[Grid]**

Set the position and the distance between the lines of the grid on the screen editor.
The grid is set not for each project but for GT Designer3. The customized grid is enabled regardless of the project to be opened.

Item	Description
[Position]	Select the display position of the grid. The following shows selectable items. • [Front] • [Back] • [None]
[Spacing]	Set the grid spacing (in dots). The setting range is [2] to [64] dots.
[Color]	Select the grid color. ➟6.4.2 Color settings

3) **[Two-point Press Inactive Area]**

Set the display position and the color of the two-point press inactive area on the screen editor.
Only GT27 is supported.
To enable the two-point touch on the GOT, the touched points must be in different two-point press inactive areas.
Place the points for the two-point touch in different two-point press inactive areas.

➟8.2.3 ■2 (1) Simultaneous 2-point press

Item	Description
[Position]	Select the display position of the two-point press inactive area. The following shows selectable items. • [Front] • [Back] • [None]
[Color]	Select the color of the two-point press inactive area ➟6.4.2 Color settings

4) **[Scroll Bar Area]**

Available to GT27, GT25, and GS25.

GOT Graphic Ver.2

This item is available when [Expand base screen sizes] is selected in [Basic Setting] in the [Type Setting] dialog.
Set the display position and color of the following items on the screen editors for the expanded base screens.

- Solid lines representing the scroll bar areas
- Dotted lines representing partitions for GOT screens

This item is not settable if the scroll bars are set to be hidden on the expanded base screens.
For details on the base screen size expansion, refer to the following.

➟5.1.3 ■2 Screen editors for editing the expanded base screens

Item	Description
[Position]	Select the display position of the lines. The following shows selectable items. • [Front] • [Back] • [None]
[Color]	Select the color of the lines. ➟6.4.2 Color settings

5) **[Display Item]**

Set the information to be displayed on the screen editor.

Item	Description
[Paint]	Displays a color on the area to be filled.
[Object ID]	Displays the object ID numbers on the objects.
[Object]	Displays the objects on the screen editor.
[Object Frame]	Displays the object frames on the screen editor.
[Template Information]	Displays the template Information on the screen editor.
[Device]	Displays the set devices on the objects. The display type can be selected. The following shows selectable items. • [Short]: Displays devices only. (For labels (GT Designer3): Displays label names only.) • [Full]: Displays channel numbers, network numbers, station numbers, CPU numbers, and devices. (For labels (GT Designer3): Displays label group names and label names.) Click the [Type Selection] button to display the [Type Selection] dialog. Whether to display or hide the devices other than monitor devices and display colors can be set. ➟■2 [Type Selection] dialog
[Device of Label]	Displays the devices assigned to the following labels on objects. • System label • Label (GT Designer3)

6) **Color setting**

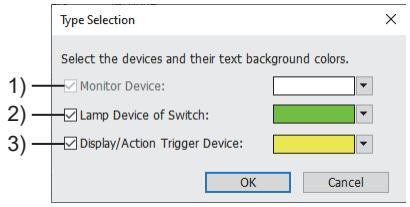
Set a text color and background color.

➟6.4.2 Color settings

Item	Description
[Device/Object ID Text Color]	Select the text color of the devices and object ID numbers displayed on the objects.
[Device Text Background Color]	Select the text background color of the devices displayed on the objects. Click the [Color Selection] button to display the [Type Selection] dialog. Whether to display or hide the devices other than monitor devices and display colors can be set. ➟■2 [Type Selection] dialog
[Object ID Text Background Color]	Select the text background color of the object ID numbers displayed on the objects.
[Object Frame Color]	Select the display color of the object frames.
[Editor Background Color]	• [Parts] Select the background color of the parts editor. • [Library] Select the background color of the library editor.
[Template Information Background Color]	Select the background color of the template information.

■2 [Type Selection] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Monitor Device]**

Displays the monitor devices on the objects.

This item cannot be deselected.

Select the text background color of the devices.

2) **[Lamp Device of Switch]**

Displays the devices set for the lamp function of touch switches.

Select the text background color of the devices.

3) **[Display/Action Trigger Device]**

Displays the devices set as display conditions or operating conditions

Select the text background color of the devices.

11.10.6 Customizing the default value

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Default values are values preset for placed figures or objects.
By setting frequently used values as the default values, drawings can be efficiently executed.

➟■1 How to use default values
■2 [Option] dialog ([Default Setting] tab)

■1 How to use default values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Changing default values in the [Option] dialog
(2) Setting the values set for edited figures and objects as the default values
(3) Canceling changes and resetting the default values to the initial values
(4) Exporting the default values
(5) Importing the default values

(1) Changing default values in the [Option] dialog

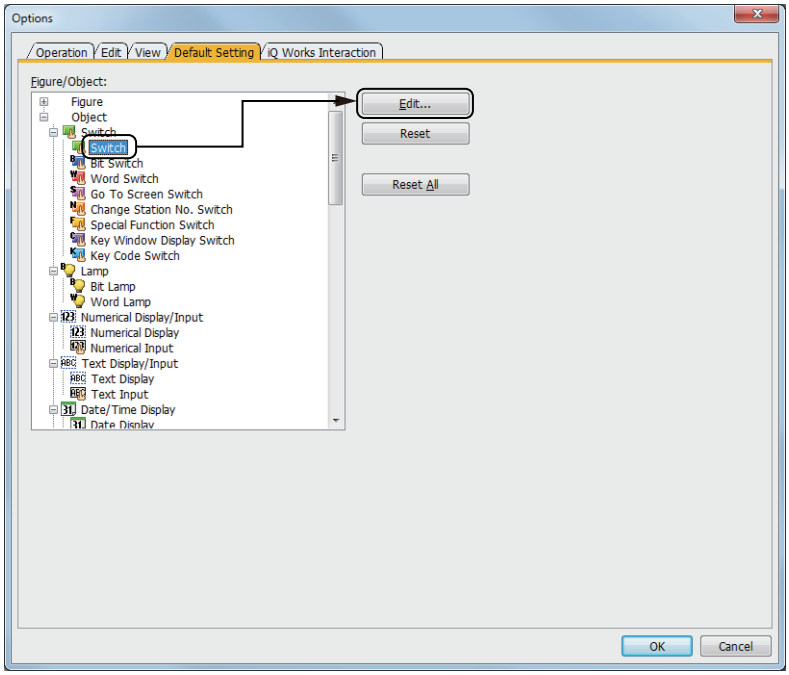
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Carry out either of the following operations to display the [Option] dialog.

- Select [Tools] → [Default Setting] → [Edit] from the menu.
- Select [Tools] → [Option] from the menu.

Step 2 Select the target for the change of the default value in [Figure/Object] of the [Default Setting] tab and click the [Edit] button.

➟11.10.6 ■2 [Option] dialog ([Default Setting] tab)
Example) Setting the default value of switches



Step 3 Displays the setting dialog for the target selected in [Figure/Object].
Set a default value and click the [OK] button

Step 4 Click the [OK] button in the [Option] dialog to complete changing the default value.

(2) Setting the values set for edited figures and objects as the default values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows how to set the values set for a figure/an object as the default values.

Step 1 Place a figure or an object on the screen editor and change the settings in the setting dialog or others.

➟6.5.1 Placing figures and objects

Step 2 Select the figure or the object and [Edit] → [Set to Default] from the menu to set the values set for the figure or object as the default values.

(3) Canceling changes and resetting the default values to the initial values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Carry out either of the following operations to display the [Option] dialog.

- Select [Tools] → [Default Setting] → [Edit] from the menu.
- Select [Tools] → [Option] from the menu.

Step 2 Carry out either of the following operations.

- Resetting default values to the initial values by figure/object
  Select the target for resetting the default value in [Figure/Object] in the [Default Setting] tab and click the [Reset] button.
- Resetting the default values of all the figures and objects to the initial values
  Click the [Reset All] button in the [Default Setting] tab.

Step 3 Click the [OK] button in the [Option] dialog to complete changing the default value.

(4) Exporting the default values

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Default Setting] → [Export] from the menu to display the [Save As] dialog.

Step 2 Set [File name] and [Save as type] and click the [Save] button to export the default value setting.

(5) Importing the default values

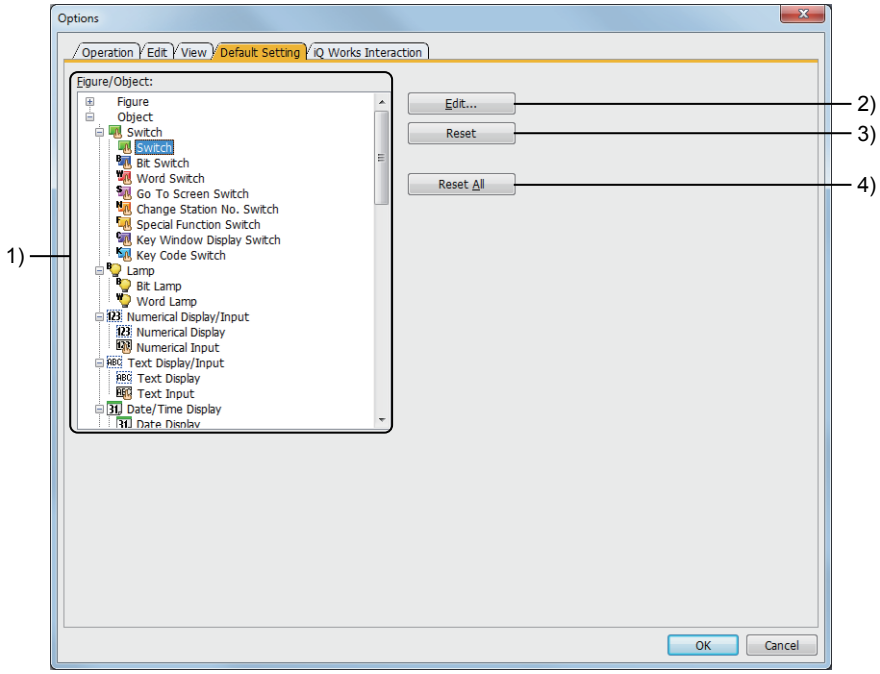
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select [Tools] → [Default Setting] → [Import] from the menu to display the [Open Default Setting File] dialog.

Step 2 Set [File name] and [Save as type] and click the [Open] button to import the default value setting.

■2 [Option] dialog ([Default Setting] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Figure/Object]**
Lists figures and objects.
For the items of figures and objects that have got the default values changed, [*] is displayed to the right of the names.
When an item is double-clicked, the setting dialog is displayed as it is displayed when the [Edit] button is clicked.

2) **[Edit] button**
Displays the setting dialog of the figure/object selected in [Figure/Object].
The items for which no default value can be set are displayed in gray.
After changing settings, click the [OK] button to change the default value.

3) **[Reset] button**
Resets the default value of the figure/object selected in [Figure/Object] to the initial value.

4) **[Reset All] button**
Resets the default value of all the figures and objects to the initial values.

11.10.7 Interaction with iQ Works

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can change the settings related to the operations of GT Designer3 in interaction with MELSOFT Navigator.

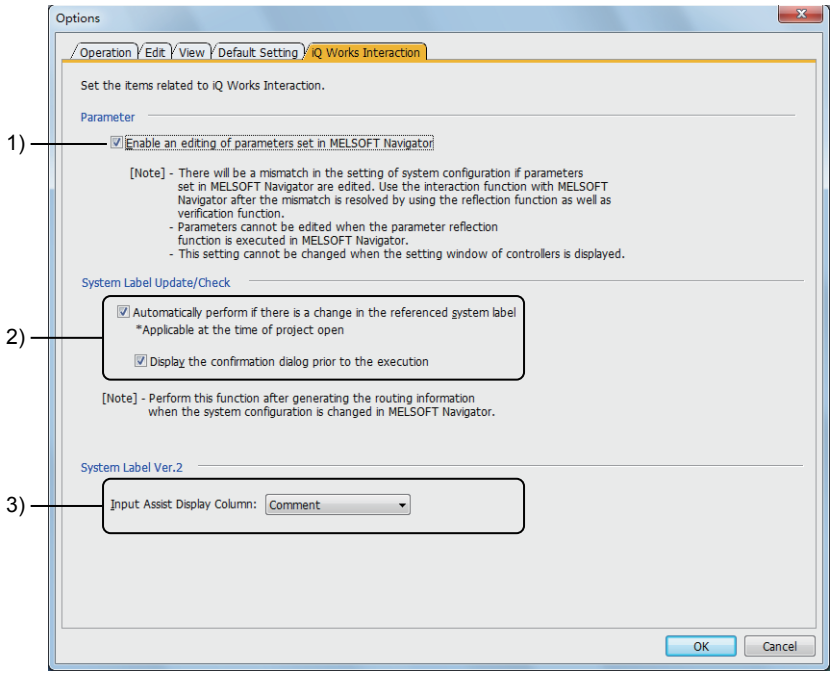
Step 1 Select [Tools] → [Option] from the menu to display the [Options] dialog.

Step 2 Change the settings of the [iQ Works Interaction] tab and click the [OK] button to get the settings reflected.

➟■1 [Option] dialog ([iQ Works Interaction] tab)

■1 [Option] dialog ([iQ Works Interaction] tab)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Enable an editing of parameters set in MELSOFT Navigator]**

Allows edits to be performed on the parameters reflected from MELSOFT Navigator by GT Designer3.
When editing the parameters reflected from MELSOFT Navigator, make the same changes to the settings for MELSOFT Navigator.
If the settings differ between MELSOFT Navigator and GT Designer3, the GOT may not communicate with controllers after package data are transferred to the GOT.
In this case, match the settings for MELSOFT Navigator with those for GT Designer3 using verification between parameter reflection/system configuration information and parameters, provided by MELSOFT Navigator.
For how to use MELSOFT Navigator, refer to the following.

➟Help on MELSOFT Navigator

2) **[Automatically perform if there is a change in the referenced system label]**

If there is a change in the system label being referred when a project is opened, updates the system label automatically.

Item	Description
[Display the confirmation dialog prior to the execution]	Displays the confirmation dialog before system labels are automatically updated.

3) **[Input Assist Display Column]**

Of the comment set for a system label Ver.2, select the column to be displayed on the input assist.

The following shows selectable items.

- [Comment]
- [Comment2]
- [Comment3]
- [Comment4]
- [Comment5]
- [Comment6]
- [Comment7]
- [Comment8]
- [Comment9]
- [Comment10]
- [Comment11]
- [Comment12]
- [Comment13]
- [Comment14]
- [Comment15]
- [Comment16]

Point

Editing the parameters reflected from MELSOFT Navigator

When editing the parameters reflected from MELSOFT Navigator, make the same changes to the settings for MELSOFT Navigator.

If the settings differ between MELSOFT Navigator and GT Designer3, the GOT may not communicate with controllers after package data are transferred to the GOT.

In this case, match the settings for MELSOFT Navigator with those for GT Designer3 using verification between parameter reflection/system configuration information and parameters, provided by MELSOFT Navigator.

For how to use MELSOFT Navigator, refer to the following.

➟Help on MELSOFT Navigator

11.11 Checking Data Size

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The data size of created screens or projects can be checked.

➟11.11.1 Checking the data size of a screen
11.11.2 Checking data size of project

For the relationship between the GOT storage memory (ROM)/operation memory (RAM) and the data to be transferred, refer to the following.

➟12.10 Data Transferred to the GOT and Storage Destination

11.11.1 Checking the data size of a screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Step 1 Select the screen to check the data size.

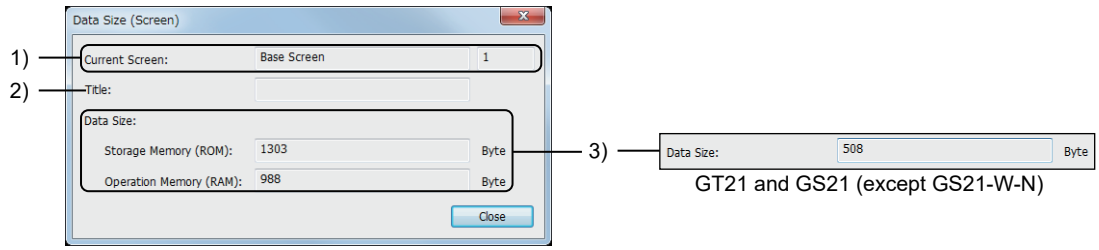
Step 2 Select [Tools] → [Data Size] → [Screen] from the menu to display the [Data Size (Screen)] dialog.

Check the data size.

➟■1 [Data Size (Screen)] dialog

■1 [Data Size (Screen)] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Current Screen]**
Displays the type of the screen being edited and the associated number.

2) **[Title]**
Displays the title of the screen being edited.

3) **[Data Size]**
Displays the data size of the screen.

Item	Description
[Storage Memory (ROM)]	Displays the data size of the screen saved in the GOT storage memory (ROM).
[Operation Memory (RAM)]	Displays the data size of the screen expanded in the GOT operation memory (RAM).

For GT21 and GS21 (except GS21-W-N), the size of screen data that has been expanded in the GOT operation memory (RAM) is displayed.

11.11.2 Checking data size of project

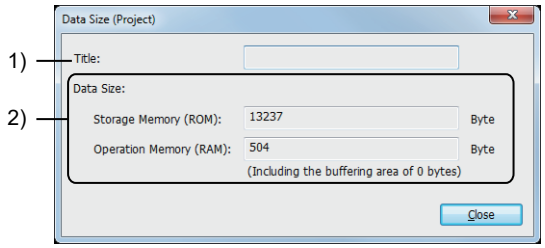
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Select [Tools] → [Data Size] → [Project] from the menu to display the [Data Size (Project)] dialog.
Check the data size.

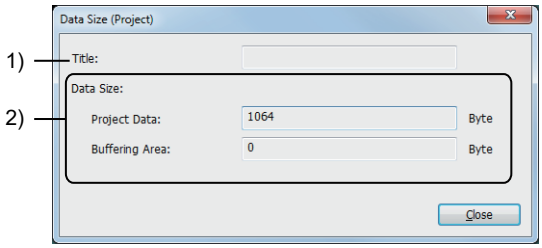
➟■1 [Data Size (Project)] dialog

■1 [Data Size (Project)] dialog

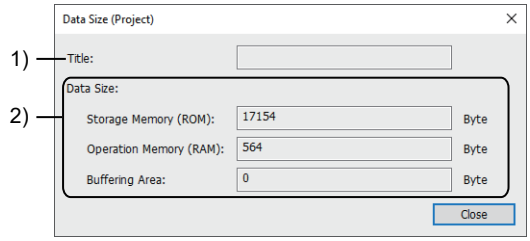
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



GT27, GT25, GT23, GT SoftGOT2000, and GS25



GT21 and GS21-W



GS21-W-N

1) **[Title]**
Displays the title of the project.

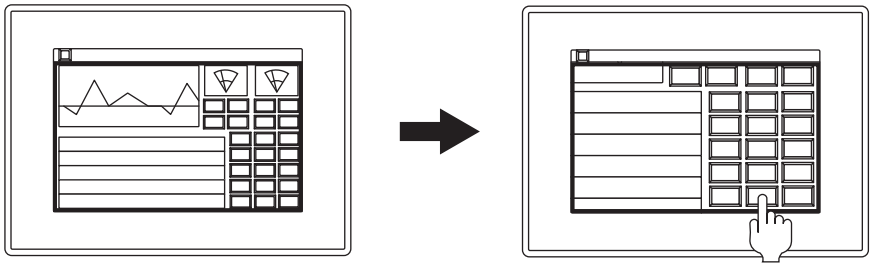
2) **[Data Size]**
Displays the data size of the project.

Item	Description
[Storage Memory (ROM)]	This item appears for GT27, GT25, GT23, GT SoftGOT2000, GS25, and GS21-W-N. The data size of the project saved in the GOT storage memory (ROM) is displayed.
[Operation Memory (RAM)]	This item appears for GT27, GT25, GT23, GT SoftGOT2000, GS25, and GS21-W-N. The data size of the project expanded in the GOT operation memory (RAM) is displayed.
[Project Data]	This item appears for GT21 and GS21-W. The data size of the project data is displayed.
[Buffering Area]	This item appears for GT21 and GS21. The data size of the project saved in the buffering area is displayed.

11.12 Zooming and Scrolling the Monitor Screen of the GOT (Screen Gesture Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Zoom and scroll the screen while the user-created screen on the GOT is displayed.
Even though many objects are arranged on the screen, erroneous operation can be preventive by zooming the screen.



Zoom and scroll the screen after switching to the screen gesture mode.
The operation for the objects is not available except part of area of the screen during the screen gesture mode.

➟11.12.1 Specification of the screen gesture function
11.12.2 How to use the screen gesture function (setting with GT Designer3)
11.12.3 How to use the screen gesture function (operating with the GOT)
11.12.4 Relevant settings
11.12.5 Precautions

11.12.1 Specification of the screen gesture function

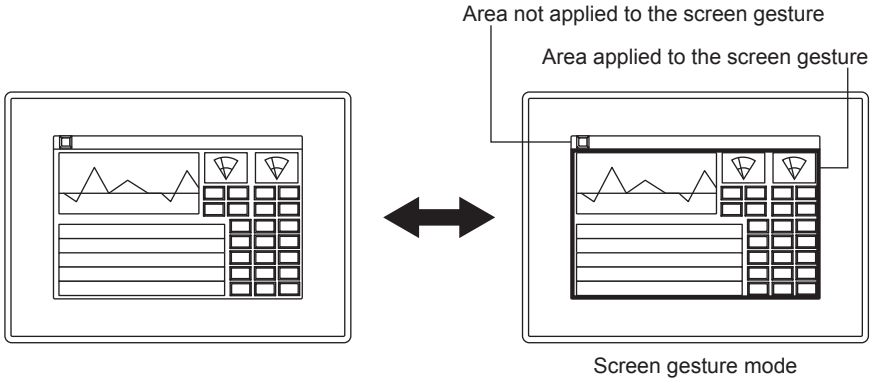
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Screen gesture mode
■2 Applicable screens to the screen gesture mode
■3 Switching to and cancelling the screen gesture mode
■4 Zooming and scrolling the screen
■5 Displaying a screen during the screen gesture mode
■6 Effect on other functions

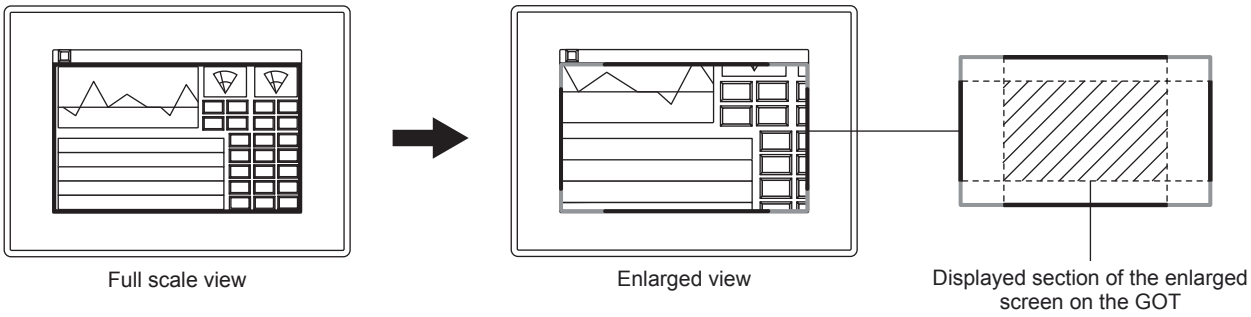
■1 Screen gesture mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Using the screen gesture mode to zoom and scroll the monitor screen of the GOT
Zooming and scrolling the screen are available only on the area applied to the screen gesture.
Switch to the screen gesture mode to display the frame for the area applied to the screen gesture.



The frame colors indicate which section of the enlarged screen is displayed.



(1) Area applied to the screen gesture

The area to zoom and scroll the screen

The operation for the objects on the area applied to the screen gesture is not available.

The status of zooming and scrolling the screen during the screen gesture mode is kept even after the screen gesture mode is cancelled.

Switch the screen to reset the status of zooming and scrolling the screen.

(2) Area not applied to the screen gesture

The area in which operating objects is enabled even in the screen gesture mode. Zooming and scrolling the screen are not available in this area.

The height of the area is 32 dots from the top edge of the screen by default. The height and position of the area are changeable.

To operate an object in the screen gesture mode, place the object in the screen gesture inactive area.

For how to set the screen gesture inactive area, refer to the following.

➟2.7.1 ■1 [Basic] tab

■2 Applicable screens to the screen gesture mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the applicable screens to the screen gesture mode.

- Base screen
- Superimpose window (only when it is displayed on the base screen.)
- Called screen (only when it is displayed on the base screen.)

Whether the screen gesture function is available or not is set by the project.

(The superimpose window and the called screen are applied to whether they are available for the destination screen to be displayed or not.)

➟11.12.2 ■1 Enabling the screen gesture function

■3 Switching to and cancelling the screen gesture mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Switch to the screen gesture mode.

(2) Cancel the screen gesture mode.

(1) Switch to the screen gesture mode.

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following operation can switch to the screen gesture mode.

- Touch the key code switch.

➟11.12.2 ■2 Arranging the switch for switching to the screen gesture mode
11.12.3 ■1 Switching the mode of the GOT to the screen gesture mode

(2) Cancel the screen gesture mode.

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The screen gesture mode is cancelled by the operation and at the timing as follows.

- Touch the key code switch.

➟11.12.2 ■2 Arranging the switch for switching to the screen gesture mode
11.12.3 ■1 Switching the mode of the GOT to the screen gesture mode

- Display the utility.
- Switch the screen (change of the screen switching device value).
- Display the system dialog.

■4 Zooming and scrolling the screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Zoom the screen.
(2) Scroll the screen.

(1) Zoom the screen.

The following operation can zoom the screen during the screen gesture mode.

- Pinch in and pinch out the screen.

➟11.12.3 ■2 Zooming the screen of the GOT

(2) Scroll the screen.

The following operation can scroll the screen during the screen gesture mode.

- Flick and slide the screen.

➟11.12.3 ■3 Scrolling the screen of the GOT

■5 Displaying a screen during the screen gesture mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Displaying a base screen
(2) Displaying a superimpose window and a called screen
(3) Displaying an overlap window
(4) Displaying a key window

(1) Displaying a base screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Entering the screen gesture mode displays the frame for the screen gesture active area.
When the value of the screen switching device changes during such an operation as pinching in or flicking the screen, a screen switching occurs when the user releases the finger from the screen of the GOT.
The screen switching exits the screen gesture mode and resets the zoomed or scrolled screen.

(2) Displaying a superimpose window and a called screen

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

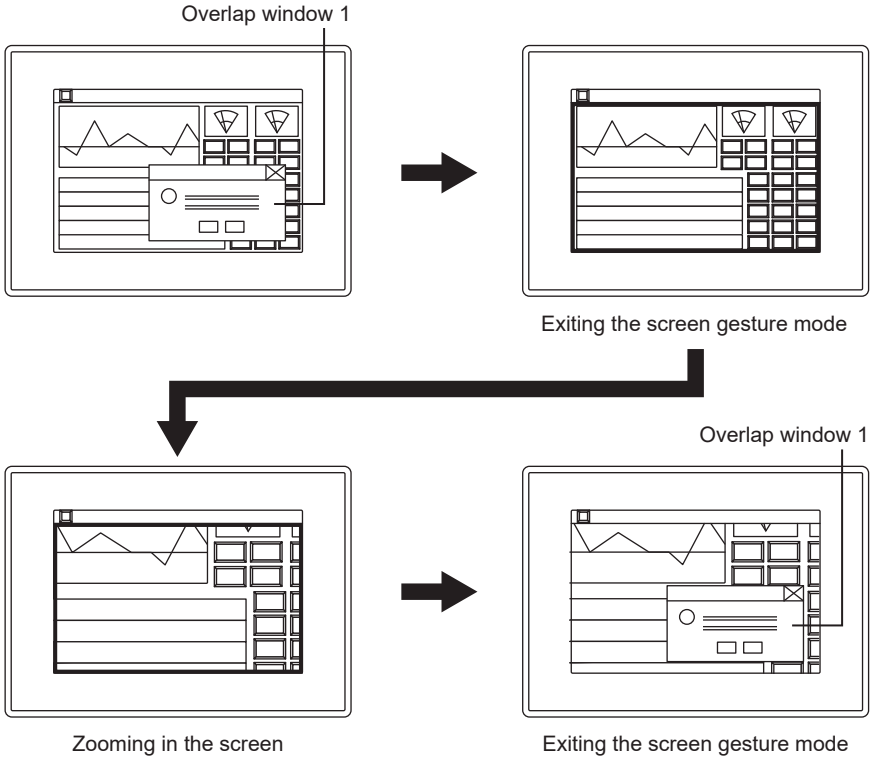
A superimpose window and a called screen that belong to a base screen are handled as part of the base screen.
When the base screen is zoomed or scrolled, the superimpose window and the called screen are also zoomed or scrolled.
Even though a screen switching occurs on the superimpose window, the zoomed or scrolled state is kept.

(3) Displaying an overlap window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Entering the screen gesture mode hides overlap windows.
Exiting the screen gesture mode redisplays the overlap windows at their original positions.
Zooming or scrolling the screen does not work on overlap windows.
Zooming or scrolling the screen does not change the value of the display position specification device of the overlap windows either.

Example) Exiting the screen gesture mode while overlap window 1 is displayed.



(4) Displaying a key window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Entering the screen gesture mode hides key windows.
Exiting the screen gesture mode does not redisplay the key windows.

■6 Effect on other functions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Numerical input and character string input
(2) Video/RGB display object
(3) Function for displaying the popup display
(4) Hard copy
(5) Remote personal computer operation (Serial)
(6) VNC server function
(7) Video display function and multimedia function
(8) Operation Log
(9) SoftGOT-GOT link function
(10) GOT internal device to notify the touch status of the GOT
(11) Screen save

(1) Numerical input and character string input

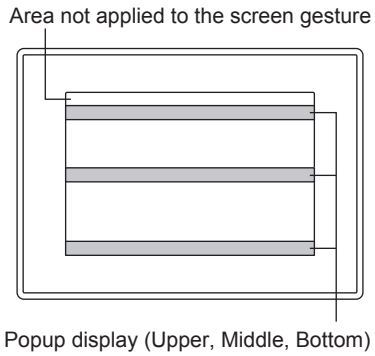
When the mode is switched to the screen gesture mode during the numerical input and character string input, the input contents are canceled.

(2) Video/RGB display object

The input image is not displayed in the screen gesture mode.
To display the image, clear the screen gesture mode.
If the video/RGB display object overlaps the screen gesture inactive area, the input image is not displayed as well.

(3) Function for displaying the popup display

Popup display under the alarm popup display, VNC server function, SoftGOT-GOT link function, and others is also made during the screen gesture mode.
The display position switching is also available with a touch at the left edge of the popup display.
The display position is corrected so as not to overlap the area not applied to the screen gesture.
Example) Screen gesture inactive area set on the top edge of the screen



(4) Hard copy

When the hard copy is performed with the GOT screen zoomed or scrolled, the zoomed or scrolled screen is output.

(5) Remote personal computer operation (Serial)

Even though RGB screen (screen of personal computer) is touched with the screen zoomed or scrolled, the touched position is not sent to the personal computer correctly.
When using the remote personal computer operation function (Serial), do not use zooming and scrolling the screen while RGB screen (personal computer screen) is displayed on the GOT.

(6) VNC server function

While a VNC client (such as a personal computer) is communicating with a VNC server (GOT), when the client obtains the authorization of the VNC server function, the screen gesture mode is canceled and the zoomed or scrolled screen is reset.
While the VNC client has the authorization, the GOT is not switched to the screen gesture mode.

(7) Video display function and multimedia function

The image input from the external device is not displayed during the screen gesture mode.
Cancel the screen gesture mode to display the image.
Zooming and scrolling the screen is not applied.

(8) Operation Log

The operation log includes switching to and cancelling the screen gesture mode.
The operation log does not include the operations during the screen gesture mode.

(9) SoftGOT-GOT link function

Even though switching to the screen gesture mode or, zooming and scrolling the screen is performed on the GOT, GT SoftGOT2000 communicating with the GOT is unaffected.

(10)GOT internal device to notify the touch status of the GOT

The following shows the action of the GOT internal device to notify the touch status of the GOT while the screen gesture function is used.

- Touch Status External Notification (X-coordinate) (GS654) and Touch Status External Notification (Y-coordinate) (GS655)
  They are not operated during the screen gesture mode.
  Cancel the screen gesture mode and touch the area applied to the screen gesture of the zoomed or scrolled screen to notify the coordinate applied to the zoomed or scrolled the screen.
- Touch Status External Notification (Touch Status) (GS656)
  It is not operated during the screen gesture mode.

(11)Screen save

Even though the status of the GOT is changed to the status of the screen save during the screen gesture mode, the screen gesture mode is kept.

11.12.2 How to use the screen gesture function (setting with GT Designer3)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Enabling the screen gesture function
■2 Arranging the switch for switching to the screen gesture mode

■1 Enabling the screen gesture function

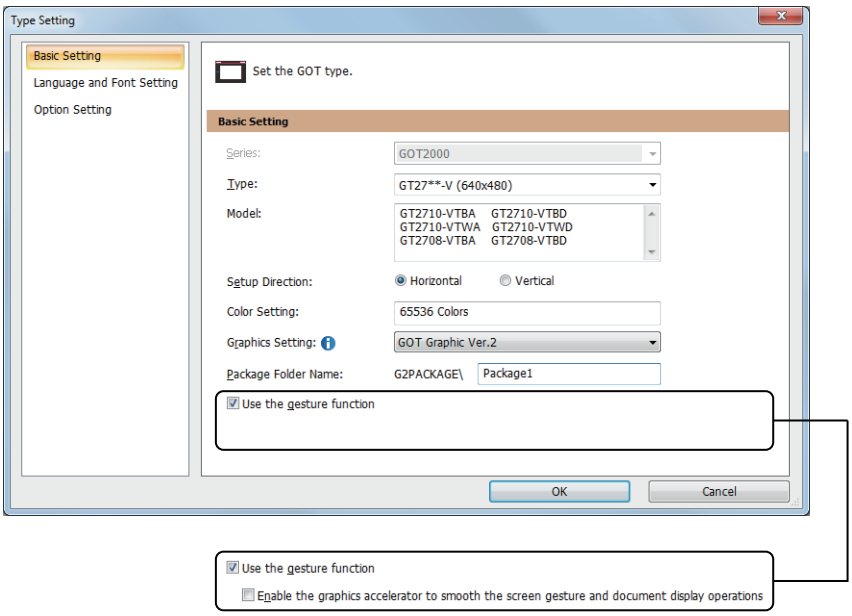
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The screen gesture function is enabled by default.
(In common with the object gesture function)
If the screen gesture function is not enabled, configure the setting according to the following procedure.

Step 1 Select [Common] → [GOT Type Setting] from the menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Step 2 Select [Use the gesture function] and click the [OK] button.
The screen gesture function is enabled.



GOT Graphic Ver.1

To smooth the operations, also select [Enable the graphics accelerator to smooth the screen gesture and document display operations].
Enabling the graphics accelerator may increase the GOT startup time.
In the screen gesture mode, the object display is not refreshed.

Step 3 Set the switching method to the screen gesture mode.

➟■2 Arranging the switch for switching to the screen gesture mode

■2 Arranging the switch for switching to the screen gesture mode

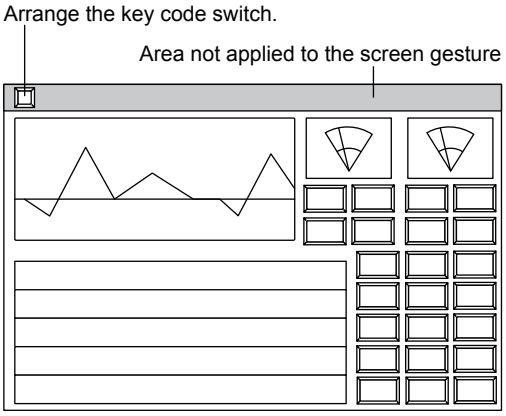
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Even though the switch for switching to the screen gesture mode is arranged on the screen where using the screen gesture function is not set, the switch cannot be operated.
Configure the setting for using the screen gesture function.

➟■1 Enabling the screen gesture function

Step 1 Select [Object] → [Switch] → [Key Code Switch] from the menu to arrange a key code switch in the screen gesture inactive area on the screen, which uses the screen gesture function.

➟6.5.1 Placing figures and objects



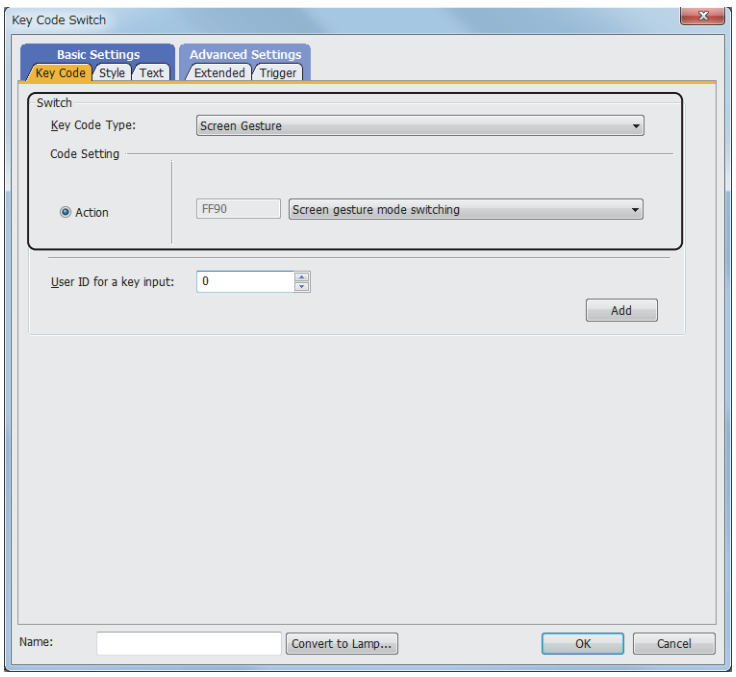
The position and size of the screen gesture inactive area are settable on the [Basic] tab in the [Screen Property] dialog.
To display the frame of the screen gesture inactive area on the screen editor, select [Display the screen gesture inactive area].

➟2.7.1 ■1 [Basic] tab

Step 2 Double-click the arranged key code switch to display the setting dialog.

Step 3 Set the following and click the [OK] button to complete the setting.

- Select [Screen Gesture] in [Key Code Type].
- Select [Screen gesture mode switching] in [Code Setting].



11.12.3 How to use the screen gesture function (operating with the GOT)

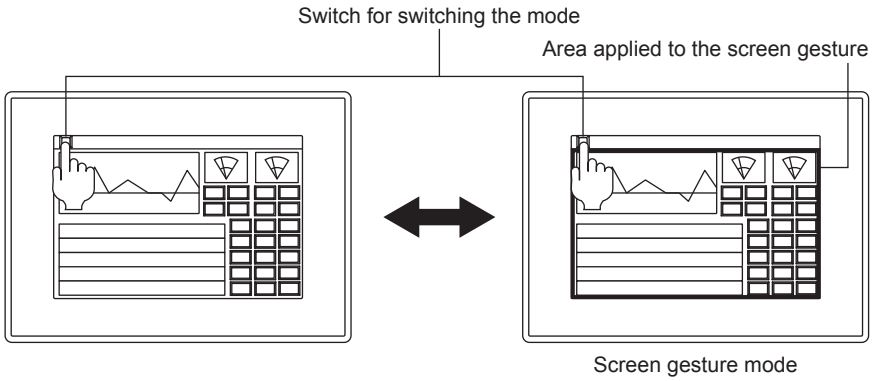
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➞■1 Switching the mode of the GOT to the screen gesture mode
■2 Zooming the screen of the GOT
■3 Scrolling the screen of the GOT

■1 Switching the mode of the GOT to the screen gesture mode

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Touch the switch for switching the mode to switch to the screen gesture mode.
Switch to the screen gesture mode to display the frame for the area applied to the screen gesture.



Touch the switch for switching the mode during the screen gesture mode to cancel the screen gesture mode.

■2 Zooming the screen of the GOT

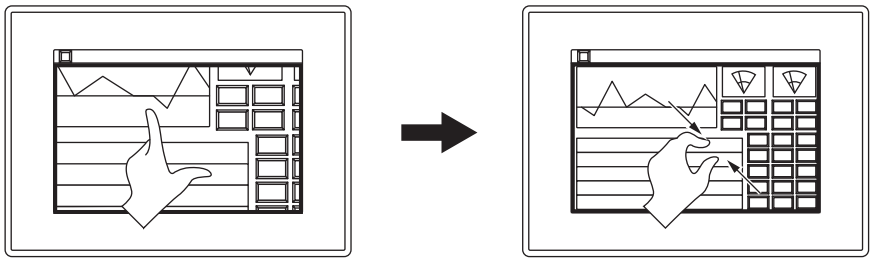
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Pinch in the screen to zoom out the screen and pinch out the screen to zoom in the screen.
Zooming out the screen is available to the screen in the zoomed-in the screen.

(1) Zoom out (pinch in) the screen.

Step 1 Touch two positions as the center of the area to be zoomed out on the GOT screen.

Step 2 Pinch in the screen by the finger toward the center of the two positions to zoom out the screen in the center of the two positions.

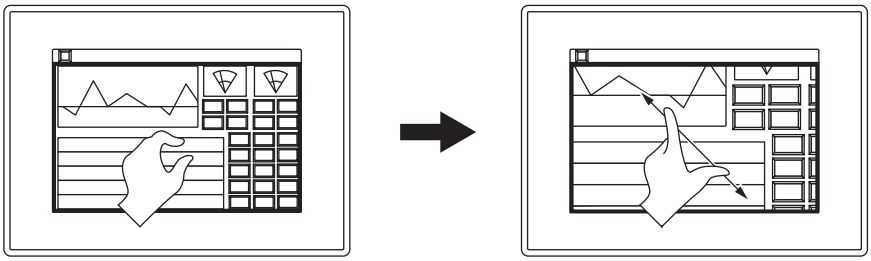


The screen cannot be zoomed out with less than the original size of the screen.
Display update of the object is cancelled during the operation.

(2) Zoom in (pinch out) the screen.

Step 1 Touch two positions as the center of the area to be zoomed in on the GOT screen.

Step 2 Pinch out the screen by the fingers from the center of the two positions outward to zoom in the screen in the center of the two positions.



The screen can be zoomed in up to four times of the screen with the original size.
The screen might blur by zooming in the screen.
Display update of the object is cancelled during the operation.

(3) Full scale display

Touch the key code switch having the following settings to return the GOT screen to the actual size (100%) and to cancel the screen gesture mode.

- [Screen Gesture] is selected for [Key Code Type].
- [Full scale display (100%)] is selected in [Code Setting].

Arrange the key code switch used in the screen gesture mode in the screen gesture inactive area.

➟11.12.2 ■2 Arranging the switch for switching to the screen gesture mode

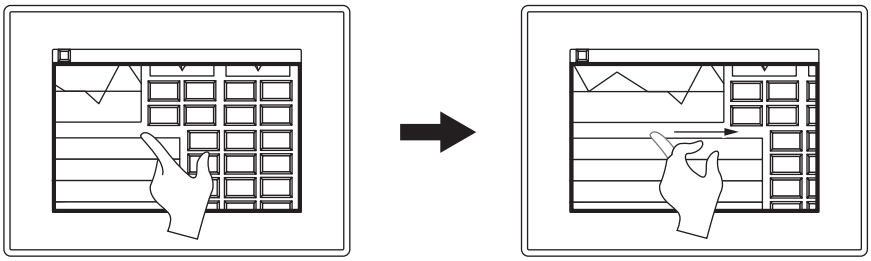
■3 Scrolling the screen of the GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Flick or slide the screen of the GOT to scroll the screen.

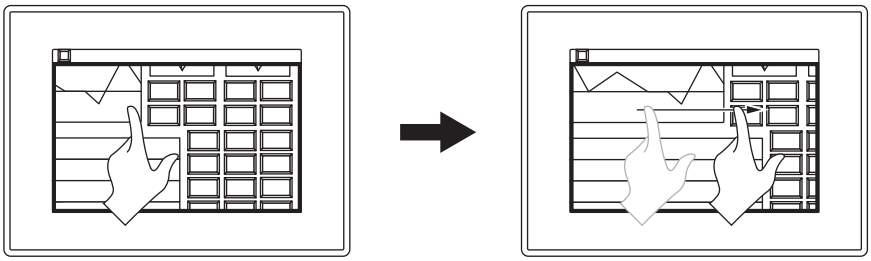
(1) Flick the screen.

Flick the screen to scroll the screen.



(2) Slide the screen.

Move a figure with the figure touched on the screen to scroll the screen.



11.12.4 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the screen gesture function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Enabling the gesture function	[Use the gesture function]
Smoothing the operations of the screen gesture function	GOT Graphic Ver.1 [Enable the graphics accelerator to smooth the screen gesture and document display operations]

11.12.5 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Arranging the switch for switching to the screen gesture mode

The objects arranged in the area applied to the screen gesture cannot be operated during the screen gesture mode.
When the switch for switching the mode is arranged to the area applied to the screen gesture, after switching to the screen gesture mode, the mode cannot be cancelled by the switch for switching the mode.
Arrange the switch for switching the mode to the area not applied to the screen gesture.

➟11.12.2 ■2 Arranging the switch for switching to the screen gesture mode

■2 Combination with the remote personal computer operation function (Serial)

Even though RGB screen (screen of personal computer) is touched with the screen zoomed or scrolled, the touched position is not sent to the personal computer correctly.
When using the remote personal computer operation function (Serial), do not use zooming and scrolling the screen while RGB screen (personal computer screen) is displayed on the GOT.

■3 Operating the GOT with a mouse

When the GOT is operated using a mouse with the USB mouse, the keyboard function, the VNC server function, and others, zooming the screen by pinching in or pinching out the screen cannot be performed.

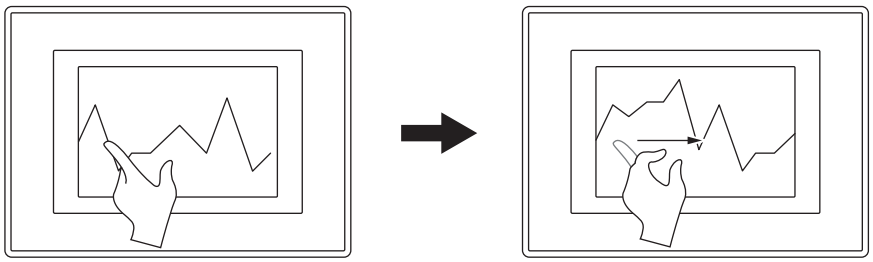
■4 Base screen size expansion

The screen gesture function is disabled when the base screen size expansion is enabled.

11.13 Operating Objects by the Gesture (Object Gesture Function)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Scroll or zoom in and out the displayed contents of the objects by the gesture such as the flick.
Example) Scroll the contents with the flick.



➟11.13.1 Specifications of the object gesture function
11.13.2 How to use the object gesture function (setting with GT Designer3)
11.13.3 How to use the object gesture function (operation with the GOT)
11.13.4 Relevant settings

11.13.1 Specifications of the object gesture function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Objects operated by the gesture
■2 Type of the gesture

■1 Objects operated by the gesture

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the applicable functions to the object gesture function.

- Historical data list display
- Alarm display (user)
- Alarm display (system)
- Simple alarm display
- Historical trend graph
- Document display
- Video/RGB display object

■2 Type of the gesture

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

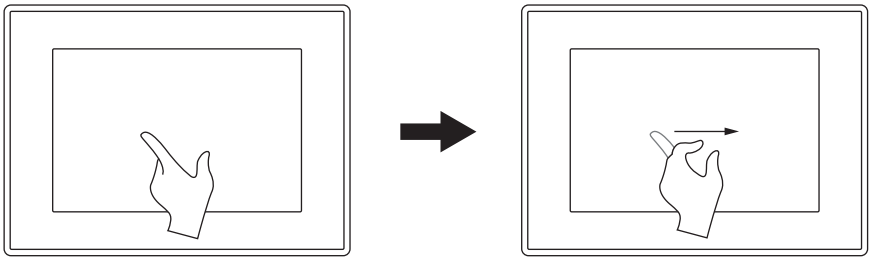
The following shows the gesture used with the object gesture function.

- Flick
- Slide
- Pinch in
- Pinch out

The operation of the object by touch is not related to the setting of the object gesture function.
Whether displaying a cursor is enabled or not while the object is touched depends on the setting for the one-touch operation with each object.

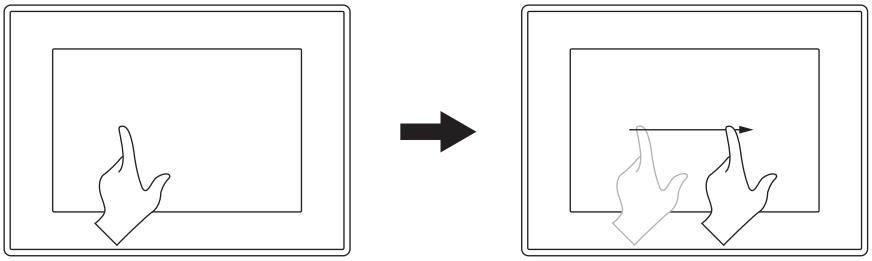
(1) Flick

Flick your finger on the screen.



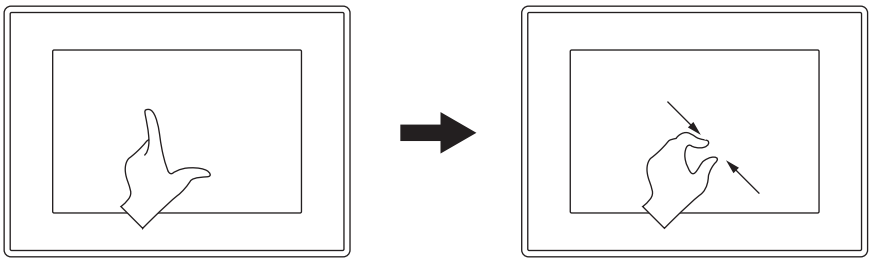
(2) Slide

Drag your finger across the screen.



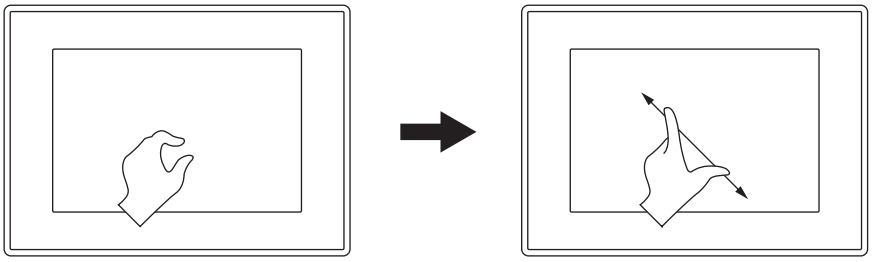
(3) Pinch in

Touch two positions and pinch in the screen by the fingers toward the center of the two positions.



(4) Pinch out

Touch two positions and pinch out the screen by the fingers from the center of the two positions outward.



11.13.2 How to use the object gesture function (setting with GT Designer3)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Enabling the object gesture function

■1 Enabling the object gesture function

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The object gesture function is enabled by default.
(In common with the screen gesture function)
If the object gesture function is not enabled, configure the setting according to the following procedure.

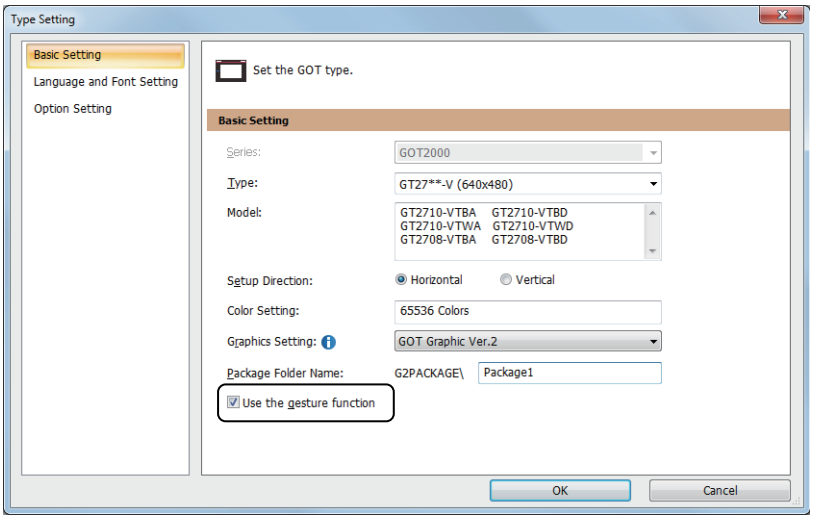
Step 1 Select [Common] → [GOT Type Setting]Menu to display the [Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Step 2 Select [Use the gesture function] and click the [OK] button.

The object gesture function is enabled.
The GOT operates as shown below during gesture operations.

- The object display is not refreshed during gesture operations.
- The document display appears in the foreground while you operate it by gestures.
  (Overlap windows and key windows appear behind the document display.)



To operate the video/RGB display object with the gesture operation, set the item as shown below.

- Select [Gesture Operation (Scaling/Scrolling)] for [Touch Mode] on the [Video/RGB Setting] tab in the [Video/RGB Display] dialog.

➟8.27.4 ■1 [Video/RGB Setting] tab

11.13.3 How to use the object gesture function (operation with the GOT)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Operating the historical data list display
■2 Operating the alarm display (user), alarm display (system), and simple alarm display
■3 Operating the historical trend graph
■4 Operating the document display
■5 Operating the video/RGB display object

■1 Operating the historical data list display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Scroll

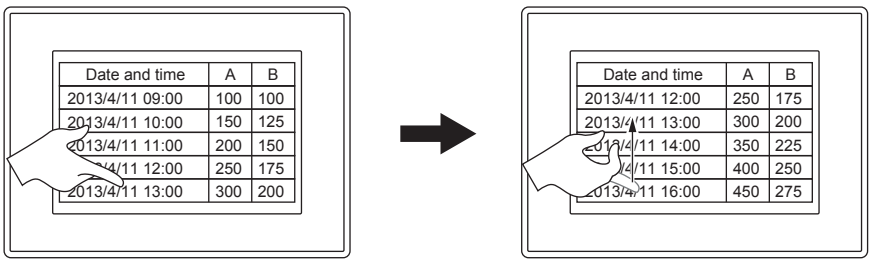
(1) Scroll

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Flick the historical data list display to scroll the displayed contents upward and downward.
One flick scrolls the display for a half page.

- Flick the display upward.
  The display is scrolled downward.
- Flick the display downward.
  The display is scrolled upward.

Example) Scroll the display downward.



■2 Operating the alarm display (user), alarm display (system), and simple alarm display

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Scroll

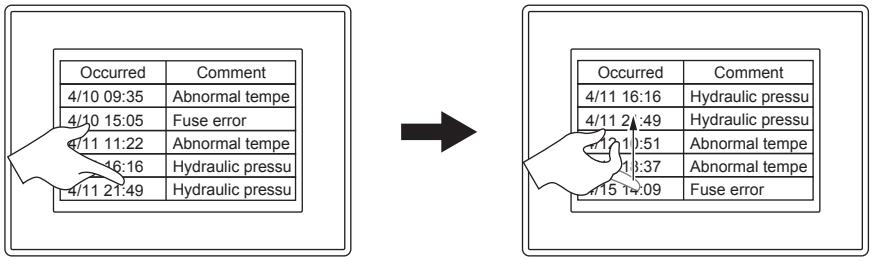
(1) Scroll

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Flick the alarm display (user), alarm display (system), and simple alarm display to scroll the displayed contents upward and downward.
One flick scrolls the display for a half page.

- Flick the display upward.
  The display is scrolled downward.
- Flick the display downward.
  The display is scrolled upward.

Example) Scroll the display downward.



■3 Operating the historical trend graph

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Scroll
(2) Zooming in and out time axis

(1) Scroll

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Flick the historical trend graph to scroll the displayed contents.
One flick scrolls the display for a half page.
A direction of the flick depends on the setting of [Direction] of the historical trend graph.

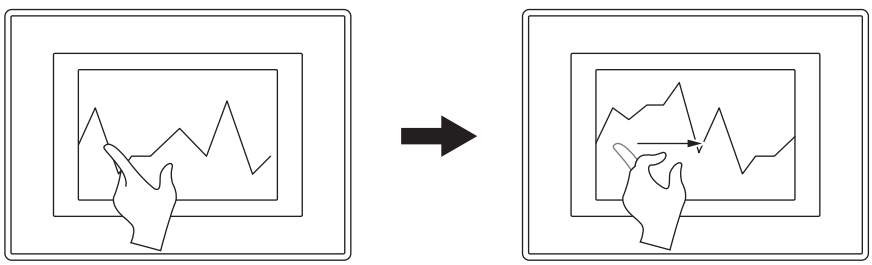
(a) When selecting [Right] or [Left] with the [Direction] of the historical trend graph

- Flick the display leftward.
  The display is scrolled rightward.
- Flick the display rightward.
  The display is scrolled leftward.

(b) When selecting [Up] or [Down] with the [Direction] of the historical trend graph

- Flick the display upward.
  The display is scrolled downward.
- Flick the display downward.
  The display is scrolled upward.

Example) Scroll the display rightward.



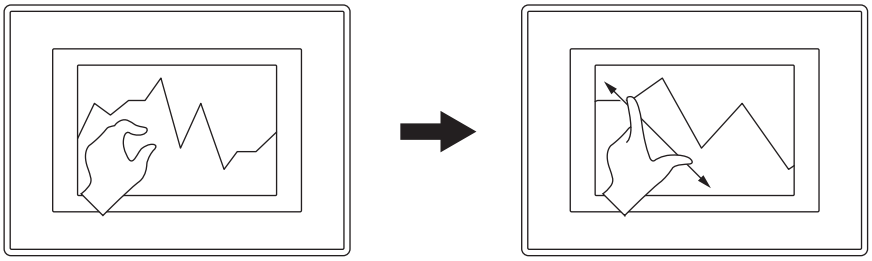
(2) Zooming in and out time axis

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Pinch in or out the historical trend graph to zoom out or in time axis each.
The details of pinch-out and pinch-in operations are settable in [Magnification for scaling operation] in the [Historical Trend Graph] dialog ([Extended] tab).

➟8.21.4 ■4 [Extended] tab

You can enlarge the time axis until the graph displays two points.
The scope of reducing the time axis varies with the setting of [Shrink the graph to be less than its full scale].
When [Shrink the graph to be less than its full scale] is selected, the time axis can be reduced to a magnification of 1/128.
When [Shrink the graph to be less than its full scale] is deselected, the time axis can be reduced to the original magnification.
Example) Zoom in time axis.



■4 Operating the document display

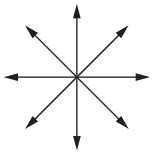
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟(1) Scroll
(2) Next page and previous page
(3) Zooming in and out the document

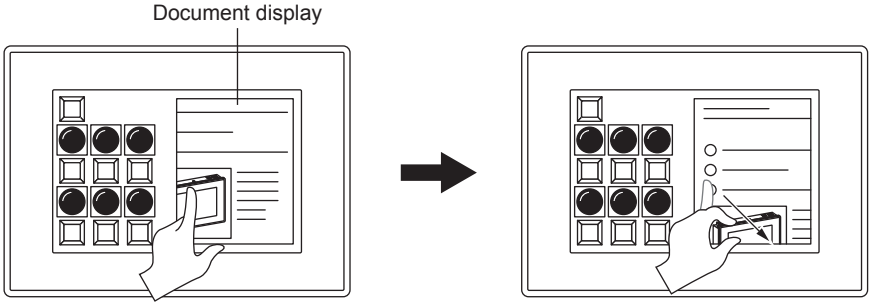
(1) Scroll

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Flick or slide your finger on the document display to scroll the document.
The document display can be scrolled in eight directions as follows.



Example) Scroll the display leftward.



(2) Next page and previous page

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

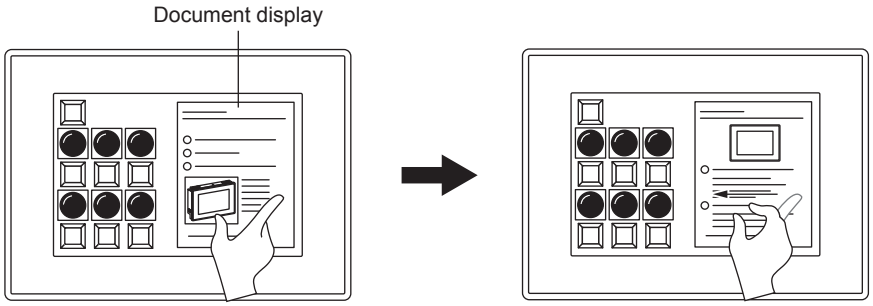
Flick the display with the edge of the document displayed to change the page.

(a) **When displaying the upper end of the document**
Flick the page downward to change to the previous page. (Previous page)

(b) **When displaying the bottom end of the document**
Flick the page upward to change to the next page. (Next page)

(c) **When displaying the left end of the document**
Flick the page rightward to change to the previous page. (Previous page)

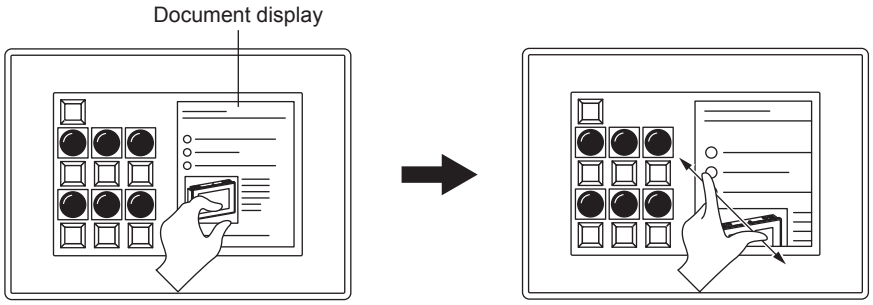
(d) **When displaying the right end of the document**
Flick the page leftward to change to the next page. (Next page)
Example) Next page



(3) Zooming in and out the document

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

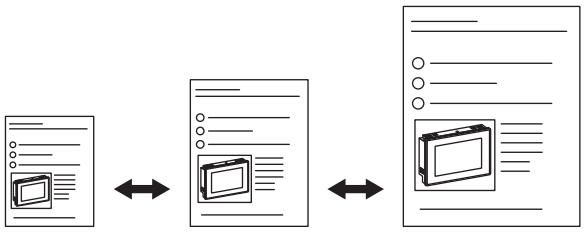
Pinching in or out the document display reduces or enlarges the document size.
Example) Zoom in the document.



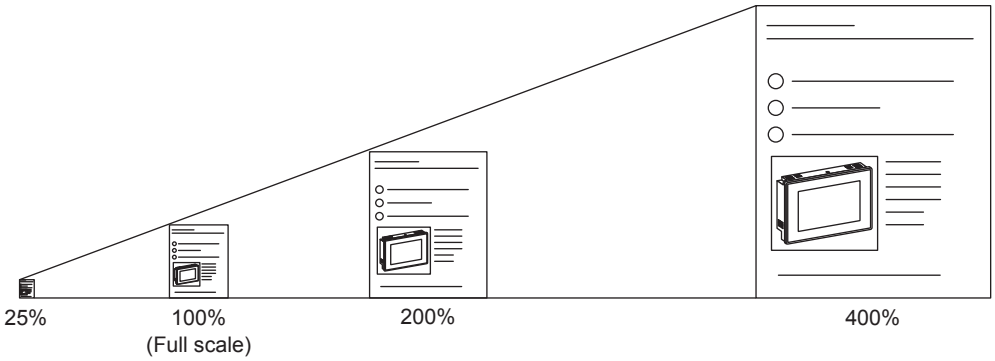
GOT Graphic Ver.2

The zoom behavior when the document display is pinched out or in varies depending on the document type.
➟8.26.6 [Document Display] dialog

- When the document type is set to [Document Converter Output File]
  Pinching in or out the document display switches the document size to large, medium, or small.
  One pinch in zooms out the displayed document by one size smaller than the current display size.
  One pinch out zooms in the displayed document by one size larger than the current display size.



- When the document type is set to [PDF File]
  Pinching in or out the document display reduces or enlarges the document size to a size at 25% to 400% magnification.

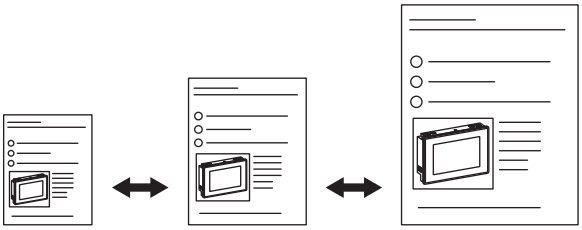


GOT Graphic Ver.1

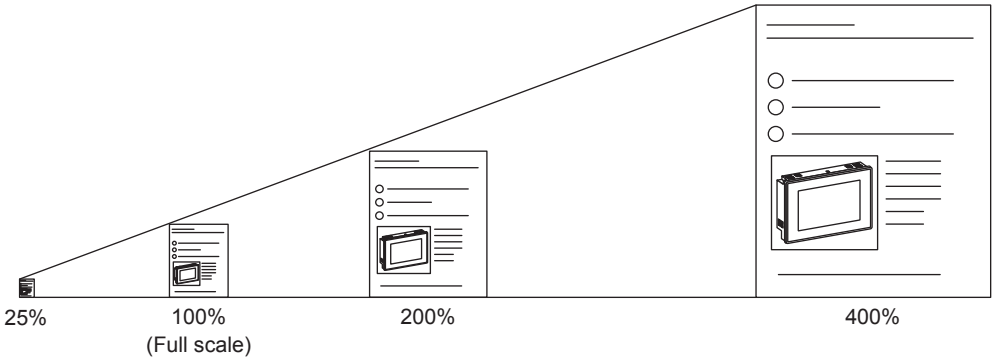
The zoom behavior when the document display is pinched out or in varies depending on the document type and the graphics accelerator setting.

➥5.1.5 [Type Setting] dialog
8.26.6 [Document Display] dialog

- When the document type is set to [Document Converter Output File] and the graphics accelerator is disabled
  Pinching in or out the document display switches the document size to large, medium, or small.
  One pinch in zooms out the displayed document by one size smaller than the current display size.
  One pinch out zooms in the displayed document by one size larger than the current display size.



- When the document type is set to [PDF File] or when the document type is set to [Document Converter Output File] and the graphics accelerator is enabled
  Pinching in or out the document display reduces or enlarges the document size to a size at 25% to 400% magnification.



■5 Operating the video/RGB display object

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

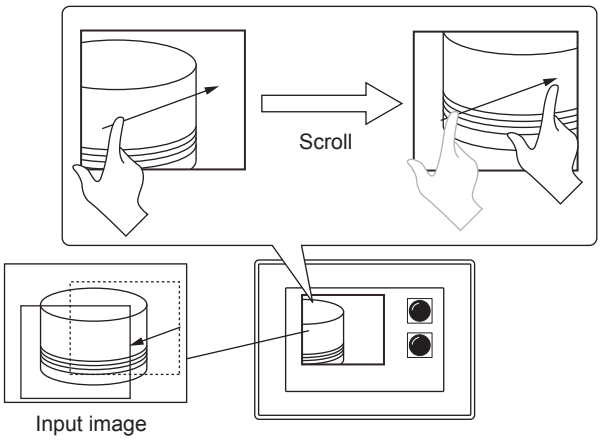
Not available to GT2705-V.

➥(1) Scrolling the displayed image
(2) Enlarging or reducing the displayed image

(1) Scrolling the displayed image

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

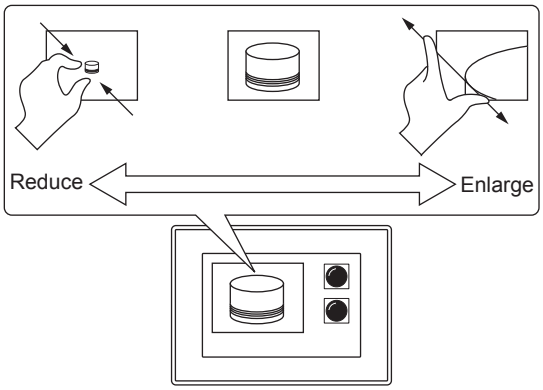
To scroll the displayed image, slide your finger across the video/RGB display object.



(2) Enlarging or reducing the displayed image

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

To reduce or enlarge the displayed image (25% to 400%), pinch in or out on the video/RGB display object.



11.13.4 Relevant settings

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Set the relevant settings other than the specific settings for the object gesture function as required.
The following shows the functions that are available by the relevant settings.

■1 GOT type settings

Select [Common] → [GOT Type Setting] from the menu to display the [GOT Type Setting] dialog.

➟5.1.5 [Type Setting] dialog

Function	Setting item
Enabling the gesture function	[Use the gesture function]
Smoothing the operations of the screen gesture function	GOT Graphic Ver.1 [Enable the graphics accelerator to smooth the screen gesture and document display operations]

■2 GOT internal device

➟12.1 GOT Internal Device

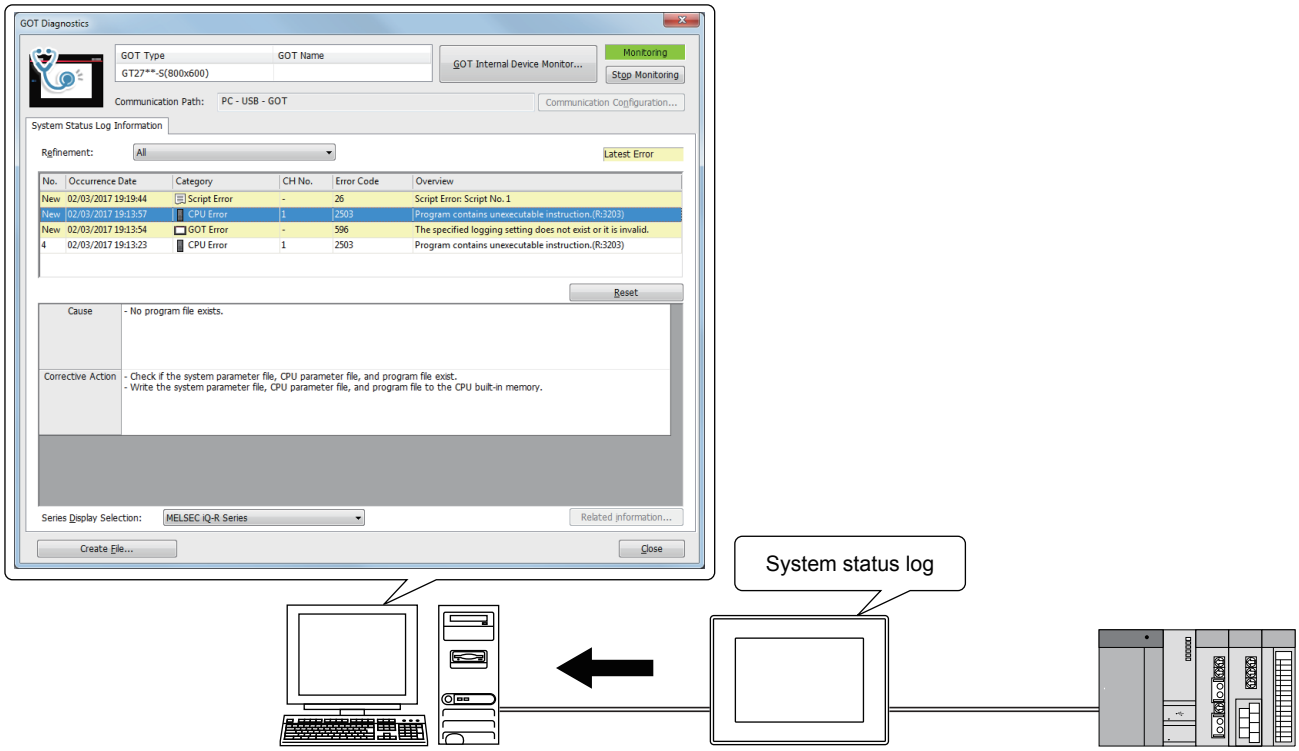
Function	Setting item
Disabling the object gesture function	GS1794.b0
Disabling the single touch operation of the object	GS1794.b1

11.14 Checking the Causes and Corrective Actions for an Error in the GOT (GOT Diagnostics)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GT Designer3 obtains system status log data from the GOT.
The causes and corrective actions for an error are displayed.
You can monitor the GOT internal devices and change the device values as necessary.

Displaying the causes and corrective actions for an error



➟11.14.1 Specifications of the GOT diagnostics
11.14.2 How to use the GOT diagnostics
11.14.3 GOT internal device monitor
11.14.4 Precautions
11.14.5 [GOT Diagnostics] dialog
11.14.6 [GOT Internal Device Monitor] window

11.14.1 Specifications of the GOT diagnostics

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 GOT diagnostics display target

The GOT diagnostics function displays the following items.

- System alarm (GOT error, CPU error, and network error)
- Script error (Project script, screen script, and object script)

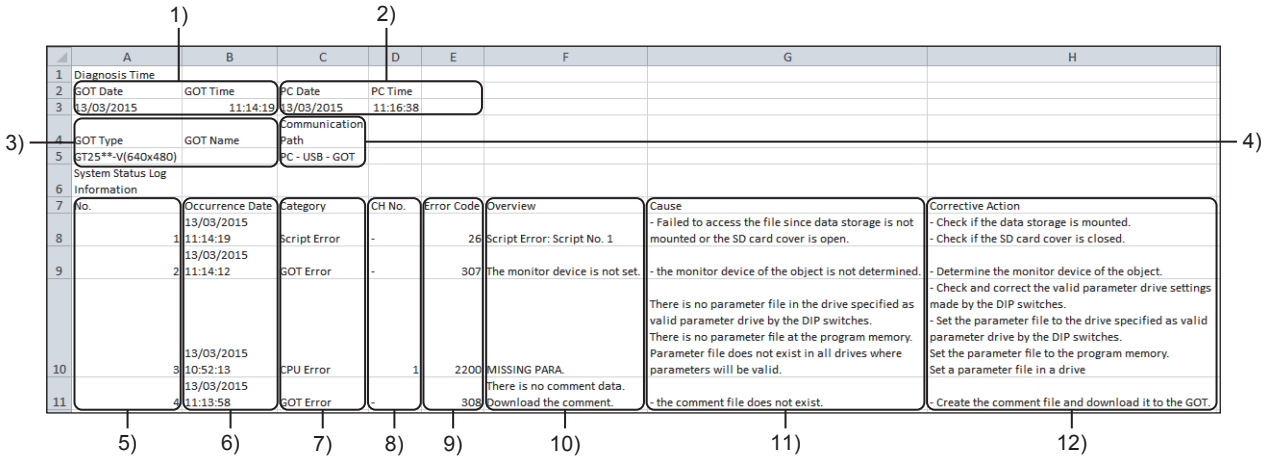
■2 Version of the standard system application

To perform the GOT diagnostics, the GOT requires a standard system application version 01.10.*** or later.
To perform the GOT internal device monitor, the GOT requires a standard system application version 01.20.*** or later. (Version 01.22.*** or later for GT21 and GS21)
For information on how to check the version of the standard system application, refer to the following.

➟GOT2000 Series User's Manual (Utility)

■3 Format of a saved file

The following shows the format of a saved file containing error information.
Example) CSV file



	A	B	C	D	E	F	G	H
1	Diagnosis Time							
2	GOT Date	GOT Time	PC Date	PC Time				
3	13/03/2015	11:14:19	13/03/2015	11:16:38				
4	GOT Type	GOT Name	Communication Path					
5	GT25**-V(640x480)		PC - USB - GOT					
6	System Status Log Information							
7	No.	Occurrence Date	Category	CH No.	Error Code	Overview	Cause	Corrective Action
8	1	13/03/2015 11:14:19	Script Error	-	26	Script Error: Script No. 1	- Failed to access the file since data storage is not mounted or the SD card cover is open.	- Check if the data storage is mounted. - Check if the SD card cover is closed.
9	2	13/03/2015 11:14:12	GOT Error	-	307	The monitor device is not set.	- the monitor device of the object is not determined.	- Determine the monitor device of the object.
10	3	13/03/2015 10:52:13	CPU Error	1	2200	MISSING PARA.	There is no parameter file in the drive specified as valid parameter drive by the DIP switches. There is no parameter file at the program memory. Parameter file does not exist in all drives where parameters will be valid.	- Check and correct the valid parameter drive settings made by the DIP switches. - Set the parameter file to the drive specified as valid parameter drive by the DIP switches. Set the parameter file to the program memory. Set a parameter file in a drive
11	4	13/03/2015 11:13:58	GOT Error		309	There is no comment data. Download the comment.	- the comment file does not exist.	- Create the comment file and download it to the GOT.

1) **Date and time on the GOT**
GOT date and time on which GT Designer3 obtained the last system log data

2) **Date and time on the personal computer**
Personal computer date and time on which error information was saved to a file

3) **Connected GOT**
Type and name of the connected GOT

4) **[Communication path]**
Communication path between the personal computer and the GOT

5) **[No.]**
Number indicating the order of displaying errors

6) **[Occurrence Date]**
Date and time on which an error occurred

7) **[Category]**
Error category

8) **[CH No.]**
Number of the channel where an error occurred

9) **[Error Code]**
Error code for a system alarm or script error

10) **[Overview]**
Details of a system alarm or script error

11) **[Cause]**
Causes of an error

12) **[Corrective Action]**
Corrective actions for an error

11.14.2 How to use the GOT diagnostics

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Obtaining system status log data from the GOT and displaying error information
■2 Saving the contents of the error list to a file

■1 Obtaining system status log data from the GOT and displaying error information

Step 1 Connect the GOT to the personal computer.

For the communication path types, refer to the following.

➟4.1.1 Route for the data transfer

For the connection method, refer to the following.

➟4.3.1 Connecting the personal computer to the GOT
4.4.1 Connecting the personal computer and PLC CPU

Step 2 Select [Diagnostics] → [GOT Diagnostics] from the menu to display the [Communication Configuration] dialog.

➟4.8.8 [Communication Configuration] dialog

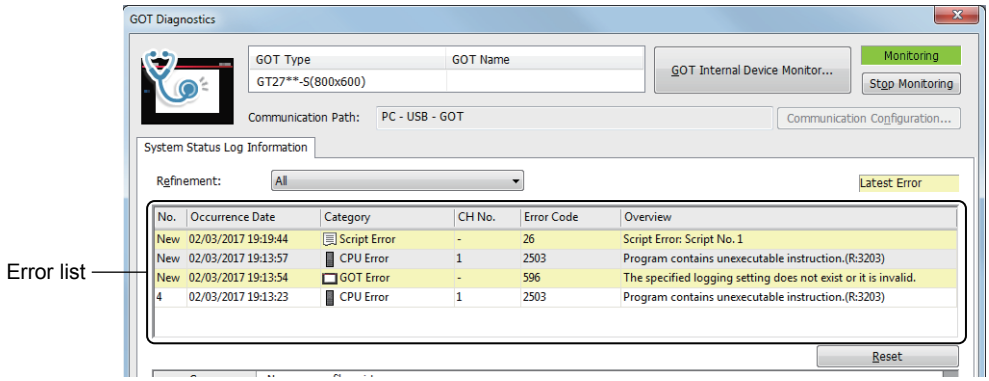
If the [GOT Diagnostics] dialog appears, any of the following settings is configured.
(Proceed to step 4.)

- On the [Operation] tab in the [Options] dialog, [Display the dialog of Communication Setting before displaying the dialog of Communicate with GOT/GOT Diagnostics] is cleared.
- In the [Communication Configuration] dialog, [Display the dialog of [Communication Configuration] the next time as well] is cleared.

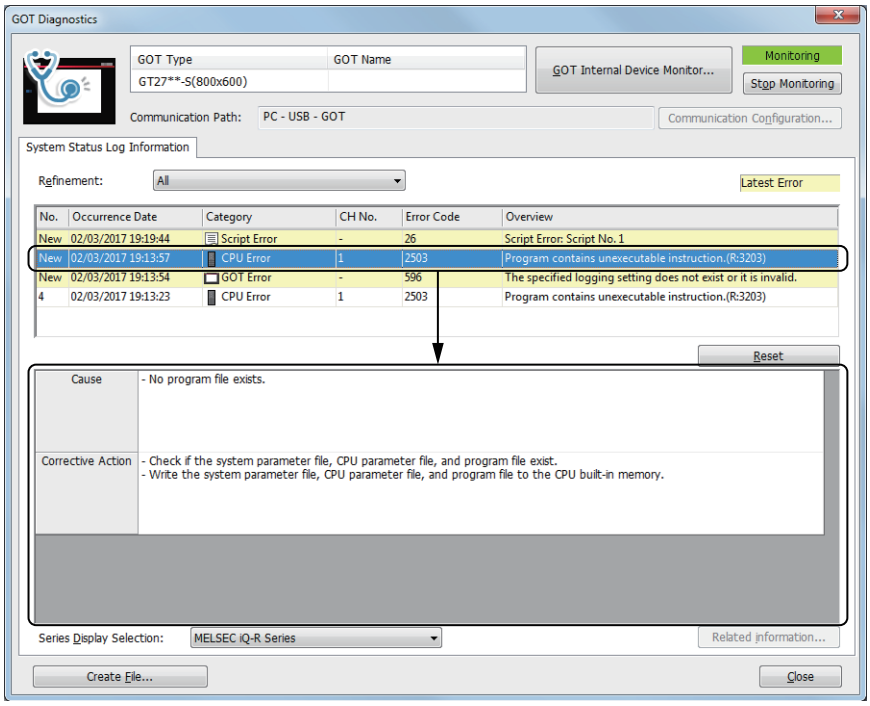
Step 3 Configure the setting according to the communication path between the GOT and the personal computer, and click the [OK] button to display the [GOT Diagnostics] dialog.

➟11.14.5 [GOT Diagnostics] dialog

Step 4 Click the [Start Monitoring] button to obtain system status log data from the GOT and list the recorded errors in the error list.



Step 5 Click an error in the error list to display its causes and corrective actions.



If an error with supplementary information is selected, click the [Related information] button to display a relevant page of GT Designer3 Help.

■2 Saving the contents of the error list to a file

The following shows the procedure for saving the contents of the error list displayed in the [GOT Diagnostics] dialog to a CSV or Unicode text file.

Step 1 In the [GOT Diagnostics] dialog, obtain system status log data from the GOT.

➟11.14.2 ■1 Obtaining system status log data from the GOT and displaying error information

Step 2 Set the items as shown below.

- [Refinement]: Type of errors to be displayed in the error list
- [Series Display Selection]: This item appears when a system alarm (CPU error) of MITSUBISHI equipment is selected in the error list.
  Select the controller series to which the display contents of [Overview], [Cause], and [Corrective Action] for the system alarm (CPU error) correspond.
  Click the [Start Monitoring] button to automatically identify the series of the controller in which a selected error occurred.

➟11.14.5 [GOT Diagnostics] dialog

Only the contents narrowed by the above items are output to a file.

Step 3 Click the [Create File] button to display the [Save As] dialog.

Step 4 Set [File name] and [Save as type], and click the [Save] button to save the contents of the error list.

For the format of the saved file, refer to the following.

➟11.14.1 ■3 Format of a saved file

11.14.3 GOT internal device monitor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

On GT Designer3, you can monitor the GOT internal devices and change the device values as necessary.
You can import the sample free registration lists of the GOT internal devices related to specific functions.

■1 Specifications of the GOT internal device monitor

(1) Devices that can be monitored

You can monitor the GOT internal devices (GB, GD, and GS) and change their current values.

➟12.1 GOT Internal Device

However, the current values of the following devices are not changeable.

- GB0 to GB63 (GB0 to GB38 and GB40 to GB63 for GT21 and GS21)
- Write devices of the GOT special registers (GS)

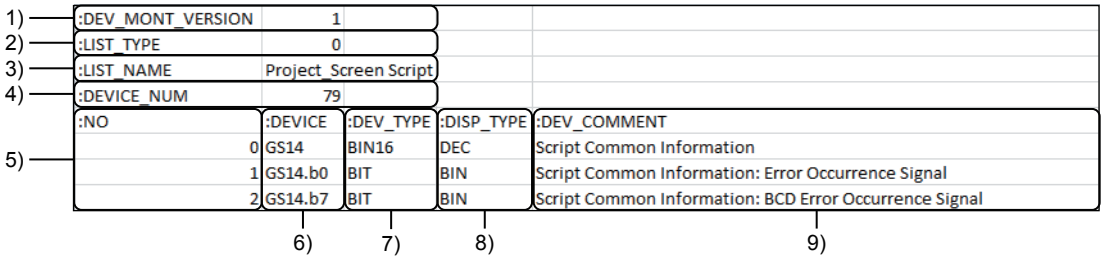
(2) Specifications of the free registration list

Use a free registration list to manage the GOT internal devices to be monitored.
A created free registration list is retained after GT Designer3 exits.
Up to 32 free registration lists can be created.
Up to 32 characters are available for a free registration list name.
The following characters cannot be used in a free registration list name.
\ / : ; * ? " < > | .
Up to 6 free registration windows can be open simultaneously.
Up to 256 devices are registrable in one free registration list.

(3) Importing or exporting a free registration list

You can import or export a free registration list.
The CSV format and the Unicode text format are supported.

An exported free registration list is editable with spreadsheet software or others.
The following shows the layout of an exported free registration list.



1) **Version**
Version of the free registration list.

2) **List type**
Type of a list.
Fixed to 0.

3) **List name**
Name of the free registration list.
For the name specifications, refer to the following.

➟(2) Specifications of the free registration list

4) **Number of devices**
Number of the registered devices.
Up to 256 devices are registrable in one free registration list.

5) **No.**
Registered device number.

6) **Device**
Registered device.

7) **Data type**
Data type of a device

- BIT: [Bit]
- BIN8: [Byte [Signed]]
- BIN8_Unsigned: [Byte [Unsigned]/Bit String [8-bit]]
- BIN16: [Word [Signed]]
- BIN16_Unsigned: [Word [Unsigned]/Bit String [16-bit]]
- BIN32: [Double Word [Signed]]
- BIN32_Unsigned: [Double Word [Unsigned]/Bit String [32-bit]]
- BIN64: [Quad Word [Signed]]
- BIN64_Unsigned: [Quad Word [Unsigned]/Bit String[64-bit]]

8) **Display format**

Display format of a device.

- BIN: [Binary]
- OCT: [Octal]
- DEC: [Decimal]
- HEX: [Hexadecimal]

9) **Comment**

Comment set for a device.
Up to 255 characters can be set for one comment.

(4) Sample free registration lists

You can import the sample free registration lists of the GOT internal devices related to the following functions.

Function	File name of a sample list
Project script, screen script	1_Project_ScreenScript.txt
Object script	2_ObjectScript.txt
GOT operational authority	3_GOT_OperationalAuthority.txt
Server function	4_ServerFunction.txt
Client function	5_ClientFunction.txt
Device data transfer	6_DeviceDataTransfer.txt
File transfer function	7_FileTransfer.txt
Mail send function	8_MailFunction.txt
Recipe	9_Recipe.txt
Global label	10_Label.txt
VNC server function	11_VNC_Server.txt

The sample free registration lists are stored in the following directory when GT Designer3 is installed.
[(Path to the installation location of GT Designer3)\GTD3_2000\App\SampleDevMonitor]
The sample lists for the project script, screen script, object script and GOT operational authority are imported automatically at the initial startup of the GOT internal device monitor.

■2 How to use the GOT internal device monitor

(1) Monitoring GOT internal devices

The following shows the procedure for monitoring GOT internal devices.

Step 1 Configure the settings to enable the GOT internal device monitor.

In the [GOT Setup] window ([GOT Internal Device Monitor]), select the following items.

- [Update the GOT internal device monitor setting]
- [Use GOT internal device monitor in the GOT diagnostics function]

To change the values of GOT internal devices by using the GOT internal device monitor, select [Allow GOT internal devices to be changed].

➟5.3.7 Configuring the settings of the GOT internal device monitor ([GOT Internal Device Monitor])

Step 2 Write package data to the GOT.

For the communication method between the personal computer (GT Designer3) and the GOT, refer to the following.

➟4. COMMUNICATING WITH GOT

Step 3 In the [GOT Diagnostics] dialog, start the GOT internal device monitor.

➟11.14.5 [GOT Diagnostics] dialog
11.14.6 [GOT Internal Device Monitor] window

The starting method varies according to the status of the GOT diagnostics.

- While the GOT diagnostics is running
  Click the [GOT Internal Device Monitor] button to display the [GOT Internal Device Monitor] window.
- While the GOT diagnostics is not running
  Click the [GOT Internal Device Monitor] button to display the [GOT Internal Device Monitor] window, and perform one of the following operations.
  · Select [Online] → [Start] from the menu.
  · Click the [Start] button on the toolbar.
  · Click the [Start Monitoring] button in the [GOT Diagnostics] dialog.

Step 4 Register the target GOT internal devices in a free registration list.

Monitoring starts upon the registration of the devices.

Step 5 To change the current value of a GOT internal device, enter a new value in [Current Value].

The GOT internal device stores the new value upon the entering of the value.

(2) Creating or editing a free registration list

Register a GOT internal device in a free registration list to monitor or change the current value of the device.
The following shows the procedure for creating or editing a free registration list.

Step 1 Perform one of the following operations to display a free registration window.

- Select [Window] → [New Free Registration List] from the menu.
- Double-click [New] under [Free Reg] in the [Project] window.
- Double-click a target free registration list under [Free Reg] in the [Project] window.

For information on how to import a free registration list and add it as a new list, refer to the following.

➟(3) Importing a free registration list

Step 2 Register, edit or delete a GOT internal device in the free registration window.

➟11.14.6 [GOT Internal Device Monitor] window

To rename a free registration list, select a target free registration list, and click it again or press the [F2] key on the keyboard.
To delete a device in a free registration list, select a target device, and press the [Delete] key on the keyboard.

(3) Importing a free registration list

Import a free registration list file in the CSV or Unicode text format.
The following shows the procedure for importing a free registration list.

Step 1 Perform one of the following operations in the [Project] window according to the import method.

- To import a free registration list and add it as a new list, select [New].
- To overwrite an existing free registration list with an imported list, select the target existing free registration list.
- To import multiple free registration lists, select [Free Reg] at the top of the tree.

Step 2 Perform one of the following operations to display the [Open] dialog.

- Select [File] → [Import Free Registration List] from the menu.
- In the [Project] window, click the [Im] button.
- Right-click the item selected in step 1, and select [Import] from the menu.

Step 3 Select a free registration list file and click the [Open] button to import the file.

When importing multiple files, you can import CSV files and Unicode text files together.
For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(4) Exporting one free registration list

The following shows the procedure for exporting one free registration list to a CSV or Unicode text file.

Step 1 In the [Project] window, select one free registration list to be exported.

Step 2 Perform one of the following operations to display the [Save As] dialog.

- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click the free registration list to be exported, and select [Export] from the menu.

Step 3 Set [File name] and [Save as type], and click the [Save] button to export the free registration list.

(5) Exporting all free registration lists

The following shows the procedure for exporting all free registration lists to CSV or Unicode text files.

Step 1 In the [Project] window, select [Free Reg] at the top of the tree.

Step 2 Perform one of the following operations to display a dialog where you can select a file format.

- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click [Free Reg] at the top of the tree, and select [Export] from the menu.

Step 3 Select a file format and click the [OK] button to display the [Browse For Folder] dialog.

Step 4 Select an export destination and click the [OK] button to export the free registration lists.

(6) Deleting a free registration list

The following shows the procedure for deleting a free registration list.

Step 1 In the [Project] window, select a free registration list to be deleted.

Step 2 Perform one of the following operations to display a confirmation dialog.

- Press the [Delete] key on the keyboard.
- Right-click the free registration list to be deleted, and select [Delete] from the menu.

Step 3 Click the [Yes] button to delete the list.

11.14.4 Precautions

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Power saving function of the personal computer

Before performing the GOT diagnostics, disable the power saving function of the personal computer and Windows.
For the details of the power saving function setting, refer to the manual of the personal computer or Windows Help.

■2 GOT diagnostics while firmware update is in progress

The GOT diagnostics cannot start while firmware update of the communication unit mounted on the GOT is in progress.
To perform the GOT diagnostics, make sure that the firmware update is not in progress.

■3 Performing the GOT diagnostics while the FA transparent function is used

While the controller programming software communicates with a controller by using the FA transparent function, the GOT diagnostics cannot start.
To perform the GOT diagnostics, make sure that the FA transparent function is not in use.

■4 System alarms (CPU errors and network errors) displayed in the GOT diagnostics and the controller status

In the GOT diagnostics, system alarms (CPU errors and network errors) are displayed based on the error history recorded in the GOT (System status log). Therefore, the alarms does not indicate the controller status.
To check the controller status, use one of the following methods.

- Using a diagnostics function of the controller programming software

  ➟Manual for the programming software used
- Checking system alarms in the GOT utility

  ➟GOT2000 Series User's Manual (Utility)

■5 Resetting script error data

You cannot reset scrip error data in the following cases.

- The GOT displays a screen in which no script is set.
- The GOT displays the utility screen.

Reset scrip error data while the GOT displays a screen in which a script is set.

■6 Changing the values of GOT internal devices

With the GOT internal device monitor, the values of GOT internal devices are changeable from GT Designer3. In such a case, the GOT may not behave as its operator expects.
To disable the changing of the device values from GT Designer3, deselect [Allow GOT internal devices to be changed] in the [GOT Setup] window ([GOT Internal Device Monitor]).

■7 Precautions for exporting a free registration list

When a free registration list contains characters that cannot be represented in ASCII or Shift JIS code, export the list to a Unicode text file.
If you export the list to a CSV file, such characters are not output properly.
For the precautions for using Unicode text files, refer to the following.

➟12.9 Precautions for Using Unicode Text File

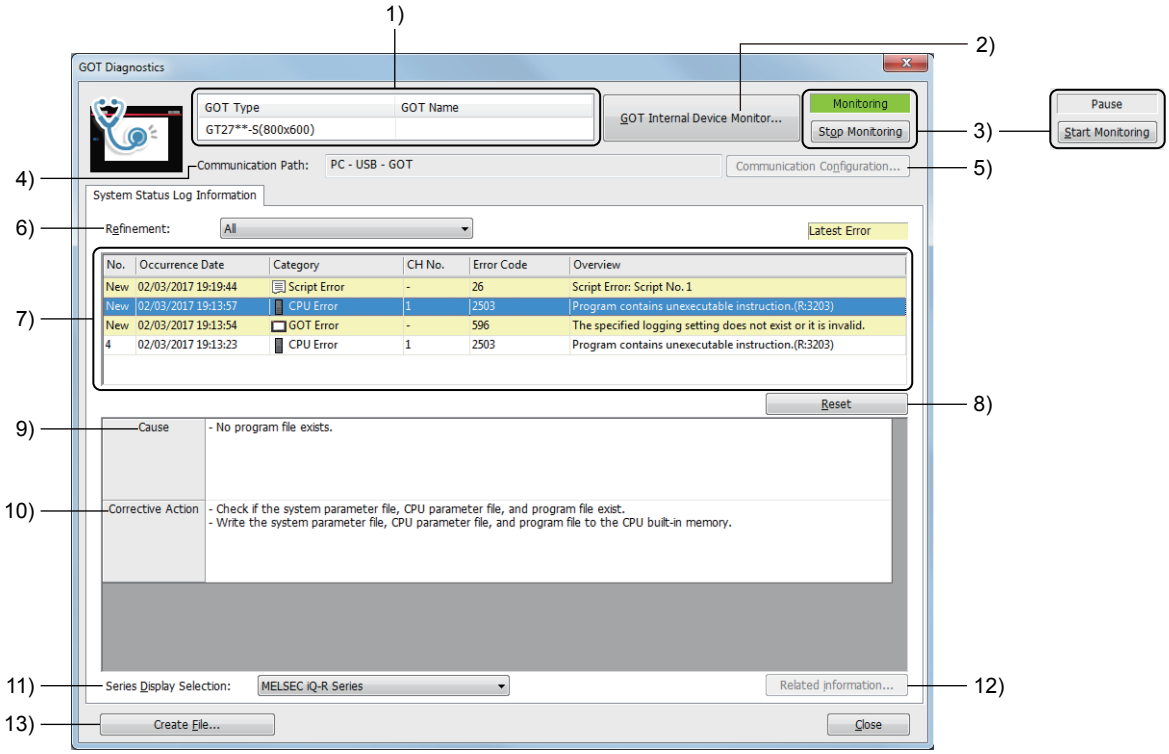
■8 Precautions for using the CC-Link IE TSN connection

When a controller is monitored using the CC-Link IE TSN connection, system alarms (CPU errors) are not displayed.

11.14.5 [GOT Diagnostics] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this dialog, system status log data is obtained from the GOT and error information is listed.
To display the dialog, select [Diagnostics] → [GOT Diagnostics] from the menu.



1) **Connected GOT**
Type and name of the connected GOT

2) **[GOT Internal Device Monitor] button**
Displays the [GOT Internal Device Monitor] window.

➟11.14.6 [GOT Internal Device Monitor] window

3) **[Start Monitoring] button, [Stop Monitoring] button**
Starts or stops the GOT diagnostics.

4) **[Communication Path]**
Communication path between the personal computer and the GOT

5) **[Communication Configuration] button**
Displays the [Communication Configuration] dialog.
Set the communication path between the personal computer and the GOT.

➟4.8.8 [Communication Configuration] dialog

6) **[Refinement]**
Select the category of errors to be displayed in the error list.
The following shows selectable items.

- [All]
- [GOT Error]
- [CPU Error]
- [Network Error]
- [Script Error]

7) **Error list**
Lists errors based on the system status data recorded in the GOT.
Errors are displayed in reverse chronological order. If the number of errors exceeds the maximum number of displayed errors, earlier errors are not displayed.
The latest errors in each category are indicated with [New] in the [No.] column.
The maximum number of displayed errors depends on the error type.

• System alarm (GOT error): 30
• System alarm (CPU error or network error): 30
• Script error (Project script or screen script): 15
• Object script error: 15

For the system alarm (GOT error), script error, and object script error, correct an error and click the [Reset] button to delete the error from the error list.

For the precautions on the system alarm, refer to the following.

➟9.1.3 ■4 (4) Display of system alarms occurring in multiple channels

8) **[Reset] button**

Resets error data in the GOT, and updates the error list.

Corrected system alarms (GOT errors) and script errors are deleted from the error list.

Others remain in the list.

For the precautions on the script error or object script error, refer to the following.

➟9.9.12 ■1 (11) Script error control and GOT status

9.10.7 ■1 (10) Object script error control and GOT status

9) **[Cause]**

Causes of an error selected in the error list

10) **[Corrective Action]**

Corrective actions to correct an error selected in the error list

11) **[Series Display Selection]**

This item appears when a system alarm (CPU error) of MITSUBISHI equipment is selected in the error list.

Select the controller series to which the display contents of [Overview], [Cause], and [Corrective Action] for the system alarm (CPU error) correspond.

Upon updating the error list, selecting a relevant error automatically identifies the series of the controller in which the error occurred.

The following shows selectable items.

• [MELSEC MX Controller]
• [MELSEC iQ-R Series]
• [MELSEC iQ-F Series]
• [MELSEC-Q Series Basic Model]
• [MELSEC-Q Series High-performance Model]
• [MELSEC-Q Series Universal Model]
• [MELSEC-L Series]
• [MELSEC-L Series Head Module]
• [MELIPC]

12) **[Related information] button**

Displays GT Designer3 Help, showing a relevant page for an error selected in the error list.

This item appears when an error with supplementary information is selected in the error list.

13) **[Create File] button**

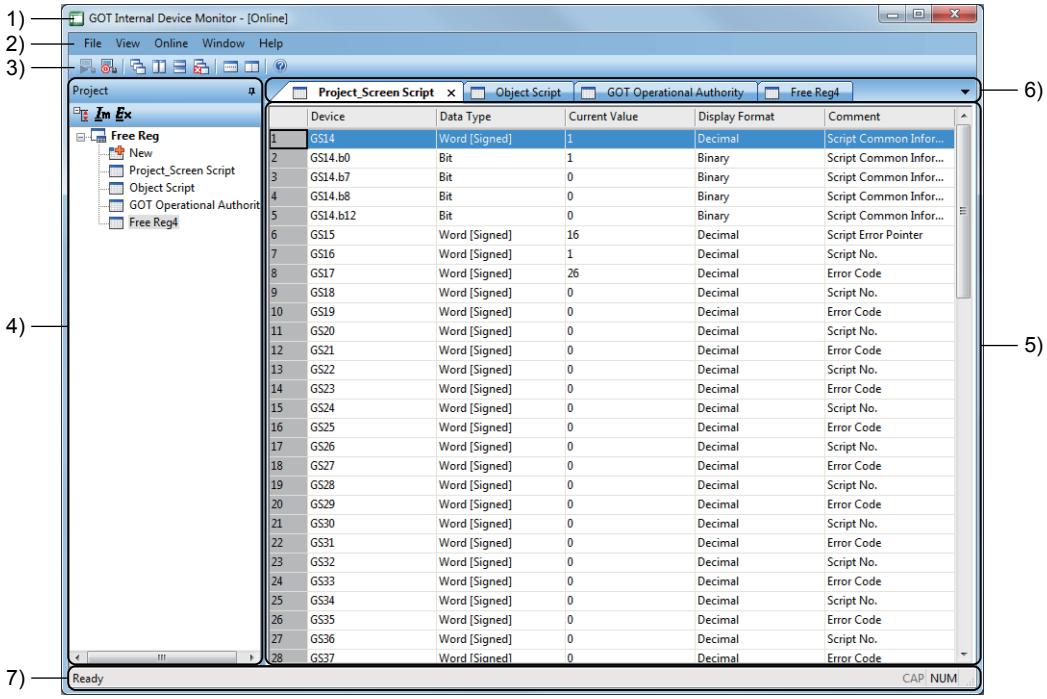
Saves the contents of the error list to a CSV or Unicode text file.

➟11.14.1 ■3 Format of a saved file

11.14.6 [GOT Internal Device Monitor] window

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

In this window, monitor the GOT internal devices, and change the device values as necessary.
To display the window, click the [GOT Internal Device Monitor] button in the [GOT Diagnostics] window.



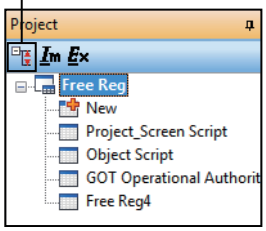
1) **Title bar**
Displays the operation status of the GOT internal device monitor.

2) **Menu bar**
Displays the operation menus of the GOT internal device monitor.
➟■1 Menus

3) **Toolbar**
Displays the operation buttons of the GOT internal device monitor.
➟■2 Toolbar

4) **[Project] window**

Expand all button, collapse all button

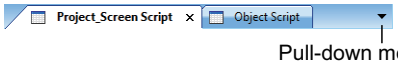


- Expand all button, collapse all button
  Expands or collapses all items in the tree.
- [Im] button
  Import a free registration list file in the CSV or Unicode text format. For the procedure for importing a free registration list, refer to the following.
  ➟11.14.3 ■2 (3) Importing a free registration list
- [Ex] button
  Export a free registration list to a CSV or Unicode text file. For the procedure for exporting a free registration list, refer to the following.
  ➟11.14.3 ■2 (4) Exporting one free registration list
  11.14.3 ■2 (5) Exporting all free registration lists
- [Free Reg]
  Displays created free registration list names.
  - [New]
    Creates a free registration list.

5) **Work window**
An area in which free registration windows appear.
➟■3 Free registration window

6) **Editor tab**
Displays the tabs corresponding to the windows opened in the work window.

To bring an open window to the foreground in the work window, select its tab.



Pull-down menu button

• **Pull-down menu button**
Lists the open windows in the work window.
To bring an open window to the foreground in the work window, select it from the pull-down menu.

7) **Status bar**
Displays the description of a selected menu.

■1 Menus

(1) [File]

Menu	Description
[Import Free Registration List]	Import a free registration list file in the CSV or Unicode text format. For the procedure for importing a free registration list, refer to the following. ➟11.14.3 ■2 (3) Importing a free registration list
[Export Free Registration List]	Export a free registration list to a CSV or Unicode text file. For the procedure for exporting a free registration list, refer to the following. ➟11.14.3 ■2 (4) Exporting one free registration list 11.14.3 ■2 (5) Exporting all free registration lists
[Exit]	Ends the device monitor.

(2) [View]

Menu	Description
[Toolbar]	Displays or hides the toolbar.
[Status Bar]	Displays or hides the status bar.

(3) [Online]

Menu	Description
[Start]	Starts monitoring the GOT internal devices.
[Stop]	Stops monitoring the GOT internal devices.

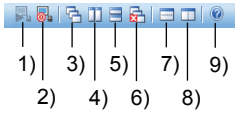
(4) [Window]

Menu	Description
[New Free Registration List]	Create a free registration list.
[Cascade]	Displays open windows in a stack in the work window.
[Arrange Sideways]	Tiles open windows side by side in the work window.
[Arrange Lengthways]	Tiles open windows horizontally in the work window.
[Close Inactive Windows]	Closes all open windows except the selected one in the work window.
[New Horizontal Tab Group]	Splits the work window into panes horizontally. Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane. Tabs are movable between the editor tabs of panes.
[New Vertical Tab Group]	Splits the work window into panes vertically. Puts the free registration window corresponding to a selected tab in the immediately right pane. Tabs are movable between the editor tabs of panes.

(5) [Help]

Menu	Description
[GT Designer3 Help]	Displays GT Designer3 Help.

■2 Toolbar



1) **[Start]**
Starts the device monitor.

2) **[Stop]**
Stops the device monitor.

3) **[Cascade]**
Displays open windows in a stack in the work window.

4) **[Arrange Sideways]**
Tiles open windows side by side in the work window.

5) **[Arrange Lengthways]**
Tiles open windows horizontally in the work window.

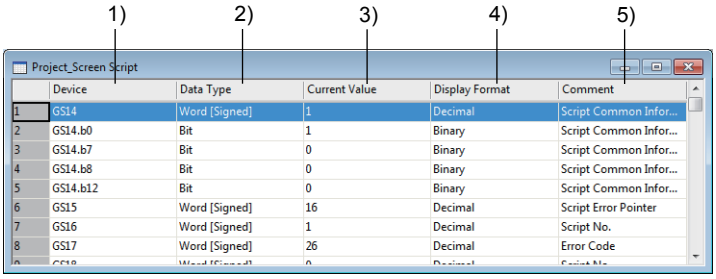
6) **[Close Inactive Windows]**
Closes all open windows except the selected one in the work window.

7) **[New Horizontal Tab Group]**
Splits the work window into panes horizontally.
Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane.
Tabs are movable between the editor tabs of panes.

8) **[New Vertical Tab Group]**
Splits the work window into panes vertically.
Puts the free registration window corresponding to a selected tab in the immediately right pane.
Tabs are movable between the editor tabs of panes.

9) **[GT Designer3 Help]**
Displays GT Designer3 Help.

■3 Free registration window



1) **[Device]**
Set a GOT internal device to be monitored.
➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of a GOT internal device.
The following shows selectable items.
- [Bit]
- [Byte [Unsigned]/Bit String [8-bit]]
- [Word [Unsigned]/Bit String [16-bit]]
- [Double Word [Unsigned]/Bit String [32-bit]]
- [Quad Word [Unsigned]/Bit String[64-bit]]
- [Byte [Signed]]
- [Word [Signed]]
- [Double Word [Signed]]
- [Quad Word [Signed]]

3) **[Current Value]**
Displays the current value of a GOT internal device.
The set value is changeable.
The setting range of [Current Value] depends on the device.
If a communication error occurs, [--] is displayed.
When any of the following is selected for [Data Type], displaying or changing the current value is not available.
- [Byte [Unsigned]/Bit String [8-bit]]
- [Quad Word [Unsigned]/Bit String[64-bit]]
- [Byte [Signed]]
- [Quad Word [Signed]]

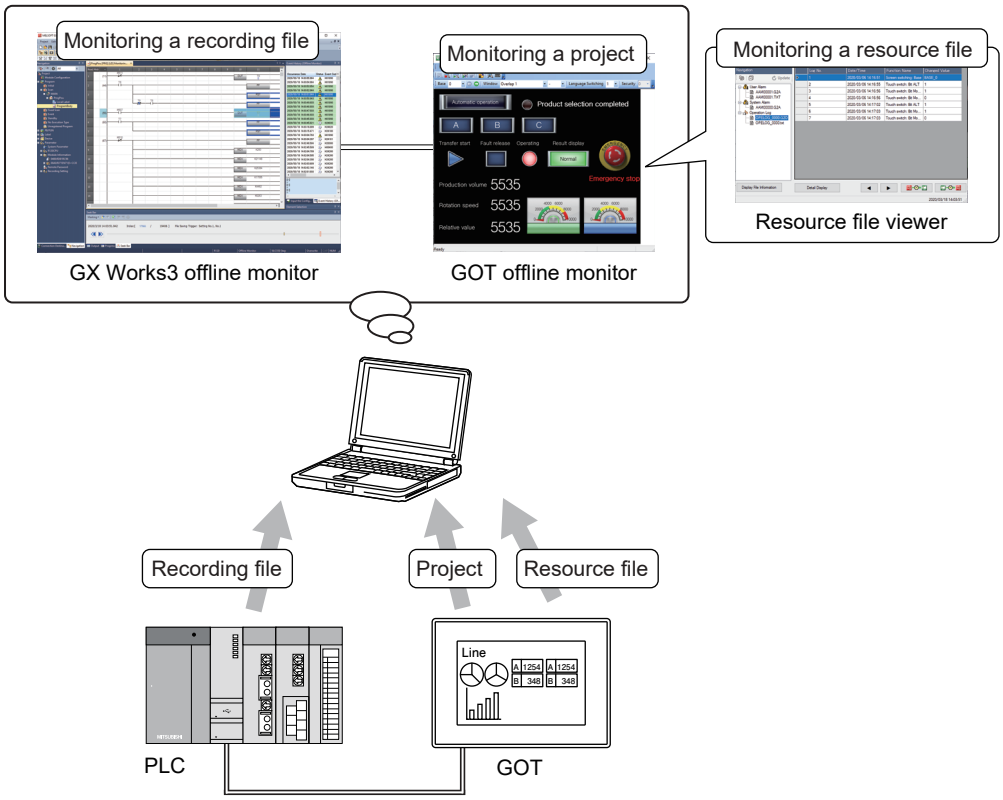
4) **[Display Format]**
Select the display format of a GOT internal device.
The following shows selectable items.
- [Binary]
- [Octal]
- [Decimal]
- [Hexadecimal]

5) **[Comment]**
Set a comment for a GOT internal device.
Up to 255 characters can be set for one comment.

11.15 Offline Reproduction and Monitoring of Operation (GOT Offline Monitor)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GOT offline monitor function is used to reproduce the circumstances of the troubled site by establishing connection with the GX Works3 offline monitor on a personal computer.
Using the file that records the circumstances when the trouble occurred and the project of that time, you can grasp the circumstances which enables a cause investigation.



➟11.15.1 Specifications of the GOT offline monitor
11.15.2 How to use the GOT offline monitor
11.15.3 Precautions for the GOT offline monitor
11.15.4 Screen layout of the GOT offline monitor
11.15.5 [Setting] dialog (GOT offline monitor)
11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog
11.15.7 How to use a Resource File Viewer module
11.15.8 Screen layout of a Resource File Viewer module

11.15.1 Specifications of the GOT offline monitor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Operating environment of the GOT offline monitor

The following shows the operating environment for the GOT offline monitor.

Item	Description
Model	Windows-compatible personal computer
OS	• Microsoft Windows Server 2016 Standard (64 bit) • Microsoft Windows Server 2012 R2 Standard (64 bit) • Microsoft Windows Server 2008 R2 Enterprise (64 bit) • Microsoft Windows Server 2008 R2 Standard (64 bit) • Microsoft Windows 11 Education (64 bit) • Microsoft Windows 11 Enterprise (64 bit) • Microsoft Windows 11 Pro (64 bit) • Microsoft Windows 11 Home (64 bit)
CPU	Use the CPU which the above OSs run on.
Memory	Use the CPU which the above OSs run on.
Display	Use the CPU which the above OSs run on.
Hard disk space	Use the CPU which the above OSs run on.
Other software	• GX Works3 Version1.065T or later • When using Resource File Viewer: Microsoft .NET Framework 4.5.2 or later
Other hardware	Use the hardware compatible with the above OS. • For installation: mouse, keyboard, DVD drive • For execution: Mouse and keyboard • For sound output (such as buzzer): Sound card, speaker

■2 Monitoring-supported GOTs

The following shows the monitoring-supported GOTs with the GOT offline monitor.

Name	Resolution (dot)	Display color *1	Memory capacity *2
GT27**-X	1024 × 768	65536 colors	57 MB
GT27**-S	800 × 600	65536 colors	57 MB
GT27**-V	640 × 480	65536 colors	57 MB
GT2705-V	640 × 480	65536 colors	32 MB
GT25**-WX	1280 × 800	65536 colors	32 MB
GT25**-W	800 × 480	65536 colors	32 MB
GT25**-S	800 × 600	65536 colors	32 MB
GT25**-V	640 × 480	65536 colors	32 MB
GT2505-V	640 × 480	65536 colors	32 MB
GT23**-V	640 × 480	256 colors	9 MB
GT SoftGOT2000	640 × 480 to 1920 × 1200	65536 colors	57 MB
GS25**-WX	1280 × 800	65536 colors	32 MB

*1 The following items are displayed in 16777216 colors.
- Parts display
- Parts movement
- Image file

*2 Capacity of the GOT user area where package data is stored.

■3 Number of GX Works3 offline monitors that can be monitored

One GX Works3 offline monitor can be monitored.

■4 Software version of GX Works3

Use GX Works3 version 1.065T or later.

■5 Monitoring-supported controllers

When connected with the GX Works3 offline monitor, the GOT offline monitor can monitor the following virtual controllers.

Controller model	Firmware version
R04CPU R08CPU R16CPU R32CPU R120CPU R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU	Version 48 or later
R08SFCPU R16SFCPU R32SFCPU R120SFCPU	Version 21 or later

■6 Monitoring-supported devices

(1) Read only devices

The devices that satisfy all of the following requirements can be read.
Writing is not available.

Requirement	Reference
Devices that can be monitored by GX Works3	⇒GX Works3 Operating Manual
Devices that can be monitored by the GOT (Except the timer set value (TS) and counter set value (CS) of the Mitsubishi Electric PLC)	⇒12.3 Device Range and Settings of Mitsubishi Electric Equipment

(2) Readable/writable devices

The following shows the readable/writable devices.

- GOT internal devices
- SoftGOT2000 internal devices

■7 Monitoring-supported functions

(1) Common functions

○: Supported, ×: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
System font display	○	Multi-channel connection	×
Option font display	○	Vertical display	○
Superimposition of objects	○	Touch panel and touch key	○
Base screen display	○	Numerical display/input	○
Overlap window display	○	Text display/input	○
Superimpose window display	○*1	Historical data list display	×
Key window display	○	Clock display	○
Set overlay screen	○	Comment display	○
Screen switching	○*2	Alarm display	×
Station No. switching	○	Alarm popup display	×
Buffer memory unit No. switching	○	Recipe display (record list)	○
Language switching	○*3	Graphical meter	○
System information	○	Panelmeter	○
Security authentication	○*4	Historical trend graph	×
Trigger action	○	Line graph	○
Time action	×	Bar graph	○

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Hard copy function	○*5	Scatter graph	○
Comment	○	Statistics graph	○
Figure	○	Level display	○
Internal device	○*6	Touch switch	○
Cursor movement	○	Slider	○
Operation log	×	Video/RGB display object	×
Logging	×	Script parts	○*7
Recipe	○	Mobile screen display	×
Script	○	Hyperlink	×

*1 The touch operation is not disabled even though [Disable the touch operation of a screen on the back] is selected in the detail setting for the overlap window.

➡5.2.1 ■2 (8) Disabling the touch operation on the screens that are behind an overlap window

*2 Use a Go To Screen switch or configure the screen switching setting for the GOT offline monitor.

➡11.15.2 ■4 Switching the screen to be monitored

*3 Configure the language switching setting for the GOT offline monitor.

➡11.15.2 ■5 Switching the display language

*4 Configure the security authentication setting for the GOT offline monitor.

➡11.15.2 ■6 Switching the security level

*5 Only available for file output.

*6 The GOT internal devices (GB, GD, GS) and SoftGOT2000 internal devices (SGB, SGD) can be used.
Note that among the GOT internal devices, GS500 to GS507 supported only by GT SoftGOT2000 cannot be used.

*7 The GOT internal devices (GB, GD, GS) and script parts temporary device areas (PTMP) can be used.

(2) Utility function

○: Supported, ×: Unsupported

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[GOT basic set]	[Display]	○	[Time]	×
	[Language]	○	[Controller]	×
	[Specific Information]	×	[Ethernet Communication]	×
	[IP Address]	×	[Transparent Mode]	×
	[IP filter setting]	×	[GOT Internal Device Monitor]	×
	[Operation]	○	[Security]	○
	[Utility Call Key]	○	[Operator Authentication]	×
	[USB Host]	×		
[Ext. func. Set]	[SoftGOT-GOT Link Function]	×	[Wireless LAN Setting]	×
	[VNC Server Function]	×	[System launcher]	×
	[Sequence Program Monitor]	×	[iQSS utility]	×
	[Backup Restoration]	×	[ANDON Setting]	×
	[License Management]	×	[Ethernet printer]	×
	[Video/RGB]	×	[Network Drive]	×
	[Multimedia]	×		
[Maintenance]	[Batch Self Check]	×	[Font check]	×
	[USB Device Management]	×	[Touch panel check]	×
	[Clean/Display Screen]	×	[I/O check]	×
	[Touch panel calibration]	×	[Ethernet Status Check]	×
	[System Alarm]	×	[GOT Information]	×
	[Drawing check]	×	[GOT Mobile information]	×

Category	Function	Supported/ Unsupported	Function	Supported/ Unsupported
[Monitor]	[System launcher]	×	[Q Motion SFC monitor]	×
	[Device monitor]	×	[Log viewer]	×
	[Sequence Program Monitor (Ladder)]	×	[Network status display]	×
	[Sequence Program Monitor (iQ-R/iQ-L Ladder)]	×	[FX list editor]	×
	[Sequence Program Monitor (iQ-F Ladder)]	×	[CNC Machining Program Edit]	×
	[FX Ladder monitor]	×	[CNC data I/O]	×
	[Network monitor]	×	[Motion program editor]	×
	[Intelligent module monitor]	×	[Motion program I/O]	×
	[Servo amp Monitor]	×	[MELSEC-L Troubleshooting]	×
	[Q Motion monitor]	×	[iQSS utility]	×
	[R Motion monitor]	×	[Drive recorder]	×
	[CNC monitor]	×	[CC-Link IE diagnostics]	×
	[CNC monitor2]	×	[Servo amplifier graph]	×
	[Sequence Program Monitor (SFC)]	×	[Vision sensor monitor]	×
	[R Motion SFC monitor]	×		
[Data mng.]	[Alarm information]	×	[Package Management]	○*1
	[Image File Management]	○	[Backup Restoration]	×
	[Recipe Information]	○	[SRAM control]	○*2
	[Logging information]	×	[Memory card format]	×
	[Operation log information]	×	[Memory check]	×
	[File manager]	×	[GOT Pkg. acquisition]	×
	[File print]	○*3		

*1 [Delete all labels] and [Sort out labels] are supported.
*2 [Initialize all] and [Initialize selected area] are supported.
*3 Only [Preview] is supported.

(3) Extended function

○: Supported, ×: Unsupported

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Screen gesture	×	Device monitor	×
Object gesture	×	Network monitor	×
Kana-Kanji/Pinyin conversion	○	Log viewer	×
Wireless LAN	×	iQSS utility	×
SoftGOT-GOT link function	×	Intelligent module monitor	×
System launcher	×	Servo amplifier monitor	×
Sequence program monitor (Ladder)	×	Drive recorder	×
Sequence program monitor (SFC)	×	R motion monitor	×
FX ladder monitor	×	Q motion monitor	×
Backup/restore	×	CNC monitor	×
Gateway (Server, Client)	×	CNC data I/O	×
Gateway (Mail)	×	CNC machining program edit	×
Gateway (FTP server)	×	CNC monitor 2	×
File transfer function	×	Motion program editor	×
Barcode	×	Motion program I/O	×
RFID	×	R motion SFC monitor	×
Remote personal computer operation (Serial)	×	Q motion SFC monitor	×

Function	Supported/ Unsupported	Function	Supported/ Unsupported
Remote personal computer operation (Ethernet)	×	FX list editor	×
VNC server	×	Vision sensor monitor	×
Video display	×	CC-Link IE TSN/CC-Link IE Field Network diagnostics	×
RGB display	×	Recipe operation	○
Multimedia	×	Recipe display (record list)	○
Operation panel	×	Operation log screen image	×
External I/O	×	Operator authentication	○
Report	○	File manager	×
Printer	×	File print	○*1
Sound output	○	Document display	○
GOT network interaction	×	MELSEC-L troubleshooting	×
GOT Mobile Setting	×	Video/RGB display object	×
Device data transfer	○	GOT Platform Library	×
Servo amplifier graph	×	Network drive	○*2
MES interface	×	Base screen size expansion	○

*1 Only [Preview] is supported.

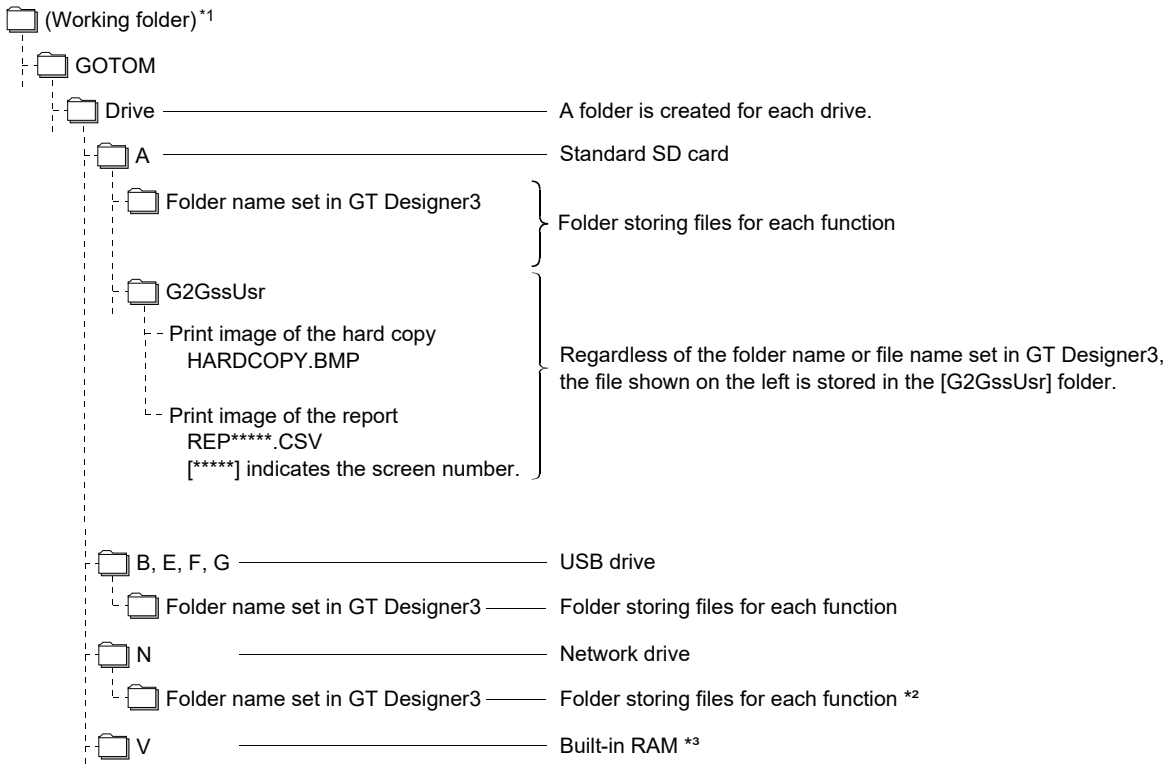
*2 In the simulation, files can be saved into virtual drives only.

■8 Destination to save data

Folders in the hard disk of the personal computer are handled by the GOT offline monitor as the virtual drive.

(1) For functions saving data into a data storage or file server

When a data storage or file server is specified to save the files for functions including object functions and extended functions, data is saved onto the hard drive of the personal computer.
The files for each function are saved into the folders as shown below.



The drive unavailable to the monitoring target GOT is not usable.

*1 For the working folder, refer to the following.

➟(3) Working folder

*2 In the simulation, files can be saved into virtual drives only.

*3 For details on drive V, refer to the following.

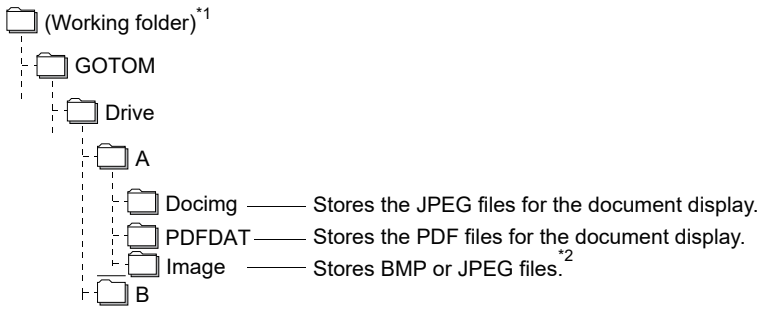
➟11.15.3 ■10 Virtual drive V

(2) For functions requiring the user to save data into a data storage

When registering BMP, JPEG, or PNG files used as parts, or data for document display, save them in the hard disk of the personal computer.

Store each data in the following (user-created) folders.

(The drive to be used depends on the specifications of the object or setting.)



*1 For the working folder, refer to the following.

➟(3) Working folder

*2 In the simulation, files can be saved into virtual drives only.

(3) Working folder

The following shows a working folder.

Users\(user name)\AppData\Local\MITSUBISHI\GSS3

11.15.2 How to use the GOT offline monitor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Starting the GOT offline monitor

To start the GOT offline monitor, establish connection between the GX Works3 offline monitor and the GOT offline monitor.
Start the GOT offline monitor in GT Designer3 or GX Works3.

(1) In GT Designer3

Step 1 Start the GX Works3 offline monitor.

➟GX Works3 Operating Manual

Step 2 Start GT Designer3 and open the project to be monitored in the GOT offline monitor.

➟2.3.2 Opening a project

Step 3 In GT Designer3, start the GOT offline monitor by either of the following methods.

- Select [Tools] → [GOT Offline Monitor] → [Activate] from the menu.
- Click the [GOT Offline Monitor: Activate] button on the toolbar.

Step 4 Specify the recording file read from the GX Works3 offline monitor at the first startup.

When the [Recording File Setting] dialog is displayed, select the recording file to be monitored and click the [OK] button to start monitoring.
After the first startup, the recording file read at the last startup is read and monitoring starts.
For details on a recording file, refer to the following.

➟GX Works3 Operating Manual

(2) In GX Works3

Step 1 Start the GX Works3 offline monitor.

➟GX Works3 Operating Manual

Step 2 When the GOT offline monitor is started in GX Workd3 , the [Open Project] dialog is displayed.

➟GX Works3 Operating Manual

Step 3 Select a GT Designer3 project to be monitored in the GOT offline monitor, and click the [Open] button to start monitoring.

■2 Ending the GOT offline monitor

When the GOT offline monitor is ended, the GX Works3 offline monitor is disconnected.
You can end the GOT offline monitor in GT Designer3, the GOT offline monitor, or GX Works3.

(1) In GT Designer3

End the GOT offline monitor by either of the following methods.

- Select [Tools] → [GOT Offline Monitor] → [Exit] from the menu.
- Click the [GOT Offline Monitor: Exit] button on the toolbar.

(2) In the GOT offline monitor

End the GOT offline monitor by either of the following methods.

- Select [Project] → [Exit] from the menu.
- Select [Online] → [Monitor Stop] from the menu.
- Click the [×] button.

(3) In GX Works3

You can end the GOT offline monitor in GX Works3 only when the GOT offline monitor is started in GX Works3.
For the details, refer to the following.

➟GX Works3 Operating Manual

(4) At disconnection of the GX Works3 offline monitor

When [Terminate GOT Offline Monitor when disconnected from GX Works3 Offline Monitor] is selected in the [Auxiliary Setup] tab in the [Setting] dialog, the GOT offline monitor automatically ends at disconnection of the GX Works3 offline monitor.

➟11.15.5 ■3 [Auxiliary Setup] tab

■3 Changing the option settings of the GOT offline monitor

Change the option settings of the GOT offline monitor in the [Setting] dialog.

➟11.15.5 [Setting] dialog (GOT offline monitor)

■4 Switching the screen to be monitored

Switch the currently monitored screen in the project by either of the following methods.

- Use the pull-down menu on the toolbar or arrow buttons.

➟11.15.4 ■2 Toolbar

- Use a Go To Screen switch.

  Switching by using a device is not available.

➟8.2.7 [Go To Screen Switch] dialog

For details on the screen switching, refer to the following.

➟5.2.1 Setting for switching screens to be displayed on the GOT ([Screen Switching/Window])

■5 Switching the display language

The GOT switches comments displayed on the object by changing the value (column number of the comment group) using the pull-down menu on the toolbar.

If messages are registered by language in each column of the comment group, the language of the comment displayed can be switched.

➟11.15.4 ■2 Toolbar

For details on the language switching, refer to the following.

➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

■6 Switching the security level

Switch the security level of the project currently monitored using the pull-down menu on the toolbar.

➟11.15.4 ■2 Toolbar

For details on the screen security, refer to the following.

➟5.2.6 Configuring the security settings for the GOT screen ([Screen Security])

■7 Using Resource File Viewer

Displays the resource files read from the GOT.

For details on Resource File Viewer, refer to the following.

➟11.15.7 How to use a Resource File Viewer module

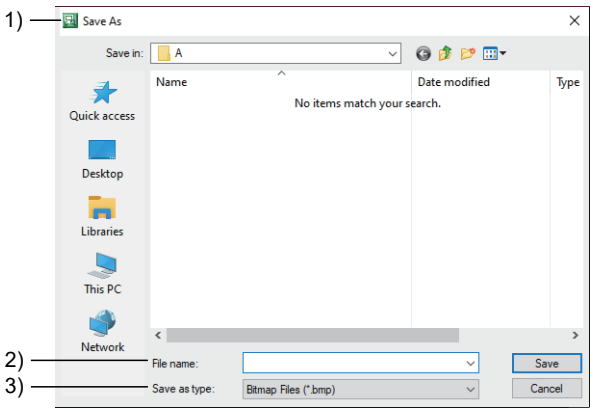
■8 Capturing snap shots

Save the image of a monitor screen as a BMP format file or a JPEG format file.

Step 1 Select [Project] → [Snap Shot] from the menu.

Step 2 The [Save As] dialog appears.

Configure the following settings and click the [Save] button.



1) **[Save in]**
Select a location for saving a file.

2) **[File Name]**
Name the screen image file to be saved.

3) **[Save as type]**
Select the BMP format or the JPEG format.

■9 Printing a monitor screen

Output the image of a monitor screen to a printer.

➟(1) Printing
(2) Previewing the print image
(3) Page setting
(4) Configuring the printer setting

(1) Printing

Step 1 Select [Project] → [Print] from the menu.

Step 2 The [Print] dialog of Windows is displayed.
Click the [OK] button to start printing.

(2) Previewing the print image

Step 1 Select [Project] → [Print Preview] from the menu.

Step 2 The print preview is displayed.

Point

Precautions for using the print preview

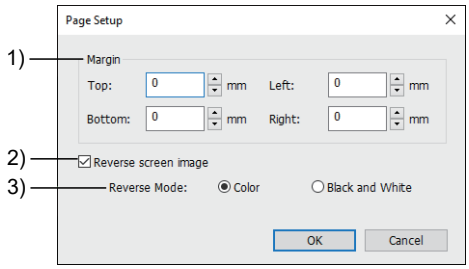
The print preview of a monitor screen may look smaller than the actual screen depending on the paper type or size, and the screen resolution.
Therefore, printed material may look different from the print preview in color.
Check the printed material.

(3) Page setting

Step 1 Select [Project] → [Page Setup] from the menu.

Step 2 The [Page Setup] dialog is displayed.

Configure the following settings and click the [OK] button.



1) **[Margin]**
Set margins for the page to be printed.

2) **[Reverse screen image]**
Select this item to reverse colors of the screen image at printing.

3) **[Reverse Mode]**
Set a reverse method for the screen image.
The following shows selectable items.

- [Color]: Reverses whole colors of the screen image to be printed.
- [Black and White]: Reverses white to black of the screen image to be printed.

(4) Configuring the printer setting

Step 1 Select [Project] → [Print Setup] from the menu.

Step 2 The print dialog of Windows is displayed.

Configure the settings for the printer (selecting a printer, paper size, direction of printing).

Point

(1) Precautions for the printer used

Each GOT model that performs monitoring has its own print settings.
However, when you perform one of the following operations, the printer selected for [Set as default printer] in Windows is specified.

- Deleting the selected printer
- Selecting a printer whose name contains 31 characters or more

(2) Precautions for the print settings

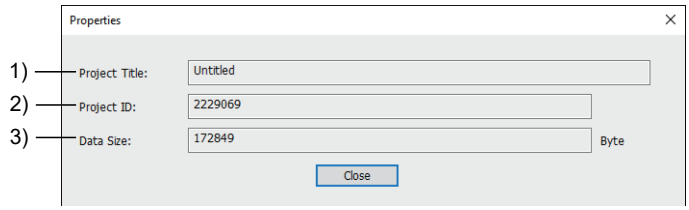
Depending on the printer used, some print settings are not retained.

■10 Displaying the information of the currently monitored project

The project title, project ID, and the data size of the currently monitored project data are displayed.

Step 1 Select [Project] → [Properties] from the menu.

Step 2 The [Properties] dialog appears.



1) **[Project Title]**
Displays the title for the project.

2) **[Project ID]**
Displays the project ID.

3) **[Data Size]**
Displays the data size of the project data.

Point

When the properties dialog is displayed before starting monitoring

When the [Properties] dialog is displayed before starting monitoring, the project title, the project ID, and the data size of the previous monitoring are displayed.

When the project data is not read, the project title, the project ID, and the data size are not displayed.

■11 Operating the numerical input or text input with a keyboard

Operate the numerical input or text input with the keyboard of a personal computer.

Perform one of the following operations to enable or disable the keyboard input.

- Select [Set] → [Keyboard] from the menu.
- Click the [Keyboard] button on the toolbar.
- Select [Set] → [Keyboard] from the right-click context menu.

The following shows how to operate the numerical input or text input with a keyboard.

Keyboard operation	GOT key code	Operation on the numerical input	Operation on the text input
[Back space]	0008h	Delete the character on the cursor.	
[Enter]*1	000Dh	Write the entry to a specified device, display the cursor on the target object, move the cursor to a different object, or close the key window.	
[Esc]	001Bh	Cancel the entry.	
[-] (Hyphen)	002Dh	Reverse the sign of the value.	-
[.] (Period)	002Eh	Enter a decimal point.	-
[0] to [9]	0030h to 0039h	Enter a numeric character.	Enter a character. (ASCII or Unicode 2.1-compatible)
[A] to [Z], [a] to [z]	0041h to 005Ah, 0061h to 007Ah	Enter a numeric character in hexadecimal ([A] to [F], [a] to [f]).	
Symbol keys	Character codes (ASCII)	-	
Enter text (such as hiragana or kanji characters).	Character codes (Unicode)	-	Enter text. (Unicode 2.1-compatible)
[→], [←], [↑], [↓]	0080h, 0081h, 0082h, 0083h	Move the cursor to a different object.	
[Home]	0084h	-	Convert the entry to kanji or Simplified Chinese characters.
[Page Up]	0085h	-	Select the previous candidate.
[Page Down]	0086h	-	Select the next candidate.
[End]	0087h	-	Confirm the entry, or select the next group of hiragana characters to be converted to kanji characters.

Keyboard operation	GOT key code	Operation on the numerical input	Operation on the text input
[Delete]	0088h	Delete all the entered characters.	
[Ctrl] + [←], [Ctrl] + [→]	0090h, 0091h	Move the cursor on the target object.	
[Ctrl] + [↑], [Ctrl] + [↓]	FFFAh, FFFBh	Increment or decrement the value.	-

*1 The operation on the target object varies depending on the setting in the [Environmental Setting] window ([Key Windows]). For the details, refer to the following.

➟5.2.4 ■4 [Key Window]

■12 Using the device monitor

You can monitor the virtual devices of a controller connected to the GOT offline monitor using the device monitor.

(1) Specifications of the device monitor

(a) Starting the device monitor

You can start the device monitor only during monitoring when connection is established between the GOT offline monitor and the GX Works3 offline monitor.

(b) Monitoring-supported devices

With the device monitor function, the GOT internal devices, GT SoftGOT2000 internal devices, and virtual devices of the controllers can be monitored.

For the devices that can be monitored by the GOT offline monitor, refer to the following.

➟11.15.1 ■6 Monitoring-supported devices

(c) Specifications of the free registration list

A created free registration list is retained after exiting the GOT offline monitor.

Up to 32 free registration lists can be created.

Up to 32 characters are available for a free registration list name.

The following characters cannot be used in a free registration list name.

\ / : ; * ? " < > | .

Up to 6 free registration windows can be open simultaneously.

Up to 256 devices are registrable in one free registration list.

(2) Starting the device monitor

Perform one of the following operations during monitoring to start the device monitor.

- Select [Tool] → [Start of Device Monitor] from the menu.
- Click the [Device Monitor] button on the toolbar.
- Select [Tool] → [Start of Device Monitor] from the right-click context menu.

(3) Ending the device monitor

Perform one of the following operations to exit the device monitor.

- Select [Tool] → [End of Device Monitor] from the menu of the GOT offline monitor.
- Select [File] → [Exit] from the menu of the device monitor.
- Click the [Close] button on the title bar of the device monitor.
- On the GOT offline monitor, select [Tool] → [End of Device Monitor] from the right-click context menu.
- Ending the GOT offline monitor

(4) Creating or editing a free registration list

Register a device in a free registration list to test the device for correct operation.

After changing the device value, you can check the project operations.

The following shows the procedure for creating or editing a free registration list.

Step 1 Perform one of the following operations to display a free registration window.

- Select [Window] → [New Free Registration List] from the menu.
- Double-click [New] under [Free Reg] in the [Project] window.
- Double-click a target free registration list under [Free Reg] in the [Project] window.

For information on how to import a free registration list and add it as a new list, refer to the following.

➟11.15.2 ■12 (7) Importing a free registration list

Step 2 Register, edit or delete a device in the free registration window.

➟(16) Free registration window

(5) Changing the name of a free registration list

Select a free registration list, and click it again or press the [F2] key on the keyboard to edit its name.

(6) Deleting a device

Select a device and press the [Delete] key on the keyboard to delete the device.

(7) Importing a free registration list

Import a free registration list file in the CSV or Unicode text format.
The following shows the procedure for importing a free registration list.

Step 1 Perform one of the following operations in the [Project] window according to the import method.

- To import a free registration list and add it as a new list, select [New].
- To overwrite an existing free registration list with an imported list, select the target existing free registration list.
- To import multiple free registration lists, select [Free Reg] at the top of the tree.

Step 2 Perform one of the following operations to display the [Open] dialog.

- Select [File] → [Import Free Registration List] from the menu.
- In the [Project] window, click the [Im] button.
- Right-click the item selected in step 1, and select [Import] from the menu.

Step 3 Select a free registration list file and click the [Open] button to import the file.

When importing multiple files, you can import CSV files and Unicode text files together.
For the precautions for using a CSV file or Unicode text file, refer to the following.

➟12.8 Precautions for Using CSV File
12.9 Precautions for Using Unicode Text File

(8) Exporting one free registration list at a time

The following shows the procedure for exporting one free registration list at a time to a CSV or Unicode text file.

Step 1 In the [Project] window, select a free registration list to be exported.

Step 2 Perform one of the following operations to display the [Save As] dialog.

- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click the free registration list to be exported, and select [Export] from the menu.

Step 3 Set [File name] and [Save as type], and click the [Save] button to export the free registration list.

(9) Exporting all free registration lists

The following shows the procedure for exporting all free registration lists to CSV or Unicode text files.

Step 1 In the [Project] window, select [Free Reg] at the top of the tree.

Step 2 Perform one of the following operations to display a dialog where you can select a file format.

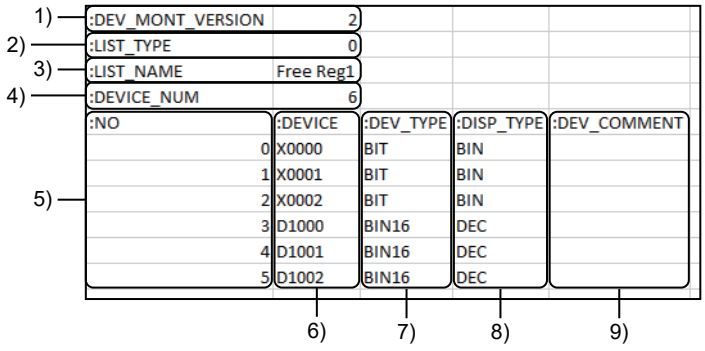
- Select [File] → [Export Free Registration List] from the menu.
- In the [Project] window, click the [Ex] button.
- Right-click [Free Reg] at the top of the tree, and select [Export] from the menu.

Step 3 Select a file format and click the [OK] button to display the [Browse For Folder] dialog.

Step 4 Select an export destination and click the [OK] button to export the free registration lists.

(10)Layout of an exported free registration list.

The exported free registration lists are editable with spreadsheet software or others.
The following shows the layout of an exported free registration list.



1) Version
Version of the free registration list

2) List type

Type of a list

• 0: Free registration list

3) List name

Name of the free registration list

For the name specifications, refer to the following.

➟11.15.2 ■12 (1) (c) Specifications of the free registration list

4) Number of devices

Number of the registered devices

Up to 256 devices are registrable in one free registration list.

5) No.

Registered device number

6) Device

Registered device

7) Data type

Data type of a device

• BIT: [Bit]
• BIN8: [Byte [Signed]]
• BIN8_Unsigned: [Byte [Unsigned]/Bit String [8-bit]]
• BIN16: [Word [Signed]]
• BIN16_Unsigned: [Word [Unsigned]/Bit String [16-bit]]
• BIN32: [Double Word [Signed]]
• BIN32_Unsigned: [Double Word [Unsigned]/Bit String [32-bit]]
• BIN64: [Quad Word [Signed]]
• BIN64_Unsigned: [Quad Word [Unsigned]/Bit String [64-bit]]

8) Display format

Display format of a device

• BIN: [Binary]
• OCT: [Octal]
• DEC: [Decimal]
• HEX: [Hexadecimal]

9) Comment

Comment set for a device

Up to 255 characters can be entered per comment.

(11)Deleting a free registration list

The following shows the procedure for deleting a free registration list.

Step 1 In the [Project] window, select a free registration list to be deleted.

Step 2 Perform one of the following operations to display a confirmation dialog.

• Press the [Delete] key on the keyboard.
• Right-click the free registration list to be deleted, and select [Delete] from the menu.

Step 3 Click the [Yes] button to delete the list.

(12)Precautions for the device monitor

(a) Monitoring performance of the GOT offline monitor

An increase in the number of monitored devices causes monitoring performance degradation in the GOT offline monitor.

(b) Precautions for exporting a free registration list

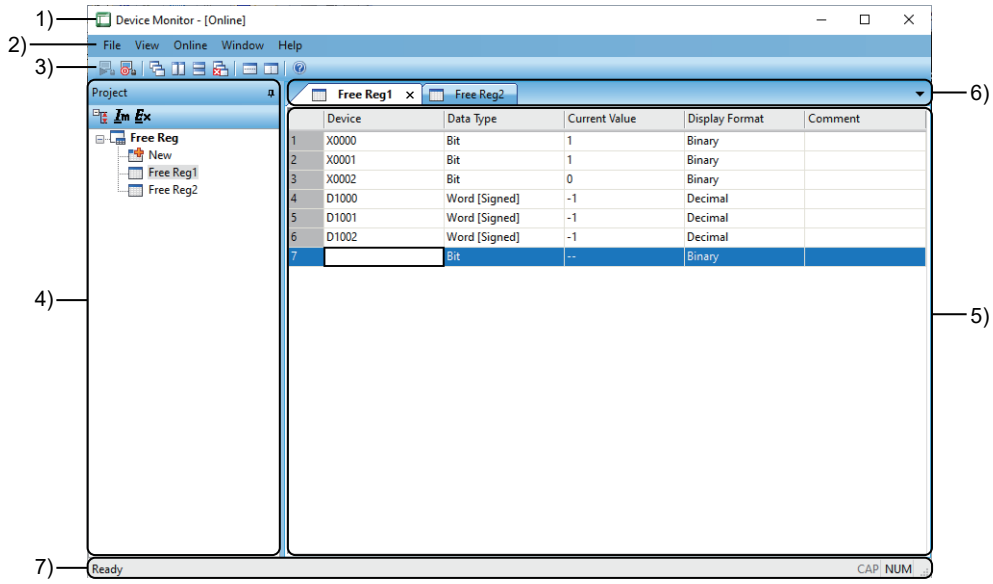
When a free registration list contains characters that cannot be represented in ASCII or Shift JIS code, export the list to a Unicode text file.

If you export the list to a CSV file, such characters are not output properly.

For the precautions for using a Unicode text file, refer to the following.

➟12.9 Precautions for Using Unicode Text File

(13)[Device Monitor] window



1) **Title bar**
Displays the device monitor operation status.

2) **Menu bar**
Displays the operation menus of the device monitor.

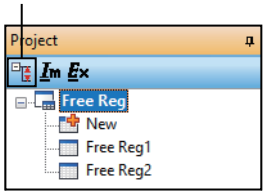
➟(14) Menus

3) **Toolbar**
Displays the operation buttons of the device monitor.

➟(15) Toolbar

4) **[Project] window**

Expand all button, collapse all button

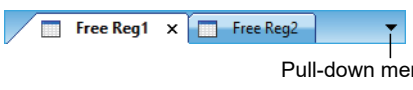


- Expand all button, collapse all button
  Expands or collapses all items in the tree.
- [Im] button
  Import a free registration list file in the CSV or Unicode text format.
  For the procedure for importing a free registration list, refer to the following.
  ➟11.15.2 ■12 (7) Importing a free registration list
- [Ex] button
  Export a free registration list to a CSV or Unicode text file.
  For the procedure for exporting a free registration list, refer to the following.
  ➟11.15.2 ■12 (8) Exporting one free registration list at a time
  11.15.2 ■12 (9) Exporting all free registration lists
- [Free Reg]
  Displays created free registration list names.
- [New]
  Creates a free registration list.

5) **Work window**
An area in which free registration windows appear

➟(16) Free registration window

6) **Editor tab**
Displays the tabs corresponding to the windows opened in the work window.
To bring an open window to the foreground in the work window, select its tab.



- Pull-down menu button
  Lists the open windows in the work window.
  To bring an open window to the foreground in the work window, select it from the pull-down menu.

7) **Status bar**
Displays the description of a selected menu.

(14)Menus

(a) [File]

Menu	Description	Shortcut key
[Import Free Registration List]	Import a free registration list file in the CSV or Unicode text format. For the procedure for importing a free registration list, refer to the following. ➟11.15.2 ■12 (7) Importing a free registration list	Alt+I
[Export Free Registration List]	Export a free registration list to a CSV or Unicode text file. For the procedure for exporting a free registration list, refer to the following. ➟11.15.2 ■12 (8) Exporting one free registration list at a time 11.15.2 ■12 (9) Exporting all free registration lists	Alt+E
[Exit]	Ends the device monitor.	-

(b) [View]

Menu	Description	Shortcut key
[Toolbar]	Displays or hides the toolbar.	-
[Status Bar]	Displays or hides the status bar.	-

(c) [Online]

Menu	Description	Shortcut key
[Start]	Starts the device monitor.	F3
[Stop]	Stops the device monitor.	Alt+F3

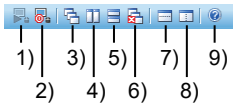
(d) [Window]

Menu	Description	Shortcut key
[New Free Registration List]	Create a free registration list.	-
[Cascade]	Displays open windows in a stack in the work window.	-
[Arrange Sideways]	Tiles open windows side by side in the work window.	-
[Arrange Lengthways]	Tiles open windows horizontally in the work window.	-
[Close Inactive Windows]	Closes all open windows except the selected one in the work window.	-
[New Horizontal Tab Group]	Splits the work window into panes horizontally. Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane. Tabs are movable between the editor tabs of panes.	-
[New Vertical Tab Group]	Splits the work window into panes vertically. Puts the free registration window corresponding to a selected tab in the immediately right pane. Tabs are movable between the editor tabs of panes.	-

(e) [Help]

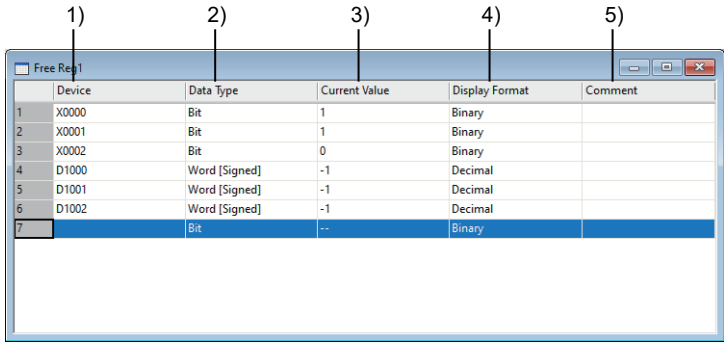
Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help.	F1

(15)Toolbar



1) **[Start the communication] button**
   Starts the device monitor.
2) **[Stop the communication] button**
   Stops the device monitor.
3) **[Display all open windows in a stack (cascade)] button**
   Displays open windows in a stack in the work window.
4) **[Display all open windows in a horizontal direction] button**
   Tiles open windows side by side in the work window.
5) **[Display all open windows in a vertical direction] button**
   Tiles open windows horizontally in the work window.
6) **[Close all the inactive windows] button**
   Closes all open windows except the selected one in the work window.
7) **[Create a new horizontal tab group] button**
   Splits the work window into panes horizontally.
   Puts the free registration window corresponding to a selected tab in a pane immediately underneath the current pane.
   Tabs are movable between the editor tabs of panes.
8) **[Create a new vertical tab group] button**
   Splits the work window into panes vertically.
   Puts the free registration window corresponding to a selected tab in the immediately right pane.
   Tabs are movable between the editor tabs of panes.
9) **[Display GT Designer3 Help] button**
   Displays GT Designer3 Help.

(16)Free registration window



1) **[Device]**
Set a device to be monitored.
➟6.1.2 How to set devices

2) **[Data Type]**
Select the data type of a device.
The following shows selectable items.
- [Bit]
- [Byte [Unsigned]/Bit String [8-bit]]
- [Word [Unsigned]/Bit String [16-bit]]
- [Double Word [Unsigned]/Bit String [32-bit]]
- [Quad Word [Unsigned]/Bit String [64-bit]]
- [Byte [Signed]]
- [Word [Signed]]
- [Double Word [Signed]]
- [Quad Word [Signed]]

3) **[Current Value]**
Displays the current value of a device.
The set value is user-changeable.
If a communication error occurs, [--] is displayed.
The setting range of [Current Value] depends on the device.

4) **[Display Format]**
Select the display format of a device.
The following shows selectable items.
- [Binary]
- [Octal]
- [Decimal]
- [Hexadecimal]

5) **[Comment]**
Set a comment for a device.
Up to 255 characters can be entered per comment.

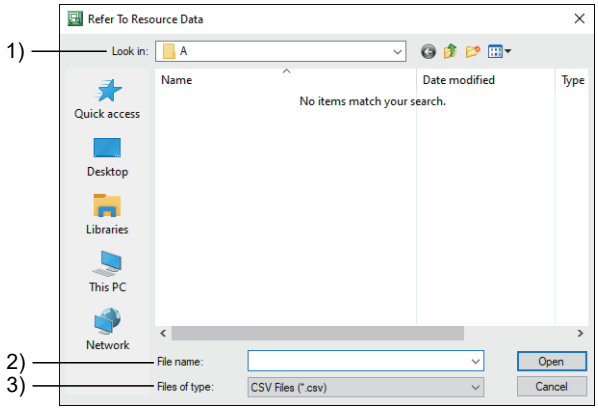
■13 Referring to the resource data

Refer to the alarm log files, recipe files, data log files, operation log files, and image files (such as hard copies) saved in a personal computer.

Step 1 Perform one of the following operations to display the [Refer To Resource Data] dialog.

- Select [Tool] → [Resource Data] from the menu.
- Click the [Resource Data] button on the toolbar.
- Select [Tool] → [Resource Data] from the right-click context menu.

Step 2 Configure the following settings and click the [Open] button to display the resource data.



1) **[Look in]**
Select the storage location of resource data.

2) **[File Name]**
Select resource data to be referred to.

3) **[Files of type]**
Select the file type of resource data.

- CSV Files (*.csv): CSV format
- Unicode Text Files (*.txt): Unicode text format
- Bitmap Files (*.bmp): BMP format
- JPEG Files (*.jpg): JPEG format

■14 Displaying a script error

Displays the script error information.
For the script function, refer to the following.

➟9.9 Project Script, Screen Script, and Script Part

Step 1 Perform one of the following operations.

- Select [Tool] → [Script Error] from the menu.
- Select [Tool] → [Script Error] from the right-click context menu.

Step 2 The [Script Error Info.] dialog is displayed.

1) **[Script No.]**
The script number of the script in which an error occurs is displayed.

2) **[Error No.]**
The error code of the error is displayed.

3) **[Error message]**

Displays the error contents.

4) **[Retry flag] button**
Retries the script.
If a screen in which no script runs is displayed on the simulator screen, the retry is not performed.

5) **[Clear] button**
Clears the displayed error message by performing the following.
If a screen in which no script runs is displayed on the simulator screen, the error message is not cleared.
- GS14.b0, b7, b8, and b12 store 0.
- GS15 stores -1.
- GS16 to GS47 store 0.

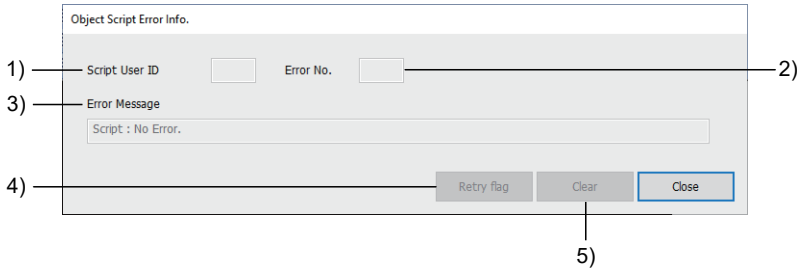
For the details of the GOT internal devices, refer to the following.
➟12.1.3 GOT special register (GS)
When the error has not been cleared, the error message is displayed again.

■15 Displaying an object script error

Displays the object script information.
For the object script function, refer to the following.
➟9.10 Object Script

Step 1 Perform one of the following operations.
- Select [Tool] → [Object Script Error] from the menu.
- Select [Tool] → [Object Script Error] from the right-click context menu.

Step 2 The [Object Script Error Info.] dialog is displayed.



1) **[Script User ID]**
The user ID of the script in which an error occurs is displayed.

2) **[Error No.]**
The error code of the error is displayed.

3) **[Error message]**
Displays the error contents.

4) **[Retry Flag] button**
Retries the object script.
If a screen in which no script runs is displayed on the simulator screen, the retry is not performed.

5) **[Clear] button**
Clears the displayed error message by performing the following.
If a screen in which no script runs is displayed on the simulator screen, the error message is not cleared.
- GS80.b0, b7, b8, and b12 store 0.
- GS81 stores -1.
- GS82 to GS113 store 0.

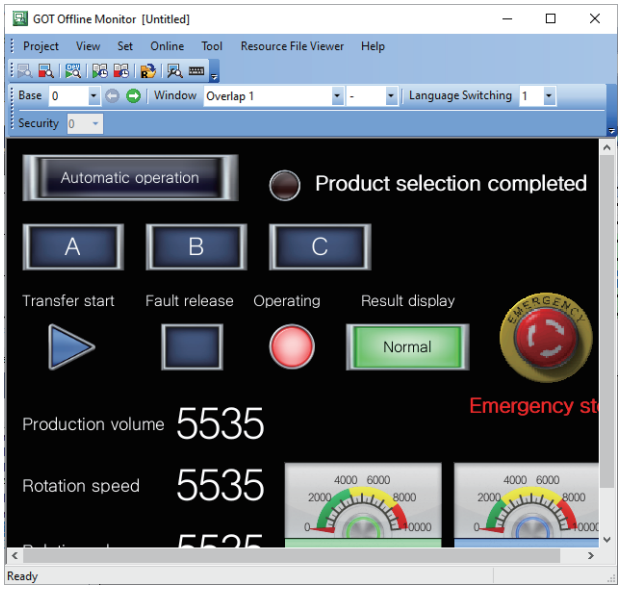
For the details of the GOT internal devices, refer to the following.
➟12.1.3 GOT special register (GS)
When the error has not been cleared, the error message is displayed again.

■16 Displaying scroll bars

Step 1 Perform one of the following operations.

- Select [View] → [Scroll Bar] from the menu.
- Right-click the mouse and select [Scroll Bar] from the menu.

Step 2 A scroll bar appears.



Point

(1) **Displaying the scroll bar**

When resolutions of the GOT model to be monitored are lower than the window size, the scroll bar is not displayed.

(2) **Scrolling the screen**

When the GOT offline monitor is activated, the screen can be scrolled by a wheel of a mouse.
The vertical scroll is prioritized.
Scrolling with the [PageUp] key and the [PageDown] key is unavailable.

■17 Displaying a monitor screen in full screen mode

The monitor screen can be displayed on the personal computer in a full screen.

➟(1) Executing a full screen display
(2) Canceling a full screen display mode

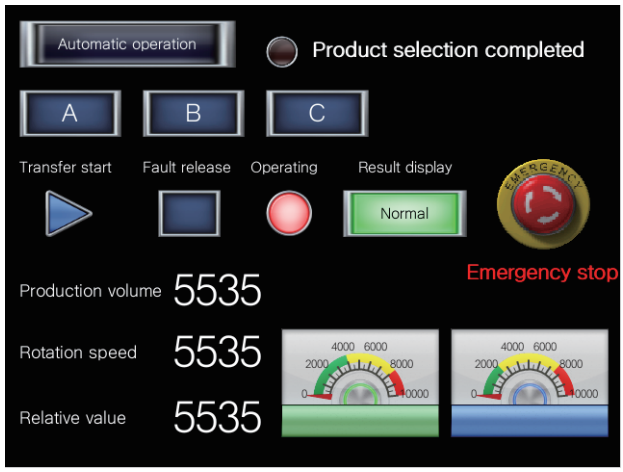
(1) Executing a full screen display

Step 1 Perform one of the following operations.

- Press the [Alt] key and the [F9] key.
- Select the [View] → [Full Screen Mode] from the menu.
- Right-click the mouse and select [Full Screen Mode] from the menu.

Step 2 The confirmation dialog for switching the full screen display appears.

Click the [OK] button, and then the GOT offline monitor is displayed in a full screen.



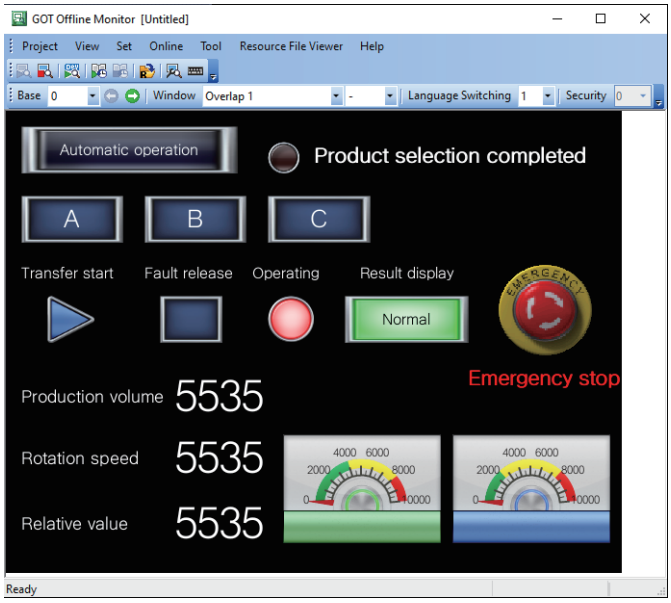
(2) Canceling a full screen display mode

Step 1 Perform one of the following operations.

- Press the [Alt] key and the [F9] key.
- Right-click the mouse and select [Full Screen Mode] from the menu.

Step 2 The confirmation dialog for switching the full screen display appears.

Click the [OK] button, and a full screen display mode is canceled.



Point

(1) **Operations during the full screen display**

During the full screen display, some menu operations are not usable.
To use such operations, cancel the full screen display mode.

(2) **Screen position during the full screen display**

If a screen is switched to a full screen when resolutions of a personal computer are different from that of the project data, the GOT offline monitor is fixed to the upper left of the display of the personal computer.
The screen cannot be moved.

11.15.3 Precautions for the GOT offline monitor

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Display of the GOT offline monitor and the GOT

The display of the GOT offline monitor may differ from the display of the GOT.
Check the actual display of the GOT.

■2 Numerical display

If an invalid numerical value is stored when [Real] is selected for [Display Format] of [Numerical Display], the invalid numerical value is displayed on the GOT offline monitor. ([non] is displayed on the GOT.)

■3 Clock display

The clock display during monitoring with the GOT offline monitor depends on the clock data of the personal computer. (The GOT reads the clock data of the PLC CPU to use it.)
The setting [Automatically adjust clock for daylight saving changes] in the personal computer is not applicable. Do not enable [Automatically adjust clock for daylight saving changes].

■4 Hard copy function

The settings of [Invert], [Writing Notification Device], and [Writing Error Notification Device] of the hard copy function cannot be monitored.
The system information about the hard copy function cannot be monitored.

■5 Printer output

(1) Printer output

The data cannot be output directly by the report function or hard copy function.
Data will be output to a file (TXT, CSV, or BMP format) on the hard disk of the personal computer. Output the file to a printer.

➟11.15.1 ■8 (2) For functions requiring the user to save data into a data storage

(2) When creating a table with the report function

Create a table as shown in example 1.
If a table is created as shown in example 2, the table will appear incorrectly in the output CSV file.

Example 1) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

CSV file table

	A	B
X	1	2
Y	3	4

Example 2) Table created with GT Designer3

	A	B
X	1	2
Y	3	4

CSV file table

A	B	
X	1	2
Y	3	4

(3) When outputting the characters specified with a text print object by using the report function

Store characters in the specified devices according to the setting of [Display in order of High -> Low].
If the characters are not stored in the specified byte order, the characters are displayed incorrectly in the output CSV file.

➟8.32.5 [Text Print] dialog

(4) When using a project where the output trigger is set to turn on frequently

Make sure that your personal computer has enough free hard disk space, and delete the output files as necessary.
The output files will not be deleted automatically upon exit from the GOT offline monitor.

(5) When opening an output file on the personal computer

If you open an output TXT file by using a text editor such as WordPad or Notepad, character spacing may be misaligned on display.
If the character spacing is misaligned, adjust the character font or font size.

(6) System alarm when the hard copy is executed

The system alarm is not displayed when the hard copy is executed.
For the troubleshooting for the hard copy, refer to the following.

Symptom	Details of error and cause	Corrective action
No files are output when the hard copy command is executed from the monitor screen.	The file cannot be saved due to problems with the output destination disk.	• Check that the folder specified as the virtual drive exists. • Check the access privilege for the folder specified as the virtual drive. • Check the disk space of the folder specified as the virtual drive.
	The file cannot be saved since the file No. external control device value is not set within 1 to 9999.	Check that the file No. external control device value is set within 1 to 9999.

■6 Sound output

(1) Personal computer conditions

The sound output function is executed with the sound function (sound card) or speaker of the personal computer.
If the personal computer to be used cannot output sound, the sound output function is unavailable.

(2) Unmuting the sound of the GOT offline monitor at its startup

If you mute the sound of the GOT offline monitor in Windows sound settings, the sound of the GOT offline monitor is automatically unmuted at its startup.
However, if you mute all sounds on Windows, the GOT offline monitor remains mute.

■7 When the project data has multiple channels

Only channel 1 can be monitored.
The other channels are ignored.
To monitor a device of other than channel 1, select [Search/Replace] → [Batch Edit] → [CHNo.] from the menu and set channel 1 for the debug target channel in GT Designer3.

Example) When channel 1 and 2 are used and channel 2 is to be monitored

Step 1 Change channel 1 to channel 3 in a batch.

Step 2 Change channel 2 to channel 1 in a batch.

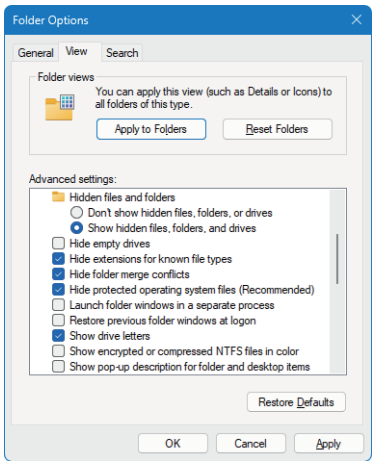
For the batch edit of the channels, refer to the following.

➟11.8.4 Changing the set values in a batch (Batch Edit)

■8 Showing hidden folders

The following folder is a hidden folder.
Users\(user name)\AppData\Local

To display the hidden folder, configure the setting in Windows.
Example) Windows 11



■9 Recipe information

Clicking a special function switch to which [Recipe Information] is set displays the recipe operation window, regardless of the setting of [Enable recipe file operation on the monitor] in the [Recipe Common Setting] dialog.
To display the recipe information, click the [Recipe information] button in the simulation utility.

■10 Virtual drive V

To store image files in drive V and use them for parts displays, satisfy all the following conditions.

- Store the image files directly under drive V using the FTP server function that can run on Windows.
- Use IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg only for the file name and extension.
- Limit the total file size to less than 6 MB.
- Do not store any file other than IMG1.jpg, IMG2.jpg, IMG3.jpg, and IMG4.jpg.

The files in drive V are deleted at the start or end of monitoring.
For details on parts displays, refer to the following.

➟8.8 Placing a Parts Display

■11 Precautions when the GOT type is GT SoftGOT2000

(1) Unavailable GOT internal devices

GOT internal devices (GS500 to GS507) are unavailable for the GOT offline monitor.

(2) Unavailable functions

The following functions are unavailable for the GOT offline monitor.

- Application start-up
- Mail send function
- SoftGOT-GOT link function
- Edgecross interaction function
- Display of file information in the PLC
- Interaction with PX Developer

■12 Reconnection after exiting the GX Works3 offline monitor

When the GOT offline monitor and the GX Works3 offline monitor are connected, exiting the GX Works3 offline monitor disconnects the GOT offline monitor.
For reconnection, start the GX Works3 offline monitor, and then start the GOT offline monitor and Resource File Viewer.

■13 When another station is set in the built-in Ethernet port setting in GX Works3

When another station is set in the built-in Ethernet port setting or station No. 0 is set for the module in GX Works3, the network information cannot be acquired automatically.
Apply the network information of GX Works3 to [Additional Allocation] in the [Setting] dialog ([Communication Setup] tab).

➟11.15.5 ■1 [Communication Setup] tab

11.15.4 Screen layout of the GOT offline monitor

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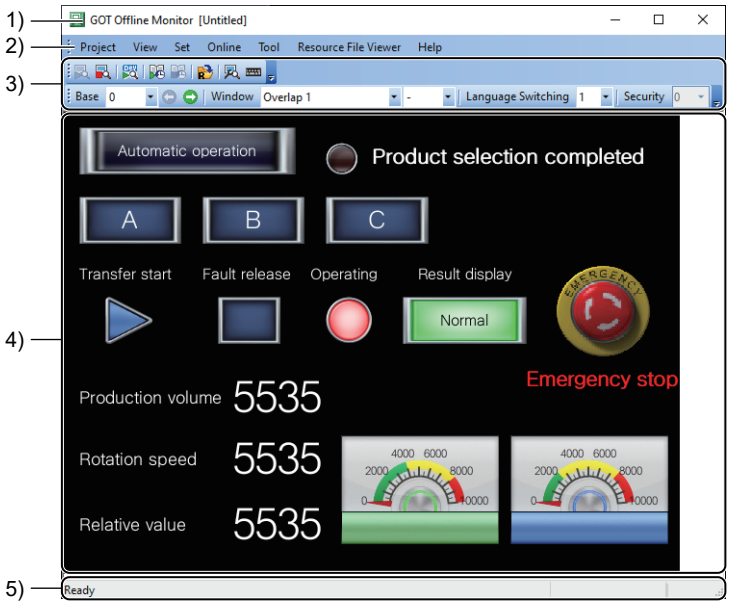


1) **Title bar**
Displays the project name.

2) **Menu bar**
Displays the operation menus of the GOT offline monitor.
➟■1 Menus

3) **Toolbar**
Displays the operation buttons of the GOT offline monitor.
➟■2 Toolbar

4) **Monitor screen**
Displays the monitor data.

5) **Status bar**
Displays the status of the GOT offline monitor.

■1 Menus

(1) [Project]

Menu	Description	Shortcut key
[Snap Shot]	Saves a screen as a file. (BMP format and JPEG format) ➟11.15.2 ■8 Capturing snap shots	Ctrl+H
[Print Setup]	Set a printer. ➟11.15.2 ■9 Printing a monitor screen	-
[Page Setup]	Adjusts the page layout for printing. ➟11.15.2 ■9 Printing a monitor screen	-
[Print Preview]	Displays a print preview. ➟11.15.2 ■9 Printing a monitor screen	-
[Print]	Outputs the settings of the project into a file. ➟11.15.2 ■9 Printing a monitor screen	Ctrl+P
[Properties]	Displays the project information.	-
[Exit]	Exits the GOT offline monitor.	Alt+F4

(2) [View]

Menu	Description	Shortcut key
[Scroll Bar]	Switches display or non-display of a scroll bar. ➟11.15.2 ■16 Displaying scroll bars	-
[Full Screen Mode]	Sets and cancels the full screen mode. ➟11.15.2 ■17 Displaying a monitor screen in full screen mode	Alt+F9

(3) [Set]

Menu	Description	Shortcut key
[Setting]	Displays the [Setting] dialog. ➟11.15.5 [Setting] dialog (GOT offline monitor)	-
[Keyboard]	Enables or disables the keyboard input. ➟11.15.2 ■11 Operating the numerical input or text input with a keyboard	-

(4) [Online]

Menu	Description	Shortcut key
[Monitor Start]	Starts the GOT offline monitor.	F3
[Monitor Stop]	Stops the GOT offline monitor.	Alt+F3

(5) [Tool]

Menu	Description	Shortcut key
[Start of Device Monitor] [End of Device Monitor]	Starts or ends the device monitor. ➟11.15.2 ■12 Using the device monitor	-
[Resource Data]	Refers to the resource data. ➟11.15.2 ■13 Referring to the resource data	Ctrl+R
[Script Error]	Displays the script error information. ➟11.15.2 ■14 Displaying a script error	-
[Object Script Error]	Displays the object script information. ➟11.15.2 ■15 Displaying an object script error	-

(6) [Resource File Viewer]

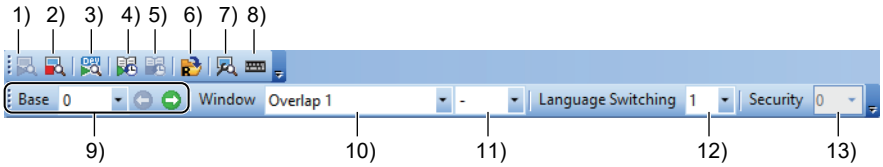
Menu	Description	Shortcut key
[Resource File Viewer Operation]	Displays the [Resource File Viewer Operation] dialog. ➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog	-
[Start All]	Starts all the Resource File Viewer modules enabled in the [Resource File Viewer Operation] dialog.	-
[Activate All]	Activates all the running Resource File Viewer modules.	-
[End All]	Ends all the running Resource File Viewer modules.	-
[Start Resource File Viewer 1] [End Resource File Viewer 1]	Starts or ends Resource File Viewer 1.	-
[Start Resource File Viewer 2] [End Resource File Viewer 2]	Starts or ends Resource File Viewer 2.	-
[Start Resource File Viewer 3] [End Resource File Viewer 3]	Starts or ends Resource File Viewer 3.	-
[Start Resource File Viewer 4] [End Resource File Viewer 4]	Starts or ends Resource File Viewer 4.	-
[Start Resource File Viewer 5] [End Resource File Viewer 5]	Starts or ends Resource File Viewer 5.	-
[Start Resource File Viewer 6] [End Resource File Viewer 6]	Starts or ends Resource File Viewer 6.	-
[Start Resource File Viewer 7] [End Resource File Viewer 7]	Starts or ends Resource File Viewer 7.	-

Menu	Description	Shortcut key
[Start Resource File Viewer 8] [End Resource File Viewer 8]	Starts or ends Resource File Viewer 8.	-

(7) [Help]

Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help.	F1

■2 Toolbar



1) **[Start Monitoring] button**
Starts the GOT offline monitor.

2) **[Stop Monitoring] button**
Stops the GOT offline monitor.

3) **[Device Monitor] button**
Starts or ends the device monitor.

4) **[Start all Resource File Viewer] button**
Starts all the Resource File Viewer modules enabled in the [Resource File Viewer Operation] dialog.

5) **[End all Resource File Viewer] button**
Ends all the running Resource File Viewer modules.

6) **[Resource Data] button**
Refers to the resource data.

7) **[Setting] button**
Displays the [Setting] dialog.
➟11.15.5 [Setting] dialog (GOT offline monitor)

8) **[Keyboard]**
Enables or disables the keyboard input.

9) **Base screen number**
Switch the number of the base screen to be displayed on the monitor screen from the pull-down menu or using the arrow buttons.

10) **Window screen types**
Select how to display the window screen to be displayed on the monitor screen.
The following shows selectable items.
- [Overlap 1]
- [Overlap 2]
- [Overlap 3]
- [Overlap 4]
- [Overlap 5]
- [Superimpose 1]
- [Superimpose 2]
- [Dialog]

11) **Window screen number**
Switch the number of the window screen to be displayed on the monitor screen from the pull-down menu.

12) **Language switching setting**
Select the column number for a comment group to be displayed.
The selectable numbers range from [1] to [30].

13) **Screen security**
Switch the security level.
The selectable levels range from [0] to [15].

11.15.5 [Setting] dialog (GOT offline monitor)

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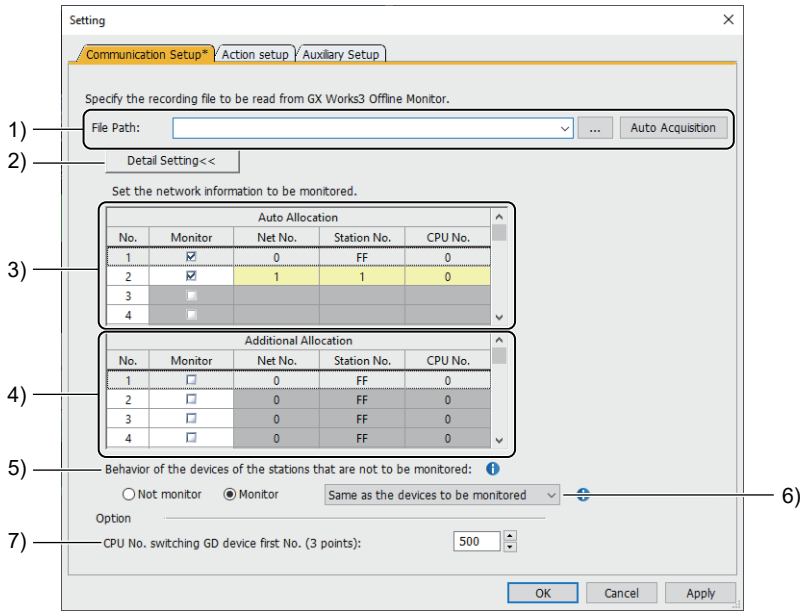
Configure the option settings of the GOT offline monitor.

➥■1 [Communication Setup] tab
■2 [Action setup] tab
■3 [Auxiliary Setup] tab

■1 [Communication Setup] tab



1) **[File Path]**
Set the path to the recording file read from the GX Works3 offline monitor.
- When the GX Works3 offline monitor is not running
  Click the [...] button to set the path to a recording file.
- When the GX Works3 offline monitor is running
  Click the [Auto Acquisition] button to acquire the path to the recording file read from the GX Works3 offline monitor.

2) **[Detail Setting >>] button, [Detail Setting <<] button**
Displays or hides the network setting items.

3) **[Auto Allocation]**
Select the network information of the controllers to be monitored.

4) **[Additional Allocation]**
To monitor another station, set the network information of the target controller for monitoring.

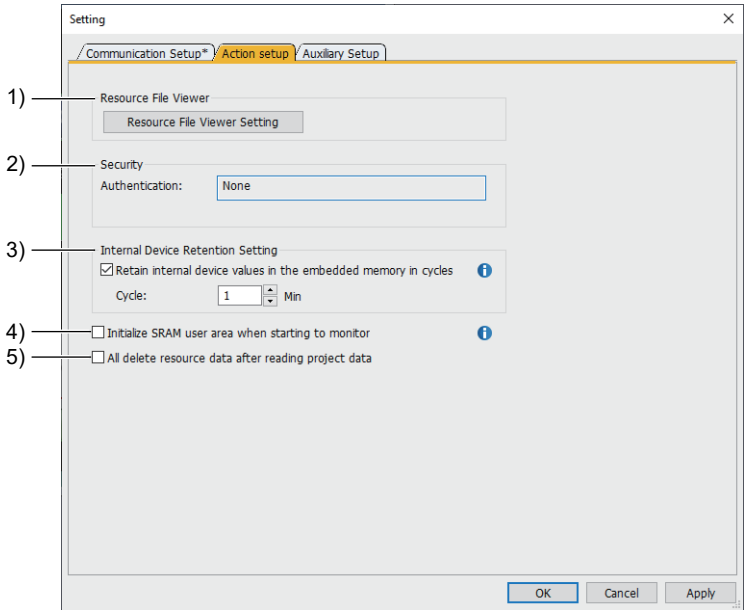
5) **[Behavior of the devices of the stations that are not to be monitored]**
Select whether to monitor the devices of the station numbers not selected in [Auto Allocation] or [Additional Allocation].
The following shows selectable items.
- [Not monitor]
- [Monitor]

6) **How to monitor the devices**
Select how to display the devices when [Monitor] is selected for [Behavior of the devices that are not to be monitored].
The following shows selectable items.
- [Same as the devices to be monitored]
- [Display 0]

7) **[CPU No. switching GD device first No. (3 points)]**
Set the start device number of the GOT data registers (GD) to specify a CPU number.
The setting range is [0] to [65520].

Specify the value of [CPU No. switching GD device first No. (3 points)] set in the [Controller Setting] window in GT Designer3.
If you set a different number, proper monitoring is not performed.

■2 [Action setup] tab



1) **[Resource File Viewer]**
Configure the settings of Resource File Viewer.
Click the [Resource File Viewer Setting] button to display the [Resource File Viewer Setting] dialog.
➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

2) **[Security]**
Displays the authentication method set for the project data.

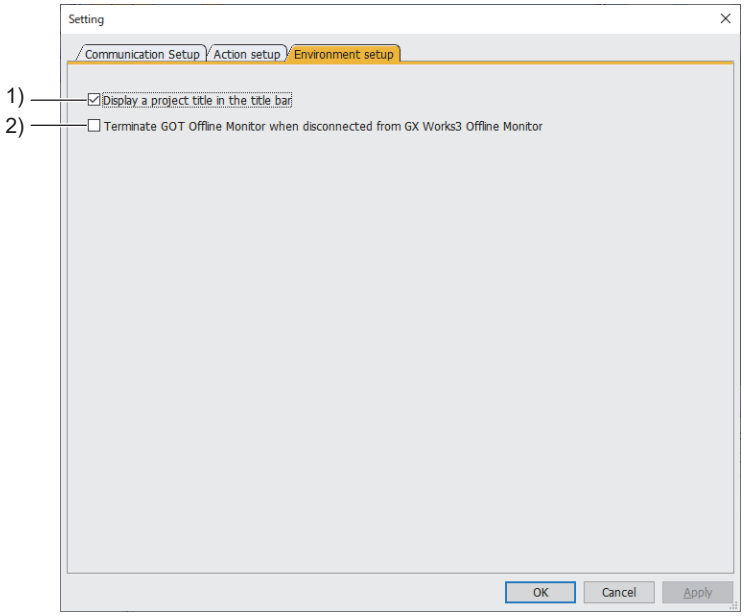
3) **[Internal Device Retention Setting]**

Item	Description
[Retain internal device values in the embedded memory in cycles]	Saves the values of GOT internal devices to the SRAM user area at the specified intervals. If this item is deselected, the values will be saved only when you exit the GOT offline monitor.
[Cycle]	Set a time interval to save the values of GOT internal devices to the SRAM user area. The setting range is [1] minute to [60] minutes.

4) **[Initialize SRAM user area when starting to monitor]**
Initializes the SRAM user area at a start of monitoring.
The following functions save data to the SRAM user area.
- User alarm observation
- System alarm observation
- Logging
- Recipe
- Internal device retention

5) **[All delete resource data after reading project data]**
Deletes all the user data in the following folders at a start of monitoring.
Folder A, B, E, F, G or lower hierarchies in the working folder
For the working folder, refer to the following.
➟11.15.1 ■8 (3) Working folder

■3 [Auxiliary Setup] tab



1) **[Display a project title in the title bar]**
Displays the project name in the title bar.

2) **[Terminate GOT Offline Monitor when disconnected from GX Works3 Offline Monitor]**
Ends the GOT offline monitor at disconnection of the GX Works3 offline monitor.
If no PLC device is set in the common settings or object settings, this setting is disabled.

11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

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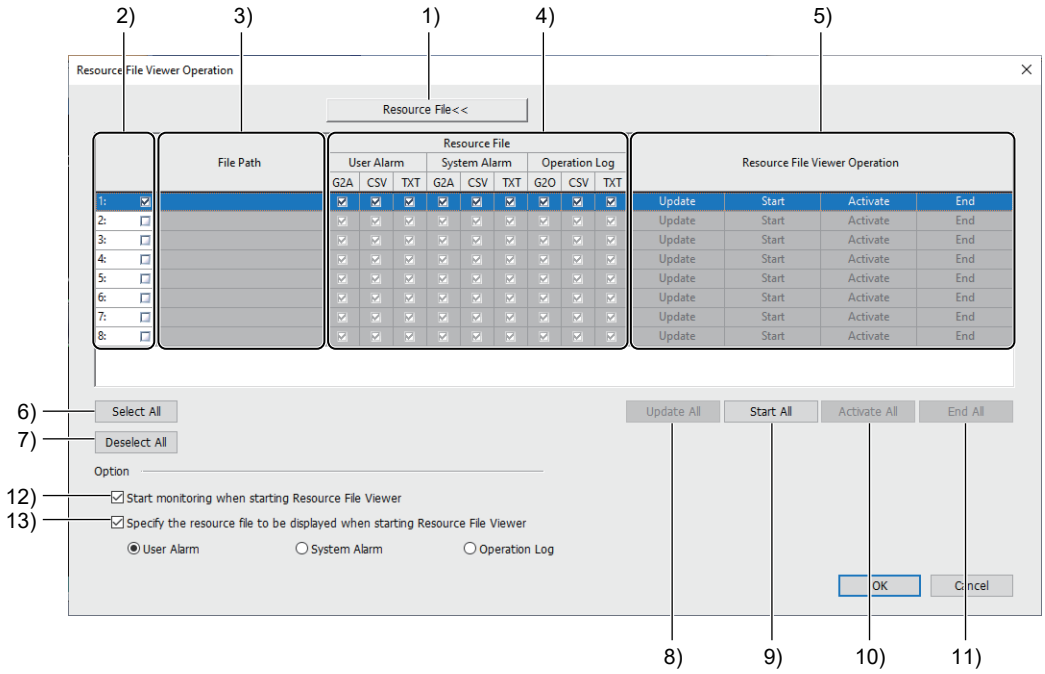
Point

This section explains startup of Resource File Viewer from the GOT offline monitor (linked startup).
For startup of Resource File Viewer directly from the RCFView.exe (independent startup), refer to the following.

➟11.16 Viewing an operation log file (Resource File Viewer)

Configure the settings for monitoring Resource File Viewer.
The dialog name depends on how to display the setting dialog.

Dialog name	Display method
[Resource File Viewer Setting] dialog	Before starting the GOT offline monitor, click [Tools] → [GOT Offline Monitor] → [Set] from the menu, and click [Resource File Viewer Setting] in the [Setting] dialog ([Action setup] tab).
[Resource File Viewer Operation] dialog	Select [Resource File Viewer] → [Resource File Viewer Operation] from the menu of the GOT offline monitor.
	Select [Set] → [Resource File Viewer Operation] from the menu of Resource File Viewer.
	After starting the GOT offline monitor, click [Resource File Viewer Setting] in the [Setting] dialog ([Action setup] tab) in the GOT offline monitor.



1) **[Resource File>>] button, [Resource File<<] button**
This item is displayed in the [Resource File Viewer Operation] dialog.
Displays or hides the [Resource File] field.

2) **No.**
Select the Resource File Viewer modules to be started when selecting [Resource File Viewer] → [Start All] from the menu.

3) **[File Path]**
Set the path to the resource files to be displayed in Resource File Viewer.

4) **[Resource File]**
Select the extensions of the resource files to be displayed in Resource File Viewer.

5) **[Resource File Viewer Operation]**
This item is displayed in the [Resource File Viewer Operation] dialog.

Select the operations for each Resource File Viewer module to be started.

Item	Description
[Update] button	Refreshes the display of the running Resource File Viewer module.
[Start] button	Starts Resource File Viewer.
[Activate] button	Activates Resource File Viewer.
[End] button	Ends Resource File Viewer.

6) **[Select All] button**
Selects all the resource file viewers.

7) **[Deselect All] button**
Deselects all the resource file viewers.

8) **[Update All] button**
This item is displayed in the [Resource File Viewer Operation] dialog.
Refresh all the displays of the running Resource File Viewer modules.

9) **[Start All] button**
This item is displayed in the [Resource File Viewer Operation] dialog.
Start all the Resource File Viewer modules targeted to start.

10) **[Activate All] button**
This item is displayed in the [Resource File Viewer Operation] dialog.
Activates all the Resource File Viewer modules.

11) **[End All] button**
This item is displayed in the [Resource File Viewer Operation] dialog.
Ends all the Resource File Viewer modules.

12) **[Start monitoring when starting Resource File Viewer]**
Starts monitoring at a start of a Resource File Viewer module.

13) **[Specify the resource file to be displayed when starting Resource File Viewer]**
Specify the type of the resource files to be displayed at a start of a Resource File Viewer module.
The following shows selectable file types.

- [User Alarm]
- [System Alarm]
- [Operation Log]

11.15.7 How to use a Resource File Viewer module

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Point

This section explains startup of Resource File Viewer from the GOT offline monitor (linked startup).
For startup of Resource File Viewer directly from the RCFView.exe (independent startup), refer to the following.

➟11.16 Viewing an operation log file (Resource File Viewer)

Monitors the resource files read from the GOT.
The following shows the monitoring-supported resource file types.

- User alarm (G2A, CSV, TXT)
- System alarm (G2A, CSV, TXT)
- Operation log (G2O, CSV, TXT)

■1 Starting monitoring with a Resource File Viewer module

Establish connection between the GX Works3 offline monitor and the GOT offline monitor to start monitoring.
Start a Resource File Viewer module from the GOT offline monitor.

Step 1 Use one of the following methods to start a Resource File Viewer module.

- Select [Resource File Viewer] → [Start All] from the menu.
- Select [Resource File Viewer] → [Start Resource File Viewer n] from the menu (n = 1 to 8).
- Click the [Start all Resource File Viewer] button on the toolbar.

Step 2 At the first startup, set the resource files to be read to a Resource File Viewer module.

When the [Resource File Viewer Operation] is displayed, set the resource files to be displayed in Resource File Viewer, and click the [Activate] button or [Activate All] button to start monitoring.

➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

After the first startup, the resource files set in the [Resource File Viewer Operation] dialog are read and monitoring starts.

■2 Updating the resource files

(1) When the storage destination of the resource files has been changed

Step 1 Display the [Resource File Viewer Operation] dialog and change the setting of the [File Path].

➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

Step 2 Click the [Update] button to update the resource files displayed in Resource File Viewer.

(2) When a resource file has been changed, added, or deleted

Step 1 Perform either of the following operations.

- Click the [Update] button in the [Navigation] window of Resource File Viewer.
- Click the [Update] button in the [Resource File Viewer Operation] dialog

➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

Step 2 The resource files displayed in Resource File Viewer are updated.

■3 Exiting Resource File Viewer

Disconnect the GX Works3 offline monitor to stop monitoring.
Exit the GOT offline monitor or Resource File Viewer.

(1) Exiting the GOT offline monitor

Exit Resource File Viewer by either of the following methods.

- Select [Resource File Viewer] → [End All] from the menu.
- Select [Resource File Viewer] → [End Resource File Viewer n] from the menu (n = 1 to 8).
- Click the [End all Resource File Viewer] button on the toolbar.
- Click the [End] button in the [Resource File Viewer Operation] dialog

➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog

- Exit the GOT offline monitor.

(2) Exiting Resource File Viewer

Exit Resource File Viewer by either of the following methods.

• Select [Project] → [Exit Application] from the menu.
• Click the [×] button.

■4 Searching for the logs in the resource files

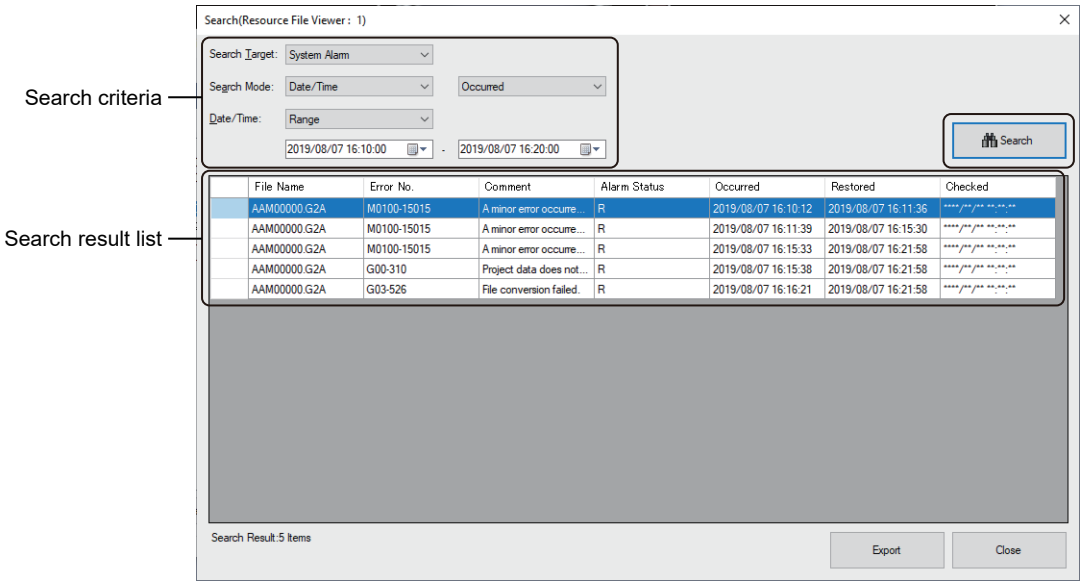
(1) Searching for the logs by specifying a keyword or a date and time value

Step 1 Perform either of the following operations to display the [Search] dialog.

• [Ctrl] key + [F] key
• Select [Search] → [Search] from the menu.

➟11.15.8 ■4 [Search] dialog

Step 2 Set the search criteria and click the [Search] button to display the found logs in the search result list.



Step 3 When monitoring is inactive, double-click any of the logs in the search result list to select the corresponding log in the resource file display area.

➟11.15.8 Screen layout of a Resource File Viewer module

(2) Exporting the search result list data

Step 1 Search for the logs using the [Search] dialog.

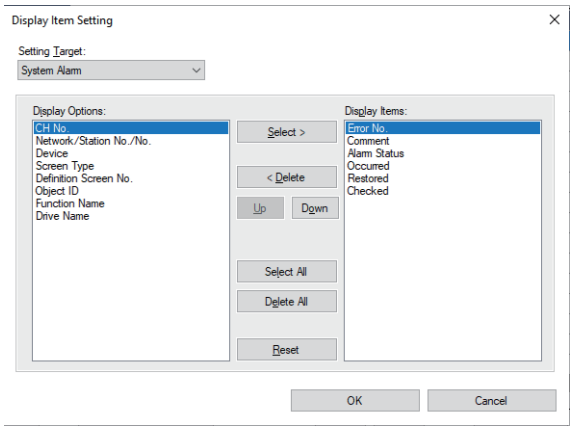
➟(1) Searching for the logs by specifying a keyword or a date and time value

Step 2 Click the [Export] button to display the [Save As] dialog.

Step 3 Set [File name] and [Save as type] and click the [Save] button to export the search result list.

■5 Changing the items to be displayed in the resource file display area

Step 1 Select [View] → [Display Items] from the menu to display the [Display Item Setting] dialog.



Step 2 Select the items to be displayed in the resource file display area and specify their display order.

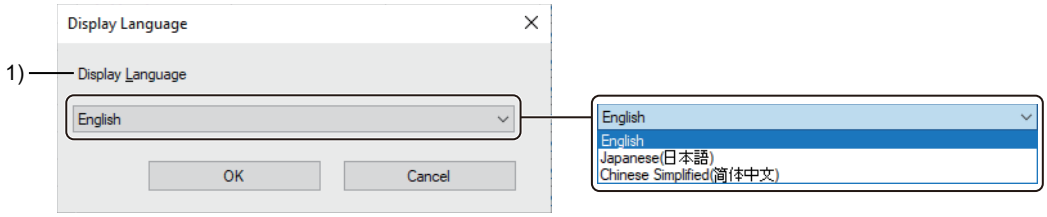
For details on the operation buttons, refer to the following.

➟11.15.8 ■5 [Display Item Setting] dialog (Resource File Viewer)

■6 Switching the display language of Resource File Viewer

The following shows how to switch the display language of Resource File Viewer.

Step 1 Select [View] → [Switch Display Language] from the menu to display the [Display Language] dialog.



Step 2 Select a language to be switched to in [Display Language] and click the [OK] button.

■7 Switching the display language of the resource files

When the resource files are binary format files, the display language can be switched.

How to switch the display language depends on the resource file type.

- User alarm

  The data are displayed in the display language set in the toolbar of the GOT offline monitor before Resource File Viewer is started.

  ➟11.15.2 ■5 Switching the display language

- System alarm, operation log

  The data are displayed in the system language set in the GOT offline monitor before Resource File Viewer is started.

  ➟5.2.2 Setting for switching the language displayed on the GOT ([Language Switching])

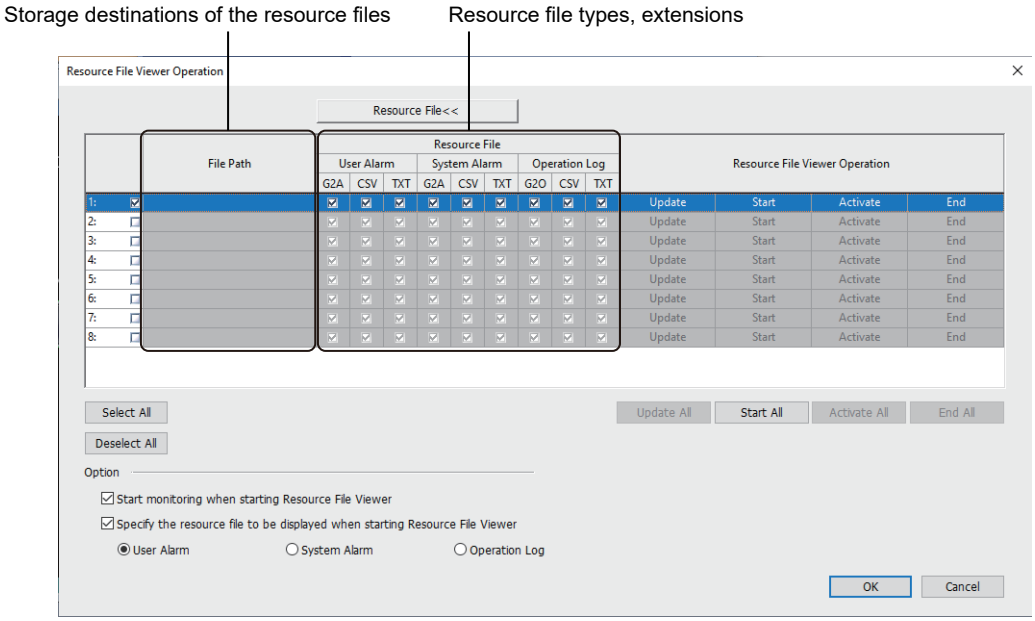
■8 Setting the resource files to be monitored in a Resource File Viewer module

Set the storage destinations and file types of the resource files to be read to each Resource File Viewer module.

Step 1 Perform one of the following operations to display the [Resource File Viewer Setting] dialog or [Resource File Viewer Operation] dialog.

- Click the [Resource File Viewer Setting] button in the [Setting] dialog ([Action setup] tab) of the GOT offline monitor.
- Select [Resource File Viewer] → [Resource File Viewer Operation] from the menu of the GOT offline monitor.
- Select [Set] → [Resource File Viewer Operation] from the menu of Resource File Viewer.

➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog



Step 2 Set the storage destinations and file types, and extensions of the resource files to be read, and click the [OK] button.

■9 Monitoring the logs by synchronizing the clock time with GX Works3 offline monitor

This is available while connection is established between the GOT offline monitor and the GX Works3 offline monitor.

(1) Reading the clock time of the GX Works3 offline monitor

By reading the clock time of the GX Works3 offline monitor to a Resource File Viewer module, the logs collected at the same time as the events occurred in the GX Works3 offline monitor can be monitored.

Step 1 Perform either of the following operations in Resource File Viewer.

- Select [Online] → [Start Monitoring] from the menu.
- Click the [Adjust date and time of Resource File Viewer to those of GX Works3 Offline Monitor.] button.

➟11.15.8 Screen layout of a Resource File Viewer module

Step 2 The logs collected at the same time as the events occurred in GX Works3 offline monitor are selected in the resource file display area.

(2) Writing the clock time of a Resource File Viewer module

By writing the clock time of a Resource File Viewer module to the GX Works3 offline monitor, the events occurred at the same time as the logs are collected can be monitored.

Step 1 Select any of the logs in the resource file display area and perform either of the following operations.

- Click the [Adjust date and time of GX Works3 Offline Monitor to those of Resource File Viewer.] in Resource File Viewer.
- Double-click the log selected in the resource file display area.
  (This is available when [Read/write GX Works3 Offline Monitor time on a selected date and time] in the [Action Setup] dialog is selected.)

➟11.15.8 Screen layout of a Resource File Viewer module

Step 2 The events occurred at the same clock time as Resource File Viewer are selected in the GX Works3 offline monitor.

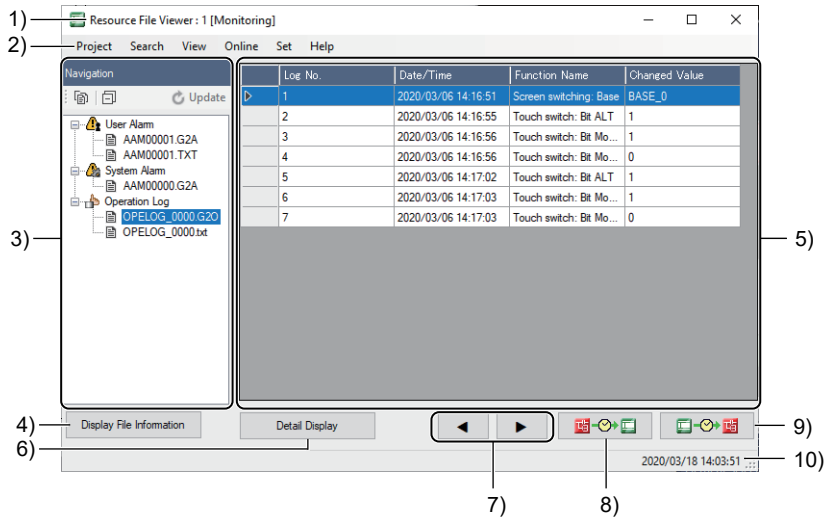
11.15.8 Screen layout of a Resource File Viewer module

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Point

This section explains startup of Resource File Viewer from the GOT offline monitor (linked startup).
For the screen layout of Resource File Viewer when starting it directly from the RCFView.exe (independent startup), refer to the following.

➟11.16.3 Screen layout of Resource File Viewer (at independent startup)

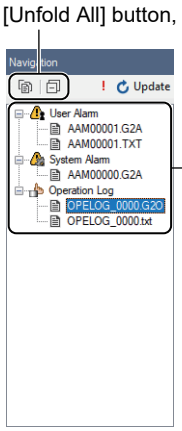


1) **Title bar**
Displays the module number of Resource File Viewer and monitoring status.

2) **Menu bar**
Displays the operation menus of Resource File Viewer.

➟■1 Menus

3) **[Navigation] window**
Lists the resource files.



- **[Unfold All] button, [Fold All] button**
  Expands or collapses all items in the tree.
- **[!]**
  Appears when a resource file has been updated, added, deleted, or renamed.
- **[Update] button**
  Updates the resource files.
- **Resource file list**
  Displays the resource files with the extensions selected in [Resource File] in the [Resource File Viewer Setting] dialog or [Resource File Viewer Operation] dialog.

4) **[Display File Information] button**
Displays the [Display File Information] dialog.

➟■2 [Display File Information] dialog

5) **Resource file display area**
Displays the details of the resource file selected in the [Navigation] window.

Set the display items in the [Display Item Setting] dialog.

➟■5 [Display Item Setting] dialog (Resource File Viewer)

6) **[Detail Display] button**
Displays the [Detail Display] dialog.

➟■3 [Detail Display] dialog

7) **Arrow buttons**
Switches between the resource files displayed in the resource file display area.

8) **[Adjust date and time of Resource File Viewer to those of GX Works3 Offline Monitor.] button**
Selects the logs collected at the same clock time as the GX Works3 offline monitor.

9) **[Adjust date and time of GX Works3 Offline Monitor to those of Resource File Viewer.] button**
Selects the events occurred at the same clock time as the resource file viewer.

10) **Status bar**
Displays the time read from the GX Works3 offline monitor.

■1 Menus

(1) [Project]

Menu	Description	Shortcut key
[Exit Application]	Exits Resource File Viewer.	Alt+F4

(2) [Search]

Menu	Description	Shortcut key
[Search]	Search for the resource files read to Resource File Viewer. ➟■4 [Search] dialog	Ctrl+F

(3) [View]

Menu	Description	Shortcut key
[Navigation]	Displays or hides the [Navigation] window.	-
[Display Items]	Select the items to be displayed in the resource file display area. ➟■5 [Display Item Setting] dialog (Resource File Viewer)	-
[Switch Display Language]	Switch the display language of Resource File Viewer. ➟11.15.7 ■6 Switching the display language of Resource File Viewer	-

(4) [Online]

Menu	Description	Shortcut key
[Start Monitoring]	Establish connection between the GX Works3 offline monitor and the GOT offline monitor to start monitoring.	F3
[Stop Monitoring]	Disconnects the GX Works3 offline monitor to stop monitoring.	Alt+F3

(5) [Set]

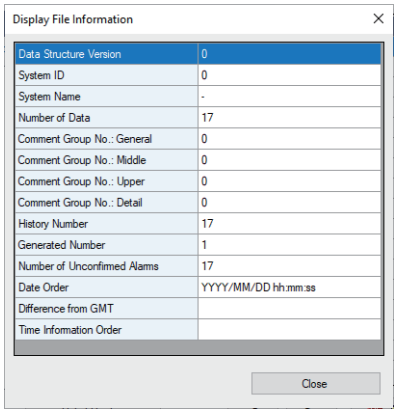
Menu	Description	Shortcut key
[Resource File Viewer Operation]	Configure the settings of Resource File Viewer. ➟11.15.6 [Resource File Viewer Setting]/[Resource File Viewer Operation] dialog	-
[Action Setup]	Configure the settings of the resource file display area. ➟■6 [Action Setup] dialog	-

(6) [Help]

Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help.	F1

■2 [Display File Information] dialog

Displays the information of the resource file selected in the [Navigation] window.
The displayed items depend on the resource file type.

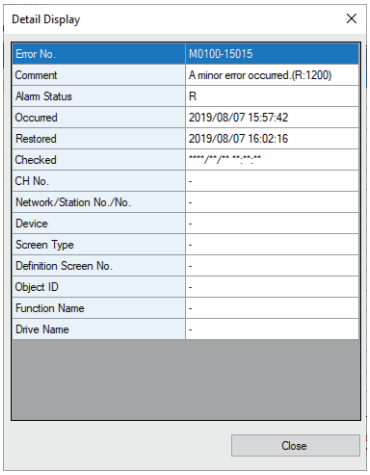


Example) User alarm, system alarm

Item	Description
Data Structure Version	The version of the data structure
System ID	Alarm ID (For system alarms, this item is fixed to 65535.)
System Name	The name of the alarm (For system alarms, this item is blank.)
Number of Data	The number of logs
Comment Group No.: General	The No. of the basic comment group (For system alarms, this item is fixed to 0.)
Comment Group No.: Middle	The No. of the middle level comment group (For system alarms, this item is fixed to 0.)
Comment Group No.: Upper	The No. of the upper level comment group (For system alarms, this item is fixed to 0.)
Comment Group No.: Detail	The No. of the detailed comment group (For system alarms, this item is fixed to 0.)
History Number	The number of alarms
Generated Number	The number of uncorrected alarms
Number of Unconfirmed Alarms	The number of unconfirmed alarms
Date Order	The order of the dates
Difference from GMT	The difference from the Greenwich Mean Time
Time Information Order	The order of output time

■3 [Detail Display] dialog

Displays the details of the logs selected in the resource file display screen.
The displayed items depend on the resource file type.



(1) User alarm

Item	Description
Upper Comment No.	The No. of the upper level comment
Middle Comment No.	The No. of the middle level comment
Comment No.	The No. of the basic comment
Comment	The comment of the basic alarm
Alarm Status	The status of the alarm • O: Occurring, not confirmed • OC: Occurring, confirmed • R: Restored, not confirmed • RC: Restored, confirmed
Occurred	The date and time on which the alarm occurred
Restored	The date and time on which the alarm was corrected
Checked	The date and time on which the alarm was confirmed
Level	The level set for the alarm
Group	The group set for the alarm
Frequency of Occurrences	The number of alarms that occurred
Cumulative Down Time	Cumulative down time
Down Time	Down time

(2) System alarm

Item	Description
Error No.	The No. of the error
Comment	System alarm message
Alarm Status	The status of the alarm • O: Occurring, not confirmed • OC: Occurring, confirmed • R: Restored, not confirmed • RC: Restored, confirmed
Occurred	The date and time on which the alarm occurred
Restored	The date and time on which the alarm was corrected
Checked	The date and time on which the alarm was confirmed
CH No.	Channel No.
Network/Station No./No.	Network No., station No., and module No.
Device	The name of the device

Item	Description
Screen Type	The type of the screen • BASE: Base screen • OVL1 to OVL5: Overlap windows 1 to 5 • SPI1 to SPI2: Superimpose windows 1 to 2 • DLG: Dialog window • PNL: Operation panel • KEY: Key window • RPT: Report screen
Definition Screen No.	The No. of the definition screen • B: Base screen • W: Window screen • R: Report screen
Object ID	Object ID
Function Name	Function Name
Drive Name	The name of the drive

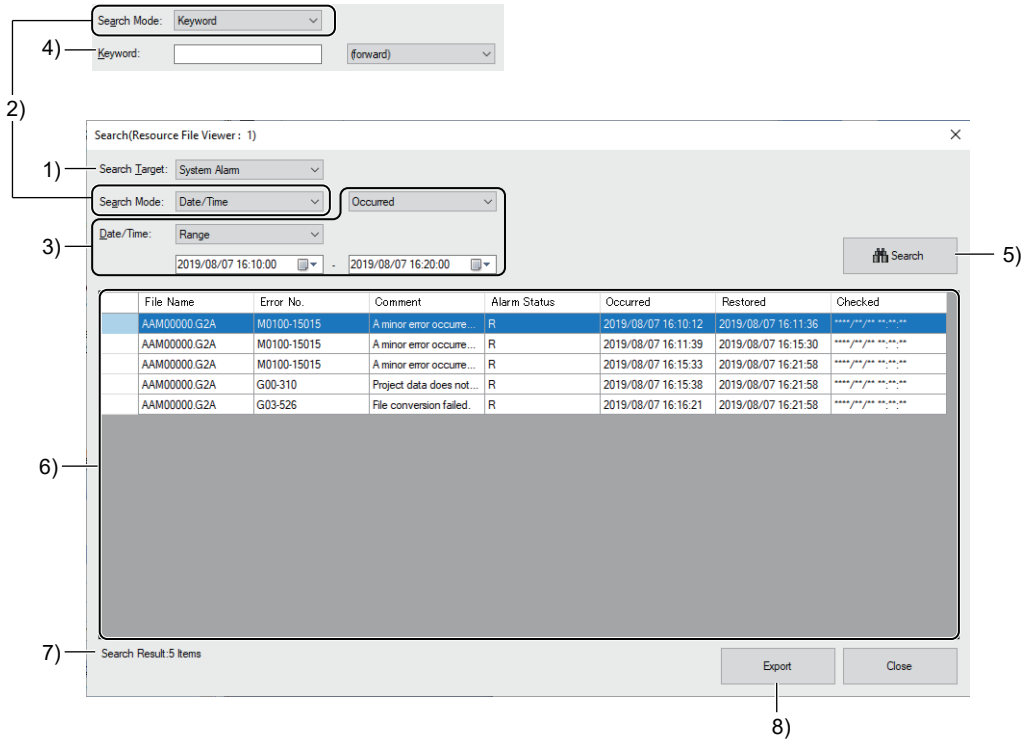
(3) Operation log

The output items depend on the operations to be recorded.
For the output items and information for each operation, refer to the following.

➟5.2.11 ■1 (2) Output items of operation logs

■4 [Search] dialog

Searches for the resource files displayed in the [Navigation] window.



1) **[Search Target]**
Select the file type of the resource data to be searched for.
The following shows selectable items.
- [User Alarm]
- [System Alarm]
- [Operation Log]

2) **[Search Mode]**
Select the method of searching.
The following shows selectable items.
- [Date/Time]
- [Keyword]

3) **[Date/Time]**

Set this field when [Search Mode] is set to [Date/Time].
The settings depend on the resource file type.

Resource file type	Setting
User alarm and system alarm log files	Select the date and time targeted for a search. The following shows selectable items. • [Occurred] • [Restored] • [Checked] Based on the selection above, select the search period. The following shows selectable items. • [Exact Match] • [On or Before] • [On or After] • [Range]
Operation log file	Based on the recorded dates and time of the operation logs, select the search period. The following shows selectable items. • [Exact Match] • [On or Before] • [On or After] • [Range]

4) **[Keyword]**
Enter here when [Search Mode] is set to [Keyword].
Specify the keyword for a search in the resource files.
Up to 1024 characters can be entered.
The characters are case-sensitive.
After a search with [Keyword] left blank, the search result will be 0.

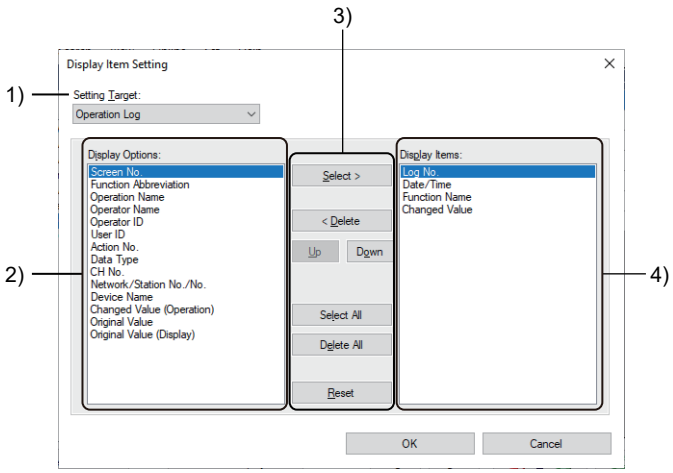
5) **[Search] button**
Start searching.
Search results are displayed in the search result list.

6) **Search result list**
Lists the search results.
When monitoring is interrupted, double-click any of the logs in the search result list to select the corresponding log in the resource file display area.

7) **[Search Result]**
The number of the resource files are displayed in the search result list.

8) **[Export]**
Saves the search result list as a CSV file or a Unicode text file.
Set [File name] and [Save as type] in the displayed dialog and click the [Save] button to export the search result list.

■5 [Display Item Setting] dialog (Resource File Viewer)



1) **[Setting Target]**
Select the file type of the resource data set as the display items.
The following shows selectable items.
• [User Alarm]
• [System Alarm]

• [Operation Log]

2) **[Display Options]**

Options of the items displayed in the search result list

Select an item and click the [Select] button to move the item to [Display Items].

3) **Operation buttons**

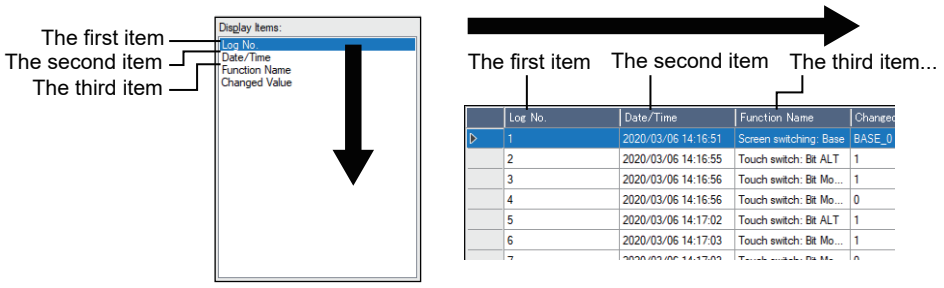
Item	Description
[Select] button	Moves the item selected in [Display Options] to [Display Items].
[Delete] button	Moves the item selected in [Display Items] to [Display Options].
[Up] button, [Down] button	Move the item selected in [Display Items] upward or downward.
[Select All] button	Moves all the items in [Display Options] to [Display Items].
[Delete All] button	Moves all the items in [Display Items] to [Display Options].
[Reset] button	Restores the items in [Display Items] to the default ones.

4) **[Display Items]**

Items to be displayed in the search result list

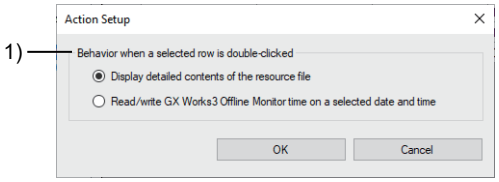
If any item is selected and the [Delete] button is clicked, the selected item is moved to [Display Options].

The items in the search result list are displayed in the order set for [Display Items].



If any item is selected and the [Up] button or the [Down] button is clicked, the position of the selected item is moved upward or downward.

■6 [Action Setup] dialog



1) **[Behavior when a selected row is double-clicked]**

Select the behavior when a log selected in the resource file display area is double-clicked.

• [Display detailed contents of the resource file]

Displays the [Detail Display] dialog to show the details of the log.

• [Read/write GX Works3 Offline Monitor time on a selected date and time]

Write the clock time of the row selected in Resource File Viewer to the GX Works3 offline monitor to monitor the events occurred at the same clock time.

11.16 Viewing an operation log file (Resource File Viewer)

Start the Resource File Viewer exe directly, and the operation log file is viewable.
The operation log file read from the GOT is viewable on the personal computer without being converted in a CSV or Unicode text format.

➥11.16.1 Specifications of Resource File Viewer (at independent startup)
11.16.2 How to use Resource File Viewer (at independent startup)
11.16.3 Screen layout of Resource File Viewer (at independent startup)

Point

This section explains direct startup of Resource File Viewer from the RCFView.exe (independent startup).
For startup of Resource File Viewer from the GOT offline monitor (linked startup), refer to the following.

➥11.15.7 How to use a Resource File Viewer module
11.15.8 Screen layout of a Resource File Viewer module

11.16.1 Specifications of Resource File Viewer (at independent startup)

➥■1 Operating environment of Resource File Viewer (at independent startup)
■2 Viewable operation log files
■3 Number of Resource File Viewer modules that can be started

■1 Operating environment of Resource File Viewer (at independent startup)

The operating environment of Resource File Viewer (at independent startup) is compliant with that of the GOT offline monitor.
For the operating environment of the GOT offline monitor, refer to the following.

➥11.15.1 ■1 Operating environment of the GOT offline monitor

■2 Viewable operation log files

Files with the following extensions are viewable.

- G2O
- CSV
- TXT

■3 Number of Resource File Viewer modules that can be started

Up to 16 Resource File Viewer modules can be started.
When a module is started, the smallest unused number from 1 to 16 is assigned to the module.

11.16.2 How to use Resource File Viewer (at independent startup)

➟■1 Obtaining a resource file
■2 Starting Resource File Viewer
■3 Updating the resource files

■1 Obtaining a resource file

Before starting Resource File Viewer, obtain a resource file.
The following shows how to obtain a resource file.

Resource file source	Method to obtain	Reference
GOT	Obtaining a resource file using GT Designer3	➟4.8.2 [Communicate with GOT] dialog
	Obtaining a resource file output to a USB memory or SD card	
	Obtaining a resource file from the GOT using Data Transfer Tool	➟Help For Data Transfer Tool
	Obtaining a resource file output to the network drive	➟5.3.15 Configuring the network drive settings ([Network Drive])
	Obtaining a resource file using the FTP server function	➟10.16 Transferring a File between the GOT and Peripheral Device (FTP Server Function)
GT Simulator3	Obtaining a resource file from the working folder	➟3.1.5 Destination to save data
GT SoftGOT2000	Obtaining a resource file from a virtual drive	➟GT SoftGOT2000 Version1 Operating Manual

For details on operation logs, refer to the following.

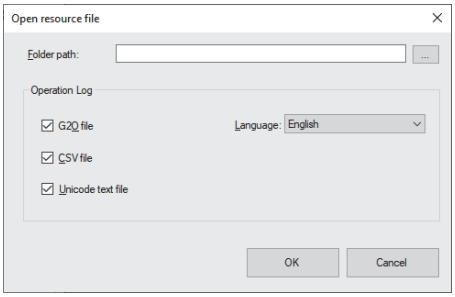
➟5.2.11 Configuring the settings for creating the operation history of the GOT ([Operation Log])

■2 Starting Resource File Viewer

The following shows how to start Resource File Viewer independently.

Step 1 Double-click the Resource File Viewer exe in the directory: (Path to the installation location of GT Designer3)\GTD3_2000\App\GSS3\RCFView\RCFView.exe.

Step 2 In the [Open resource file] dialog, select a resource file to be read to Resource File Viewer.
Click the [OK] button to start Resource File Viewer.



➟11.16.3 ■2 [Open resource file] dialog

■3 Updating the resource files

The following shows how to update the resource files or folder that stores the resource files.

(1) When the storage destination of the resource files has been changed

In the [Open resource file] dialog, set the path to the folder and click the [OK] button.

➟11.16.3 ■2 [Open resource file] dialog

(2) When a resource file has been changed, added, or deleted

Perform either of the following operations to update the resource files.

- Click the [Update] button in the [Navigation] window of the Resource File Viewer module.
- Click the [OK] button in the [Open resource file] dialog.

➟11.16.3 ■2 [Open resource file] dialog

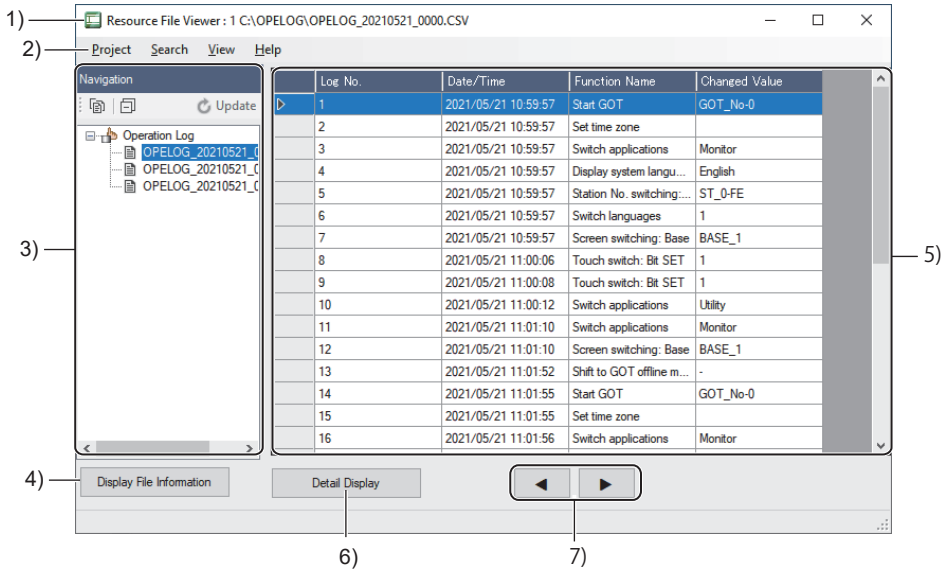
11.16.3 Screen layout of Resource File Viewer (at independent startup)

Point

This section explains startup of Resource File Viewer directly from the exe (independent startup).
For the screen layout at startup of Resource File Viewer from the GOT offline monitor (linked startup), refer to the following.

➟11.15.8 Screen layout of a Resource File Viewer module

The following shows the screen layout of Resource File Viewer (at independent startup).

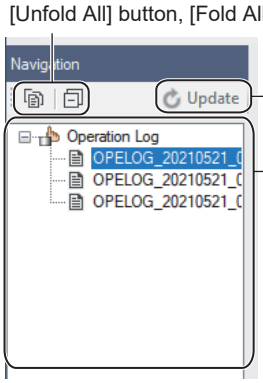


1) **Title bar**
Displays the Resource File Viewer module number and path to the displayed resource file.

2) **Menu bar**
Displays the operation menus of the Resource File Viewer module.

➟■1 Menus (at independent startup of a Resource File Viewer module)

3) **[Navigation] window**
Lists the resource files.



- **[Unfold All] button, [Fold All] button**
  Expands or collapses all items in the tree.
- **[!]**
  Appears when a resource file has been updated, added, deleted, or renamed.
- **[Update] button**
  Updates the resource files.
- **Resource file list**
  Displays the resource files with the extensions selected in the [Open resource file] dialog.

4) **[File Information] button**
Displays the [Display File Information] dialog.

➟11.15.8 ■2 [Display File Information] dialog

5) **Resource file display area**
Displays the details of the resource file selected in the [Navigation] window.
Set the display items in the [Display Item Setting] dialog.

➟11.15.8 ■5 [Display Item Setting] dialog (Resource File Viewer)

6) **[Detail Display] button**

Displays the [Detail Display] dialog.

➟11.15.8 ■3 [Detail Display] dialog

7) **Arrow buttons**

Switches between the resource files displayed in the resource file display area.

■1 Menus (at independent startup of a Resource File Viewer module)

(1) [Project]

Menu	Description	Shortcut key
[Exit Application]	Exits the Resource File Viewer module.	Alt+F4
[Open]	Select a resource file displayed in the resource file display area. ➟■2 [Open resource file] dialog	-

(2) [Search]

Menu	Description	Shortcut key
[Search]	Search for the resource files read to Resource File Viewer. Only operation logs are searched for. ➟11.15.8 ■4 [Search] dialog	Ctrl+F

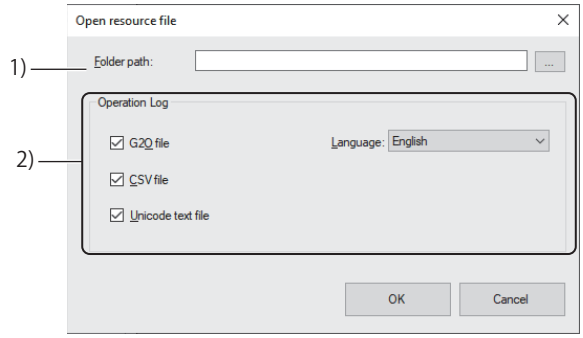
(3) [View]

Menu	Description	Shortcut key
[Navigation]	Displays or hides the [Navigation] window.	-
[Display Items]	Select the items to be displayed in the resource file display area. Only operation logs are selectable. ➟11.15.8 ■5 [Display Item Setting] dialog (Resource File Viewer)	-
[Switch Display Language]	Switch the display language of the Resource File Viewer module. ➟11.15.7 ■6 Switching the display language of Resource File Viewer	-

(4) [Help]

Menu	Description	Shortcut key
[GT Designer3 Help]	Displays GT Designer3 Help.	F1
[About Resource File Viewer]	Display the Resource File Viewer version. ➟■3 [About Resource File Viewer] dialog (at independent startup of a Resource File Viewer module)	-

■2 [Open resource file] dialog



1) **[Folder path]**
Set the path to the resource file to be read to the Resource File Viewer module.

2) **[Operation Log]**
Select the types of operation logs displayed in the Resource File Viewer module.

- [G2O file]
- [CSV file]
- [Unicode text file]

When selecting a G2O file, select the language displayed in the Resource File Viewer module.
The following system languages can be selected.

- [Japanese]
- [English]
- [Chinese (Simplified)]
- [Chinese (Traditional)]
- [Korean]

■3 [About Resource File Viewer] dialog (at independent startup of a Resource File Viewer module)

Select [Menu] → [Help] → [About Resource File Viewer] to display the [About Resource File Viewer] dialog.

12.APPENDICES

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12.1 GOT Internal Device

➡12.1.1 GOT bit register (GB)
12.1.2 GOT data register (GD)
12.1.3 GOT special register (GS)

The following data types cannot be used for GOT internal devices.
GOT bit register (GB): 64-bit
GOT data register (GD): 8-bit
GOT special register (GS): 8-bit, 64-bit

12.1.1 GOT bit register (GB)

Device	Function	Supported models
GB0 to GB9	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB10 to GB25	External Output for Y0 to YF	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB26 to GB29	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB30 to GB37	External Input for X0 to X7	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB38	Without Power Supply	
GB39	Clock Data Storage During ON	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB40	Always ON	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB41	Always OFF	
GB42	ON When Screen Switching Occurs	
GB43 to GB49	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB50 to GB57	External Input for X8 To XF	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Supported models
GB58 to GB63	Use prohibited	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB64 to GB2047	User area	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GB2048 to GB65535	User area	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■1 External Output for Y0 to YF (GB10 to GB25)

With the external I/O function, the signals are output to an external I/O device when the GB devices turn on.
The following shows the signal names for each GB device.

GB device	Signal name	GB device	Signal name	GB device	Signal name	GB device	Signal name
GB10	Y0 output	GB14	Y4 output	GB18	Y8 output	GB22	YC output
GB11	Y1 output	GB15	Y5 output	GB19	Y9 output	GB23	YD output
GB12	Y2 output	GB16	Y6 output	GB20	YA output	GB24	YE output
GB13	Y3 output	GB17	Y7 output	GB21	YB output	GB25	YF output

■2 External Input for X0 to X7 And X8 To XF (GB30 to GB37, GB50 to GB57)

With the external I/O function, the GB devices turn on when signals are input with an external I/O device.
The following shows the signal names for each GB device.

GB device	Signal name	GB device	Signal name	GB device	Signal name	GB device	Signal name
GB30	X0 input	GB34	X4 input	GB50	X8 input	GB54	XC input
GB31	X1 input	GB35	X5 input	GB51	X9 input	GB55	XD input
GB32	X2 input	GB36	X6 input	GB52	XA input	GB56	XE input
GB33	X3 input	GB37	X7 input	GB53	XB input	GB57	XF input

■3 Without Power Supply (GB38)

With the external I/O function, the GB devices turn on when the power for the external device is not supplied.

■4 Clock Data Storage during ON (GB39)

While this device is on, the clock data is stored to GD0 to GD6.
While this device is off, the clock data is not stored.

■5 Always ON (GB40)

Always ON

■6 Always OFF (GB41)

Always OFF

■7 ON When Screen Switching Occurs (GB42)

Turns on when switching the following screens occurs.

- Base screen
- Overlap window 1, 2, 3, 4, 5
- Superimpose window 1, 2
- When an overlap window is closed by opening a system window.

You need to turn off this device.

Point

Actions of the Always ON (GB40) and the Always OFF (GB41)

Actions of the Always ON (GB40) and the Always OFF (GB41) are the same as those of b4 and b5 in the Common Information 1 (GS0), respectively.

12.1.2 GOT data register (GD)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

GD devices are listed as follows.

Device	Function	Supported models
GD0 to GD2047	User area	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GD2048 to GD65535	User area	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■1 Storing clock data in GD devices (for GT21 and GS21)

While GB39 is on, the clock data is stored to GD0 to GD6.
For the details of the clock function, refer to the following.

➡5.3.5 Setting the GOT time setting method ([Time Setting])

The following shows the data to be stored to each GD device.

GD device	Data to be stored
GD0	Second (0 to 59)
GD1	Minute (0 to 59)
GD2	Hour (0 to 23)
GD3	Date (1 to 31)
GD4	Month (1 to 12)
GD5	Year (2000 to 2037)
GD6	Day of the week (0 to 6)

While GB39 is on, GD0 to GD6 are not usable as the user area.
To use GD0 to GD6 as the user area, turn off GB39.

■2 Designation of a station number using GD (only for the temperature controller connection, inverter connection and servo amplifier connection)

If 100 to 115 is set for a station number. in the setting of device, a station number can be designated by the value of GD10 to GD25.

The monitor target station number can be changed by simply changing a device value.

For how to set the devices, refer to the following.

➟6.1 Device Settings

(1) When a GD device is used together with the Station No. Switching device (GT27, GT25, GT23, and GS25)

The station No.switching device has priority.

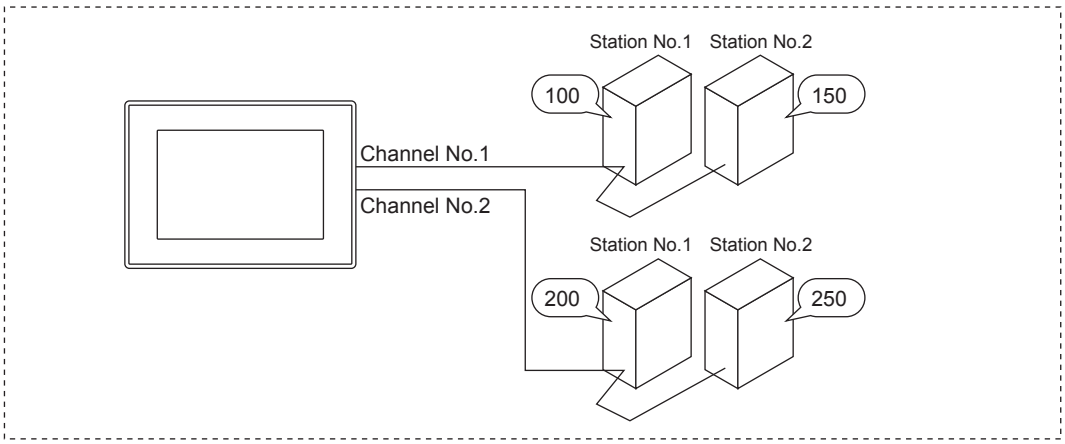
(2) When objects that monitor different channel numbers. are arranged on the same screen

To monitor different station Nos. by individual objects, use GD10 to GD25.

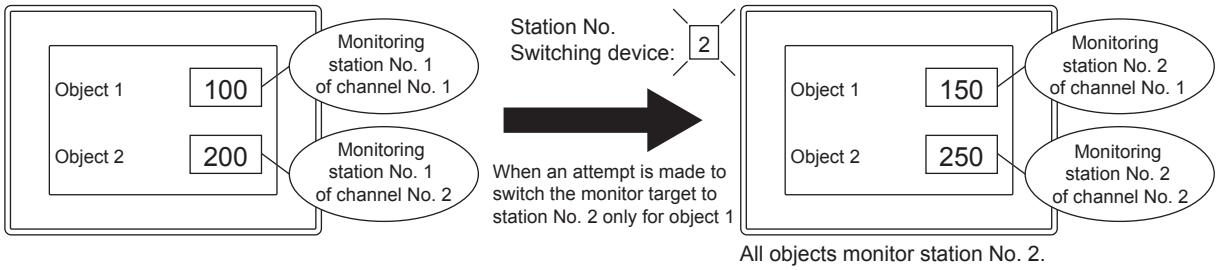
If station No. switching devices are used, the monitor target station number of an unintended object may be changed. (Especially when multiple switching target channel Nos. are set)

Example) When monitor target channel Nos. of station No. switching device are 1 and 2

The monitor target station Nos are switched at the timing of changing the value of GD10 to GD25.

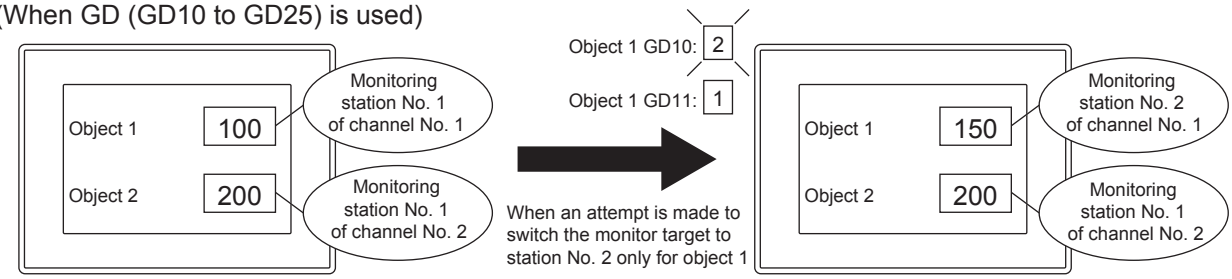


(When using the Station No.Switching device)



All objects monitor station No. 2.

(When GD (GD10 to GD25) is used)



Only object 1 monitors station No. 2.

12.1.3 GOT special register (GS)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The GOT special register includes the following two types.

Types	Range	Description
Write device	GS0 to GS383, GS640 to GS1791	Writing values by the GOT notifies a user of the status of GOT. ➟■1 Write device list
Read device	GS384 to GS639, GS1792 to GS2047	Writing values by a user controls the behavior of GOT. ➟■4 Read device list

Point

Functions affected by GOT special register

Some GOT special registers affect multiple functions on the GOT.

For the relation between each GOT special register and GOT functions, refer to the following.

➟Settings related to each function

■1 Write device list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Device	Function	Reference	Supported models
GS0	Common Information 1	➟12.1.3 ■2 (1) Common Information1 (GS0)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1	Base Screen Information	➟12.1.3 ■2 (2) Base Screen Information (GS1)	
GS2	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS3	GOT ID No.	➟12.1.3 ■2 (3) GOT ID No. (GS3)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS4 GS5	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS6	CC-Link G4 Station No. (CH1)	➟12.1.3 ■2 (4) CC-Link G4 Station No.(CH1) (GS6)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	GOT Multidrop Slave Station No. (CH1)	➟12.1.3 ■2 (5) GOT Multidrop Slave Station No. (CH1) (GS6)	
GS7	1 Second Binary Counter	➟12.1.3 ■2 (6) 1 Second Binary Counter (GS7)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS8	Scan Time of Monitor	➟12.1.3 ■2 (7) Scan Time of Monitor (GS8)	
GS9	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS10	Scan Time of Monitor	⇒12.1.3 ■2 (8) Scan Counter of Monitor (GS10)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS11 to GS13	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS14	Script Common Information	⇒12.1.3 ■2 (9) Script Common Information (GS14)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS15	Script Error Pointer	⇒12.1.3 ■2 (10) Script Error Pointer (GS15)	
GS16	Script No.	⇒12.1.3 ■2 (11) Script Error Data (GS16 to GS47)	
GS17	Error Code		
:	:		
GS46	Script No.		
GS47	Error Code		
GS48	Script Execute Pointer	⇒12.1.3 ■2 (12) Script Execute Pointer (GS48)	
GS49 to GS79	Script Execute No.	⇒12.1.3 ■2 (13) Script Execute No. (GS49 to GS79)	
GS80	Object Script Common Information	⇒12.1.3 ■2 (14) Object Script Common Information (GS80)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS81	Object Script Error Pointer	⇒12.1.3 ■2 (15) Object Script Error Pointer (GS81)	
GS82	Object Script User ID	⇒12.1.3 ■2 (16) Object Script Error Data (GS82 to GS113)	
GS83	Error Code		
:	:		
GS112	Object Script User ID		
GS113	Error Code		
GS114	Object Script Execute Pointer	⇒12.1.3 ■2 (17) Object Script Execute Pointer (GS114)	
GS115 to GS145	Object Script Execute ID	⇒12.1.3 ■2 (18) Object Script Execute No. (GS115 to GS145)	
GS146 to GS153	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS154	File operation function information	⇒12.1.3 ■2 (19) File operation function information (GS154)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS155 GS156	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS157	Latest Script Error Info Pointer	⇒12.1.3 ■2 (20) Latest Script Error Info Pointer (GS157)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS158	Latest Executed Script Pointer	⇒12.1.3 ■2 (21) Latest Executed Script Pointer (GS158)	
GS159	Latest Object Script Error Info Pointer	⇒12.1.3 ■2 (22) Latest Object Script Error Info Pointer (GS159)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS160	Latest Executed Object Script Pointer	⇒12.1.3 ■2 (23) Latest Executed Object Script Pointer (GS160)	

Device	Function	Reference	Supported models
GS161 to GS193	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS194 GS195	Ethernet Port 2 GOT IP Address	➟12.1.3 ■2 (24) Ethernet Port 2 GOT IP Address (GS194, GS195), Ethernet Port 1 GOT IP Address (GS198, GS199)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS196 to GS197	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS198 GS199	Ethernet Port 1 GOT IP Address	➟12.1.3 ■2 (24) Ethernet Port 2 GOT IP Address (GS194, GS195), Ethernet Port 1 GOT IP Address (GS198, GS199)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS200	Gateway Common Information	➟12.1.3 ■2 (25) Gateway Common Information (GS200)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS201	Mail Send Function Error Counter	➟12.1.3 ■2 (26) Mail Send Function Error Counter (GS201)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS202	Mail Send Function Error Code	➟12.1.3 ■2 (27) Mail Send Function Error Code (GS202)	
GS203 to GS205	Mail Send Function Error Occurrence Date And Time	➟12.1.3 ■2 (28) Mail Send Function Error Occurrence Date And Time (GS203 to GS205)	
GS206	Mail Send Function Send Source	➟12.1.3 ■2 (29) Mail Send Function Send Source (GS206)	
GS207	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS208	Number of Connected FTP Clients	➟12.1.3 ■2 (30) Number of Connected FTP Clients (GS208)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS209	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS210	Server Function Error Counter	➟12.1.3 ■2 (31) Server Function Error Counter (GS210)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS211	Server Function Error Code	➟12.1.3 ■2 (32) Server Function Error Code (GS211)	
GS212 to GS214	Server Function Error Occurrence Date And Time	➟12.1.3 ■2 (33) Server Function Error Occurrence Date And Time (GS212 to GS214)	
GS215 GS216	Server Function Error Client	➟12.1.3 ■2 (34) Server Function Error Client (GS215, GS216)	

Device	Function	Reference	Supported models
GS217 to GS219	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS220	Client Function Error Counter	⇒12.1.3 ■2 (35) Client Function Error Counter (GS220)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS221	Client Function Error Code	⇒12.1.3 ■2 (36) Client Function Error Code (GS221)	
GS222 to GS224	Client Function Error Occurrence Date And Time	⇒12.1.3 ■2 (37) Client Function Error Occurrence Date And Time (GS222 to GS224)	
GS225 GS226	Client Function Error Server	⇒12.1.3 ■2 (38) Client Function Error Counter (GS225, GS226)	
GS227 to GS229	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS230	No. Of Faulty Stations	⇒12.1.3 ■2 (39) No. Of Faulty Stations (GS230)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS231 to GS238	Ethernet Faulty Station Information	⇒12.1.3 ■2 (40) Ethernet Faulty Station Information (GS231 to GS238)	
GS239	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS240	External Authentication Status Notification	⇒12.1.3 ■2 (41) External Authentication Status Notification (GS240)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS241	Insufficient Security Level Notification	⇒12.1.3 ■2 (42) Insufficient Security Level Notification (GS241)	
GS242	Incorrect Login	⇒12.1.3 ■2 (43) Incorrect Login (GS242)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS243	Object Direct Input Reception Notification	⇒12.1.3 ■2 (44) Object Direct Input Reception Notification (GS243)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT25HS-V)
GS244	SoftGOT-GOT Link Status Control/Notification	⇒12.1.3 ■2 (45) SoftGOT-GOT Link Status Control/ Notification (GS244)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS245 to GS250	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS251	Drive Accessibility	⇒12.1.3 ■2 (46) Drive Accessibility (GS251)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS252	Error Detection Common Information	➟12.1.3 ■2 (47) Error Detection Common Information (GS252)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS253	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS254	Invalid Access from Ethernet Port 1, Invalid Access from Ethernet Port 2	➟12.1.3 ■2 (48) Invalid Access from Ethernet Port 1, Invalid Access from Ethernet Port 2 (GS254)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS255	Intensity Notification	➟12.1.3 ■2 (49) Intensity Notification (GS255)	
GS256	FA Transparent Status	➟12.1.3 ■2 (50) FA Transparent Status (GS256)	
GS257	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS258	Printer Status Information	➟12.1.3 ■2 (51) Printer Status Information (GS258)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT25HS-V)
GS259	Ethernet Printer Error Info	➟12.1.3 ■2 (52) Ethernet Printer Error Info (GS259)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS260	Integer←→Real Number Conversion Status	➟12.1.3 ■2 (53) Integer←→Real Number Conversion Status (GS260)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS261	Integer←→Real Number Conversion Error Code	➟12.1.3 ■2 (54) Integer←→Real Number Conversion Error Code (GS261)	
GS262	System Alarm GOT Error Channel No.	➟12.1.3 ■2 (55) System Alarm GOT Error Channel No. (GS262)	
GS263	System Alarm CPU Error Channel No.	➟12.1.3 ■2 (56) System Alarm CPU Error Channel No. (GS263)	
GS264	System Alarm Network Error Channel No.	➟12.1.3 ■2 (57) System Alarm Network Error Channel No.(GS264)	
GS265	SNTP Time Synchronization Setting Status	➟12.1.3 ■2 (58) SNTP Time Synchronization Setting Status (GS265)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS266 to GS272	SNTP Time Query Result	➟12.1.3 ■2 (59) SNTP Time Query Result (GS266 to GS272)	
GS273 GS274	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS275	Monitoring Interval Timeout Count	➟12.1.3 ■2 (60) Monitoring Interval Timeout Count (GS275)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS276	Document Display Status Notification	⇒12.1.3 ■2 (61) Document Display Status (GS276)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS277	Notify Automatic Connection Status	⇒12.1.3 ■2 (62) Notify Automatic Connection Status (GS277)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS278	Report Page Number	⇒12.1.3 ■2 (63) Report Page Number (GS278)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS279	Standard SD Card Information	⇒12.1.3 ■2 (64) Standard SD Card Information (GS279)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS280	Faulty Monitor Station signal (CH1)	⇒12.1.3 ■2 (65) Faulty Monitor Station signal (CH1 to CH14) (GS280, GS300, GS320, GS340)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS281 to GS288	Faulty Station Information (CH1)	⇒12.1.3 ■2 (66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS289 to GS298	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS299	Channel Observation Notification Information (CH1)	⇒12.1.3 ■2 (67) Channel Observation Notification Information (GS299, GS319, GS339, GS359)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS300	Faulty Monitor Station signal (CH2)	⇒12.1.3 ■2 (65) Faulty Monitor Station signal (CH1 to CH14) (GS280, GS300, GS320, GS340)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS301 to GS308	Faulty Station Information (CH2)	⇒12.1.3 ■2 (66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS309 to GS318	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS319	Channel Observation Notification Information (CH2)	⇒12.1.3 ■2 (67) Channel Observation Notification Information (GS299, GS319, GS339, GS359)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS320	Faulty Monitor Station signal (CH3)	⇒12.1.3 ■2 (65) Faulty Monitor Station signal (CH1 to CH14) (GS280, GS300, GS320, GS340)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS321 to GS328	Faulty Station Information (CH3)	⇒12.1.3 ■2 (66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)	

Device	Function	Reference	Supported models
GS329 to GS338	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS339	Channel Observation Notification Information (CH3)	➡12.1.3 ■2 (67) Channel Observation Notification Information (GS299, GS319, GS339, GS359)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS340	Faulty Monitor Station signal (CH4)	➡12.1.3 ■2 (65) Faulty Monitor Station signal (CH1 to CH14) (GS280, GS300, GS320, GS340)	
GS341 to GS348	Faulty Station Information (CH4)	➡12.1.3 ■2 (66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)	
GS349 to GS358	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS359	Channel Observation Notification Information (CH4)	➡12.1.3 ■2 (67) Channel Observation Notification Information (GS299, GS319, GS339, GS359)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS360	CC-Link G4 Station No. (CH1)	➡12.1.3 ■2 (4) CC-Link G4 Station No.(CH1) (GS6)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	GOT Multidrop Slave Station No. (CH1)	➡12.1.3 ■2 (5) GOT Multidrop Slave Station No. (CH1) (GS6)	
GS361	CC-Link G4 Station No. (CH2)	➡12.1.3 ■2 (4) CC-Link G4 Station No.(CH1) (GS6)	
	GOT Multidrop Slave Station No. (CH2)	➡12.1.3 ■2 (5) GOT Multidrop Slave Station No. (CH1) (GS6)	
GS362	CC-Link G4 Station No. (CH3)	➡12.1.3 ■2 (4) CC-Link G4 Station No.(CH1) (GS6)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	GOT Multidrop Slave Station No. (CH3)	➡12.1.3 ■2 (5) GOT Multidrop Slave Station No. (CH1) (GS6)	
GS363	CC-Link G4 Station No. (CH4)	➡12.1.3 ■2 (4) CC-Link G4 Station No.(CH1) (GS6)	
	GOT Multidrop Slave Station No. (CH4)	➡12.1.3 ■2 (5) GOT Multidrop Slave Station No. (CH1) (GS6)	
GS364 to GS375	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS376 GS377	GOT Network No./Station No. Notification (CH1)	➡12.1.3 ■2 (68) GOT Network No./Station No. Notification (CH1 to CH4) (GS376 to GS383)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS378 GS379	GOT Network No./Station No. Notification (CH2)		
GS380 GS381	GOT Network No./Station No. Notification (CH3)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS382 GS383	GOT Network No./Station No. Notification (CH4)		
GS384 to GS639	Read device	➡■4 Read device list	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS640 GS641	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS642	Error Device Data Transfer ID	⇒12.1.3 ■3 (1) Error Device Data Transfer ID (GS642)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS643	Device Data Transfer Error Count	⇒12.1.3 ■3 (2) Device Data Transfer Error Count (GS643)	
GS644	Device Data Transfer Processing Time	⇒12.1.3 ■3 (3) Device Data Transfer Processing Time (GS644)	
GS645	Device Data Transfer ID	⇒12.1.3 ■3 (4) Device Data Transfer ID (GS645)	
GS646	Device Data Transfer Min. Processing Time	⇒12.1.3 ■3 (5) Device Data Transfer Min. Processing Time (GS646)	
GS647	Device Data Transfer ID (Min. Processing Time)	⇒12.1.3 ■3 (6) Device Data Transfer ID (Min. Processing Time) (GS647)	
GS648	Device Data Transfer Max. Processing Time	⇒12.1.3 ■3 (7) Device Data Transfer Max. Processing Time (GS648)	
GS649	Device Data Transfer ID (Max. Processing Time)	⇒12.1.3 ■3 (8) Device Data Transfer ID (Max. Processing Time) (GS649)	
GS650 to GS653	Present Time	⇒12.1.3 ■3 (9) Present Time (GS650 to GS635)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS654	Touch Status External Notification (X-coordinate)	⇒12.1.3 ■3 (10) Touch Status External Notification (X-coordinate) (GS654)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS655	Touch Status External Notification (Y-coordinate)	⇒12.1.3 ■3 (11) Touch Status External Notification (Y-coordinate) (GS655)	
GS656	Touch Status External Notification (Touch Status)	⇒12.1.3 ■3 (12) Touch Status External Notification (Touch Status) (GS656)	
GS657	Trigger Backup Processing Setting No. Notification signal	⇒12.1.3 ■3 (13) Trigger Backup Processing Setting No. Notification (GS657)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS658 to GS665	Extended External Input Status Notification signal	⇒12.1.3 ■3 (14) Extended External Input Status Notification signal (GS658 to GS665)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS666 to GS667	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS668	Sound Status Information	⇒12.1.3 ■3 (15) Sound Status Information (GS668)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)

Device	Function	Reference	Supported models
GS669	Sound File Number During Play	➟12.1.3 ■3 (16) Sound File Number During Play (GS669)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS670	Number of Trigger Buffer Data	➟12.1.3 ■3 (17) Number of Trigger Buffer Data (GS670)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS671	Trigger Buffer Overflow Count	➟12.1.3 ■3 (18) Trigger Buffer Overflow Count (GS671)	
GS672 to GS675	Trigger Buffer Overflow Flag per Job	➟12.1.3 ■3 (19) Trigger Buffer Overflow Flag per Job (GS672 to GS675)	
GS676 to GS692	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS693	Notify Number of Hard Copy Output Screens signal	➟12.1.3 ■3 (20) Notify Number of Hard Copy Output Screens signal (GS693)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS694	Object Position upon Cursor Display (X Coordinate)	➟12.1.3 ■3 (21) Object Position upon Cursor Display (GS694 and GS695)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS695	Object Position upon Cursor Display (Y Coordinate)		
GS696	Expanded Base Screen Position (X Coordinate)	➟12.1.3 ■3 (22) Expanded Base Screen Position (GS696 and GS697)	
GS697	Expanded Base Screen Position (Y Coordinate)		
GS698 to GS979	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS980	Touch Position Color Acquisition Complete signal	➟12.1.3 ■3 (23) Touch Position Color Acquisition Complete signal (GS980)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS981 to GS983	Touch Position Color	➟12.1.3 ■3 (24) Touch Position Color (GS981 to GS983)	
GS984	Authorization Guarantee Status Notification signal	➟12.1.3 ■3 (25) Authorization Guarantee Status Notification signal (GS984)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS985 GS986	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS987	Executing File Transfer ID Notification	➟12.1.3 ■3 (26) Executing File Transfer ID Notification (GS987)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS988	Communicating FTP Server ID Notification	➟12.1.3 ■3 (27) Communicating FTP Server ID Notification (GS988)	
GS989	File Transfer Error No.	➟12.1.3 ■3 (28) File Transfer Error No. (GS989)	
GS990	File Transfer Status	➟12.1.3 ■3 (29) File Transfer Status (GS990)	
GS991	Number of Transfer Target Files	➟12.1.3 ■3 (30) Number of Transfer Target Files (GS991)	
GS992	Number of Transferred Files	➟12.1.3 ■3 (31) Number of Transferred Files (GS992)	

Device	Function	Reference	Supported models
GS993 to GS1009	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1010	Recipe Status	➟12.1.3 ■3 (32) Recipe Status(GS1010)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1011	Recipe Special Control Result	➟12.1.3 ■3 (33) Recipe Special Control Result (GS1011)	
GS1012	Recipe Special Control No.	➟12.1.3 ■3 (34) Recipe Special Control No. (GS1012)	
GS1013	Recipe Display (Record List) Target Recipe No.	➟12.1.3 ■3 (35) Recipe Display (Record List) Target Recipe No. (GS1013)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1014	Recipe Display (Record List) Selected Record No.	➟12.1.3 ■3 (36) Recipe Display (Record List) Selected Record No. (GS1014)	
GS1015	Recipe Display (Record List) Target Record No.	➟12.1.3 ■3 (37) Recipe Display (Record List) Target Record No. (GS1015)	
GS1016	Recipe Display (Record List) Record Manipulation Result	➟12.1.3 ■3 (38) Recipe Display (Record List) Record Manipulation Result (GS1016)	
GS1017 to GS1021	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1022	Video File Maintenance Information	➟12.1.3 ■3 (39) Video File Maintenance Information (GS1022)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1023	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1024	USB Drive Common Information	➟12.1.3 ■3 (40) USB Drive Common Information (GS1024)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21)
GS1025	RGB Signal Input Status Notification	➟12.1.3 ■3 (41) RGB Signal Input Status Notification (GS1025)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1026	RGB Signal Resolution (Horizontal)	➟12.1.3 ■3 (42) RGB Signal Resolution (Horizontal) (GS1026)	
GS1027	RGB Signal Resolution (Vertical)	➟12.1.3 ■3 (43) RGB Signal Resolution (Vertical) (GS1027)	
GS1028	RGB Signal Refresh Rate	➟12.1.3 ■3 (44) RGB Signal Refresh Rate (GS1028)	
GS1029	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1030	Video/RGB Display Object Status (CH1)	➟12.1.3 ■3 (45) Video/RGB Display Object Status (CH1 to CH2) (GS1030, GS1035)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1031	Video/RGB Display Object Horizontal Resolution (CH1)	➟12.1.3 ■3 (46) Video/RGB Display Object Horizontal Resolution (CH1 to CH2) (GS1031, GS1036)	
GS1032	Video/RGB Display Object Vertical Resolution (CH1)	➟12.1.3 ■3 (47) Video/RGB Display Object Vertical Resolution (CH1 to CH2) (GS1032, GS1037)	
GS1033	Video/RGB Display Object Refresh Rate (CH1)	➟12.1.3 ■3 (48) Video/RGB Display Object Refresh Rate (CH1 to CH2) (GS1033, GS1038)	
GS1034	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1035	Video/RGB Display Object Status (CH2)	➟12.1.3 ■3 (45) Video/RGB Display Object Status (CH1 to CH2) (GS1030, GS1035)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1036	Video/RGB Display Object Horizontal Resolution (CH2)	➟12.1.3 ■3 (46) Video/RGB Display Object Horizontal Resolution (CH1 to CH2) (GS1031, GS1036)	
GS1037	Video/RGB Display Object Vertical Resolution (CH2)	➟12.1.3 ■3 (47) Video/RGB Display Object Vertical Resolution (CH1 to CH2) (GS1032, GS1037)	
GS1038	Video/RGB Display Object Refresh Rate (CH2)	➟12.1.3 ■3 (48) Video/RGB Display Object Refresh Rate (CH1 to CH2) (GS1033, GS1038)	
GS1039	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1040	Wireless Processing Security Information	➟12.1.3 ■3 (49) Wireless Processing Security Information (GS1040)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1041 to GS1042	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1043 to GS1044	Ethernet Port 1 Subnet Mask Notification	➟12.1.3 ■3 (50) Ethernet Port 1 Subnet Mask Notification (GS1043, GS1044), Ethernet Port 2 Subnet Mask Notification (GS1045, GS1046)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1045 to GS1046	Ethernet Port 2 Subnet Mask Notification	➟12.1.3 ■3 (50) Ethernet Port 1 Subnet Mask Notification (GS1043, GS1044), Ethernet Port 2 Subnet Mask Notification (GS1045, GS1046)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1047 to GS1048	Wireless LAN Port Subnet Mask Notification	➟12.1.3 ■3 (51) Wireless LAN Port Subnet Mask Notification (GS1047 to GS1048)	
GS1049 to GS1050	Default Gateway Notification	➟12.1.3 ■3 (52) Default Gateway Notification (GS1049 to GS1050)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1051 to GS1059	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1060	Wireless LAN Status Notification	➡12.1.3 ■3 (53) Wireless LAN Status Notification (GS1060)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1061	Reception Field Intensity Notification	➡12.1.3 ■3 (54) Reception Field Intensity Notification (GS1061)	
GS1062 to GS1066	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1067 to GS1069	Access Point MAC Address Notification	➡12.1.3 ■3 (55) Access Point MAC Address Notification(GS1067 to GS1069)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1070 to GS1071	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1072	Number of Connected Stations	➡12.1.3 ■3 (56) Number of Connected Stations (GS1072)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1073 to GS1079	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1080	Label Name Resolution Status (Common)	➡12.1.3 ■3 (57) Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1081	Label Name Resolution Status (CH1)		
GS1082	Label Name Resolution Status (CH2)		
GS1083	Label Name Resolution Status (CH3)		
GS1084	Label Name Resolution Status (CH4)		
GS1085 to GS1109	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1110 to GS1111	HMS Communication Module Version	12.1.3 ■3 (58) HMS Communication Module Version (GS1110 to GS1111)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1112 to GS1113	HMS Communication Module Error Details	12.1.3 ■3 (59) HMS Communication Module Error Details (GS1112 to GS1113)	
GS1114	CC-Link IE TSN Module Communication Test Status	12.1.3 ■3 (60) CC-Link IE TSN Module Communication Test Status (GS1114)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1115	CC-Link IE TSN Module Communication Test Error	12.1.3 ■3 (61) CC-Link IE TSN Module Communication Test Error (GS1115)	
GS1116 to GS1129	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1130	Front USB Drive Additional Installation Information	12.1.3 ■3 (62) Front USB Drive Additional Installation Information (GS1130)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1131 to GS1219	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1220	Special Function Switch Special Control	12.1.3 ■3 (63) Special Function Switch Special Control (GS1220)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1221	iQSS Utility Special Control Error Sensor Device No.	12.1.3 ■3 (64) iQSS Utility Special Control Error Sensor Device No. (GS1221)	
GS1222 to GS1229	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1230	VNC Server Operation Status Notification	12.1.3 ■3 (65) VNC Server Operation Status Notification (GS1230)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
GS1231 GS1232	VNC Client IP Address	12.1.3 ■3 (66) Communicating VNC Client Information Notification (GS1231, GS1232)	
GS1233	VNC Server Authorization Guarantee Status Notification	12.1.3 ■3 (67) VNC Server Authorization Guarantee Status Notification (GS1233)	
GS1234 to GS1240	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1241	Insufficient Security Level Notification	12.1.3 ■3 (68) Insufficient Security Level Notification (GS1241)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1242 to GS1270	Use prohibited	12.1.3 ■3 (68) Insufficient Security Level Notification (GS1241)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1271	Report Output Status: Print Date/Time (Year) (GS1271)	➟12.1.3 ■3 (69) Report Output Status: Print Date/Time (Year) (GS1271)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1272	Report Output Status: Print Date/Time (Month) (GS1272)	➟12.1.3 ■3 (70) Report Output Status: Print Date/Time (Month) (GS1272)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1273	Report Output Status: Print Date/Time (Day) (GS1273)	➟12.1.3 ■3 (71) Report Output Status: Print Date/Time (Day) (GS1273)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1274	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1275	Report Output Status: Print Date/Time (Hour) (GS1275)	➟12.1.3 ■3 (72) Report Output Status: Print Date/Time (Hour) (GS1275)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1276	Report Output Status: Print Date/Time (Minute) (GS1276)	➟12.1.3 ■3 (73) Report Output Status: Print Date/Time (Minute) (GS1276)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1277	Report Output Status: Print Date/Time (Second) (GS1277)	➟12.1.3 ■3 (74) Report Output Status: Print Date/Time (Second) (GS1277)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1278	Report Output Status: Total Number of Pages (GS1278)	➟12.1.3 ■3 (75) Report Output Status: Total Number of Pages (GS1278)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1279	Report Output Status: Operator Name (GS1279)	➟12.1.3 ■3 (76) Report Output Status: Operator Name (GS1279)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1280	Faulty Monitor Station signal (CC-Link IE TSN)	➟12.1.3 ■3 (77) Faulty Monitor Station signal (CC-Link IE TSN) (GS1280)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1281 to GS1288	Faulty Station Information (CC-Link IE TSN)	➟12.1.3 ■3 (78) Faulty Station Information (CC-Link IE TSN) (GS1281 to GS1288)	
GS1289 to GS1296	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1297	CC-Link IE TSN Connection Status	➟12.1.3 ■3 (79) CC-Link IE TSN Connection Status (GS1297)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1298 to GS1399	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1400	Number of Connected GOT Mobile Function Clients	➟12.1.3 ■3 (80) Number of Connected GOT Mobile Function Clients (GS1400)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1401	GOT Mobile Function Connection Status	➟12.1.3 ■3 (81) GOT Mobile Function Connection Status (GS1401)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1402 to GS1459	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1460	Authorization Status Information	➟12.1.3 ■3 (82) Authorization Status Information (GS1460)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1461 to GS1462	Master GOT IP Address	➟12.1.3 ■3 (83) Master GOT IP Address (GS1461 to GS1462)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1463	Time Elapsed from Authorization Acquisition	➟12.1.3 ■3 (84) Time Elapsed from Authorization Acquisition (GS1463)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1464	Authorization Guarantee Time	➟12.1.3 ■3 (85) Authorization Guarantee Time (GS1464)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1465	Authorization Management Information	➟12.1.3 ■3 (86) Authorization Management Information (GS1465)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1466 to GS1467	Authorized Equipment IP Address	➟12.1.3 ■3 (87) Authorized Equipment IP Address (GS1466 to GS1467)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1468	Authorized Equipment Type	➟12.1.3 ■3 (88) Authorized Equipment Type (GS1468)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1469	Authorized Equipment ID Information	➟12.1.3 ■3 (89) Authorized Equipment ID Information (GS1469)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1470	Authorization Use Time	➟12.1.3 ■3 (90) Authorization Use Time (GS1470)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1471 to GS1499	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1500	GOT Ethernet Setting Change Status	➟12.1.3 ■3 (91) GOT Ethernet Setting Change Status (GS1500)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1501 to GS1791	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1792 to GS2047	Read device	➟■4 Read device list	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■2 Write device (GS0 to GS383)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the GOT models that support each device, refer to the following.

➟■1 Write device list

(1) Common Information1 (GS0)

- b0: Repeats turning on and off for every communication cycle (For channel No. 1) *1
- b1: Turns on when the base or window screen is switched and remains on until a cycle of the on-screen setting processing is complete.
  (This applies to the station No. switching, security level change or language switching.)
  It is used to check (debug) the screen switch setting processing.
- b2: Turns on when the base or window screen is switched and remains on until a cycle of the trigger action processing for the project and screen display is complete.
  (This applies to the station No. switching, security level change or language switching.)
  It is used to activate the trigger action only once in switching the screen.
- b3: Turns on while the initial screen is displayed at power-on.
  It turns off when the base screen is switched over.
- b4: Always on
- b5: Always off
- b6 to b7: Use prohibited
- b8: Repeats turning on and off for every communication cycle (For channel No. 2) *1
- b9: Repeats turning on and off for every communication cycle (For channel No. 3) *1
- b10: Repeats turning on and off for every communication cycle (For channel No. 4) *1
- b11 to b14: Use prohibited
- b15: Turns on in the screen gesture mode.

*1 One cycle is the elapsed time for the GOT to read the objects on the current screen display and the data set in the common settings.

Point

Actions of b4 and b5 in the Common Information 1 (GS0)

Actions of b4 and b5 in the Common Information 1 (GS0) are the Always ON (GB40) and the Always OFF (GB41) respectively.

(2) Base Screen Information (GS1)

- b0: Repeats turning on and off for every communication cycle while the base screen is displayed. (For channel No. 1)
- b1: Turns on when the base screen is switched and remains on until a cycle of the on-screen setting processing is complete.

(This applies to the station No. switching, security level change or language switching.)
It is used to check (debug) the screen switch setting processing.

- b2: Turns on when the base screen is switched and remains on until a cycle of the on-screen setting processing is complete. (This applies to the station No. switching, security level change or language switching.)
  It is used to activate the trigger action only once in switching the screen.
- b3 to b7: Use prohibited
- b8: Repeats turning on and off for every communication cycle while the base screen is displayed. (For channel No. 2)
- b9: Repeats turning on and off for every communication cycle while the base screen is displayed. (For channel No. 3)
- b10: Repeats turning on and off for every communication cycle while the base screen is displayed. (For channel No. 4)
- b11 to b15: Use prohibited

(3) GOT ID No. (GS3)

Notifies the GOT ID number.
The notified GOT ID numbers range from 0 to 32767.
Notifies 0 when no GOT ID number is used.

(4) CC-Link G4 Station No.(CH1) (GS6)

For the CC-Link connection (via G4), the station number of the connected AJ65BT-G4-S3 or AJ65BT-R2N is stored when the GOT is powered on.
When the multi-channel function is used, the station number of channel No. 1 is stored.
The station numbers of channel No. 2 to 4 are stored to GS361 to GS363.

(5) GOT Multidrop Slave Station No. (CH1) (GS6)

For the multidrop connection, the station number of the connected GOT is stored when the GOT is powered on.
When the multi-channel function is used, the station number of channel No. 1 is stored.
The station numbers of channel No. 2 to 4 are stored to GS361 to GS363.

(6) 1 Second Binary Counter (GS7)

Starts counting every second immediately after the power is switched on.
When a value is written by a user, counting starts from the written value.
It is used to check how long the time has elapsed from specific timing (operation and others).
Data type: Unsigned binary
Counting range: 0 to 65535
When counting reaches the maximum value, a new counting starts from 0.

(7) Scan Time of Monitor (GS8)

Stores the time (ms) of a complete processing cycle set on the display screen as binary data.
Data will be updated when all of the processing set on the display screen is complete.
An error of plus or minus 10 ms may be produced depending on the processing settings.
Also, it does not apply to the objects that have not been processed by the security function.
It is useful for load checking (debug) of the monitor processing.

(8) Scan Counter of Monitor (GS10)

Counts up the number of cycles every time the processing cycle set on the display screen is complete.
It is used to check (debug) the number of scan of monitor.
Data type: Unsigned binary
Counting range: 0 to 65535
When counting reaches the maximum value, a new counting starts from 0.

(9) Script Common Information (GS14)

The following script types are supported: project script, screen script, and script part.
Stores information of error occurrence.

- b0: Turns on in error occurrence
- b1 to b6: Use prohibited
- b7: Turns on in BCD error occurrence
- b8: Turns on in zero division error occurrence
- b9 to b11: Use prohibited
- b12: Turns on in communication error occurrence (including access to the device out of range)
- b13 to b15: Use prohibited

(10)Script Error Pointer (GS15)

The following script types are supported: project script and screen script.
Stores a number showing the start device number of the devices where the latest error record is stored.
Each error record is stored in two Script Error Data devices (GS16 to GS47).
The value at GS15 is changed as shown below each time an error occurs.
-1 → 16 → 18 → ⋯ → 46 (The value is back to 16 and changes repeatedly.)
The following shows the relationship between the value of GS15 and the storage location of the latest error record.

- When GS15 stores 16, the latest error record is stored in GS16 and GS17.
- When GS15 stores 46, the latest error record is stored in GS46 and GS47.

(11)Script Error Data (GS16 to GS47)

The following script types are supported: project script and screen script.
Store the script numbers and error codes for the error-generated scripts.
Two word devices are used for one error.
If the number of errors is 17 or more, the error records are overwritten starting from the oldest one.

(12)Script Execute Pointer (GS48)

The following script types are supported: project script and screen script.
Stores the device number of the device where the latest script execution number is stored.
Each script execution number is stored in one Script Execute No. device (GS49 to GS79).
The value at GS48 changes as shown below each time the project script and the screen script are executed.
-1 → 49 → 50 → ⋯ → 79 (The value is back to 49 and changes repeatedly.)
The following shows the relationship between the value of GS48 and the storage location of the latest script execution number.

- When GS48 stores 49, the latest script execution number is stored in GS49.
- When GS48 stores 79, the latest script execution number is stored in GS79.

(13)Script Execute No. (GS49 to GS79)

The following script types are supported: project script and screen script.
Store the script numbers of the executed scripts.
One word device is used for one script.
If the number of the executed scripts is 32 or more, the script execution records are overwritten starting from the oldest one.

(14)Object Script Common Information (GS80)

Stores information of error occurrence.

- b0: Turns on in error occurrence
- b1 to b6: Use prohibited
- b7: Turns on in BCD error occurrence
- b8: Turns on in zero division error occurrence
- b9 to b11: Use prohibited
- b12: Turns on in communication error occurrence (including access to the device out of range)
- b13 to b15: Use prohibited

(15)Object Script Error Pointer (GS81)

Stores a number showing the start device number of the devices where the latest error record is stored.
Each error record is stored in two Object Script Error Data devices (GS82 to GS113).
The value at GS81 changes as shown below each time an error occurs.
-1 → 82 → 84 → ⋯ → 112 (The value is back to 16 and changes repeatedly.)
The following shows the relationship between the value of GS81 and the storage location of the error code of the latest error.

- When GS81 stores 82, the latest error record is stored in GS82 and GS83.
- When GS81 stores 112, the latest error record is stored in GS112 and GS113.

(16)Object Script Error Data (GS82 to GS113)

Store the script user ID numbers and error codes for the error-generated object scripts.
Two word devices are used for one error.
If the number of errors is 17 or more, the error records are overwritten starting from the oldest one.

(17)Object Script Execute Pointer (GS114)

Stores the device number of the device where the latest script execution number is stored.
Each script execution number is stored in one Object Script Execute No. device (GS115 to GS145).
The value at GS114 changes as shown below each time an object script is executed.
-1 → 115 → 116 → ⋯ → 145 (The value is back to 115 and changes repeatedly.)
The following shows the relationship between the value of GS114 and the storage location of the latest script execution number.

- When GS114 stores 115, the latest script execution number is stored in GS115.
- When GS114 stores 145, the latest script execution number is stored in GS145.

(18)Object Script Execute No. (GS115 to GS145)

Store the script numbers of the executed scripts.
One word device is used for one script.
If the number of the executed scripts is 32 or more, the script execution records are overwritten starting from the oldest one.

(19)File operation function information (GS154)

The following script types are supported: project script and screen script.
Notifies the execution status of the file operation function.

- b0: Turns on during the executing for a file operation function.
  Turns off when the file operation function is completed.
- b1 to b14: Use prohibited
- b15: Turns on when an error occurs with a file operation function.
  The bit turns off when the next file operation function is completed normally.
  This bit does not turn off even if the Script Error Clear signal (GS384.b0) is turned on.

(20)Latest Script Error Info Pointer (GS157)

The following script types are supported: project script, screen script, and script part.
Stores a number showing the devices where the latest error record is stored.
Data type: Signed binary
Initial value: -1
Calculate the start device number of the devices storing the latest error record by using the following expression.

- GS392 + (GS157 × 8)

(21)Latest Executed Script Pointer (GS158)

The following script types are supported: project script, screen script, and script part.
Stores a number showing the devices where the latest script execution record is stored.
Data type: Signed binary
Initial value: -1
Calculate the start device number of the devices storing the latest script execution record by using the following expression.

- GS396 + (GS158 × 8)

(22)Latest Object Script Error Info Pointer (GS159)

Stores a number showing the area where the latest object script error record is stored.
Data type: Signed binary
Initial value: -1
Calculate the start device number of the devices storing the latest error record by using the following expression.

- GS432 + (GS159 × 8)

(23)Latest Executed Object Script Pointer (GS160)

Stores a number showing the area where the latest object script execution record is stored.
Data type: Signed binary
Initial value: -1
Calculate the start device number of the devices storing the latest script execution record by using the following expression.

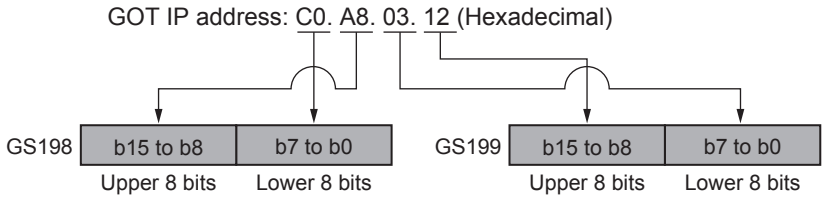
- GS436 + (GS160 × 8)

(24)Ethernet Port 2 GOT IP Address (GS194, GS195), Ethernet Port 1 GOT IP Address (GS198, GS199)

Stores the GOT IP address that is specified for the GOT Ethernet interface in hexadecimal.
The following shows the IP address to be stored to each device.

GOT	GOT IP address	Destination device
GT27, GT25-S, GT25-V (excluding GT2505-V)	GOT IP address for the Ethernet standard port	GS198, GS199
	GOT IP address for the Ethernet extended port	GS194, GS195
GT25-W, GS25	GOT IP address for Ethernet standard port 1	GS198, GS199
	GOT IP address for Ethernet standard port 2	GS194, GS195
GT2505-V, GT25HS-V, GT23, GT21, GS21	GOT IP address for the Ethernet standard port	GS198, GS199

Example) When the GOT IP address for the Ethernet standard port of GT27 is 192.168.3.18 (decimal)



(25)Gateway Common Information (GS200)

Notifies the common information of the gateway function
GT21 and GS21 support b1 and b2.

- b0: Turns on while the mail send function is ready.
- b1: Turns on while the FTP server function is ready.
- b2: Turns on when an FTP client is logged in.
- b3: ON while the server function is ready.
- b4: ON while the client function is ready.
- b5 to b10: Use prohibited
- b11: Turns on when an error occurs in the mail send function.
- b12 to b13: Use prohibited
- b14: Turns on when an error occurs in the server function.
- b15: Turns on when an error occurs in the client function.

(26)Mail Send Function Error Counter (GS201)

Counts the number of the errors that have occurred in the mail send function.

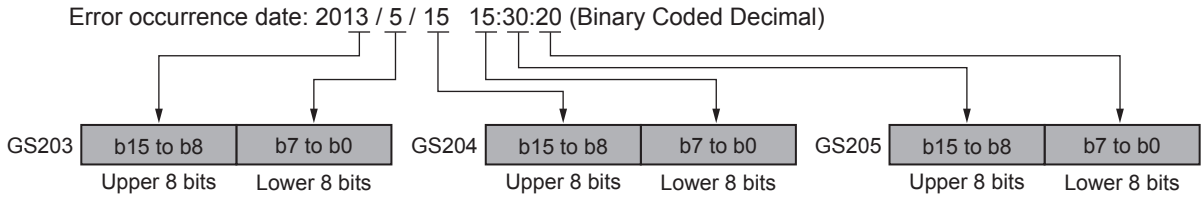
(27)Mail Send Function Error Code (GS202)

Stores the codes of the errors that have occurred in the mail send function.
For the error codes to be stored, refer to the following.

➟10.15.8 ■3 Error code and error message of the mail send function

(28)Mail Send Function Error Occurrence Date And Time (GS203 to GS205)

Stores the day and the time of the error occurrence with BCD code.
Example) When the error occurrence date is 15:30:20 May 15, 2013



(29)Mail Send Function Send Source (GS206)

Notifies the type of the function that has caused the error in the mail sending process.

- 0: No error
- 1: User alarm observation
- 2 or more: Use prohibited

(30)Number of Connected FTP Clients (GS208)

Notifies the number of the clients connected to the FTP server.
Clients are counted when the OPEN command (an FTP command) is executed.

(31)Server Function Error Counter (GS210)

Counts the number of the errors that have occurred in the server function.

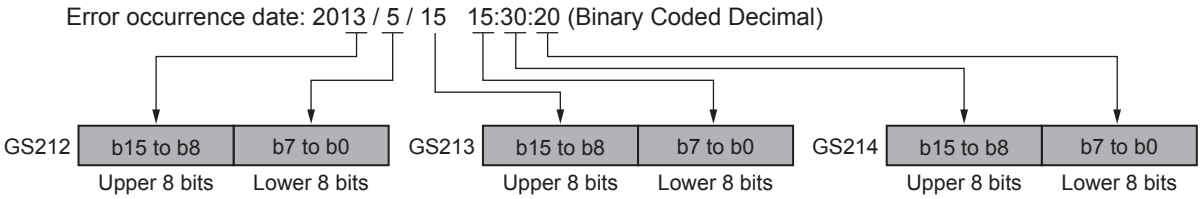
(32)Server Function Error Code (GS211)

Stores the codes of the errors that have occurred in the server function.
The following shows the list of the error code to be stored.

Error code	Details of error and cause	Corrective action
490	A script was used for monitoring the gate device that executed the script.	• Change the monitor destination GOT specified in the script to another GOT. • Monitor the PLC devices directly without using the script.
491	A station that does not exist was accessed.	Check the network number, the PLC station number, and the Ethernet settings of the monitor destination.
492	A communication timeout error has occurred.	• Specify a longer communication timeout period. ➟5.5.1 ■4 [Controller Setting] • Check the network. (Check if firewall exists, execute Ping, or take other actions.) • Check for cable disconnection, and check the module mounting status.
493	A communication error has occurred.	• Check the network. (Check if firewall exists, execute Ping, or take other actions.) • Check for cable disconnection, and check the module mounting status.

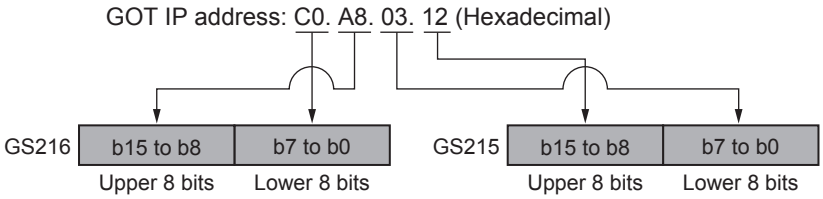
(33)Server Function Error Occurrence Date And Time (GS212 to GS214)

Stores the day and the time of the error occurrence with BCD code.
Example) When the error occurrence date is 15:30:20 May 15, 2013



(34)Server Function Error Client (GS215, GS216)

Stores the IP address of the GOT (client) where the error occurred in hexadecimal.
Example) When the GOT IP address is 192.168.3.18 (decimal)



(35)Client Function Error Counter (GS220)

Counts the number of the errors that have occurred in the client function.

(36)Client Function Error Code (GS221)

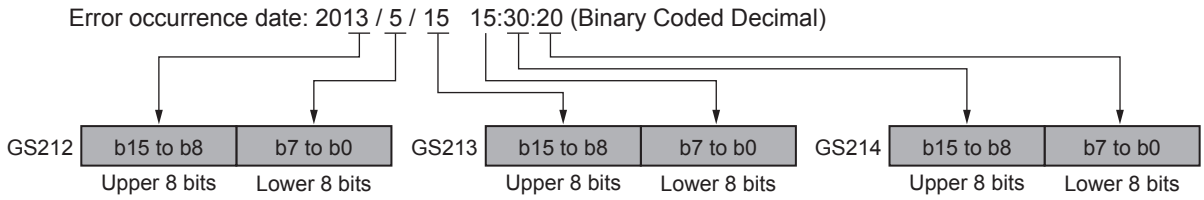
Stores the codes of the errors that have occurred in the client function.
The following shows the list of the error code to be stored.

Error code	Details of error and cause	Corrective action
490	A script was used for monitoring the gate device that executed the script.	• Change the monitor destination GOT specified in the script to another GOT. • Monitor the PLC devices directly without using the script.
491	A station that does not exist was accessed.	Check the network number, the PLC station number, and the Ethernet settings of the monitor destination.
492	A communication timeout error has occurred.	• Specify a longer communication timeout period. ➟5.5.1 ■4 [Controller Setting] • Check the network. (Check if firewall exists, execute Ping, or take other actions.) • Check for cable disconnection, and check the module mounting status.
493	A communication error has occurred.	• Check the network. (Check if firewall exists, execute Ping, or take other actions.) • Check for cable disconnection, and check the module mounting status.

(37)Client Function Error Occurrence Date And Time (GS222 to GS224)

Stores the day and the time of the error occurrence with BCD code.

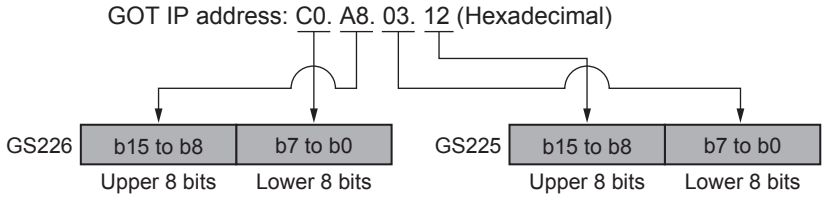
Example) When the error occurrence date is 15:30:20 May 15, 2013



(38)Client Function Error Counter (GS225, GS226)

Stores the IP address of the GOT (server) where the error occurred in hexadecimal.

Example) When the GOT IP address is 192.168.3.18 (decimal)



(39)No. Of Faulty Stations (GS230)

Stores the number of stations where CPU error was detected.

The station where error occurs can be checked with GS231 to GS238.

➟(40) Ethernet Faulty Station Information (GS231 to GS238)

When the redundant setting is configured, these GS devices do not operate.

- b0 to b7: Stores the number of faulty stations.
- b8 to b15: Use prohibited

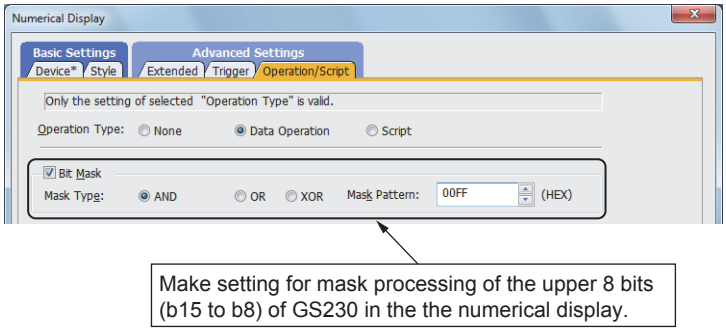
Point

Monitoring GS230 by numerical display

To monitor GS230 by numerical display and others, perform mask processing using data operation function as follows.

➟6.5.5 ■4 Setting data operations

Example) Setting of numerical display (the [Operation/Script] tab)



(40)Ethernet Faulty Station Information (GS231 to GS238)

When the Ethernet connection is used, the bit corresponding to the station with a communication error turns on.

When the multi-channel connection is used, the Ethernet-connected controller with the smallest channel number is monitored.

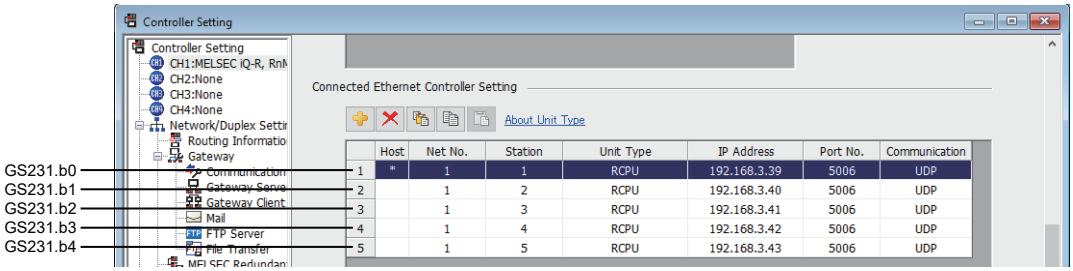
To monitor the faulty station information of multiple channels, use the following GOT special registers (GS).

➟(66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)

0: No error

1: Error

When the Ethernet module has restored from the error, the bit turns off.



Device	Ethernet setting No.															
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS231	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS232	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS233	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS234	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS235	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS236	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS237	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS238	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

The following shows the communication drivers that support the devices.
○ : Supported, - : Not supported

Communication driver	Supported/ Unsupported		Communication driver	Supported/ Unsupported	
	Host station	Other stations		Host station	Other stations
[Bus Q]	-	-	[Panasonic MINAS A5]	-	-
[Bus A/QnA]	-	-	[Muratec MPC]	-	-
[Serial(MELSEC)]	-	-	[Computer]	-	-
[AJ71QC24, MELDAS C6*]	-	-	[MELSERVO-J4,J3,J2S/M,JE]	-	-
[AJ71C24/UC24]	-	-	[FREQROL 500/700/800,SENSORLESS SERVO]	-	-
[CC-Link(G4)]	-	-	[FREQROL 800]	-	-
[MELSECNET/H]	-	-	[FREQROL(Batch monitor)]	-	-
[CC-Link Ver.2(ID)]	-	-	[OMRON THERMAC/INPANEL NEO]	-	-
[CC-Link IE Controller Network]	-	-	[OMRON Digital Temperature Controller]	-	-
[CC-Link IE Field Network]	-	-	[azbil SDC/DMC]	-	-
[CC-Link IE TSN]	-	-	[azbil DMC50]	-	-
[MELSEC-FX]	-	-	[RKC SR Mini HG(MODBUS)]	-	-
[MELSEC-WS]	-	-	[FUJI Temperature Controller/Digital Controller]	-	-
[MEI Nexgenie]	-	-	[YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced]	-	-
[Multidrop(Slave)]	-	-	[Shinko Technos Controller]	-	-
[OMRON SYSMAC]	-	-	[CHINO MODBUS device]	-	-
[YASKAWA GL]	-	-	[MODBUS/RTU Master]	-	-
[YASKAWA CP9200 (H)]	-	-	[MODBUS/RTU Slave]	-	-
[YASKAWA CP9300MS (MC compatible)]	-	-	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	○	○
[YASKAWA MP2000/MP900/CP9200SH]	-	-	[Ethernet(FX), Gateway]	○	○
[AB SLC500, AB 1:N]	-	-	[Ethernet(FREQROL), Gateway]	○	○
[AB MicroLogix]	-	-	[Ethernet(FREQROL(Batch monitor)), Gateway]	○	○
[AB MicroLogix(Extended)]	-	-	[Ethernet(YASKAWA), Gateway]	○	○
[AB Control/CompactLogix]	-	-	[Ethernet(YASKAWA MP3000), Gateway]	○	○

Communication driver	Supported/ Unsupported		Communication driver	Supported/ Unsupported	
	Host station	Other stations		Host station	Other stations
[SHARP JW]	-	-	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	○	○
[TOSHIBA PROSEC T/V]	-	-	[Ethernet(YOKOGAWA), Gateway]	○	○
[HITACHI IES HIDIC H]	-	-	[Ethernet(AB), Gateway]	○	○
[HITACHI IES HIDIC H(Protocol2)]	-	-	[Ethernet(AB MicroLogix), Gateway]	○	○
[Panasonic MEWNET-FP]	-	-	[Ethernet(AB Tag), Gateway]	○	○
[Panasonic MEWTOCOL-7]	-	-	[Ethernet(OMRON), Gateway]	○	○
[SIEMENS S7-200]	-	-	[Ethernet(OMRON NJ/NX), Gateway]	○	○
[SIEMENS S7-300/400]	-	-	[Ethernet(TOSHIBA nv), Gateway]	○	○
[YOKOGAWA FA500/FA-M3/STARDOM]	-	-	[Ethernet(HITACHI IES), Gateway]	○	○
[Serial(KEYENCE)]	-	-	[Ethernet(HITACHI), Gateway]	○	○
[JTEKT TOYOPUC-PC]	-	-	[Ethernet(LS Industrial Systems XGK), Gateway]	○	○
[HITACHI S10mini/S10V]	-	-	[Ethernet(SIEMENS S7), Gateway]	○	○
[FUJI MICREX-F]	-	-	[Ethernet(SIEMENS OP), Gateway]	○	○
[FUJI MICREX-SX SPH]	-	-	[Ethernet(FUJI), Gateway]	○	○
[GE (SNP-X)]	-	-	[Ethernet(KEYENCE), Gateway]	○	○
[SHIBAURA MACHINE TCmini]	-	-	[MODBUS/TCP Master, Gateway]	-	-
[KOYO KOSTAC/DL]	-	-	[MODBUS/TCP Slave, Gateway]	-	-
[LS Industrial Systems MASTER-K]	-	-	[PROFIBUS DP]	-	-
[Hirata HNC]	-	-	[DeviceNet]	-	-
[IAI ROBO CYLINDER]	-	-	[Ethernet(MICROCOMPUTER)]	-	-
[IAI X-SEL]	-	-	[Ethernet(SLMP), Gateway]	○	○
[SICK Flexi Soft]	-	-	[Ethernet(MELSERVO), Gateway]	○	○
[Panasonic MINAS A4]	-	-	[Ethernet(CC-Link IE Field Network Basic)]	-	-

(41)External Authentication Status Notification (GS240)

- b0: Turns on when the authentication by an external authentication device succeeds.
  Turns off when the login screen or operator re-authentication screen is displayed regardless of the authentication method.
- b1: Turns on when the authentication by an external authentication device fails.
  Turns off when the login screen or operator re-authentication screen is displayed regardless of the authentication method.
- b2 to b12: Use prohibited
- b13: Turns on while the login screen or operator re-authentication screen is displayed.
- b14: Turns on while the login screen for the authentication by an external authentication device is displayed.
- b15: Turns on while the external authentication ID input key window is displayed.

Point

Notifying the authentication mode by b13 and b14

The status of the Operator Authentication Reception signal and the External Authentication Reception signal notifies the user of the authentication mode currently being accepted.

Operator Authentication Reception signal (GS240.b13)	External Authentication Reception signal (GS240.b14)	Authentication mode
OFF	OFF	The operator authentication not accepted
ON	OFF	The password authentication accepted (operator name + password)
ON	ON	The external authentication accepted

This notifies the user of switching to the auxiliary authentication.

(42)Insufficient Security Level Notification (GS241)

The bit turns on when the screen cannot be displayed because of the insufficient security level.

- b0: Use prohibited
- b1: Turns on when the overlap window 1 cannot be displayed.
- b2: Turns on when the overlap window 2 cannot be displayed.
- b3: Turns on when the superimpose window 1 cannot be displayed.
- b4: Turns on when the superimpose window 2 cannot be displayed.
- b5 to b7: Use prohibited
- b8: Turns on when a called screen on the base screen cannot be displayed.
- b9: Turns on when a called screen on the overlap window 1 cannot be displayed.
- b10: Turns on when a called screen on the overlap window 2 cannot be displayed.
- b11: Turns on when a called screen on the superimpose window 1 cannot be displayed.
- b12: Turns on when a called screen on the superimpose window 2 cannot be displayed.
- b13 to b15: Use prohibited

b1 to b4 turn off when a screen is displayed.
b1 to b4 turn off when 0 is stored in a screen switching device.
b8 to b12 turn off when a called screen is displayed.

(43)Incorrect Login (GS242)

- b0: Turns on when an incorrect login is detected.

  Turns off upon the lapse of the set login block time or unlocking an operator account by logging in as the administrator.
- b1: Turns on when any operator account is locked.

  Turns off when no operator account is locked.
- b2 to b15: Use prohibited

(44)Object Direct Input Reception Notification (GS243)

- b1 to b14: Use prohibited
- b15: Turns on while an object is in the ready state for the data read by the barcode reader or RFID to be directly input.

(45)SoftGOT-GOT Link Status Control/Notification (GS244)

When the GOT network interaction function is enabled, only GS244.b2 operates.

- b0: Turns on while GT SoftGOT2000 communicates with the GOT.
- b1: Turns on when the GOT or GT b2: SoftGOT2000 obtains the authorization.
- b2: Notifies whether the GOT or GT SoftGOT2000 is in use.

  0: GOT
  1: GT SoftGOT2000 (Changes to 0 if GT SoftGOT2000 does not communicate with the GOT.)
- b3: Turns on when the GOT obtains the exclusive authorization. (Always off for GT SoftGOT2000)
- b4: Turns on when the dedicated screen for the utility or the extended function is displayed. (Always off for GT SoftGOT2000)
- b5 to b15: Use prohibited

(46)Drive Accessibility (GS251)

Notifies whether each drive is accessible.

- b0: Turns on when data can be read and written from and to drive A.
- b1: Turns on when data can be read and written from and to drive B
- b2: Turns on when data can be read and written from and to drive E.
- b3: Turns on when data can be read and written from and to drive F
- b4: Turns on when data can be read and written from and to drive G.
- b5: Turns on when data can be read from drive N.
- b6 and b7: Use prohibited
- b8: Turns on when data forbids writing to drive A.
- b9: Turns on when data forbids writing to drive B
- b10: Turns on when data forbids writing to drive E.
- b11: Turns on when data forbids writing to drive F.
- b12: Turns on when data forbids writing to drive G.
- b13 to b15: Use prohibited

For the available drives by GOT model, refer to the following.

➥1.2.8 Drive configuration of the target GOT for data transfer

(47)Error Detection Common Information (GS252)

- b0 to b7: Use prohibited
- b8: Turns on when the video signal for CH1 is not input.
  The bit automatically turns off when the video signal for CH1 is input.
- b9: Turns on when the video signal for CH2 is not input.
  The bit automatically turns off when the video signal for CH2 is input.
- b10: Turns on when the video signal for CH3 is not input.
  The bit automatically turns off when the video signal for CH3 is input.
- b11: Turns on when the video signal for CH4 is not input.
  The bit automatically turns off when the video signal for CH4 is input.
- b12 to b13: Use prohibited
- b14: Turns on when the RGB signal for CH2 is not input.
  The bit automatically turns off when the RGB signal for CH2 is input.
  The bit turns off when b14 of the device specified for [Video/RGB Input Common] is turned off (to hide the RGB screen for CH2).
  For details, refer to the following.
  ➟10.7 Displaying Image from a Personal Computer on the GOT (RGB Display Function)
- b15: Turns on when the RGB signal for CH1 is not input.
  The bit automatically turns off when the RGB signal for CH1 is input.
  The bit turns off when b15 of the device specified for [Video/RGB Input Common] is turned off (to hide the RGB screen for CH1).
  For details, refer to the following.
  ➟10.7 Displaying Image from a Personal Computer on the GOT (RGB Display Function)

(48)Invalid Access from Ethernet Port 1, Invalid Access from Ethernet Port 2 (GS254)

Notifies an invalid write/read request from GT Designer3 while the writing or reading of package data is disabled with the Ethernet Port 1 Access Control or Ethernet Port 2 Access Control device (GS454).
The following shows the correspondence between the Ethernet interfaces and the bits.

GOT	Ethernet interface	Bit number
GT27, GT25-S, GT25-V (excluding GT2505-V)	Ethernet standard port	b0, b1, b8
	Ethernet extended port	b4, b5, b12
GT25-W, GS25	Ethernet standard port 1	b0, b1, b8
	Ethernet standard port 2	b4, b5, b12
GT2505-V, GT25HS-V, GT23, GT21, GS21	Ethernet standard port	b0, b1, b8

- b0: Available when the Prohibit System Package Write signal (GS454.b0) is on.
  Turns on when the GOT receives a write request of package data (containing system applications) from GT Designer3 through the corresponding Ethernet interface.
  When the Prohibit System Package Write signal (GS454.b0) turns off, this bit also turns off.
- b1: Available when the Prohibit Project Data Write signal (GS454.b1) is on.
  Turns on when the GOT receives a write request of package data (containing project data) from GT Designer3 through the corresponding Ethernet interface.
  When the Prohibit Project Data Write signal (GS454.b1) turns off, this bit also turns off.
- b2 to b3: Use prohibited
- b4: Available when the Prohibit System Package Write signal (GS454.b4) is on.
  Turns on when the GOT receives a write request of package data (containing system applications) from GT Designer3 through the corresponding Ethernet interface.
  When the Prohibit System Package Write signal (GS454.b4) turns off, this bit also turns off.
- b5: Available when the Prohibit Project Data Write signal (GS454.b5) is on.
  Turns on when the GOT receives a write request of package data (containing project data) from GT Designer3 through the corresponding Ethernet interface.
  When the Prohibit Project Data Write signal (GS454.b5) turns off, this bit also turns off.
- b6 to b7: Use prohibited
- b8: Available when the Prohibit Project Data Read signal (GS454.b8) is on.
  Turns on when the GOT receives a read request of package data from GT Designer3 through the corresponding Ethernet interface.
  When the Prohibit Project Data Read signal (GS454.b8) turns off, this bit also turns off.
- b9 to b11: Use prohibited

• b12: Available when the Prohibit Project Data Read signal (GS454.b12) is on.
Turns on when the GOT receives a read request of package data from GT Designer3 through the corresponding Ethernet interface.
When the Prohibit Project Data Read signal (GS454.b12) turns off, this bit also turns off.
• b13 to b15: Use prohibited

➟12.1.3 ■5 (34) Ethernet Port 1 Access Control, Ethernet Port 2 Access Control (GS454)

(49)Intensity Notification (GS255)

Stores the current intensity and the brightness adjustment mode of the GOT display section.

• b0 to b14: Store the current intensity.

Intensity	Notified value	Intensity	Notified value	Intensity	Notified value	Intensity	Notified value
1	1	9	109	17	117	25	125
2	102	10	3	18	118	26	126
3	103	11	111	19	5	27	127
4	104	12	112	20	120	28	7
5	2	13	113	21	121	29	129
6	106	14	4	22	122	30	130
7	107	15	115	23	6	31	131
8	108	16	116	24	124	32	8

For GT23

Intensity	Notified value	Intensity	Notified value	Intensity	Notified value	Intensity	Notified value
1	102	5	3	9	118	13	126
2	104	6	112	10	120	14	7
3	106	7	4	11	122	15	130
4	108	8	116	12	124	16	8

• b15: Sets the current brightness adjustment mode.
The bit turns on when the brightness adjustment mode is set to the low intensity.
The bit turns off when the brightness adjustment mode is set to normal.

The Intensity Notification is stored when the Intensity Control or the Intensity Control by the intensity adjustment function of the utility is performed.
For the details of the Intensity Control, refer to the following.

➟12.1.3 ■5 (35) Intensity Control (GS455)

For the intensity adjustment function of the utility, refer to the following manual.

➟GOT2000 Series User's Manual (Utility)

(50)FA Transparent Status (GS256)

Notifies the status of the FA transparent function.
The relationship between the stored value and the FA transparent status is as indicated below.
0: Ordinary monitoring
1: In the transparent mode
2: In the pass-through mode

(51)Printer Status Information (GS258)

GT25-W, GT2505-V, GT23, GT21, GS25, and GS21 support b3 only.

• b0: This bit is available when a PictBridge-compatible printer is used.
Turns on when the printer is connected to the printer unit of the GOT.
Turns off when the connection is disconnected.
• b1: This bit is available when a PictBridge-compatible printer is used.
Turns on when a warning occurs while the printer is connected.
Turns off after the error restoration.
• b2: This bit is available when a PictBridge-compatible printer is used.
Turns on when a fatal error occurs while the printer is connected.
Turns off after the error restoration.
• b3: This bit is available when a PictBridge-compatible printer, serial printer, or Ethernet printer is used.
Turns on when the printer is ready to print.

Turns off while the printer is starting up (including warming up), or printing is in progress.
When printing cannot be executed while this signal is on, confirm that a function that executes printing (such as the hard copy function) completes the processing.
You can confirm that the processing is completed by the Hard Copy Output signal (System signal 2-1.b7).

- b4 to b15: Use prohibited

(52)Ethernet Printer Error Info (GS259)

The following printers are supported: Ethernet printers.
Notifies the error code of the latest error that has occurred in the printer.
For details on the error codes, refer to the following Technical Bulletin.

➟List of Valid Devices Applicable for GOT2000 Series and GOT SIMPLE Series (for Overseas) (GOT-A-0160)

(53)Integer←→Real Number Conversion Status (GS260)

The following script types are supported: project script, screen script, and script part.
Stores the conversion completion notification and error occurrence status into each bit.
If the Conversion Start Indication (GS460.b15) is turned off (0), each bit becomes 0.

➟12.1.3 ■5 (38) Conversion Start Indication (GS460)

- b0 to b13: Use prohibited
- b14: Turns on when error occurs during conversion processing by GOT.
  (Stores an error code in GS261)

➟(54) Integer←→Real Number Conversion Error Code (GS261)

- b15: Turns on when conversion is completed by GOT.

(54)Integer←→Real Number Conversion Error Code (GS261)

The following script types are supported: project script, screen script, and script part.
Stores the error during conversion.
Stores 0 when the conversion is completed normally.
Error codes stored in GS261 are as follows.

Error code	Description	Remarks
1	The Conversion Start Indication is not initialized.	The conversion processing is not executed.
2	The setting of the Conversion Start Indication is incorrectly configured.	
3	The number of devices is out of range.	
4	The device is out of range.	
5	The conversion source and destination are the same.	
6	Not used	-
7	Conversion error (such as an overflow)	The conversion processing continues.

(55)System Alarm GOT Error Channel No. (GS262)

If a system alarm (GOT error) occurs, the corresponding channel No. is stored.
0 is stored when the system alarm is cleared.
With some system alarms, channel numbers are not stored.
For details, refer to the following manuals.

➟GOT2000 Series User's Manual (Utility)

(56)System Alarm CPU Error Channel No. (GS263)

If a system alarm (CPU error) occurs, the corresponding channel No. is stored.
0 is stored when the system alarm is cleared.

(57)System Alarm Network Error Channel No.(GS264)

If a system alarm (network error) occurs, the corresponding channel No. is stored.
0 is stored when the system alarm is cleared.

(58)SNTP Time Synchronization Setting Status (GS265)

Notifies the status of the SNTP time synchronization setting.
The following shows the values to be stored.
0: No SNTP time synchronization setting or failure
1: Synchronizing with SNTP

(59)SNTP Time Query Result (GS266 to GS272)

Stores the SNTP Time Query Result.
The following shows the values to be stored.

- GS266: The four-digit year data is stored.
- GS267: The month data, 01 to 12, is stored.
- GS268: The day data, 01 to 31, is stored.
- GS269: The hour data, 00 to 23, is stored.
- GS270: The minute data, 00 to 59, is stored.
- GS271: The second data, 00 to 59, is stored.
- GS272: The day-of-the-week data, 0 to 6, is stored.
  (0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday)

(60)Monitoring Interval Timeout Count (GS275)

The cumulative number of times that monitoring interval timeout has occurred is stored.
If monitoring interval timeout occurs frequently, check the number of job settings and the trigger condition setting.

(61)Document Display Status (GS276)

- b0: Turns on when a specified file is not displayable.
  Turns off when the file is displayed appropriately.
  For the cause of the display failure, refer to the following.
  ➟8.26.5 Precautions for a document display object
- b1: Turns on when a PDF file cannot be cached for display.
  Turns off when the cached PDF file is displayed.
  For the cause of the cache failure, refer to the following.
  ➟8.26.5 Precautions for a document display object
- b2: Turns on when a PDF document is displayed in high quality (144 dpi resolution).
- b3: Turns on when the display size of the document is changed by GS523.b3.
  Turns off when GS523.b3 is turned off.
  ➟12.1.3 ■5 (61) Document Display Common Control (GS523)
- b4 to b15: Use prohibited

(62)Notify Automatic Connection Status (GS277)

Notifies the communication status between the controllers supporting the automatic connection and the GOT.
GT21 and GS21 support b0 to b3.

- b0: Turns on when the automatic connection is enabled in the setting of the controller (CH1).
- b1: Turns on when the automatic connection process is completed between the controller (CH1) and the GOT.
- b2: Turns on when the automatic connection is enabled in the setting of the controller (CH2).
- b3: Turns on when the automatic connection process is completed between the controller (CH2) and the GOT.
- b4: Turns on when the automatic connection is enabled in the setting of the controller (CH3).
- b5: Turns on when the automatic connection process is completed between the controller (CH3) and the GOT.
- b6: Turns on when the automatic connection is enabled in the setting of the controller (CH4).
- b7: Turns on when the automatic connection process is completed between the controller (CH4) and the GOT.
- b8 to b15: Use prohibited

(63)Report Page Number (GS278)

Specify this device for a numerical print object on a report screen to output page numbers at the position where the object is placed.

(64)Standard SD Card Information (GS279)

- b0: Turns on when an SD card is inserted into the standard SD card interface.
  Check the Drive Accessibility device (GS251) to see if the SD card is accessible.
  ➟12.1.3 ■2 (46) Drive Accessibility (GS251)
- b1 to b15: Use prohibited

(65)Faulty Monitor Station signal (CH1 to CH14) (GS280, GS300, GS320, GS340)

- b0 to b7: Stores the number of faulty monitor stations with the Ethernet connection. (Except the Ethernet connection with a microcomputer)
- b8 to b15: Use prohibited

(66)Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)

If a communication error occurs in a station that is connected to the GOT by using an applicable connection type, the corresponding bit turns on. The applicable connection types are as follows: Ethernet connection, CC-Link IE Controller Network connection, CC-Link IE Field Network connection, temperature controller connection, inverter connection, and servo amplifier connection.
(For the multi-channel connection, the bit of the device corresponding to each channel No. (CH1 to CH4) turns on.)
0: No error
1: Error
When the faulty station is restored from the error, the bit turns off.
The following shows the communication drivers that support the device.
○: Supported, -: Not supported

Communication driver	Supported/ Unsupported		Communication driver	Supported/ Unsupported	
	Host station	Other stations		Host station	Other stations
[Bus Q]	○	-	[Panasonic MINAS A5]	○	○
[Bus A/QnA]	○	-	[Muratec MPC]	○	○
[Serial(MELSEC)]	○	-	[Computer]	-	-
[AJ71QC24, MELDAS C6*]	○	-	[MELSERVO-J4,J3,J2S/M,JE]	○	○
[AJ71C24/UC24]	○	-	[FREQROL 500/700/800,SENSORLESS SERVO]	○	○
[CC-Link(G4)]	○	-	[FREQROL 800]	○	○
[MELSECNET/H]	-	-	[FREQROL(Batch monitor)]	○	○
[CC-Link Ver.2(ID)]	-	-	[OMRON THERMAC/INPANEL NEO]	○	○
[CC-Link IE Controller Network]	-	○*1	[OMRON Digital Temperature Controller]	○	○
[CC-Link IE Field Network]	-	○*1	[azbil SDC/DMC]	○	○
[CC-Link IE TSN]*2	-	-	[azbil DMC50]	○	○
[MELSEC-FX]	○	-	[RKC SR Mini HG(MODBUS)]	○	○
[MELSEC-WS]	○	-	[FUJI Temperature Controller/Digital Controller]	○	○
[MEI Nexgenie]	○	○	[YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced]	○	○
[Multidrop(Slave)]	-	-	[Shinko Technos Controller]	○	○
[OMRON SYSMAC]	○	-	[CHINO MODBUS device]	○	○
[YASKAWA GL]	○	-	[MODBUS/RTU Master]	○	○
[YASKAWA CP9200 (H)]	○	-	[MODBUS/RTU Slave]	-	-
[YASKAWA CP9300MS (MC compatible)]	○	-	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	○	○
[YASKAWA MP2000/MP900/CP9200SH]	○	-	[Ethernet(FX), Gateway]	○	○
[AB SLC500, AB 1:N]	○	○	[Ethernet(FREQROL), Gateway]	○	○
[AB MicroLogix]	○	○	[Ethernet(FREQROL(Batch monitor)), Gateway]	○	○
[AB MicroLogix(Extended)]	○	○	[Ethernet(YASKAWA), Gateway]	○	○
[AB Control/CompactLogix]	○	-	[Ethernet(YASKAWA MP3000), Gateway]	○	○
[SHARP JW]	○	-	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	○	○
[TOSHIBA PROSEC T/V]	○	-	[Ethernet(YOKOGAWA), Gateway]	○	○
[HITACHI IES HIDIC H]	○	-	[Ethernet(AB), Gateway]	○	○
[HITACHI IES HIDIC H(Protocol2)]	○	-	[Ethernet(AB MicroLogix), Gateway]	○	○
[Panasonic MEWNET-FP]	○	-	[Ethernet(AB Tag), Gateway]	○	○
[Panasonic MEWTOCOL-7]	○	-	[Ethernet(OMRON), Gateway]	○	○
[SIEMENS S7-200]	○	-	[Ethernet(OMRON NJ/NX), Gateway]	○	○
[SIEMENS S7-300/400]	○	○	[Ethernet(TOSHIBA nv), Gateway]	○	○
[YOKOGAWA FA500/FA-M3/STARDOM]	○	-	[Ethernet(HITACHI IES), Gateway]	○	○

Communication driver	Supported/ Unsupported		Communication driver	Supported/ Unsupported	
	Host station	Other stations		Host station	Other stations
[Serial(KEYENCE)]	○	-	[Ethernet(HITACHI), Gateway]	○	○
[JTEKT TOYOPUC-PC]	○	○	[Ethernet(LS Industrial Systems XGK), Gateway]	○	○
[HITACHI S10mini/S10V]	○	-	[Ethernet(SIEMENS S7), Gateway]	○	○
[FUJI MICREX-F]	○	○	[Ethernet(SIEMENS OP), Gateway]	○	○
[FUJI MICREX-SX SPH]	○	-	[Ethernet(FUJI), Gateway]	○	○
[GE (SNP-X)]	○	○	[Ethernet(KEYENCE), Gateway]	○	○
[SHIBAURA MACHINE TCmini]	○	-	[MODBUS/TCP Master, Gateway]	○	○
[KOYO KOSTAC/DL]	○	○	[MODBUS/TCP Slave, Gateway]	-	-
[LS Industrial Systems MASTER-K]	○	○	[PROFIBUS DP]	○	-
[Hirata HNC]	○	○	[DeviceNet]	○	-
[IAI ROBO CYLINDER]	○	○	[Ethernet(MICROCOMPUTER)]	-	-
[IAI X-SEL]	○	-	[Ethernet(SLMP), Gateway]	○	○
[SICK Flexi Soft]	○	-	[Ethernet(MELSERVO), Gateway]	○	○
[Panasonic MINAS A4]	○	○	[Ethernet(CC-Link IE Field Network Basic)]	-	-

*1 Only the faulty station can be detected in the same network.

*2 To detect a faulty station in the CC-Link IE TSN connection, use the following GOT special registers (GS).

➟12.1.3 ■3 (78) Faulty Station Information (CC-Link IE TSN) (GS1281 to GS1288)

When the GOT is connected to the AZBIL temperature controller (DMC50), the specified station number of the DMC50 differs from the station numbers of the other controllers.
The following shows station numbers for each device.

(a) Correspondence between station numbers and device bits (when connecting to a controller other than the AZBIL temperature controller (DMC50))

The station corresponding to each device bit differs according to whether the Ethernet connection is used or not.

• With the Ethernet connection: 1 to 128

Device				Ethernet setting No.															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 281	GS 301	GS 321	GS 341	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS 282	GS 302	GS 322	GS 342	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS 283	GS 303	GS 323	GS 343	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS 284	GS 304	GS 324	GS 344	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS 285	GS 305	GS 325	GS 345	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS 286	GS 306	GS 326	GS 346	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS 287	GS 307	GS 327	GS 347	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS 288	GS 308	GS 328	GS 348	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

• With other than the Ethernet connection: 0 to 127

Device				Station															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 281	GS 301	GS 321	GS 341	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0 *1

Device				Station															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 282	GS 302	GS 322	GS 342	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS 283	GS 303	GS 323	GS 343	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS 284	GS 304	GS 324	GS 344	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS 285	GS 305	GS 325	GS 345	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS 286	GS 306	GS 326	GS 346	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS 287	GS 307	GS 327	GS 347	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS 288	GS 308	GS 328	GS 348	127 *1*2	126 *1*2	125 *1*2	124 *1*2	123 *1*2	122 *1*2	121 *1*2	120	119	118	117	116	115	114	113	112

*1 This station number is not used for the CC-Link IE Controller Network connection.

*2 This station number is not used for the CC-Link IE Field Network connection.

(b) Correspondence between station numbers and device bits (when connecting to the AZBIL temperature controller (DMC50))

Device				Station-Sub station															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 281	GS 301	GS 321	GS 341	1-15	1-14	1-13	1-12	1-11	1-10	1-9	1-8	1-7	1-6	1-5	1-4	1-3	1-2	1-1	1-0
GS 282	GS 302	GS 322	GS 342	2-15	2-14	2-13	2-12	2-11	2-10	2-9	2-8	2-7	2-6	2-5	2-4	2-3	2-2	2-1	2-0
GS 283	GS 303	GS 323	GS 343	3-15	3-14	3-13	3-12	3-11	3-10	3-9	3-8	3-7	3-6	3-5	3-4	3-3	3-2	3-1	3-0
GS 284	GS 304	GS 324	GS 344	4-15	4-14	4-13	4-12	4-11	4-10	4-9	4-8	4-7	4-6	4-5	4-4	4-3	4-2	4-1	4-0
GS 285	GS 305	GS 325	GS 345	5-15	5-14	5-13	5-12	5-11	5-10	5-9	5-8	5-7	5-6	5-5	5-4	5-3	5-2	5-1	5-0
GS 286	GS 306	GS 326	GS 346	6-15	6-14	6-13	6-12	6-11	6-10	6-9	6-8	6-7	6-6	6-5	6-4	6-3	6-2	6-1	6-0
GS 287	GS 307	GS 327	GS 347	7-15	7-14	7-13	7-12	7-11	7-10	7-9	7-8	7-7	7-6	7-5	7-4	7-3	7-2	7-1	7-0
GS 288	GS 308	GS 328	GS 348	8-15	8-14	8-13	8-12	8-11	8-10	8-9	8-8	8-7	8-6	8-5	8-4	8-3	8-2	8-1	8-0

Point

(1) Range of detectable faulty stations

The GOT cannot detect errors with the station No. 128 or later, or the station number and the sub station 9-0 or later.

(2) Detecting a faulty station whose station number is specified with the value of a GOT data register

When an error occurs with the station number specified on GT Designer3, the operation differs according to the controller used.

(a) When using other than the AZBIL temperature controller (DMC50)

When an error occurs with the station number specified on GT Designer3, the own station number of the error temperature controller, inverter, or servo amplifier is detected.

(For example, when the station number specified on GT Designer3 is 110 and the own station number of the temperature controller or servo amplifier is 10, the bit for the station number 10 turns on.)

(b) When using the AZBIL temperature controller (DMC50)

When the station number is specified with the value of the GOT data register (GD), the GOT cannot detect errors.

For details of specifying station numbers, refer to the following.

➟GOT2000 Series Connection Manual for a controller used

(3) **Restrictions on the CC-Link IE Field Network connection**

If a submaster station exists on the network, use a CC-Link IE Field Network communication unit (GT15-J71GF13-T2) with software version C or later.

You can find the software version on the rating plate of the unit. Check the 10th digit of the serial number.

(4) **Dealing with a faulty station**

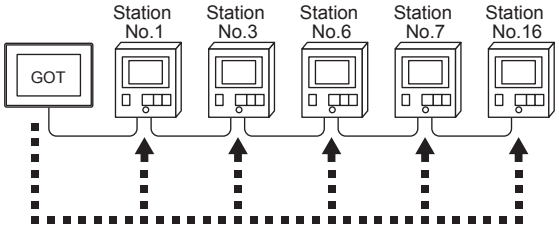
(a) Automatically stopping monitoring a faulty station

The GOT automatically stops monitoring a connected station where a communication timeout error occurs so as not to retard the monitoring of the other connected stations. (No setting is required.)

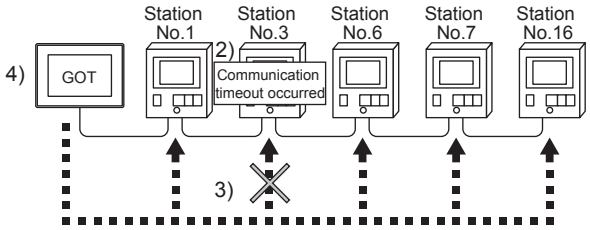
The following shows an example of the GOT operation when a communication error occurs in station No. 3.

Example) When the GOT is connected to a temperature controller

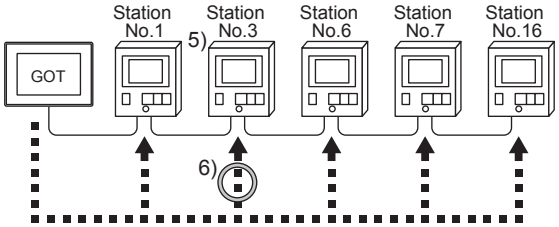
1) The GOT correctly communicates with controllers.



2) Communication time-out occurs with station No.3.
3) The GOT stops monitoring operations of station No.3.
4) The GOT checks if the communication time-out with station No.3 is cancelled.



5) Communication time-out with station No.3 is cancelled.
6) The GOT automatically restarts monitoring operations of station No.3.



(b) Disconnecting the specified station from the GOT with the GOT special register (GS)

You can disconnect the specified controller from the GOT by using the GOT special register (GS).

➟12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)

Doing so helps avoid the occurrence of a communication timeout error even if the specified controller is removed for changing a module or other reasons. (No system alarm appears on the GOT.)

However, depending on the type of connection cables used, the GOT may not monitor the controllers that are connected to the removed one.

(67)Channel Observation Notification Information (GS299, GS319, GS339, GS359)

Notifies the communication status of each channel.

- b0: Turns on if a connection error occurs.
- b1 to b15: Use prohibited

The following shows the communication drivers that support the device.

○: Supported, -: Not supported

Communication driver	Supported/ Unsupported	Communication driver	Supported/ Unsupported
[Bus Q]	○	[Panasonic MINAS A5]	○
[Bus A/QnA]	○	[Muratec MPC]	○
[Serial(MELSEC)]	○	[Computer]	-
[AJ71QC24, MELDAS C6*]	○	[MELSERVO-J4,J3,J2S/M,JE]	○
[AJ71C24/UC24]	○	[FREQROL 500/700/800,SENSORLESS SERVO]	○

Communication driver	Supported/ Unsupported	Communication driver	Supported/ Unsupported
[CC-Link(G4)]	○	[FREQROL 800]	○
[MELSECNET/H]	-	[FREQROL(Batch monitor)]	○
[CC-Link Ver.2(ID)]	-	[OMRON THERMAC/INPANEL NEO]	○
[CC-Link IE Controller Network]	-	[OMRON Digital Temperature Controller]	○
[CC-Link IE Field Network]	-	[azbil SDC/DMC]	○
[CC-Link IE TSN]	-	[azbil DMC50]	○
[MELSEC-FX]	○	[RKC SR Mini HG(MODBUS)]	○
[MELSEC-WS]	○	[FUJI Temperature Controller/Digital Controller]	○
[MEI Nexgenie]	○	[YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced]	○
[Multidrop(Slave)]	-	[Shinko Technos Controller]	○
[OMRON SYSMAC]	○	[CHINO MODBUS device]	○
[YASKAWA GL]	○	[MODBUS/RTU Master]	○
[YASKAWA CP9200 (H)]	○	[MODBUS/RTU Slave]	-
[YASKAWA CP9300MS (MC compatible)]	○	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	○
[YASKAWA MP2000/MP900/CP9200SH]	○	[Ethernet(FX), Gateway]	○
[AB SLC500, AB 1:N]	○	[Ethernet(FREQROL), Gateway]	○
[AB MicroLogix]	○	[Ethernet(FREQROL(Batch monitor)), Gateway]	○
[AB MicroLogix(Extended)]	○	[Ethernet(YASKAWA), Gateway]	○
[AB Control/CompactLogix]	○	[Ethernet(YASKAWA MP3000), Gateway]	○
[SHARP JW]	○	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	○
[TOSHIBA PROSEC T/V]	○	[Ethernet(YOKOGAWA), Gateway]	○
[HITACHI IES HIDIC H]	○	[Ethernet(AB), Gateway]	○
[HITACHI IES HIDIC H(Protocol2)]	○	[Ethernet(AB MicroLogix), Gateway]	○
[Panasonic MEWNET-FP]	○	[Ethernet(AB Tag), Gateway]	○
[Panasonic MEWTOCOL-7]	○	[Ethernet(OMRON), Gateway]	○
[SIEMENS S7-200]	○	[Ethernet(OMRON NJ/NX), Gateway]	○
[SIEMENS S7-300/400]	○	[Ethernet(TOSHIBA nv), Gateway]	○
[YOKOGAWA FA500/FA-M3/STARDOM]	○	[Ethernet(HITACHI IES), Gateway]	○
[Serial(KEYENCE)]	○	[Ethernet(HITACHI), Gateway]	○
[JTEKT TOYOPUC-PC]	○	[Ethernet(LS Industrial Systems XGK), Gateway]	○
[HITACHI S10mini/S10V]	○	[Ethernet(SIEMENS S7), Gateway]	○
[FUJI MICREX-F]	○	[Ethernet(SIEMENS OP), Gateway]	○
[FUJI MICREX-SX SPH]	○	[Ethernet(FUJI), Gateway]	○
[GE (SNP-X)]	○	[Ethernet(KEYENCE), Gateway]	○
[SHIBAURA MACHINE TCmini]	○	[MODBUS/TCP Master, Gateway]	○
[KOYO KOSTAC/DL]	○	[MODBUS/TCP Slave, Gateway]	-
[LS Industrial Systems MASTER-K]	○	[PROFIBUS DP]	○
[Hirata HNC]	○	[DeviceNet]	○
[IAI ROBO CYLINDER]	○	[Ethernet(MICROCOMPUTER)]	-
[IAI X-SEL]	○	[Ethernet(SLMP), Gateway]	○
[SICK Flexi Soft]	○	[Ethernet(MELSERVO), Gateway]	○
[Panasonic MINAS A4]	○	[Ethernet(CC-Link IE Field Network Basic)]	-

(68)GOT Network No./Station No. Notification (CH1 to CH4) (GS376 to GS383)

When the GOT starts, the devices store a network number and a station number of the GOT connected with the Ethernet connection.
When the GOT is connected with other than the Ethernet connection, the devices store 0.

Device				Description
CH1	CH2	CH3	CH4	
GS376	GS378	GS380	GS382	Network number (1 to 239)
GS377	GS379	GS381	GS383	Station number (1 to 64)

■3 Write device (GS640 to GS1791)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the GOT models that support each device, refer to the following.

➟■1 Write device list

(1) Error Device Data Transfer ID (GS642)

Stores the device data transfer ID with the executed device data if an error occurs during device data transfer.

(2) Device Data Transfer Error Count (GS643)

Stores the number of error times with the executed device data during the device data transfer. (Maximum 65535 times)
When errors occur 65535 times or more, the value remains 65535.
The device data transfer ID with the executed device data is stored in the error device data transfer ID.

(3) Device Data Transfer Processing Time (GS644)

Stores the device data transfer processing time for one time. (0 to 60000 (×10ms))
Stores 60000 (×10ms) when the device data transfer processing time is 600 seconds or more.

(4) Device Data Transfer ID (GS645)

Stores the device data transfer ID with the executed device data transfer.

(5) Device Data Transfer Min. Processing Time (GS646)

Stores the minimum processing time in all of the processing times stored in the Device Data Transfer Processing Time (GS644).
(0 to 60000 (×10ms))

(6) Device Data Transfer ID (Min. Processing Time) (GS647)

Stores the device data transfer ID with the executed device data transfer when GS646 stores the minimum processing time.

(7) Device Data Transfer Max. Processing Time (GS648)

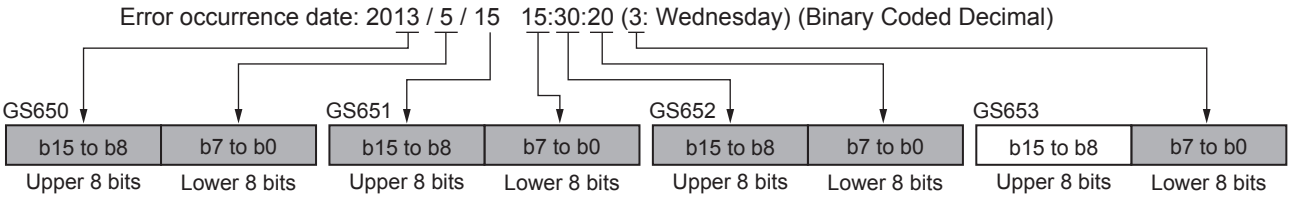
Stores the maximum processing time in all of the processing times stored in the Device Data Transfer Processing Time (GS644).
(0 to 60000 (×10ms))

(8) Device Data Transfer ID (Max. Processing Time) (GS649)

Stores the device data transfer ID with the executed device data transfer when GS648 stores the maximum processing time.

(9) Present Time (GS650 to GS635)

Stores the current time with BCD code.
The day-of-the-week data, 0 to 6, is stored.
(0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday)
Example) When the error occurrence date is 15:30:20 May 15, 2013 (Wednesday)



(10)Touch Status External Notification (X-coordinate) (GS654)

Stores the x-coordinate of touched position when the GOT screen is touched on.

(11)Touch Status External Notification (Y-coordinate) (GS655)

Stores the Y-coordinate of touched position when the GOT screen is touched on.

(12)Touch Status External Notification (Touch Status) (GS656)

The following values are stored in the device depending on the touched screen types when the GOT screen is touched on.

0: Without touching
1: Touching on the base screen
2: Touching touchable objects on the base screen
11: Touching on the overlap window 1
12: Touching touchable objects on the overlap window 1
21: Touching on the overlap window 2
22: Touching touchable objects on the overlap window 2
31: Touching on the overlap window 3
32: Touching touchable objects on the overlap window 3
41: Touching on the overlap window 4
42: Touching touchable objects on the overlap window 4
51: Touching on the overlap window 5
52: Touching touchable objects on the overlap window 5
61: Touching on the video window
71: Touching on the key window
72: Touching touchable objects on the key window
81: Touching on the comment window
91: Touching on the popup display

(13)Trigger Backup Processing Setting No. Notification (GS657)

The GOT notifies users of the trigger backup processing status.
Stores the channel number of the backup trigger setting if a trigger backup is being processed.
Stores 0 when the trigger backup is not processed.

(14)Extended External Input Status Notification signal (GS658 to GS665)

When the 128-point input can be executed with the external I/O function, the bit for an input scan signal turns on.
When the 128-point input cannot be executed, the devices are always off.
To enable the 128-point input, turn on GS517.b0 (External I/O Function Notification/External I/O Control Function).
0: Signal off
1: Signal on
The following shows the devices for each bit.

Scan signal	Extended External Input Status Notification signal	External Input signal															
		X0	X1	X2	X3	X4	X5	X6	X7	X8	X9	XA	XB	XC	XD	XE	XF
XSCN0	GS658	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN1	GS659	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN2	GS660	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN3	GS661	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN4	GS662	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN5	GS663	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN6	GS664	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
XSCN7	GS665	b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15

Point

Controlling a signal with controllers

The above signals can be controlled with controllers when the trigger action and the script function are used.

(15)Sound Status Information (GS668)

- b1 to b14: Use prohibited
- b15: Turns on with a jack disconnection when the sound output function is used.
  Turns off without a jack disconnection.

(16)Sound File Number During Play (GS669)

Stores the sound file number during the play in the device.
When no sound file exists during the play, 0 is stored in the device.

(17)Number of Trigger Buffer Data (GS670)

Stores the number of the trigger buffer data.
When many trigger buffer data is stored for a long time, the GOT becomes busy. As a result, some data may not be collected.
Check the number of job settings for which the trigger buffering is enabled and the trigger condition setting.

(18)Trigger Buffer Overflow Count (GS671)

Stores the cumulative number of times that a trigger buffer overflow has occurred.
The trigger buffer overflow means that the 129th trigger data is discarded without being buffered when 128 trigger data is already buffered.
If a trigger buffer overflow occurs frequently, check the number of job settings for which the trigger buffering is enabled and the trigger condition setting.

(19)Trigger Buffer Overflow Flag per Job (GS672 to GS675)

Indicates the status of trigger buffer overflow for each job.
When a trigger buffer overflow occurs for a job, the GOT internal device corresponding to the job turns on.
The following shows the GOT internal devices corresponding to jobs from 1 to 64.

Device	Job	Correspondence of the jobs and the GOT internal devices															
		b0	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11	b12	b13	b14	b15
GS672	1 to 16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GS673	17 to 32	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
GS674	33 to 48	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
GS675	49 to 64	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64

(20)Notify Number of Hard Copy Output Screens signal (GS693)

Stores the number of screens whose the hard copy outputs are completed.
When the start trigger condition is satisfied, 0 is stored.
The target screens are counted one by one at completion of output regardless of the output file format or output settings of the target screen.

(21)Object Position upon Cursor Display (GS694 and GS695)

Store the upper-left coordinates of the object (numerical input or text input) on which the cursor is displayed.

- GS694: X coordinate
- GS695: Y coordinate

The devices store 0 if the cursor is not displayed on any object.

(22)Expanded Base Screen Position (GS696 and GS697)

Stores the upper-left coordinates of the area of the expanded base screen currently displayed on the GOT.

- GS696: X coordinate
- GS697: Y coordinate

The devices store 0 when the original size base screen is displayed on the GOT.

(23)Touch Position Color Acquisition Complete signal (GS980)

- b0: Turns on when the Touch Position Color (GS981 to 983) stores a value.
  Turning on the bit cancels the touch position color acquisition ready status.
  Turning off the Touch Position Color Acquisition Ready signal (GS630.b0) turns off the bit.
- b1 to b15: Use prohibited

(24)Touch Position Color (GS981 to GS983)

Notifies the color information at the touched position.
The GOT acquires the color information with RGB. The following GOT special registers (GS) store the RGB values (0 to 255).

- R: GS981
- G: GS982
- B: GS983

Turning on the Touch Position Color Acquisition Ready signal (GS630.b0) stores -1 in R, G, and B each.
After the signal (GS630.b0) turns on, the GOT acquires the color information at the first touch and release of the screen.

(25)Authorization Guarantee Status Notification signal (GS984)

Not available to GT SoftGOT2000 (Multiple channels).

This is disabled when the GOT network interaction function is used.

Stores the remaining authorization guarantee time (seconds) when the authorization guarantee time is set in GT SoftGOT2000 (Single channel) or the GOT.

(26)Executing File Transfer ID Notification (GS987)

Stores the file transfer setting ID of the file transfer setting in execution.

(27)Communicating FTP Server ID Notification (GS988)

Stores the FTP server setting ID of the currently connected destination FTP server setting.

(28)File Transfer Error No. (GS989)

Stores the error code of an error that occurred in the file transfer.

Turn on GS401.b0 to clear the stored error code.

The following shows the list of the error code to be stored.

Error code	Details of error and cause	Corrective action
1	The connection to the FTP server has failed.	• Check the IP address of the FTP server. • Check if a cable is connected. • Check HUB connection status. • Check if the FTP server is working on the target device. • Check if the destination FTP server setting is configured properly.
2	Authentication of the FTP server has failed.	Check if the user name and password are correct.
3	FTP server is busy.	Wait until the FTP server recovers from the busy status. *1
4	FTP communication timeout	• Check if the communication line has not been physically interrupted. • Check the communication congestion.
5	Access to the target file to be written has failed.	• Check if the write destination drive is enabled. • Check if the write destination drive has enough available space. • Check if the file is not write-prohibited. • When using the GOT as the FTP server, check if the GOT is in the write enable mode.
6	Access to the target file to be read has failed.	• Check if the target file exists. • Check whether the file name specified by the file transfer setting is correct or not. • Check if the data storage has been installed on the GOT. • Check if the SD card cover has been closed. • Check that the SD card access switch is turned on. • Check that the write protection for the SD card is canceled.
7	The file whose size exceeds the file size supported by the GOT was attempted to be transferred.	Check if the size of the transfer file is within 2GB.
10	• For the FTP transfer The GOT folder name is invalid. • For the GOT internal transfer The transfer source folder name is invalid.	Check that the GOT folder name or the transfer source folder name does not contain invalid characters, such as two-byte characters.
11	The transfer file name is invalid.	Check if the transfer file name does not include invalid characters such as two-byte characters.
12	The transfer source folder and destination folder have the same path.	Set different paths to the transfer source folder and the transfer destination folder.
13	Drive N is specified for both the transfer source folder and the transfer destination folder.	Specify drive N for only one of the transfer source folder and the transfer destination folder.
50	The drive specification on the PLC side is incorrect.	When a PLC is used as a FTP server, only drive 2 (Memory card (ROM)) is accessible. Check if the setting of [FTP Server Folder] specified in the [File Transfer Setting] dialog is correct.
100	The destination FTP server setting ID which does not exist has been specified.	• Check if the destination FTP server setting ID specified by [File transfer setting] is correct. • Add the required destination FTP server setting.
200	Access to the storage device has failed when the file name or folder name is specified indirectly.	Check if the device setting used for the indirect specification is correct.

Error code	Details of error and cause	Corrective action
507	The total number of characters of the folder path and transfer file name exceeds the limit.	Check that the total number of the characters does not exceed the limit as shown below. • <GOT folder path>\<Transfer file name>: 78 characters or less (including backward slash marks) • <FTP server folder path>\<Transfer file name>: 250 characters or less (including backward slash marks) • <Transfer source folder path>\<Transfer file name>: 78 characters or less (including backward slash marks) • <Transfer destination folder path>\<Transfer file name>: 78 characters or less (including backward slash marks)
600 *2	The file transfer has been skipped because the total number of characters of the folder path and transfer file name exceeds the limit. (Only when the file is specified with a wildcard character)	
601 *2	Since invalid characters had been used for the transfer file name, the transfer processing was skipped. (only when the file is specified with the wild card)	Check if the transfer file name does not include invalid characters such as two-byte characters.
602 *2	Since the write operation for the file had failed, the transfer processing was skipped. (only when the file is specified with the wild card)	• Another function might have been using the transfer file. Transfer the file again. • Check if the write destination drive has enough available space.
603 *2	Since the read operation for the file had failed, the transfer processing was skipped. (only when the file is specified with the wild card)	• The file might have been deleted before being transferred. Check if all the files have been transferred to the destination folder. • Check if the data storage has been installed on the GOT. • Check if the SD card cover has been closed. • Check that the SD card access switch is turned on. • Check that the write protection for the SD card is canceled.
606 *2	Since the file specified with the wild card had not existed, the file was not transferred. (only when the file is specified with the wild card)	Check if the specified file name is correct.
607 *2	The file whose size exceeds the file size supported by the GOT was attempted to be transferred. (only when the file is specified with the wild card)	Check if the size of the transfer file is within 2GB.
610 *2	Deleting the source file has failed.	Check if the source file is in the deletable status.

*1 The status in which a request from the client cannot be accepted

*2 Even if a warning is given, the file transfer process does not stop.

(29)File Transfer Status (GS990)

Notifies the file transfer processing status.

- b0: Turns on when the GOT (FTP client) writes files to the FTP server, or the GOT transfers files within itself.
  When [Trigger Type] is [Rise] or [Fall], be sure to dissatisfy the trigger condition after the file transfer is started.
  When the trigger condition remains satisfied, this bit does not turn off even after the file transfer is completed.
- b1: Turns on when the GOT (FTP client) reads files from the FTP server.
- b2: Notifies the connection mode of the GOT (FTP client) and the FTP server.
  ON: PASV mode
  OFF: PORT mode
- b3 to b13: Use prohibited
- b14: Turns on when the error with which the processing can be continued occurs during the file transfer.
  Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.
- b15: Turns on when the error with which the processing cannot be continued occurs during the file transfer.
  Files cannot be transferred while this signal is on.
  Turns off when the Clear File Transfer Error signal (GS401.b0) is turned on.

(30)Number of Transfer Target Files (GS991)

Stores the total number of files to be transferred.
When the transfer file name is specified with the wild card, the total count includes the files which are not transferred due to an invalid number of characters for the folder name or other causes.
(However, the total count does not include only the files which have invalid names consisting of such as two-byte characters.)
Holds the device value until the processing for the next file transfer ID is started.

(31)Number of Transferred Files (GS992)

Stores the total number of files which is completely transferred.
The total count includes the files which are not transferred due to the error or other causes.
Holds the device value until the processing for the next file transfer ID is started.

(32)Recipe Status(GS1010)

Notifies the processing status of recipe data when the recipe data is manipulated using a special function switch ([Switch Action]: [Recipe Data Operation]).

➟9.3.3 ■3 (4) Exporting a recipe file by using a special function switch (Recipe data operation)

- b0: Turns on when the recipe data is imported.
- b1: Turns on when the recipe data is exported.
- b2: Turns on when the recipe special control is executed.
  Turns off after the control is complete and the Execute Special Control signal (GS1800.b2) is turned off.
- b3 to b13: Use prohibited
- b14: Turns on after importing or exporting the recipe data is complete.
  Turns off when another recipe data manipulation is performed or the Clear Status Information signal (GS1800.b14) is turned on.

➟12.1.3 ■6 (7) Recipe Control (GS1800)

- b15: Turns on when importing or exporting the recipe data fails.
  Turns off when another recipe data manipulation is performed or the Clear Status Information signal (GS1800.b14) is turned on.

➟12.1.3 ■6 (7) Recipe Control (GS1800)

(33)Recipe Special Control Result (GS1011)

Notifies the result of the recipe special control.
Stores 0 if the control is complete.
Stores a value other than 0 if an error occurs.
For the error codes and corrective actions, refer to the following.

➟9.3.3 ■8 (12) Error code list

This device is reset to 0 upon turn-on of the Execute Special Control signal (GS1800.b2).

(34)Recipe Special Control No. (GS1012)

Notifies the search result (record No.) of the recipe special control.
This device is reset to 0 upon turn-on of the Execute Special Control signal (GS1800.b2).

(35)Recipe Display (Record List) Target Recipe No. (GS1013)

Notifies the recipe number for the records displayed on the recipe display (record list).
This device stores 0 in the following cases.

- No recipe display (record list) is placed on the screen.
- A nonexistent recipe setting is specified to be displayed on the recipe display (record list).
- The recipe display (record list) is not displayed because the display condition is unsatisfied or the security level is insufficient.

For information on how to link the recipe function with the recipe display (record list) by using GOT special registers, refer to the following.

➟9.3.3 ■9 Link with the recipe display (record list) by using GOT special registers

(36)Recipe Display (Record List) Selected Record No. (GS1014)

Stores the record number selected on the recipe display (record list).
This device stores 0 in the following cases.

- No recipe display (record list) is placed on the screen.
- A nonexistent recipe setting is specified to be displayed on the recipe display (record list).
- The recipe display (record list) is not displayed because the display condition is unsatisfied or the security level is insufficient.
- No cursor is displayed on the recipe display (record list).

For information on how to link the recipe function with the recipe display (record list) by using GOT special registers, refer to the following.

➟9.3.3 ■9 Link with the recipe display (record list) by using GOT special registers

(37)Recipe Display (Record List) Target Record No. (GS1015)

Stores the record number of the record manipulated on the recipe display (record list) while GS1809.b0 is on.
This device stores 0 when the record number is not identified.

➟12.1.3 ■6 (15) Recipe Display (Record List) Control (GS1809)

(38)Recipe Display (Record List) Record Manipulation Result (GS1016)

Notifies the record manipulation result of the recipe display (record list) while GS1809.b0 is on.
This device turns off when GS1809.b15 is turned on.

➥12.1.3 ■6 (15) Recipe Display (Record List) Control (GS1809)

- b0: Turns on when the device values of a record and those of the PLC match at the record verification.
- b1: Turns on when the device values of a record and those of the PLC do not match at the record verification.
- b2: Turns on when no device value is set in the record at the record verification.
- b3 to b10: Use prohibited
- b11: Turns on when a record verification is unsuccessful.
- b12: Turns on when a record deletion is unsuccessful.
- b13: Turns on when a record writing is unsuccessful.
- b14: Turns on when a record reading is unsuccessful.
- b15: Turns on when a record renaming is unsuccessful.

(39)Video File Maintenance Information (GS1022)

Notifies the amount of usage of the CF card or the number of video files in the card in the multimedia unit while the Start Video File Information Notification signal (GS522.b1) is on.
This function is usable only when [Enable] is selected and [Event Trigger Device] is set in [Before-After Event Recording Setting] on the [Recording Setting] tab of the [Multimedia] dialog.
This device turns off upon the turn-off of the Start Video File Information Notification signal (GS522.b1).

➥12.1.3 ■5 (60) Special Control During Specific Function Execution (GS522)

- b0: Turns on when the amount of usage of the CF card reaches 60%.
- b1: Turns on when the amount of usage of the CF card reaches 80%.
- b2: Turns on when the number of video files in the CF card reaches 80.
- b3: Turns on when the number of video files in the CF card reaches 110.
- b4: Turns on when the number of video files in the CF card reaches 150.
- b5: Turns on when the number of video files in the CF card reaches 400.
- b6: Turns on when the number of video files in the CF card reaches 450.
- b7: Turns on when the number of video files in the CF card reaches 500.
- b8 to b15: Use prohibited

(40)USB Drive Common Information (GS1024)

- b0: Turns on when the USB memory connected to drive E on the GOT is ready for removal after the USB Drive Common Control (GS1824.b0) turns on.
- b1: Turns on when the USB memory connected to drive F on the GOT is ready for removal after the USB Drive Common Control (GS1824.b1) turns on.
- b2: Turns on when the USB memory connected to drive B on the GOT is ready for removal after the USB Drive Common Control (GS1824.b2) turns on.
- b3: Turns on when the USB memory connected to drive G on the GOT is ready for removal after the USB Drive Common Control (GS1824.b3) turns on.
- b4: Turns on when the USB memory connected to drive E on the GOT is ready for removal after the USB Drive Common Control (GS1824.b4) turns on.
- b5: Turns on when the USB memory connected to drive F on the GOT is ready for removal after the USB Drive Common Control (GS1824.b5) turns on.
- b6: Turns on when the USB memory connected to drive B on the GOT is ready for removal after the USB Drive Common Control (GS1824.b6) turns on.
- b7: Turns on when the USB memory connected to drive G on the GOT is ready for removal after the USB Drive Common Control (GS1824.b7) turns on.
- b8: Turns on when drive E recognizes the USB memory or memory card adapter.
- b9: Turns on when drive F recognizes the USB memory or memory card adapter.
- b10: Turns on when drive B recognizes the USB memory or memory card adapter.
- b11: Turns on when drive G recognizes the USB memory or memory card adapter.
- b12: Turns on when drive E can access the USB memory or memory card.
- b13: Turns on when drive F can access the USB memory or memory card.
- b14: Turns on when drive B can access the USB memory or memory card.

• b15: Turns on when drive G can access the USB memory or memory card.

b8 to b11 turn on also when a memory card is not inserted into the memory card adapter.
b12 to b15 turn off when a memory card is not inserted into the memory card adapter.
When GS1824.b0 to b7 are turned off, b0 to b7 of this device are also turned off.
For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

(41)RGB Signal Input Status Notification (GS1025)

Notifies the RGB signal input, supporting the resolution and the refresh rate of the RGB signal or not, and the RGB input unit status.
When the GT27-R2-Z is used, the device notifies the input status of the channel set for the input source of the RGB screen.

- b0: Turns on when the RGB signal is input.
- b1: Turns on when the GOT supports the input resolution and refresh rate.
- b2: Turns on when the RGB input unit operates normally.
- b3 to b15: Use prohibited

(42)RGB Signal Resolution (Horizontal) (GS1026)

When GS1025.b0 turns on, the device stores the horizontal resolution (dots) of the RGB signal.
When the RGB signal does not exist or the resolution of the signal is unclear, the device stores 0.

(43)RGB Signal Resolution (Vertical) (GS1027)

When GS1025.b0 turns on, the device stores the vertical resolution (dots) of the RGB signal.
When the RGB signal does not exist or the resolution of the signal is unclear, the device stores 0.

(44)RGB Signal Refresh Rate (GS1028)

When GS1025.b0 turns on, the device stores the refresh rate (Hz) of the RGB signal.
When the RGB signal does not exist or the refresh rate of the signal is unclear, the device stores 0.

(45)Video/RGB Display Object Status (CH1 to CH2) (GS1030, GS1035)

Notifies information on the video/RGB display object.

- b0: Turns on when a signal is input.
- b1: Turns on when the target GOT supports the resolution and refresh rate indicated by input signals.
- b2: Turns on when the RGB input unit operates normally.
- b3 to b15: Use prohibited

(46)Video/RGB Display Object Horizontal Resolution (CH1 to CH2) (GS1031, GS1036)

Stores the horizontal resolution (dots) indicated by an input signal for the video/RGB display object.
Stores 0 if no signal is input or the resolution cannot be identified.

(47)Video/RGB Display Object Vertical Resolution (CH1 to CH2) (GS1032, GS1037)

Stores the vertical resolution (dots) indicated by an input signal for the video/RGB display object.
Stores 0 if no signal is input or the resolution cannot be identified.

(48)Video/RGB Display Object Refresh Rate (CH1 to CH2) (GS1033, GS1038)

Stores the refresh rate (Hz) indicated by an input signal for the video/RGB display object.
Stores 0 if no signal is input or the refresh rate cannot be identified.

(49)Wireless Processing Security Information (GS1040)

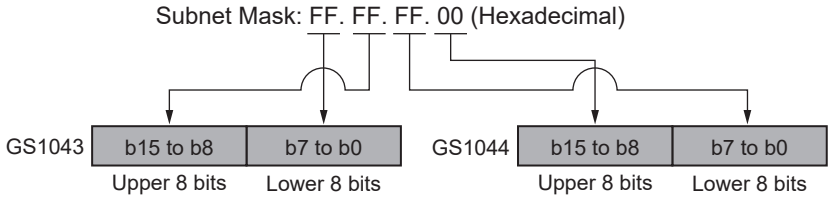
Notifies operations executed via a wireless LAN.

- b0: Turns on when the GOT receives a write request of the package data (containing system applications) from GT Designer3 while the Prohibit System Package Write signal (GS1840.b0) is on.
  When the Prohibit System Package Write signal (GS1840.b0) turns off, this bit also turns off.
- b1: Turns on when the GOT receives a write request of the package data (containing project data) from GT Designer3 while the Prohibit Project Data Write signal (GS1840.b1) is on.
  When the Prohibit Project Data Write signal (GS1840.b1) turns off, this bit also turns off.
- b2 to b7: Use prohibited
- b8: Turns on when the GOT receives a read request of data from GT Designer3 while the Prohibit Project Data Read signal (GS1840.b8) is on.
  When the Prohibit Project Data Read signal (GS1840.b8) turns off, this bit also turns off.
- b9 to b15: Use prohibited

(50)Ethernet Port 1 Subnet Mask Notification (GS1043, GS1044), Ethernet Port 2 Subnet Mask Notification

(GS1045, GS1046)

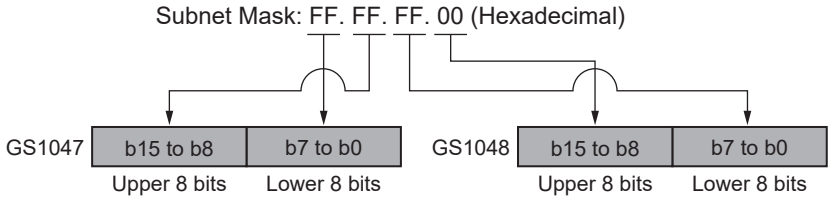
Stores the subnet mask that is specified for the GOT Ethernet port 1 or port 2 in hexadecimal.
Example) Subnet mask for Ethernet port 1: 255.255.255.0 (decimal)



When the subnet mask for Ethernet port 2 is invalid, 0.0.0.0 (decimal) is stored in GS1045 and GS1046.

(51)Wireless LAN Port Subnet Mask Notification (GS1047 to GS1048)

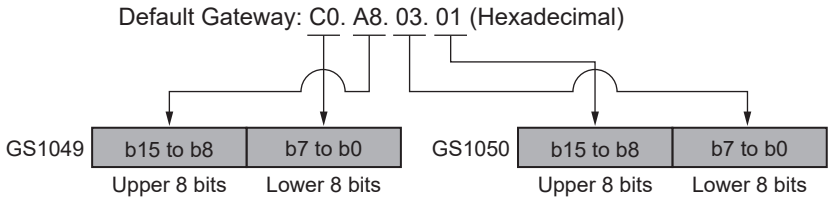
Stores the subnet mask that is specified for the wireless LAN interface in hexadecimal.
Example) Subnet mask: 255.255.255.0 (decimal)



When the wireless LAN function is disabled, 0.0.0.0 (decimal) is stored.

(52)Default Gateway Notification (GS1049 to GS1050)

Stores the default gateway set in the GOT in hexadecimal.
Example) Default gateway: 192.168.3.1 (decimal)



(53)Wireless LAN Status Notification (GS1060)

Notifies the information on the GOT wireless LAN function.

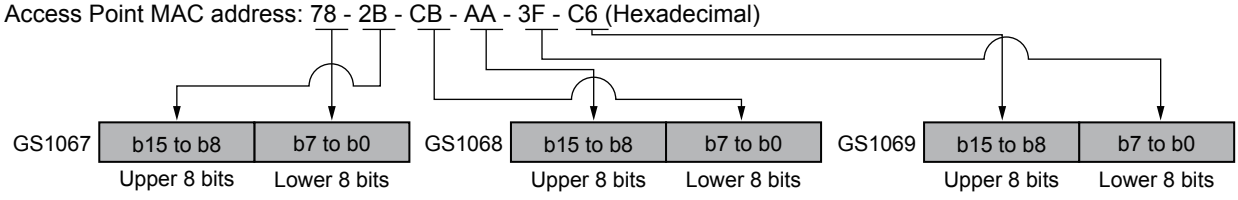
- b0: Turns on when the wireless LAN function is enabled.
  Turns off when the wireless LAN function is disabled.
- b1: Turns on when the GOT (operation mode: station) connects to the wireless LAN access point.
- b2: Notifies the GOT operation mode.
  0: Station
  1: Access point
- b3 to b15: Use prohibited

(54)Reception Field Intensity Notification (GS1061)

Stores a value (0 to 4) indicating the intensity of radio waves received by access points when the wireless LAN function is used.
Zero indicates a disconnection, and the other values indicate the intensity of radio waves. The larger the value, the higher the intensity.

(55)Access Point MAC Address Notification(GS1067 to GS1069)

Stores the MAC address of the access point to which the GOT is connected in hexadecimal.
Example) When the MAC address is 78-2B-CB-AA-3F-C6(16 bits)



(56)Number of Connected Stations (GS1072)

Stores the number of stations connected to the GOT (operation mode: access point) on a wireless LAN.
Stores 0 when the GOT operates as a station (operation mode: station) or the wireless LAN function is disabled.

(57)Label Name Resolution Status (Common, CH1 to CH4) (GS1080, GS1081 to GS1084)

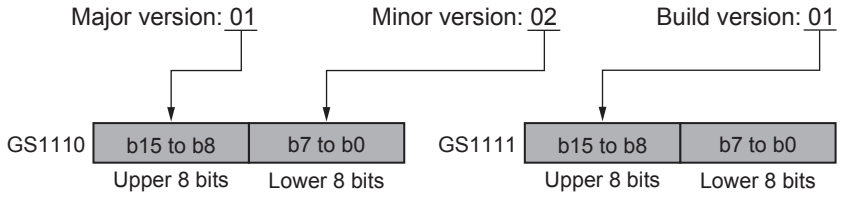
Notifies the status of the label name resolution.
GS1080 notifies the status relevant to all channels.
GS1081 to GS1084 each notify the status of the corresponding channel (CH1 to CH4).

- b0: Use prohibited
- b1: Notifies that the label name resolution is being executed.
  For GS1080, this bit turns on while the label name resolution is being executed on any of the channels.
  For GS1081 to GS1084, this bit turns on while the label name resolution is being executed on the corresponding channel.
- b2: Notifies that the label name resolution completes.
  For GS1080, this bit turns on when the label name resolution completes on all the channels.
  For GS1081 to GS1084, this bit turns on when the label name resolution completes on the corresponding channel.
- b3: Notifies that the label name resolution is canceled.
  For GS1080, this bit turns on when the label name resolution is canceled on any of the channels.
  For GS1081 to GS1084, this bit turns on when the label name resolution is canceled on the corresponding channel.
- b4 to b14: Use prohibited
- b15: Notifies that an error has occurred during the label name resolution.
  For GS1080, this bit turns on when a label name resolution error occurs on any of the channels.
  For GS1081 to GS1084, this bit turns on when a label name resolution error occurs on the corresponding channel.
  For how to use the bits, refer to the following.

➟6.1.4 ■5 (3) Label name resolution performed by a user

(58)HMS Communication Module Version (GS1110 to GS1111)

Stores the version of the HMS communication module used.
Example) When the communication module version is 01.02.01



(59)HMS Communication Module Error Details (GS1112 to GS1113)

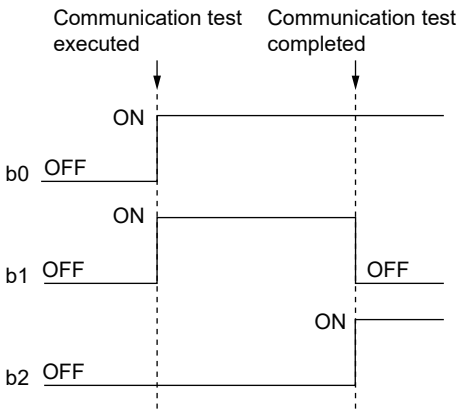
- GS1112.b0 to b7: Store an exception code of the network object.
- GS1112.b8 to b15: Store an exception code of the Anybus object.
- GS1113.b0 to b7: Store the Anybus status.
- GS1113.b8 to b15: Store the error code of an Anybus message.

(60)CC-Link IE TSN Module Communication Test Status (GS1114)

Notifies the execution status of a communication test of the CC-Link IE TSN communication unit.

- b0: Turns on when a communication test is executed.
- b1: Is on while a communication test is being executed.
- b2: Turns on when a communication test is complete.
- b3 to b15: Use prohibited

Stores the IP address of the VNC client communicating with the VNC server in hexadecimal.



For details on the communication test of the CC-Link IE TSN communication unit, refer to the following.

➥GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

(61)CC-Link IE TSN Module Communication Test Error (GS1115)

Notifies that an error has occurred during a communication test of the CC-Link IE TSN communication unit.

- b0: Turns on if there is a problem with the port 1 side of the CC-Link IE TSN communication unit.
- b1: Turns on if there is a problem with the connection interface (port 1) or the Ethernet cable terminal connected to port 1.
- b2: Turns on if there is a problem with the Ethernet cable connected to port 1 of the CC-Link IE TSN communication unit.
- b3 to b7: Use prohibited
- b8: Turns on if there is a problem with the port 2 side of the CC-Link IE TSN communication unit.
- b9: Turns on if there is a problem with the connection interface (port 2) or the Ethernet cable terminal connected to port 2.
- b10: Turns on if there is a problem with the Ethernet cable connected to port 2 of the CC-Link IE TSN communication unit.
- b11 to b15: Use prohibited

For details on the communication test of the CC-Link IE TSN communication unit, refer to the following.

➥GOT2000 Series Connection Manual (Mitsubishi Electric Products) For GT Works3 Version1

(62)Front USB Drive Additional Installation Information (GS1130)

To use this device, install BootOS version BA or later on the GOT.

- b0: Notifies that additional installation of a data storage to the front USB drive of the GOT is disabled.
  This signal turns on when the Front USB Drive Additional Installation Control (GS1930.b0) turns on and the front USB drive of the GOT becomes unrecognized.
  The signal turns off when the Front USB Drive Additional Installation Control (GS1930.b0) turns off.

➥12.1.3 ■6 (32) Front USB Drive Additional Installation Control (GS1930)

(63)Special Function Switch Special Control (GS1220)

- b0: Turns on when an error occurs during the iQSS utility special control.
  This signal turns off at a start of the iQSS utility special control.

(64)iQSS Utility Special Control Error Sensor Device No. (GS1221)

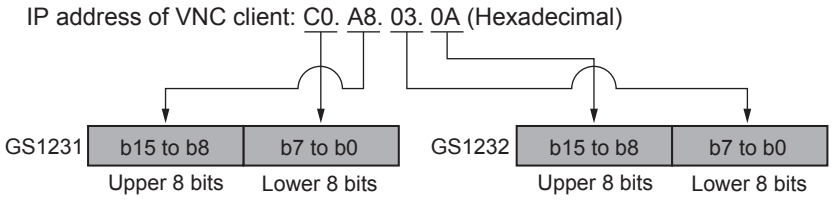
Stores the affected sensor device number when an error occurs during the iQSS utility special control.
Data type: Unsigned binary
When no error occurs, the reset value (65535) is stored.

(65)VNC Server Operation Status Notification (GS1230)

- b0: Turns on while the VNC server communicates with the VNC client.
- b1: Turns on when the VNC client is allowed to display the VNC server screen and to remotely operate the VNC server.
  Turns off when the VNC client is allowed to only display the VNC server screen.
- b2: Turns on when the VNC client holds the authorization.
  Turns off when the VNC server holds the authorization.
- b3 to b14: Use prohibited
- b15: Turns on when the VNC client holds the authorization.
  Turns off when the VNC server holds the authorization.

(66)Communicating VNC Client Information Notification (GS1231, GS1232)

Stores the IP address of the VNC client communicating with the VNC server in hexadecimal.
Example) When the IP address of the VNC client is 192.168.3.10 (Decimal)



(67)VNC Server Authorization Guarantee Status Notification (GS1233)

Stores the remaining authorization guarantee time (second).

(68)Insufficient Security Level Notification (GS1241)

Turns on when the screen cannot be displayed because of the insufficient security level.

- b0: Turns on when the overlap window 3 cannot be displayed.
- b1: Turns on when the overlap window 4 cannot be displayed.
- b2: Turns on when the overlap window 5 cannot be displayed.
- b3 to b7: Use prohibited
- b8: Turns on when a called screen on the overlap window 3 cannot be displayed.
- b9: Turns on when a called screen on the overlap window 4 cannot be displayed.
- b10: Turns on when a called screen on the overlap window 5 cannot be displayed.
- b11 to b15: Use prohibited

(69)Report Output Status: Print Date/Time (Year) (GS1271)

Specify this device for a numerical print object on a report screen to output the date (year) on which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(70)Report Output Status: Print Date/Time (Month) (GS1272)

Specify this device for a numerical print object on a report screen to output the date (month) on which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(71)Report Output Status: Print Date/Time (Day) (GS1273)

Specify this device for a numerical print object on a report screen to output the date (day) on which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(72)Report Output Status: Print Date/Time (Hour) (GS1275)

Specify this device for a numerical print object on a report screen to output the time (hour) at which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(73)Report Output Status: Print Date/Time (Minute) (GS1276)

Specify this device for a numerical print object on a report screen to output the time (minute) at which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(74)Report Output Status: Print Date/Time (Second) (GS1277)

Specify this device for a numerical print object on a report screen to output the time (second) at which the file print function prints a report.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(75)Report Output Status: Total Number of Pages (GS1278)

Specify this device for a numerical print object on a report screen to output the total number of pages at the position where the object is placed.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(76)Report Output Status: Operator Name (GS1279)

Specify this device for a text print object on a report screen to output the name of the operator who prints a report using the file print function.
This device is activated only when the report function outputs data to a file.
This device is activated on a report screen only.

(77)Faulty Monitor Station signal (CC-Link IE TSN) (GS1280)

- b0 to b7: Stores the number of faulty monitor stations in the CC-Link IE TSN connection.
- b8 to b15: Use prohibited

(78)Faulty Station Information (CC-Link IE TSN) (GS1281 to GS1288)

Turn on the bit that corresponds to the faulty monitor station number in the CC-Link IE TSN network.
0: No error
1: Error
When the faulty station is restored from the error, the bit turns off.
The following shows station numbers for each device.

Device	Station number corresponding to each bit															
	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS1281	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
GS1282	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS1283	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS1284	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS1285	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS1286	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS1287	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS1288	-	-	-	-	-	-	-	120	119	118	117	116	115	114	113	112

(79)CC-Link IE TSN Connection Status (GS1297)

Notifies whether the GOT is connectable to the network in CC-Link IE TSN Connection.
After checking the connection with the master station at the startup, the GOT is connectable to the network.

- 0 or 1: Not connectable because the connection has not been confirmed.
- 2: Connectable

(80)Number of Connected GOT Mobile Function Clients (GS1400)

Stores the number of clients connected to the server (GOT).

(81)GOT Mobile Function Connection Status (GS1401)

Notifies the connection status between the server (GOT) and each client.
GT27, GT25, and GS25 support b0 to b5.

- b0: Use prohibited
- b1: Turns on when client 1 connects to the server (GOT).
- b2: Turns on when client 2 connects to the server (GOT).
- b3: Turns on when client 3 connects to the server (GOT).
- b4: Turns on when client 4 connects to the server (GOT).
- b5: Turns on when client 5 connects to the server (GOT).
- b6: Turns on when client 6 connects to the server (GOT).
- b7: Turns on when client 7 connects to the server (GOT).
- b8: Turns on when client 8 connects to the server (GOT).
- b9: Turns on when client 9 connects to the server (GOT).
- b10: Turns on when client 10 connects to the server (GOT).
- b11: Turns on when client 11 connects to the server (GOT).
- b12: Turns on when client 12 connects to the server (GOT).
- b13: Turns on when client 13 connects to the server (GOT).

• b14: Turns on when client 14 connects to the server (GOT).
• b15: Turns on when client 15 connects to the server (GOT).

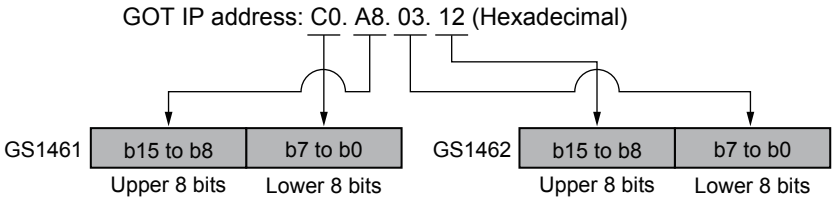
(82)Authorization Status Information (GS1460)

Notifies the information on the authorization of the GOT network interaction function.
This device is activated in an applicable GOT in the control group.

• b0: Turns on when the equipment obtains the authorization.
• b1: Turns on when the equipment displays a screen in which the authorization control is enabled.
• b2 to b15: Use prohibited

(83)Master GOT IP Address (GS1461 to GS1462)

Store the IP address of the master GOT in hexadecimal when GS1460.b0 turns on.
Store 0 when GS1460.b0 is off.
These devices are activated in an applicable GOT in the control group.
Example) When the IP address of the master GOT is 192.168.3.18 (decimal)



(84)Time Elapsed from Authorization Acquisition (GS1463)

Stores the time (second) elapsed since GS1460.b0 turned on.
If the time exceeds 65536 seconds, the value update stops.
Stores 0 when GS1460.b0 is off.
This device is activated in an applicable GOT in the control group.

(85)Authorization Guarantee Time (GS1464)

Stores the remaining authorization guarantee time (second) when GS1460.b0 is on.
Stores 0 when GS1460.b0 is off.
This device is activated in an applicable GOT in the control group.

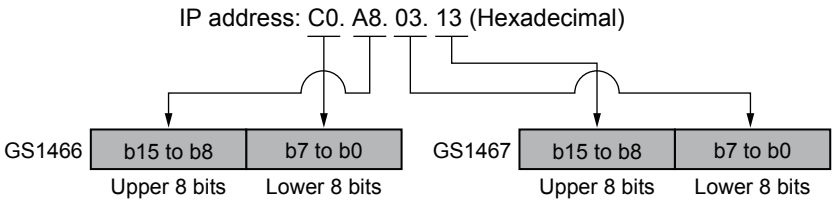
(86)Authorization Management Information (GS1465)

Notifies the information on the authorization of the GOT network interaction function.
This device is activated in the master GOT in the control group.

• b0: Turns on when any equipment in the control group obtains the authorization.
• b1: Turns on when equipment except the master GOT in the control group is prohibited from obtaining the authorization (when GS1796.b0 is on).
• b2: Turns on when all pieces of equipment including the master GOT in the control group are prohibited from obtaining the authorization (when GS1796.b2 is on).
• b3 to b15: Use prohibited

(87)Authorized Equipment IP Address (GS1466 to GS1467)

Store the IP address of the authorized equipment when GS1465.b0 turns on.
Store 0 when GS1465.b0 is off.
These devices are activated in the master GOT in the control group.
Example) When the IP address of the authorized equipment is 192.168.3.19 (decimal)



(88)Authorized Equipment Type (GS1468)

Stores the type of the authorized equipment when GS1465.b0 turns on.

Stored value	Type
0	GOT
1	GT SoftGOT2000
2	GOT Mobile function client

When GS1465.b0 is off, 0 is stored.
This device is activated in the master GOT in the control group.

(89)Authorized Equipment ID Information (GS1469)

Stores the ID number of the authorized equipment when GS1465.b0 turns on.
The value to be stored varies depending on the type of the authorized equipment.

Type	Value to be stored
GOT	GOT ID number (1 to 32767)
GT SoftGOT2000	GT SoftGOT2000 module number (1 to 32767)
GOT Mobile function client	GOT Mobile function client number (1 to 15)

When GS1465.b0 is off, 0 is stored.
This device is activated in the master GOT in the control group.

(90)Authorization Use Time (GS1470)

Stores the time (second) elapsed since GS1465.b0 turned on.
If the time exceeds 65536 seconds, the value update stops.
When GS1465.b0 is off, 0 is stored.
This device is activated in the master GOT in the control group.

(91)GOT Ethernet Setting Change Status (GS1500)

Notifies the status of the GOT Ethernet setting change.
GT21 and GS21 support b0, b1, and b15.

- b0: Turns on while the Ethernet setting is being changed.
  When the Execute GOT Ethernet Setting Change signal (GS1901.b0) turns off, this bit also turns off.
- b1: Turns on when the Ethernet setting change has completed.
- b2: Turns on when changes are made in the Ethernet setting by using the GOT Ethernet Setting Change devices (GS1900 to GS1908).
  Restart the GOT to apply the new Ethernet setting.
- b3 to b14: Use prohibited
- b15: Turns on when an error occurs during the Ethernet setting change.

For the details of the GOT Ethernet Setting Change devices (GS1900 to GS1908), refer to the following.

➟12.1.3 ■6 (27) GOT Ethernet Setting Change (GS1900 to GS1908)

■4 Read device list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Device	Function	Reference	Supported models
GS0 to GS383	Write device	➡■1 Write device list	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS384	Script Common Control	➡12.1.3 ■5 (1) Script Common Control (GS384)	
GS385	Script Monitoring Time	➡12.1.3 ■5 (2) Script Monitoring Time (GS385)	
GS386	Project/Screen Script Initial Operation	➡12.1.3 ■5 (3) Project/Screen Script Initial Operation (GS386)	
GS387	Object Script Common Control	➡12.1.3 ■5 (4) Object Script Common Control (GS387)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS388	Object Script Monitoring Time	➡12.1.3 ■5 (5) Object Script Monitoring Time (GS388)	
GS389	Object Script Initial Operation	➡12.1.3 ■5 (6) Object Script Initial Operation (GS389)	
GS390	File Operation Data Storage Order	➡12.1.3 ■5 (7) File Operation Data Storage Order (GS390)	
GS391	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS392	Start GD Device for Script Error Info Notification	➡12.1.3 ■5 (8) Start GD Device for Script Error Info Notification (GS392)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS393	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS394	Number of Script Error Info Outputs	➡12.1.3 ■5 (9) Number of Script Error Info Outputs (GS394)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS395	Script Error Info Output Common Control	➡12.1.3 ■5 (10) Script Error Info Output Common Control (GS395)	
GS396	Start GD Device for Script Event Notification	➡12.1.3 ■5 (11) Start GD Device for Script Event Notification (GS396)	
GS397	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS398	Number of Script Event Outputs	➡12.1.3 ■5 (12) Number of Script Event Outputs (GS398)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS399	Script Event Output Common Control	➡12.1.3 ■5 (13) Script Event Output Common Control (GS399)	
GS400	Gateway Common Information	➡12.1.3 ■5 (14) Gateway Common Control (GS400)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS401	File Transfer Control	➡12.1.3 ■5 (15) File Transfer Control (GS401)	
GS402	File Transfer Timeout Time	➡12.1.3 ■5 (16) File Transfer Timeout Time (GS402)	

Device	Function	Reference	Supported models
GS403	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS404	Maximum Number of Connected FTP Clients	12.1.3 ■5 (17) Maximum Number of Connected FTP Clients (GS404)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS405	GOT Information Output Common Control	12.1.3 ■5 (18) GOT Information Output Common Control (GS405)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS406	Serial No. Output Destination	12.1.3 ■5 (19) Serial No. Output Destination (GS406)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS407	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS408	Ethernet Port 1 MAC Address Destination	12.1.3 ■5 (20) Ethernet Port 1 MAC Address Destination (GS408)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS409	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS410	Ethernet Port 2 MAC Address Destination	12.1.3 ■5 (21) Ethernet Port 2 MAC Address Destination (GS410)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS411	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS412	Wireless LAN Interface MAC Address Destination	12.1.3 ■5 (22) Wireless LAN Interface MAC Address Destination (GS412)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS413 to GS422	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS423	Current Directory Designation when Logging in to the FTP Server Function	➟12.1.3 ■5 (23) Current Directory Designation when Logging in to the FTP Server Function (GS423)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS424 to GS431	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS432	Start GD Device for Object Script Error Info Notification	➟12.1.3 ■5 (24) Start GD Device for Object Script Error Info Notification (GS432)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS433	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS434	Number of Object Script Error Info Outputs	➟12.1.3 ■5 (25) Number of Object Script Error Info Outputs (GS434)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS435	Object Script Error Info Output Common Control	➟12.1.3 ■5 (26) Object Script Error Info Output Common Control (GS435)	
GS436	Start GD Device for Object Script Event Notification	➟12.1.3 ■5 (27) Start GD Device for Object Script Event Notification (GS436)	
GS437	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS438	Number of Object Script Event Outputs	➟12.1.3 ■5 (28) Number of Object Script Event Outputs (GS438)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS439	Object Script Event Output Common Control	➟12.1.3 ■5 (29) Object Script Event Output Common Control (GS439)	
GS440 to GS446	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS447	Exclusive Authorization Control	➟12.1.3 ■5 (30) Exclusive Authorization Control (GS447)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS448	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS449	RGB Display Common Control	➟12.1.3 ■5 (31) RGB Display Common Control (GS449)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2705-V)
GS450	Monitor Common Control	➟12.1.3 ■5 (32) Monitor Common Control (GS450)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS451	Auto Screen Save Time	➟12.1.3 ■5 (33) Auto Screen Save Time (GS451)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS452, GS453	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS454	Ethernet Port 1 Access Control, Ethernet Port 2 Access Control	➟12.1.3 ■5 (34) Ethernet Port 1 Access Control, Ethernet Port 2 Access Control (GS454)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS455	Intensity Control	➟12.1.3 ■5 (35) Intensity Control (GS455)	
GS456	Character Code	➟12.1.3 ■5 (36) Character Code Control (GS456)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS457	Pass-through Transparent Stop Control	➟12.1.3 ■5 (37) Pass-through Transparent Stop Control (GS457)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS458 to GS459	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS460	Conversion Start Indication	➟12.1.3 ■5 (38) Conversion Start Indication (GS460)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS461	Number of Conversion Devices	➟12.1.3 ■5 (39) Number of Conversion Devices (GS461)	
GS462	Conversion Source Head Device No.	➟12.1.3 ■5 (40) Conversion Source Head Device No. (GS462)	
GS463	Conversion Destination Head Device No.	➟12.1.3 ■5 (41) Conversion Destination Head Device No. (GS463)	
GS464	Storage Error Value	➟12.1.3 ■5 (42) Storage Error Value (GS464)	
GS465	Remote Personal Computer Operation (Ethernet) Common Control	➟12.1.3 ■5 (43) Remote Personal Computer Operation (Ethernet) Common Control (GS465)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS466	Unit of Drive Free Space	➟12.1.3 ■5 (44) Unit of Drive Free Space (GS466)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS467	Monitor Common Control 2	➟12.1.3 ■5 (45) Monitor Common Control 2 (GS467)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS468	Kanji Region Control	➟12.1.3 ■5 (46) Kanji Region Control (GS468)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS469 to GS499	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS500	GT SoftGOT2000 Common Control	⇒12.1.3 ■5 (47) GT SoftGOT2000 Common Control (GS500)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS501, GS502	Application Start signal	⇒12.1.3 ■5 (48) Application Start signal (GS501, GS502)	
GS503	GT SoftGOT2000 Full Screen Size (Width)	⇒12.1.3 ■5 (49) GT SoftGOT2000 Full Screen Size (Width) (GS503)	
GS504	GT SoftGOT2000 Full Screen Size (Height)	⇒12.1.3 ■5 (50) GT SoftGOT2000 Full Screen Size (Height) (GS504)	
GS505 to GS507	Advanced Application Start signal	⇒12.1.3 ■5 (51) Advanced Application Start signal (GS505, GS506 to GS507)	
GS508, GS509	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS510	Device Data Transfer Information	⇒12.1.3 ■5 (52) Device Data Transfer Information (GS510)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS511	Touch Status Communication Control	⇒12.1.3 ■5 (53) Touch Status Communication Control (GS511)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS512	Time Change Information	⇒12.1.3 ■5 (54) Time Change Information (GS512)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS513 to GS516	Changed Time	⇒12.1.3 ■5 (55) Changed Time (GS513 to GS516)	
GS517	External I/O Function Notification/External I/O Control Function	⇒12.1.3 ■5 (56) External I/O Function Notification/ External I/O Control Function (GS517)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS518	Sound Output Common Control	⇒12.1.3 ■5 (57) Sound Output Common Control (GS518)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS519	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS520	Buffering And File Access Control	⇒12.1.3 ■5 (58) Buffering And File Access Control (GS520)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS521	Trigger Backup Data Send Delay	➟12.1.3 ■5 (59) Trigger Backup Data Send Delay (GS521)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS522	Special Control During Specific Function Execution	➟12.1.3 ■5 (60) Special Control During Specific Function Execution (GS522)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS523	Document Display Common Control	➟12.1.3 ■5 (61) Document Display Common Control (GS523)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS524	Report Common Control	➟12.1.3 ■5 (62) Report Common Control (GS524)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS525	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS526	Delay Hard Copy Execution	➟12.1.3 ■5 (63) Delay Hard Copy Execution (GS526)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS527 to GS529	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS530	Network No. For Monitor Station Disconnected (CH1)	➟12.1.3 ■5 (64) Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS531 to GS538	Monitor Station Disconnection (CH1)	➟12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS539	Channel Shutdown Control (CH1)	➟12.1.3 ■5 (66) Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS540	Network No. For Monitor Station Disconnected (CH2)	➟12.1.3 ■5 (64) Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS541 to GS548	Monitor Station Disconnection (CH2)	➟12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS549	Channel Shutdown Control (CH2)	➟12.1.3 ■5 (66) Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS550	Network No. For Monitor Station Disconnected (CH3)	⇒12.1.3 ■5 (64) Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS551 to GS558	Monitor Station Disconnection (CH3)	⇒12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)	
GS559	Channel Shutdown Control (CH3)	⇒12.1.3 ■5 (66) Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)	
GS560	Network No. For Monitor Station Disconnected (CH4)	⇒12.1.3 ■5 (64) Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)	
GS561 to GS568	Monitor Station Disconnection (CH4)	⇒12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)	
GS569	Channel Shutdown Control (CH4)	⇒12.1.3 ■5 (66) Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)	
GS570 to GS576	MODBUS Communication Control Function (Common)	⇒12.1.3 ■5 (67) MODBUS Communication Control Function (GS570 to GS576, GS590 to GS596, GS597 to GS603, GS604 to GS610, GS611 to GS617)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS577 to GS578	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS579	Channel Setting of MODBUS Communication Control Function	⇒12.1.3 ■5 (68) Channel Setting of MODBUS Communication Control Function (GS579)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS580	Microcomputer Connection Extended Setting (CH1)	⇒12.1.3 ■5 (69) Microcomputer Connection Extended Setting (CH1 to CH4) (GS580 to GS583)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS581	Microcomputer Connection Extended Setting (CH2)		
GS582	Microcomputer Connection Extended Setting (CH3)	⇒12.1.3 ■5 (69) Microcomputer Connection Extended Setting (CH1 to CH4) (GS580 to GS583)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS583	Microcomputer Connection Extended Setting (CH4)		
GS584 to GS589	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS590 to GS596	MODBUS Communication Control Function (CH1)	⇒12.1.3 ■5 (67) MODBUS Communication Control Function (GS570 to GS576, GS590 to GS596, GS597 to GS603, GS604 to GS610, GS611 to GS617)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS597 to GS603	MODBUS Communication Control Function (CH2)	⇒12.1.3 ■5 (67) MODBUS Communication Control Function (GS570 to GS576, GS590 to GS596, GS597 to GS603, GS604 to GS610, GS611 to GS617)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS604 to GS610	MODBUS Communication Control Function (CH3)		GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS611 to GS617	MODBUS Communication Control Function (CH4)		

Device	Function	Reference	Supported models
GS618 to GS619	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS620	CC-Link IE TSN Control	➡12.1.3 ■5 (70) CC-Link IE TSN Control (GS620)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS621	Operator Management Common Control	➡12.1.3 ■5 (71) Operator Management Common Control (GS621)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS622	System Screen Operation Restriction	➡12.1.3 ■5 (72) System Screen Operation Restriction (GS622)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS623	Specify Drive to Prohibit Write Operation (System Screen)	➡12.1.3 ■5 (73) Specify Drive to Prohibit Write Operation (System Screen) (GS623)	
GS624	Specify Drive to Hide (System Screen)	➡12.1.3 ■5 (74) Specify Drive to Hide (System Screen) (GS624)	
GS625 to GS629	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS630	Touch Position Color Acquisition Ready signal	➡12.1.3 ■5 (75) Touch Position Color Acquisition Ready signal (GS630)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS631	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS632	Date Format Control	➡12.1.3 ■5 (76) Date Format Control (GS632)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS633	Specify Notification While Monitoring Stopped	➡12.1.3 ■5 (77) Specify Notification While Monitoring Stopped (GS633)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS634	Specify Screen No. to be Displayed While Monitoring Stopped	➡12.1.3 ■5 (78) Specify Screen No. to be Displayed While Monitoring Stopped (GS634)	
GS635	Base Screen Size Expansion Common Control	➡12.1.3 ■5 (79) Base Screen Size Expansion Common Control (GS635)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS636	Specify Expanded Base Screen Position (X Coordinate)	➡12.1.3 ■5 (80) Specify Expanded Base Screen Position (GS636 and GS637)	
GS637	Specify Expanded Base Screen Position (Y Coordinate)		
GS638	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS639	GOT Reset Control	➡12.1.3 ■5 (81) GOT Reset Control (GS639)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS640 to GS1791	Write device	⇒12.1.3 ■1 ■1 Write device list	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1792	VNC Server Function Control	⇒12.1.3 ■6 (1) VNC Server Function Control (GS1792)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21, only available to GS21-W-N for GS21)
GS1793	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1794	Gesture Common Control	⇒12.1.3 ■6 (2) Gesture Common Control (GS1794)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1795	Authorization Status Control	⇒12.1.3 ■6 (3) Authorization Status Control (GS1795)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1796	Authorization Management Control	⇒12.1.3 ■6 (4) Authorization Management Control (GS1796)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1797	Log Viewer Common Control	⇒12.1.3 ■6 (5) Log Viewer Common Control (GS1797)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1798	VNC Server GOT Processing Balance Control	⇒12.1.3 ■6 (6) VNC Server GOT Processing Balance Control (GS1798)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1799	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1800	Recipe Control	⇒12.1.3 ■6 (7) Recipe Control (GS1800)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1801	Recipe Special Control Action	⇒12.1.3 ■6 (8) Recipe Special Control Action (GS1801)	
GS1802	Recipe Special Control Target Type	⇒12.1.3 ■6 (9) Recipe Special Control Target Type (GS1802)	
GS1803	Recipe Special Control Start GD Device No.	⇒12.1.3 ■6 (10) Recipe Special Control Start GD Device No. (GS1803)	
GS1804	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1805	Recipe Special Control Recipe No.	12.1.3 ■6 (11) Recipe Special Control Recipe No. (GS1805)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1806	Recipe Special Control Record No.	12.1.3 ■6 (12) Recipe Special Control Record No. (GS1806)	
GS1807	Recipe Special Control Row No.	12.1.3 ■6 (13) Recipe Special Control Row No. (GS1807)	
GS1808	Recipe Special Control Points	12.1.3 ■6 (14) Recipe Special Control Points (GS1808)	
GS1809	Recipe Display (Record List) Control	12.1.3 ■6 (15) Recipe Display (Record List) Control (GS1809)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1810	Special Function Switch Special Control	12.1.3 ■6 (16) Special Function Switch Special Control (GS1810)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1811	iQSS Utility Special Control Start GD Device No. Specification	12.1.3 ■6 (17) iQSS Utility Special Control Start GD Device No. Specification (GS1811)	
GS1812	iQSS Utility Special Control Number of Parameters	12.1.3 ■6 (18) iQSS Utility Special Control Number of Parameters (GS1812)	
GS1813 to GS1819	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1820	SD Card Access Switch Status Control	12.1.3 ■6 (19) SD Card Access Switch Status Control (GS1820)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1821 to GS1823	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1824	USB Drive Common Control	12.1.3 ■6 (20) USB Drive Common Control (GS1824)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Only available to GT2107-W for GT21)
GS1825 to GS1839	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1840	Wireless Access Control	12.1.3 ■6 (21) Wireless Access Control (GS1840)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2505-V and GT25HS-V)
GS1841 to GS1879	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1880	Label Name Resolution Control	➟12.1.3 ■6 (22) Label Name Resolution Control (GS1880)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1881 to GS1884	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1885	Prioritize Touch Switch Operation Control	➟12.1.3 ■6 (23) Prioritize Touch Switch Operation Control (GS1885)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1886 to GS1891	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1892	GOT Mobile File Operation Security Level	➟12.1.3 ■6 (24) GOT Mobile File Operation Security Level (GS1892)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1893 to GS1895	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1896	GOT Mobile Common Control	➟12.1.3 ■6 (25) GOT Mobile Common Control (GS1896)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1897 to GS1898	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1899	Time to Force Mobile Momentary Switch OFF	➟12.1.3 ■6 (26) Time to Force Mobile Momentary Switch OFF (GS1899)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1900 to GS1908	GOT Ethernet Setting Change	➟12.1.3 ■6 (27) GOT Ethernet Setting Change (GS1900 to GS1908)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1909 to GS1929	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1930	Front USB Drive Additional Installation Control	➟12.1.3 ■6 (32) Front USB Drive Additional Installation Control (GS1930)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1931 to GS1997	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Device	Function	Reference	Supported models
GS1998	Full-screen Display Control signal	12.1.3 ■6 (33) Full-screen Display Control signal (GS1998)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS1999 to GS2006	Video Window 1 Extended Control signal	12.1.3 ■6 (34) Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)	(Except GT2705-V)
GS2007 to GS2008	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS2009 to GS2016	Video Window 2 Extended Control signal	12.1.3 ■6 (34) Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2705-V)
GS2017 to GS2018	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS2019 to GS2026	Video Window 3 Extended Control signal	12.1.3 ■6 (34) Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2705-V)
GS2027 to GS2028	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS2029 to GS2036	Video Window 4 Extended Control signal	12.1.3 ■6 (34) Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2705-V)
GS2037 to GS2038	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GS2039 to GS2045	RGB Screen Extended Control signal	12.1.3 ■6 (34) Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000 (Except GT2705-V)
GS2046 to GS2047	Use prohibited	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

■5 Read device (GS384 to GS639)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the GOT models that support each device, refer to the following.

➟■4 Read device list

(1) Script Common Control (GS384)

The following script types are supported: project script, screen script, and script part.
Notifies the information common to project scripts and screen scripts.

- b0: When this bit is turned on, the script error records are cleared as shown below.
  GS14.b0, b7, b8, and b12 store 0.
  GS15 stores -1.
  GS16 to GS47 store 0.
- b1: When this bit is turned on, the script aborted due to an error is re-executed.
- b2 to b15: Use prohibited

For the precautions on the script error, refer to the following.

➟9.9.12 ■1 (11) Script error control and GOT status

(2) Script Monitoring Time (GS385)

The following script types are supported: project script, screen script, and script part.
Specify the monitoring time of a project script, screen script, or script of a script parts object in seconds.
If a script does not end after a lapse of the specified time, the script is aborted.
The setting range is [1] (second) to [300] (seconds).
If an invalid value is specified, 10 seconds are assumed.

(3) Project/Screen Script Initial Operation (GS386)

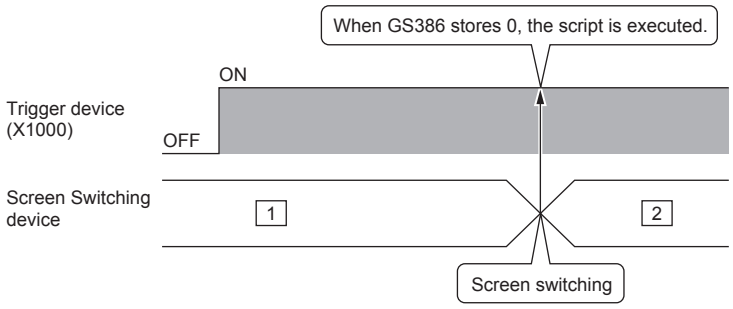
Set whether to run a project script, screen script, or script of a script parts object upon screen switching or others applicable processes.

- When GS386 stores 0, the script runs.
- When GS386 stores a nonzero value, the script does not run.

This setting is applied to the project scripts, screen scripts, and script parts where the following trigger types are set.

- [Rise]:
  When the trigger device is on, the script runs upon screen switching or other applicable processes.
- [Fall]:
  When the trigger device is off, the script runs upon screen switching or other applicable processes.
- [Rise/Fall]:
  When the trigger device is on or off, the script runs upon screen switching or other applicable processes.

Example) When a screen script ([Trigger Type]: [Rise], [Trigger Device]: X1000) is set for base screen 2
After base screen 1 is switched to base screen 2, if the trigger device (X1000) turns on, the screen script set for base screen 2 is executed.



The following processes trigger applicable scripts to run.

(a) **Project script**

- When the GOT is powered on or when the GOT returns from offline

(b) **Screen script**

- Screen switching

The script set for the destination screen runs upon screen switching.
If [Perform script initial operation (screen/object) only when switching screens] is deselected in the [Script] dialog, each of the following processes triggers the relevant script to run.

➟9.9.5 ■4 [Option] tab

- Security switching
- Language switching
- System language switching
- Station No. switching

  When the station No. switching devices are set by screen type, the scripts that are set for the screens of the target screen type are executed.
- Offset switching

  Only the screen scripts are executed.

  On a screen having a script setting, when offset switching occurs in any device of the screen, the script is executed.
- Buffer memory unit No. switching
- When object script "redraw_screen()" is executed

(4) Object Script Common Control (GS387)

Notifies the information common to object scripts.

- b0: When this bit is turned on, the object script error records are cleared as shown below.

  GS80.b0, b7, b8, and b12 store 0.

  GS81 stores -1.

  GS82 to GS113 store 0.
- b1: When this bit is turned on, the object script aborted due to an error is re-executed.
- b2 to b15: Use prohibited

For the precautions on the object script error, refer to the following.

➟9.10.7 ■1 (10) Object script error control and GOT status

(5) Object Script Monitoring Time (GS388)

Specify the monitoring time of an object script in seconds.

If a script does not end after a lapse of the specified time, the script is aborted.

The setting range is [1] (second) to [300] (seconds).

If an invalid value is specified, 10 seconds are assumed.

(6) Object Script Initial Operation (GS389)

Set whether to run an object script upon screen switching or others applicable processes.

- When GS389 stores 0, the object script runs.
- When GS389 stores a nonzero value, the object script does not run.

This setting is applied to the object scripts where the following trigger types are set.

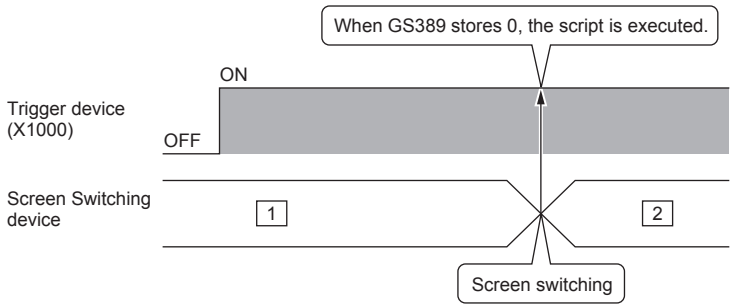
- [Rise]:

  When the trigger device is on, the script runs upon screen switching or other applicable processes.
- [Fall]:

  When the trigger device is off, the script runs upon screen switching or other applicable processes.
- [Rise/Fall]:

  When the trigger device is on or off, the script runs upon screen switching or other applicable processes.

Example) When the object script ([Trigger Type]: [Rise], [Trigger Device]: X1000) is set for a switch on base screen 2
After base screen 1 is switched to base screen 2, if the trigger device (X1000) turns on, the object script of the switch on base screen 2 is executed.



The following processes trigger applicable scripts to run.

- Screen switching

The script set for the destination screen runs upon screen switching.

If [Perform script initial operation (screen/object) only when switching screens] is deselected in the [Script] dialog, each of the following processes triggers the relevant script to run.

➟9.9.5 ■4 [Option] tab

- Security switching
- Language switching
- System language switching
- Station No. switching

When the station No. switching devices are set by screen type, the scripts that are set for the screens of the target screen type are executed.

(7) File Operation Data Storage Order (GS390)

The following script types are supported: project script, screen script, and script part.
Select the order in which data is stored when using the file_read or file_write function in a script.
[Low-->High]: Stores data from the lower-order bytes.
[High-->Low]: Stores data from the higher-order bytes.
Alternatively, you can configure the data storage order setting on GT Designer3.
This setting becomes invalid when GS390 stores 1 or 2.
The following shows examples of settings.

- When GS390 stores 0, data is stored in the order specified on GT Designer3.
- When GS390 stores 1, data is stored from the lower-order bytes.
- When GS390 stores 2, data is stored from the higher-order bytes.
- When GS390 stores 3 or more, data is stored in the order specified on GT Designer3.

(8) Start GD Device for Script Error Info Notification (GS392)

The following script types are supported: project script, screen script, and script part.
Specify the start device number of the GD devices to store error records.
Data type: Unsigned binary

(9) Number of Script Error Info Outputs (GS394)

The following script types are supported: project script, screen script, and script part.
Specify the maximum number of error records.
Data type: Unsigned binary
The setting range is 0 to 5000.
If the device stores 0, no error record will be stored.
If the device stores 5001 or more, up to 5000 records will be stored.
GS395.b1 specifies the operation to be performed when the number of errors has exceeded the maximum number of error records.
The following shows an example of how an error record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Error code	Error code of an error. For the error details and corrective actions, refer to the following. ➟9.9.14 ■3 (5) List of script execution error codes
GD1001	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 1: Project script • 2: Screen script (set for a base screen) • 3: Screen script (set for a window screen) • 4: Script part
GD1002	Screen number	Number of the screen for which the script is set. The device stores 0 for a project script.
GD1003	Script number or object ID number	The device stores a script number or object ID number according to the script type. • For project scripts and screen scripts: script number • For script parts: object ID number
GD1004	Execution order number	Script execution order number specified on GT Designer3 The device stores any of the following values according to the script type. • For project scripts: 1 to 256 • For screen scripts: 1 to 256 (per screen) • For script parts: 1 to 16 (per script parts object)

Storage device	Item	Description
GD1005	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332 The device stores 0 for a project script.
GD1006	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1007	Use prohibited	The device stores 0.

(10)Script Error Info Output Common Control (GS395)

The following script types are supported: project script, screen script, and script part.

• b0: When this bit is turned on, storing error records starts.
When this bit is turned off, storing error records ends.

• b1: Specifies the operation to be performed when the number of errors has exceeded the maximum number of error records specified with GS394.
When this bit is turned on, storing error records stops.
When this bit is turned off, storing error records continues by overwriting the oldest record.

• b2 to b7: Use prohibited

• b8: When this bit is turned on, the project script error records are not stored.

• b9: When this bit is turned on, the screen script error records are not stored.

• b10: When this bit is turned on, the script error records of script parts objects are not stored.

• b11: When this bit is turned on, the records of warnings that do not abort a script are not stored.

• b12 to b15: Use prohibited

(11)Start GD Device for Script Event Notification (GS396)

The following script types are supported: project script, screen script, and script part.
Specify the start device number of the GD devices to store script execution records.
Data type: Unsigned binary

(12)Number of Script Event Outputs (GS398)

The following script types are supported: project script, screen script, and script part.
Specify the maximum number of script execution records.
Data type: Unsigned binary
The setting range is 0 to 5000.
If the device stores 0, no script execution record will be stored.
If the device stores 5001 or more, up to 5000 records will be stored.
GS399.b1 specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records.
The following shows an example of how a script execution record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 1: Project script • 2: Screen script (set for a base screen) • 3: Screen script (set for a window screen) • 4: Script part
GD1001	Screen number	Number of the screen for which the script is set. The device stores 0 for a project script.

Storage device	Item	Description
GD1002	Script number or object ID number	The device stores a script number or object ID number according to the script type. • For project scripts and screen scripts: script number • For script parts: object ID number
GD1003	Execution order number	Script execution order number specified on GT Designer3 The device stores any of the following values according to the script type. • For project scripts: 1 to 256 • For screen scripts: 1 to 256 (per screen) • For script parts: 1 to 16 (per script parts object)
GD1004	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332 The device stores 0 for a project script.
GD1005	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1006	Use prohibited	The device stores 0.
GD1007	Use prohibited	The device stores 0.

(13)Script Event Output Common Control (GS399)

The following script types are supported: project script, screen script, and script part.

- b0: When this bit is turned on, storing script execution records starts.
  When this bit is turned off, storing script execution records ends.
- b1: Specifies the operation to be performed when the number of executed scripts has exceeded the maximum number of script execution records specified with GS398.
  When this bit is turned on, storing script execution records stops.
  When this bit is turned off, storing script execution records continues by overwriting the oldest record.
- b2 to b7: Use prohibited
- b8: When this bit is turned on, the project script execution records are not stored.
- b9: When this bit is turned on, the screen script execution records are not stored.
- b10: When this bit is turned on, the script execution records of script parts objects are not stored.
- b11 to b15: Use prohibited

(14)Gateway Common Control (GS400)

Controls the FTP server function.
GT21 and GS21 support b2 and b8.

- b0 to b1: Use prohibited
- b2: When this bit is turned on, all FTP clients connected to the FTP server are forcibly disconnected.
- b3 to b7: Use prohibited
- b8: When this bit is turned on, binary files (*.G2□) become readable from all the FTP clients that are connected to the FTP server.
- b9 to b10: Use prohibited
- b11: When this bit is turned on, the error occurring in the mail send function is cleared. (GS200.b11 and GS201 to GS206 are cleared.)
- b12 to b13: Use prohibited
- b14: When this bit is turned on, the error occurring in the server function is cleared. (GS200.b14 and GS210 to GS216 are cleared.)
- b15: When this bit is turned on, the error occurring in the client function is cleared. (GS200.b15 and GS220 to GS226 are cleared.)

(15)File Transfer Control (GS401)

• b0: When this bit is turned on, the error code stored in the following device is cleared or the following signals are turned off.
File Transfer Error No. (GS989)
Warning signal (GS990.b14)
File Transfer Error signal (GS990.b15)
• b1 to b15: Use prohibited

(16)File Transfer Timeout Time (GS402)

Set the timeout period for FTP communication in units of seconds.
If a script does not end after the lapse of the timeout period, the script processing is aborted.
The setting range is [1] (second) to [300] (seconds).
If the set value falls outside the setting range, the timeout period defaults to 3 seconds.

(17)Maximum Number of Connected FTP Clients (GS404)

Specify the number of FTP clients connectable to the FTP server.
The setting range is 1 to 4.
If an invalid value is specified, 1 is assumed.
Changing the number of connectable FTP clients does not affect the already-connected FTP clients.

(18)GOT Information Output Common Control (GS405)

For GT2505-V and GT25HS-V, b0 and b1 are available.
• b0: When this bit is turned on, the GOT serial number is output to the devices specified with GS406.
If 10 word devices cannot be reserved, the output is not executed.
• b1: When this bit is turned on, the MAC address of the Ethernet standard port or Ethernet standard port 1 is output to the devices specified with GS408.
If 3 word devices cannot be reserved, the output is not executed.
• b2: When this bit is turned on, the MAC address of the Ethernet extended port or Ethernet standard port 2 is output to the devices specified with GS410.
If 3 word devices cannot be reserved, the output is not executed.
• b3: When this bit is turned on, the MAC address of the wireless LAN interface is output to the devices specified with GS412.
If 3 word devices cannot be reserved, the output is not executed.
The output may not be executed upon startup of the GOT, and therefore check that the Wireless LAN Status Notification signal (GS1060.b0) is on and then execute the output.
• b4 to b15: Use prohibited

(19)Serial No. Output Destination (GS406)

Specify the start device number of the GOT data registers (GD) to store the GOT serial number.
Ten GD devices, starting from the specified device, are used to store the GOT serial number.

(20)Ethernet Port 1 MAC Address Destination (GS408)

Specify the start device number of the GOT data registers (GD) to store the MAC address of the Ethernet standard port or Ethernet standard port 1.
Three GD devices, starting from the specified device, are used to store the MAC address.

(21)Ethernet Port 2 MAC Address Destination (GS410)

Not available to GT2505-V and GT25HS-V.
Specify the start device number of the GOT data registers (GD) to store the MAC address of the Ethernet extended port or Ethernet standard port 2.
Three GD devices, starting from the specified device, are used to store the MAC address.

(22)Wireless LAN Interface MAC Address Destination (GS412)

Not available to GT2505-V and GT25HS-V.
Specify the start device number of the GOT data registers (GD) to store the MAC address of the wireless LAN interface.
Three GD devices, starting from the specified device, are used to store the MAC address.

(23)Current Directory Designation when Logging in to the FTP Server Function (GS423)

Specify the current directory when logging in to the FTP server.
• b0 to b9: Use prohibited
• b10: When this bit is turned on, drive V is specified as the current directory.
• b11 to b15: Use prohibited

(24)Start GD Device for Object Script Error Info Notification (GS432)

Specify the start device number of the GD devices to store error records.
Data type: Unsigned binary

(25)Number of Object Script Error Info Outputs (GS434)

Specify the maximum number of error records.
Data type: Unsigned binary
The setting range is 0 to 5000.
If the device stores 0, no error record will be stored.
If the device stores 5001 or more, up to 5000 records will be stored.
GS435.b1 specifies the operation to be performed when the number of errors has exceeded the maximum number of error records.
The following shows an example of how an error record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Error code	Error code of an error. For the error details and corrective actions, refer to the following. ➥9.10.9 ■3 (5) List of object script execution error codes
GD1001	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 10: Display object script or switch object script • 11: Input object script
GD1002	Screen number	Number of the screen where the object is placed.
GD1003	Object ID number	ID number of the object where a script error has occurred.
GD1004	Use prohibited	The device stores 0.
GD1005	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 • 400: User-created key window • 500: Dialog window substituted for a system message If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332
GD1006	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1007	Use prohibited	The device stores 0.

(26)Object Script Error Info Output Common Control (GS435)

- b0: When this bit is turned on, storing error records starts.
  When this bit is turned off, storing error records ends.
- b1: Specifies the operation to be performed when the number of errors has exceeded the maximum number of error records specified with GS434.
  When this bit is turned on, storing error records stops.
  When this bit is turned off, storing error records continues by overwriting the oldest record.
- b2 to b10: Use prohibited
- b11: When this bit is turned on, the records of warnings that do not abort a script are not stored.
- b12 to b15: Use prohibited

(27)Start GD Device for Object Script Event Notification (GS436)

Specify the start device number of the GD devices to store script execution records.
Data type: Unsigned binary

(28)Number of Object Script Event Outputs (GS438)

Specify the maximum number of script execution records.
Data type: Unsigned binary
The setting range is 0 to 5000.
If the device stores 0, no script execution record will be stored.
If the device stores 5001 or more, up to 5000 records will be stored.
GS439.b1 specifies the operation to be performed when the number of the executed scripts has exceeded the maximum number of script execution records.
The following shows an example of how a script execution record is stored in eight word devices starting from GD1000.

Storage device	Item	Description
GD1000	Script type	Number that shows a script type. The device stores any of the following values according to the script type. • 10: Display object script or switch object script • 11: Input object script
GD1001	Screen number	Number of the screen where the object is placed.
GD1002	Object ID number	ID number of the object where a script error has occurred.
GD1003	Use prohibited	The device stores 0.
GD1004	Screen type	Type of the screen for which the script is set. The device stores any of the following values according to the screen type. • 200: Base screen • 210: Superimpose window 1 • 220: Superimpose window 2 • 310: Overlap window 1 • 320: Overlap window 2 • 330: Overlap window 3 • 340: Overlap window 4 • 350: Overlap window 5 • 400: User-created key window • 500: Dialog window substituted for a system message If the script is set for a called screen, the device stores a value by adding a number to the number showing the calling screen type. • When a base screen is called, 1 is added. • When a window screen is called, 2 is added. Example) When a window screen is called from overlap window 3 330 + 2 = 332
GD1005	Number of the displayed base screen	Number of the base screen that is displayed when the script runs.
GD1006	Use prohibited	The device stores 0.
GD1007	Use prohibited	The device stores 0.

(29)Object Script Event Output Common Control (GS439)

• b0: When this bit is turned on, storing script execution records starts.
When this bit is turned off, storing script execution records ends.
• b1: Specifies the operation to be performed when the number of executed scripts has exceeded the maximum number of script execution records specified with GS438.
When this bit is turned on, storing script execution records stops.
When this bit is turned off, storing script execution records continues by overwriting the oldest record.
• b2 to b15: Use prohibited

(30)Exclusive Authorization Control (GS447)

Controls the authorization of the SoftGOT-GOT link function.
This is disabled when the GOT network interaction function is used.
• b0: When this bit is turned on, the GOT obtains the exclusive authorization.
• b1: When this bit is turned on, the authorization guarantee time for the SoftGOT-GOT link function is disabled and GS984 (Authorization Guarantee Status Notification signal) stores 0.
• b2 to b15: Use prohibited

(31)RGB Display Common Control (GS449)

• b0: When this bit is turned on, the RGB screen is displayed at the center of the GOT screen .
When this bit is turned off, the RGB screen is displayed at position set by the RGB display position (b13) of [Video/RGB Input Common] device.

➟10.6.4 ■8 Setting items of [Video/RGB Input Common] device

• b1 to b15: Use prohibited

(32)Monitor Common Control (GS450)

GT21 (except GT2107-W) and GS21 support b15 only.
GS21-W-N supports b4.
GT2107-W supports b4 and b15.

• b0: When this bit is turned on, a confirm message is displayed after numerical or text data (numerical input or text input) is input .

• b1: Controls the displaying methods of the message displayed when an numeric value exceeding the valid range is input.
Turning on displays a message during the numerical input.
Turning off displays a message after the numeric value is input.

• b2: When this bit is turned on, the system signal 1-1.b4 (Numeric Value Input Read Complete signal), system signal 2-1.b4 (Numeric Value Input signal), [Numeric Value Input Number], [Current Cursor Display User ID], and [Previous Cursor Display User ID] in the [Environmental Setting] window ([System Information]) are activated during the input as well.

• b3: When this bit is turned on, 0 is stored into [Current Cursor Display Object], [Previous Cursor Display Object], [Current Cursor Display User ID], and [Previous Cursor Display User ID] in the [Environmental Setting] window ([System information]) when a cursor is erased.

• b4: When this bit is turned on, the Kana-Kanji conversion or Pinyin conversion function is activated when text input is used.
The conversion function selected for [Kana-Kanji/Pinyin Conversion] in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion]) is activated.

• b5: When this bit is turned on, the key window is forcibly closed if the input condition (the trigger condition or security level for the object) is not satisfied during a value or text input.

• b6: When this bit is turned on, the key window for inputting binary values is displayed for the numerical input whose format is binary.

• b7: When this bit is turned on, the key window for inputting octal values is displayed for the numerical input whose format is octal.

• b8: When this bit is turned on, BNP, JPE, and PNG files in the data storage can be used as a part for parts display or parts movement.
Turning off displays parts registered by GT Designer3.
When [Show image files in the memory card at the time of specifying Parts No. 9001-9999] is selected in the [Parts Setting] dialog, a BMP, JPEG, or PNG file in the data storage is used as a part regardless of the on and off status of this signal.
➟8.8 Placing a Parts Display

• b9: When this bit is turned on, the GOT retains the state of the historical trend graph displayed before screen switching and displays the same graph state after switching back to the graph screen.
➟8.21 Placing a Historical Trend Graph

• b10: When this bit is turned on, the upper and lower limit symbols on the trend graph and the historical trend graph are hidden.

• b11: Use prohibited

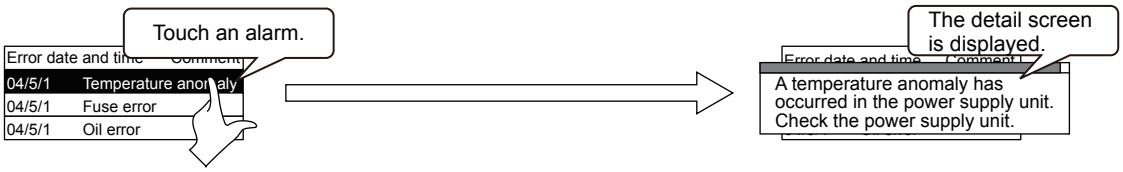
• b12: Controlling the timing when the bit alternate or bit reset, or bit reset, or screen switching and station No. switching are set to the touch switch.
➟8.2 Placing a Touch Switch

• b13: When this bit is turned on, the data storage stores the history of the screen switching.

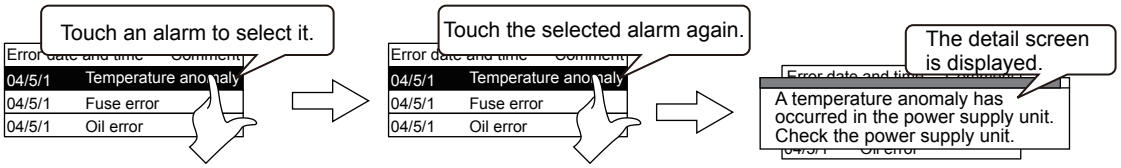
• b14: When this bit is turned on, the screen switching mode is switched from the previous mode to the history mode.

• b15: While this bit is on, touching an alarm once in the alarm display (user) displays the detail screen.
While this bit is off, touching an alarm twice in the alarm display (user) displays the detail screen.

When GS450.b15 is on



When GS450.b15 is off



(33)Auto Screen Save Time (GS451)

Stores the time before closing (OFF) the monitor screen in screen save function.
Stores the value by 1 to 60 (Min).
(To store value higher than 60, store it as 60)
The changed value is validated after canceling the screen save when a value is changed during the screen save.

Point

Relationship between GS451 and GOT utility (screen save time)

If value other than 0 is stored in GS451, the screen save time set in GOT utility will be invalidated.
To validate the screen save time of utility, store 0 in GS451.

(34)Ethernet Port 1 Access Control, Ethernet Port 2 Access Control (GS454)

Controls the operations through an Ethernet network.
The Ethernet interface corresponding to each bit varies by GOT model.
The following shows the correspondence between the Ethernet interfaces and the bits.

GOT	Ethernet interface	Bit number
GT27, GT25-S, GT25-V (excluding GT2505-V)	Ethernet standard port	b0, b1, b8
	Ethernet extended port	b4, b5, b12
GT25-W, GS25	Ethernet standard port 1	b0, b1, b8
	Ethernet standard port 2	b4, b5, b12
GT2505-V, GT25HS-V, GT23, GT21, GS21	Ethernet standard port	b0, b1, b8

- b0: Turn on this bit to disable the writing of package data (containing system applications) through the corresponding Ethernet interface.
- b1: Turn on this bit to disable the writing of package data (containing project data) through the corresponding Ethernet interface.
- b2 and b3: Use prohibited
- b4: Turn on this bit to disable the writing of package data (containing system applications) through the corresponding Ethernet interface.
- b5: Turn on this bit to disable the writing of package data (containing project data) through the corresponding Ethernet interface.
- b6 and b7: Use prohibited
- b8: Turn on this bit to disable the reading of data through the corresponding Ethernet interface.
- b9 to b11: Use prohibited
- b12: Turn on this bit to disable the reading of data through the corresponding Ethernet interface.
- b13 to b15: Use prohibited

(35)Intensity Control (GS455)

Sets the intensity and the brightness adjustment mode of the GOT display section.

- b0 to b14: When the bits store a setting value, the intensity of the backlight changes to the one corresponding to the setting value.

The setting value ranges from 1 to 8, or 101 to 132.

Intensity	Setting value	Intensity	Setting value	Intensity	Setting value	Intensity	Setting value
1	1 or 101	9	109	17	117	25	125
2	102	10	3 or 110	18	118	26	126
3	103	11	111	19	5 or 119	27	127
4	104	12	112	20	120	28	7 or 128
5	2 or 105	13	113	21	121	29	129
6	106	14	4 or 114	22	122	30	130
7	107	15	115	23	6 or 123	31	131
8	108	16	116	24	124	32	8 or 132

For GT23

Intensity	Setting value	Intensity	Setting value	Intensity	Setting value	Intensity	Setting value
1	102	5	3 or 110	9	118	13	126
2	104	6	112	10	120	14	7 or 128
3	106	7	4 or 114	11	122	15	130
4	108	8	116	12	124	16	8 or 132

If 0 and 9 to 100, or 133 or more is set, the setting for the intensity adjustment function for the utility is applied.

• b15: When the bit turns on, the brightness adjustment mode is set to the low intensity.

To set the brightness adjustment mode to the low intensity, install the version E or later of BootOS on the GOT.

The intensity of the GOT can be confirmed by the Intensity Notification (GS255).

➟12.1.3 ■2 (49) Intensity Notification (GS255)

For the specifications of the GOT display section, refer to the following.

➟GOT2000 Series User's Manual (Hardware)

Point

(1) **Setting value changed by the Intensity Control (GS455)**

The Intensity Control (GS455) changes the setting value of the intensity temporarily.
If the GOT is turned off after the setting value is changed by the Intensity Control (GS455), the value is returned to the value set in the utility.

(2) **Stored setting value**

For the projects converted from GOT1000 projects, you can use the stored setting value without changing the Intensity Control (GS455) setting.
Since the intensity is controlled in eight levels, the setting value ranges from 1 to 8.

(36)Character Code Control (GS456)

The character code used for the text display or the text input is changeable.
This device is enabled only when the character code is determined by the system language or Unicode.
If you change the character code, the KANJI region for the kanji characters displayed on the text display or the text input is also changed.
The character code is changed to one corresponding to the stored value as shown below.

Stored value	Character code	KANJI region of displayed kanji characters	Supported models
0	ASCII code, Shift JIS code	Japanese	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
	GB code*1	Chinese (Simplified)	
1	Shift JIS code	Japanese	
2	ASCII code	Japanese	
3	GB code	Chinese (Simplified)	
4	KS code	Japanese	
5	BIG5	Chinese (Traditional)	

*1 This item is enabled when all of the following conditions are satisfied.
• Selecting [Kana-Kanji/Pinyin Conversion] in the [Extended] tab in the [Text Input] dialog
• Selecting [Pinyin Simplified Characters] for [Conversion Method] in [GOT Environmental Setting] → [Kana-Kanji/Pinyin

Conversion]

For the GOT models other than GT21 and GS21, a new character code is reflected to the GOT screen at any of the following timing.

- Switching screens (Switching to a key window or dialog window is excluded.)
- Switching security levels or operator accounts
- Switching languages
- Switching station numbers
- Switching buffer memory unit numbers
- Executing the function (redraw_screen()) of the object script

For GT21 and GS21, a new character code is reflected to the GOT screen in real time.

(a) **Applied KANJI region**

If the GOT does not have a font corresponding to the KANJI region for a selected character code, the KANJI region for the standard font is applied.
The following is an example in using the GOT that has only Japanese as the standard font (standard).
If the character code is changed to GB code, the KANJI region of the displayed kanji characters is set to Japanese.

(b) **How to reflect the new setting at the GOT startup**

You can reflect the new setting at the GOT startup by using the object script.

Example) When changing the character code to GB code at the GOT startup
On the screen displayed at the GOT startup, place an object where the following object script is set.

Setting item for the script	Setting details
Trigger type	[Rise]
Trigger device	GS0.b4 (Common Information1: Always ON signal)
Script	[w:GS456] = 3; redraw_screen();

(37)Pass-through Transparent Stop Control (GS457)

When 1 is set at this area, pass-through transparent stop request is performed.
By using this area, the user can expedite recovery from the pass-through transparent recovery waiting status.
This area is effective only when 2 (pass-through mode in operation) is set for FA transparent status (GS256).
0: No stop request
1: No stop request

(38)Conversion Start Indication (GS460)

The following script types are supported: project script, screen script, and script part.

- b0: With Integer←→Real Number Conversion, converting unsigned 16-bit binary data to real numbers is specified.
- b1: With Integer←→Real Number Conversion, converting signed 16-bit binary data to real numbers is specified.
- b2 and b3: Use prohibited
- b4: With Integer←→Real Number Conversion, converting real numbers to unsigned 16-bit binary data is specified.
- b5: With Integer←→Real Number Conversion, converting real numbers to signed 16-bit binary data is specified.
- b6 to b14: Use prohibited
- b15: With Integer←→Real Number Conversion, the conversion start is indicated.

(39)Number of Conversion Devices (GS461)

The following script types are supported: project script, screen script, and script part.
With Integer←→Real Number Conversion, the number of conversion devices is specified.
1 to 4096 conversion devices can be specified.

(40)Conversion Source Head Device No. (GS462)

The following script types are supported: project script, screen script, and script part.
With Integer←→Real Number Conversion, the head device No. of GOT internal device (GD) that stores the value before conversion is specified.

(41)Conversion Destination Head Device No. (GS463)

The following script types are supported: project script, screen script, and script part.
With Integer←→Real Number Conversion, the value after conversion is stored and the head device No. of GOT internal device (GD) is specified.

(42)Storage Error Value (GS464)

The following script types are supported: project script, screen script, and script part.
With Integer←→Real Number Conversion, if conversion error occurs, the device value to be stored in the conversion destination device is specified.

(43)Remote Personal Computer Operation (Ethernet) Common Control (GS465)

Set whether to display the operation buttons on the personal computer screen on the GOT, and specify the display magnification of the personal computer screen.
The setting is applied when the GOT displays the personal computer screen with the remote personal computer operation function (Ethernet).
For the details of the remote personal computer operation function (Ethernet), refer to the following.

➟10.3 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Ethernet))

- b0: When this bit is turned on, the [CAD] button is hidden.
- b1: When this bit is turned on, the [C+E] button is hidden.
- b2: When this bit is turned on, the [KBD] button is hidden.
- b3: When this bit is turned on, the zoom in button and the zoom out button are hidden.
- b4: Use prohibited
- b5: Specifies the display magnification of the personal computer screen to be applied when b3 is turned on.
  When this bit is turned on, the display magnification specified on GT Designer3 is applied.
  When this bit is turned off, the display magnification is fixed to 100%.
- b6: When this bit is turned on, the click switching button is hidden.
- b7: When this bit is turned on, the scroll bars of the personal computer screen on the GOT are hidden.
- b8: When this bit is turned on, the personal computer screen on the GOT opens in the full screen mode.
  For the display modes of the personal computer screen on the GOT, refer to the following.

➟10.3.2 ■5 Display modes of the personal computer screen on the GOT

- b9: When this bit is on, the GOT (VNC server) can be connected to a vision sensor described in the following Technical Bulletin.

➟List of VNC Servers Supporting the Remote Personal Computer Operation (Ethernet) Function Validated to Operate with the GOT2000 Series (GOT-A-0110)

- b10: When the GOT connected with multiple personal computers displays a remote screen window, use this bit to set the action when the touch screen to open the specified personal computer screen without closing the remote screen window is touched.
  When this bit is on, the personal computer screen on the GOT is switched.
  When this bit is off, the personal computer screen on the GOT is not switched and an error message is displayed.
  For switching the personal computer screen on the GOT, refer to the following.

➟10.3.2 ■6 Switching the personal computer screen on the GOT

- b11 to b15: Use prohibited

(44)Unit of Drive Free Space (GS466)

Specify the unit of values to be stored in the Drive Empty Capacity Information devices of the system information.

➟5.2.5 ■1 (14) Drive Empty Capacity Information

This setting applies to all the drives when the system information is updated.
The setting range is 0 to 2.
If you set a value outside the setting range, each target device stores a value in bytes.

Stored value	Unit	Remarks
0	byte	Each target device notifies up to 2 GB free space.
1	Kbyte	Each target device notifies up to 2 TB free space. (1 Kbyte = 1024 bytes) The fractional portion is rounded off. Example) For 1.1 Kbytes of free space, 1 is stored.
2	Mbyte	Each target device notifies up to 2 PB free space. (1 Mbyte = 1024 Kbytes) The fractional portion is rounded off. Example) For 1.2 Mbytes of free space, 1 is stored.

If you change the specified unit, the maximum size of free space to be notified is changed. Note that the capacity of the data storage usable in the GOT remains unchanged.

(45)Monitor Common Control 2 (GS467)

- b0: When this bit is turned on, the cursor moves to a different alarm on the alarm display (user) after the alarm under

the cursor is deleted.
The cursor display position after the deletion varies with the displayed contents on the alarm display (user).
If an alarm is displayed below the deleted alarm, the cursor moves to this alarm after the deletion.
If all the other alarms are displayed above the deleted alarm, the cursor moves to the alarm at the bottom after the deletion.
If all the alarms are deleted, the cursor is hidden after the deletion.
When this bit is off, the cursor is hidden.

- b1: When this bit is turned on, a key window for text input that supports Kana-Kanji conversion or Pinyin conversion appears when a text input object with Kana-Kanji/Pinyin conversion enabled is touched.
  The conversion function selected for [Kana-Kanji/Pinyin Conversion] in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion]) is activated.
- b2 to b15: Use prohibited

(46)Kanji Region Control (GS468)

The KANJI region used for the text display or text input is changeable.
This setting is applied to all the text displays and text inputs where [Character Code] is set to [Unicode].
The KANJI region is changed according to the stored value as shown below.

Stored value	KANJI region
0	Not changed
1	Japanese
2	Simplified Chinese
3	Traditional Chinese

For the GOT models other than GT21 and GS21, a new KANJI region is reflected to the GOT screen at any of the following timing.

- Switching screens (Switching to a key window or dialog window is excluded.)
- Switching security levels or operator accounts
- Switching languages
- Switching station numbers
- Switching buffer memory unit numbers
- Executing the function (redraw_screen()) of the object script

For GT21 and GS21, a new KANJI region is reflected to the GOT screen in real time.

If the GOT has no font corresponding to the new KANJI region, the KANJI region for an installed standard font is applied.

(a) How to reflect the new setting at the GOT startup

You can reflect the new setting at the GOT startup by using the object script.

Example) When changing the KANJI region to Simplified Chinese at the GOT startup
On the screen displayed at the GOT startup, place an object where the following object script is set.

Setting item for the script	Setting details
Trigger type	[Rise]
Trigger device	GS0.b4 (Common Information1: Always ON signal)
Script	[w:GS468] = 2; redraw_screen();

(47)GT SoftGOT2000 Common Control (GS500)

- b0: When this bit is turned on, the dialog for exiting the GT SoftGOT2000 is displayed.
  If exiting is canceled in the displayed dialog, the signal turns off.
- b1: When this bit is turned on, GT SoftGOT2000 is displayed in the full screen mode.
  When this bit is turned off, the full screen mode of GT SoftGOT2000 is canceled.
- b2: When this bit is turned on, the [File Information in PLC] dialog is displayed.
  Not available to GT SoftGOT2000 (Multiple channels).
- b3 to b15: Use prohibited

(48)Application Start signal (GS501, GS502)

b0 to b15: When this bit is turned on, the application assigned to each bit by GT SoftGOT2000 runs.

(49)GT SoftGOT2000 Full Screen Size (Width) (GS503)

With the full screen mode function of GT SoftGOT2000, set the width of GT SoftGOT2000 monitor screen (320 to 1920 dots).
When the set value is 320 or less, the value is processed as 320. When the set value is 1920 or more, the value is processed as 1920.

(50)GT SoftGOT2000 Full Screen Size (Height) (GS504)

With the full screen mode function of GT SoftGOT2000, set the height of GT SoftGOT2000 monitor screen (240 to 1200 dots).
When the set value is 240 or less, the value is processed as 240. When the set value is 1200 or more, the value is processed as 1200.

(51)Advanced Application Start signal (GS505, GS506 to GS507)

Using a value in GS505 and any bit from GS506 to GS507 starts an application on GT SoftGOT2000.
For setting the devices from GS505 to 507 as a trigger of the application, refer to the following manual.

➟GT SoftGOT2000 Version1 Operating Manual

(a) **GS505**

Stores a value used for starting the application. (1 to 255)

(b) **GS506 to 507**

b0 to b15: When this bit is turned on, the application assigned to each bit according to a value stored in GS505.

(52)Device Data Transfer Information (GS510)

- b0: When this bit is turned on, the device stores 0 in the Error Device Data Transfer ID (GS642) and the Device Data Transfer Error Count (GS643).
- b1: When this bit is turned on, the device stores 0 in the Device Data Transfer Processing Time (GS644), the Device Data Transfer Min. Processing Time (GS646), and the Device Data Transfer Max. Processing Time (GS648).
- b2 to b15: Use prohibited

(53)Touch Status Communication Control (GS511)

- b0: When this bit is turned on, the touch status is output to the personal computer.
  When this bit is turned off, the touch status is not output to the personal computer.
- b1 to b15: Use prohibited

Point

For using the Touch Status Communication Control

To use the Touch Status Communication Control, the system application (extended function) for the remote personal computer operation (Serial) is required.
For details of the remote personal computer operation (Serial), refer to the following.

➟10.4 Operating a Personal Computer by Using the GOT (Remote Personal Computer Operation (Serial))

(54)Time Change Information (GS512)

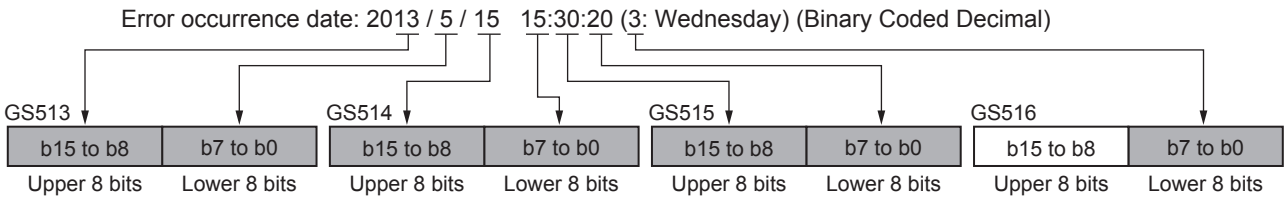
- b0: When this bit is turned on, the GOT clock data is changed to the data set for the Changed Time (GS513 to GS516).
- b1 to b15: Use prohibited

(55)Changed Time (GS513 to GS516)

Stores the current time with BCD code.
The valid date range varies with the GOT model.

- GT27, GT25, GT23, and GS25: Jan. 1, 2000 to Dec. 31, 2099
- GT21 and GS21: Jan. 1, 2000 to Dec. 31, 2037

The day-of-the-week data, 0 to 6, is stored.
(0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday)
Example) When the error occurrence date is 15:30:20 May 15, 2013 (Wednesday)



(56)External I/O Function Notification/External I/O Control Function (GS517)

• b0: When this bit is turned on, the 128-point input can be executed with the external I/O function.
When this bit is turned off, the 16-point input can be executed.
• b1 to b15: Use prohibited

Point

128-point input

Without the 128-point input (when the above device turns off), the GOT internal device turns on when the 16-point input is executed with the input terminal.
With the 128-point input (when the above device turns on), the 16-point input with the input terminal is used with the 8-point scan signal and the 128-point input (16 × 8) is performed.
For connection diagrams of each signal with the external I/O function, refer to the following manual.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

(57)Sound Output Common Control (GS518)

• b0: Turn on this bit to stop the current playback.
• b1: Turn on this bit to stop the current playback and cancel all standby sound files.
• b2: Turn on this bit to mute the sound.
• b3 to b15: Use prohibited

(58)Buffering And File Access Control (GS520)

• b0: When this bit is turned on, the whole data in the buffering area is stored in the destination drive at the timing of the rising edge.
• b1 to b15: Use prohibited

(59)Trigger Backup Data Send Delay (GS521)

The backup/restore function can set the delay time for backup communication intervals.
Setting of the delay time can reduce the load of other processes (such as monitoring objects) with the backup process.
The delay time set by the set value is listed as follows.

Set value	Delay time
0	None
1 to 100	Set value × 5 (ms)
101 or more	500 (ms)

Point

Setting of Trigger Backup Data Send Delay

Backup communication times are longer than a default when the Trigger Backup Data Send Delay is set.
Set the suitable delay time to match the processing condition of backup function and others (such as monitoring objects).

(60)Special Control During Specific Function Execution (GS522)

GT25, GT23, and GS25 support b0, b2 to b4, and b6.
GT2512-WX, GT2510-WX, and GS25 support b9.
GT2105-Q, GT2104-R, GT2104-P, GT2103-P, and GS21-W support b2 only.
GT2107-W and GS21-W-N support b2 and b3.
GT SoftGOT2000 supports b0, b2, and b3.

• b0: When this bit is turned on, during the backup/restore function execution, processing by the alarm functions, the logging function, and others and device monitoring stop, and only the backup and restore process is executed.
• b1: When this bit is turned on, the GOT notifies the amount of usage of the CF card and the number of video files in the card in the multimedia unit by using the Video File Maintenance Information (GS1022).
This function is usable only when [Enable] is selected and [Event Trigger Device] is set in [Before-After Event Recording Setting] on the [Recording Setting] tab of the [Multimedia] dialog.

➟12.1.3 ■3 (39) Video File Maintenance Information (GS1022)

• b2: When this bit is on, the character code is changed to Unicode and data is tab-delimited during a binary-to-CSV conversion or the creation of a CSV file.
Turn on this bit before executing the following operations.
· Converting a binary file (alarm log file, logging file, recipe file, or operation log file) to a CSV file

· Outputting a report screen to a virtual drive in CSV format.
(GT SoftGOT2000 only)
· Writing/reading data to/from a recipe file in CSV format
· Reading a CSV file from drive C or D of the GOT with a personal computer
(GT21 and GS21)
· Copying a CSV file from drive C or D to any other drive
(GT21 and GS21)
Make sure that this bit is on when you execute the following operations using the CSV file that has been converted from another format or created during the turn-on of the bit.
· Converting the CSV file to a binary file
· Performing an operation that uses the CSV file as a recipe file

- b3: When this bit is turned on, all buttons except the [List] and [Latest] buttons are disabled on the [Operation Log Information] screen of the utility.
- b4: When this bit is turned on, the printing operations are disabled on the [Print file list display] screen of the file print function in the utility.
- b5: Use prohibited
- b6: When this bit is turned on, the GOT data package acquisition is executed when the trigger backup of the backup/restoration function is complete.
  When any backup trigger condition of any channel is satisfied, the GOT data package acquisition is executed.
- b7: Turn on this bit to close the displayed system window and switch the base screen, when switching the base screen with the system window open.
  The system window is not closed if the base screen remains the same before and after switching.
  For system windows, refer to the following.
  ➟5.2.1 ■2 (5) Using an overlap window as the system window
- b8: Use prohibited
- b9: Turn on this bit to increase the size of the key window (for numerical input or search) displayed for the following monitor functions.
  · Device monitor
  · Sequence program monitor (Ladder)
  · Sequence program monitor (iQ-R ladder)
  · Sequence program monitor (iQ-F ladder)
  · Sequence program monitor (SFC)
  · Q Motion SFC monitor
  · R Motion SFC monitor
- b10 to b15: Use prohibited

(61)Document Display Common Control (GS523)

- b0: When this bit is turned on, PDF files are not cached, and the cached PDF files are not displayed and updated.
- b1: When this bit is turned on, the search history file is not created or updated.
- b2: When this bit is turned on, an A4 or smaller PDF document is displayed in high quality (144 dpi resolution).
  When this bit is turned off, a PDF document is displayed in standard quality (72 dpi resolution).
- b3: When this bit is turned on while a PDF document is displayed, the document is fit to the object width.
  When a document is displayed for the first time while this bit is on, the document is fit to the object width, regardless of the selection for [Initial Display Size].
- b4 to b15: Use prohibited

(62)Report Common Control (GS524)

GT27, GT25, GT23, and GS25 do not support b15.
GT21 and GS21 support b15 only.

- b0: This bit is activated when [Output Timing] is set to [At the time of data collection] in the [Screen Property] dialog for a report screen.
  While this bit is on, automatic page breaks are disabled and the footer is not output to a report when the number of output lines reaches the set value of [Page Lines] in the [Report Setting] dialog.
  If [Insert a page break before an output] is selected in the [Report Setting] dialog, a page break will be inserted according to the previously output contents even after automatic page breaks are disabled.
  To enable automatic page breaks again, restart the GOT.
- b1: This bit is activated when [Output Timing] is set to [At the time of data collection] in the [Screen Property] dialog for a report screen.
  When this bit is turned on while GS524.b0 is on, a page break is inserted.
  If a footer is set in the previously output report screen, the footer will be printed and then a page break will be inserted.

• b2: This bit is activated when [Output Timing] is set to [When trigger condition is satisfied] in the [Screen Property] dialog for a report screen.
When this bit is turned on, the data stored in a temporary file is output upon satisfaction of the output trigger condition. If the number of collections of data stored in the file is less than or equal to the set value of [Number of repeats] in the [Screen Property] dialog for a report screen, the number of repeats will be assumed to be the number of collections of data decreased by one.
• b3 to b14: Use prohibited
• b15: This bit is activated when [Output Timing] is set to [When trigger condition is satisfied] in the [Screen Property] dialog for a report screen and a Brightek's serial printer is connected.
When the output trigger condition is satisfied while this bit is on, the Brightek's serial printer outputs a report with GB code.
If the bit is turned off after the report output, the output destination will still be the Brightek's serial printer.
To change the printer, restart the GOT.

(63)Delay Hard Copy Execution (GS526)

Set delay time to output a hidden screen image using the hard copy function.
When the start trigger condition is satisfied, the hard copy processing is executed after the set delay time is passed.
Set the delay time as below according to the values to be stored.

Set value	Delay time
0	1 second
1 to 10	1 to 10 seconds
11 or more	10 seconds

(64)Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)

Controls the disconnection and the connection of the monitor stations by the station.
• b0 to b7: the network No. for the station to be disconnected is specified. (0 to 239)
One network No. can be specified per channel.
• b8 to b15: Use prohibited
The devices are enabled only when the following communication drivers are used.
• [Serial(MELSEC)]
• [AJ71QC24, MELDAS C6*]
• [AJ71C24/UC24]
• [Bus(A/QnA)]
• [Bus(Q)]
• [CC-Link(G4)]
Specify the station to be disconnected by using the following GOT special registers.

➡12.1.3 ■5 (65) Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)

(65)Monitor Station Disconnection (CH1 to CH4) (GS531 to GS538, GS541 to GS548, GS551 to GS558, GS561 to GS568)

Each bit corresponds to a station number when one of the following communication drivers is used. Turning on a bit disconnects the corresponding station from the GOT.
When this signal is turned on, the Ethernet Faulty Station Information (GS231 to GS238) of the station number disconnected from the GOT becomes invalid.

➡12.1.3 ■2 (40) Ethernet Faulty Station Information (GS231 to GS238)

The following shows the communication drivers supported by the GOT models.
○ : Available, - : Not available

Communication driver	GT27, GT25, GT23, GS25	GT21, GS21	Communication driver	GT27, GT25, GT23, GS25	GT21, GS21
[Bus Q] *1*2	○	-	[azbil DMC50]	○	○
[Bus A/QnA]*1*2	○	-	[RKC SR Mini HG(MODBUS)]	○	-
[Serial(MELSEC)] *1*2	○	-	[FUJI Temperature Controller/Digital Controller]	○	○
[AJ71QC24, MELDAS C6*] *1*2	○	-	[YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced]	○	-
[AJ71C24/UC24] *1*2	○	-	[Shinko Technos Controller]	○	-

Communication driver	GT27, GT25, GT23, GS25	GT21, GS21	Communication driver	GT27, GT25, GT23, GS25	GT21, GS21
[CC-Link(G4)] *1*2	○	-	[CHINO Controllers(MODBUS)]	○	-
[MEI Nexgenie]	○	○	[MODBUS/RTU Master]	○	○
[IAI ROBO CYLINDER]	○	○	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	○	○
[IAI X-SEL]	○	○	Ethernet(FX), Gateway]	○	○
[Panasonic MINAS A4]	○	-	[Ethernet(FREQROL), Gateway]	○	○
[Panasonic MINAS A5]	○	-	[Ethernet(FREQROL(Batch monitor)), Gateway]	○	○
[MELSERVO-J4,J3,J2S/M,JE]	○	○	[Ethernet(MELSERVO), Gateway]	○	○
[FREQROL 500/700/800,SENSORLESS SERVO]	○	○	[Ethernet(OMRON NJ/NX), Gateway]	○	○
[FREQROL 800]	○	○	[Ethernet(HITACHI IES), Gateway]	○	-
[FREQROL(Batch monitor)]	○	○	[Ethernet(HITACHI), Gateway]	○	-
[OMRON THERMAC/INPANEL NEO]	○	○	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	○	-
[OMRON Digital Temperature Controller]	○	○	[Ethernet(LS Industrial Systems XGK), Gateway]	○	○
[MODBUS/TCP Master, Gateway]	○	○	[Ethernet(SLMP), Gateway]	○	○
[azbil SDC/DMC]	○	○			

*1 Use the following GS devices to specify network numbers.

➟12.1.3 ■5 (64) Network No. For Monitor Station Disconnected (CH1 to CH4) (GS530, GS540, GS550, GS560)

*2 When the network connected through the PLC is the CC-Link IE TSN, 0 to 120 stations can be disconnected.

For the multi-channel connection, the target bit of the device corresponding to each channel No. (CH1 to CH4) turns on.

1: Disconnected

0: Connected

When the GOT is connected to the AZBIL temperature controller (DMC50), the specified station number of the DMC50 differs from the station numbers of the other models.

The following shows the station numbers for each device.

(a) Correspondence between station numbers and device bits (when connecting to a controller other than the AZBIL temperature controller (DMC50))

The station corresponding to each device differs according to whether the Ethernet connection is used or not.

• With the Ethernet connection: 1 to 128

Device				Ethernet setting No.															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 531	GS 541	GS 551	GS 561	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS 532	GS 542	GS 552	GS 562	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS 533	GS 543	GS 553	GS 563	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS 534	GS 544	GS 554	GS 564	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS 535	GS 545	GS 555	GS 565	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS 536	GS 546	GS 556	GS 566	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS 537	GS 547	GS 557	GS 567	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS 538	GS 548	GS 558	GS 568	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

• With other than the Ethernet connection: 0 to 127

Device				Station															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 531	GS 541	GS 551	GS 561	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
GS 532	GS 542	GS 552	GS 562	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
GS 533	GS 543	GS 553	GS 563	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
GS 534	GS 544	GS 554	GS 564	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48
GS 535	GS 545	GS 555	GS 565	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
GS 536	GS 546	GS 556	GS 566	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80
GS 537	GS 547	GS 557	GS 567	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
GS 538	GS 548	GS 558	GS 568	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112

(b) **Correspondence between station numbers and device bits (when connecting to the AZBIL temperature controller (DMC50))**

Device				Station-Sub station															
CH 1	CH 2	CH 3	CH 4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS 531	GS 541	GS 551	GS 561	1-15	1-14	1-13	1-12	1-11	1-10	1-9	1-8	1-7	1-6	1-5	1-4	1-3	1-2	1-1	1-0
GS 532	GS 542	GS 552	GS 562	2-15	3-14	2-13	2-12	2-11	2-10	2-9	2-8	2-7	2-6	2-5	2-4	2-3	2-2	2-1	2-0
GS 533	GS 543	GS 553	GS 563	3-15	3-14	3-13	3-12	3-11	3-10	3-9	3-8	3-7	3-6	3-5	3-4	3-3	3-2	3-1	3-0
GS 534	GS 544	GS 554	GS 564	4-15	4-14	4-13	4-12	4-11	4-10	4-9	4-8	4-7	4-6	4-5	4-4	4-3	4-2	4-1	4-0
GS 535	GS 545	GS 555	GS 565	5-15	5-14	5-13	5-12	5-11	5-10	5-9	5-8	5-7	5-6	5-5	5-4	5-3	5-2	5-1	5-0
GS 536	GS 546	GS 556	GS 566	6-15	6-14	6-13	6-12	6-11	6-10	6-9	6-8	6-7	6-6	6-5	6-4	6-3	6-2	6-1	6-0
GS 537	GS 547	GS 557	GS 567	7-15	7-14	7-13	7-12	7-11	7-10	7-9	7-8	7-7	7-6	7-5	7-4	7-3	7-2	7-1	7-0
GS 538	GS 548	GS 558	GS 568	8-15	8-14	8-13	8-12	8-11	8-10	8-9	8-8	8-7	8-6	8-5	8-4	8-3	8-2	8-1	8-0

Point

(1) Error station

When an error station is disconnected from the GOT, the temperature controller and servo amplifier faulty station information corresponding to the disconnected station turns off.

➟(66) Faulty Station Information (CH1 to CH4) (GS281 to GS288, GS301 to GS308, GS321 to GS328, GS341 to GS348)

(2) Restrictions

- The GOT cannot disconnect the station number 128 or later, or the station number and the sub station number 9-0 or later.
- The stations with the station numbers specified on GT Designer3 cannot be disconnected using the device of the temperature controller and servo amplifier monitor station disconnection.
  For details of specifying station numbers, refer to the following.

  ➟GOT2000 Series Connection Manual for a controller used

(66)Channel Shutdown Control (CH1 to CH4) (GS539, GS549, GS559, GS569)

Communication of each channel is prohibited.

When this signal turns on, the Channel Observation Notification Information (GS299, GS319, GS339, GS359) for the channel whose communication is prohibited turns off.

➟12.1.3 ■2 (67) Channel Observation Notification Information (GS299, GS319, GS339, GS359)

• b0: While the bit is on, communication of each channel is prohibited.

• b1 to b15: Use prohibited

The following shows the communication drivers that support the device.

○: Supported, -: Not supported

Communication driver	Supported/ Unsupported	Communication driver	Supported/ Unsupported
[Bus Q]	○	[Panasonic MINAS A4]	○
[Bus A/QnA]	○	[Panasonic MINAS A5]	○
[Serial(MELSEC)]	○	[Muratec MPC]	○
[AJ71QC24, MELDAS C6*]	○	[Computer]	-
[AJ71C24/UC24]	○	[MELSERVO-J4,J3,J2S/M,JE]	○
[CC-Link(G4)]	○	[FREQROL 500/700/800,SENSORLESS SERVO]	○
[MELSECNET/H]	-	[FREQROL 800]	○
[CC-Link Ver.2(ID)]	-	[FREQROL(Batch monitor)]	○
[CC-Link IE Controller Network]	-	[OMRON THERMAC/INPANEL NEO]	○
[CC-Link IE Field Network]	-	[OMRON Digital Temperature Controller]	○
[CC-Link IE TSN]	-	[azbil SDC/DMC]	○
[MELSEC-FX]	○	[azbil DMC50]	○
[MELSEC-WS]	○	[RKC SR Mini HG(MODBUS)]	○
[MEI Nexgenie]	○	[FUJI Temperature Controller/Digital Controller]	○
[Multidrop(Slave)]	-	[YOKOGAWA GREEN/UT100/UT2000/ UTAdvanced]	○
[OMRON SYSMAC]	○	[Shinko Technos Controller]	○
[YASKAWA GL]	○	[CHINO MODBUS device]	○
[YASKAWA CP9200 (H)]	○	[MODBUS/RTU Master]	○
[YASKAWA CP9300MS (MC compatible)]	○	[MODBUS/RTU Slave]	-
[YASKAWA MP2000/MP900/CP9200SH]	○	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	○
[AB SLC500, AB 1:N]	○	[Ethernet(FX), Gateway]	○
[AB MicroLogix]	○	[Ethernet(FREQROL), Gateway]	○
[AB MicroLogix(Extended)]	○	[Ethernet(FREQROL(Batch monitor)), Gateway]	○
[AB Control/CompactLogix]	○	[Ethernet(YASKAWA), Gateway]	○
[SHARP JW]	○	[Ethernet(YASKAWA MP3000), Gateway]	○
[TOSHIBA PROSEC T/V]	○	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	○
[HITACHI IES HIDIC H]	○	[Ethernet(YOKOGAWA), Gateway]	○
[HITACHI IES HIDIC H(Protocol2)]	○	[Ethernet(AB), Gateway]	○
[Ethernet(HITACHI IES), Gateway]	○	[Ethernet(AB MicroLogix), Gateway]	○
[Panasonic MEWNET-FP]	○	[Ethernet(AB Tag), Gateway]	○
[Panasonic MEWTOCOL-7]	○	[Ethernet(OMRON), Gateway]	○
[SIEMENS S7-200]	○	[Ethernet(OMRON NJ/NX), Gateway]	○
[SIEMENS S7-300/400]	○	[Ethernet(TOSHIBA nv), Gateway]	○
[YOKOGAWA FA500/FA-M3/STARDOM]	○	[Ethernet(HITACHI), Gateway]	○
[Serial(KEYENCE)]	○	[Ethernet(LS Industrial Systems XGK), Gateway]	○
[JTEKT TOYOPUC-PC]	○	[Ethernet(SIEMENS S7), Gateway]	○
[HITACHI S10mini/S10V]	○	[Ethernet(SIEMENS OP), Gateway]	○
[FUJI MICREX-F]	○	[Ethernet(FUJI), Gateway]	○

Communication driver	Supported/ Unsupported	Communication driver	Supported/ Unsupported
[FUJI MICREX-SX SPH]	○	[Ethernet(KEYENCE), Gateway]	○
[GE (SNP-X)]	○	[MODBUS/TCP Master, Gateway]	○
[SHIBAURA MACHINE TCmini]	○	[MODBUS/TCP Slave, Gateway]	-
[KOYO KOSTAC/DL]	○	[PROFIBUS DP]	○
[LS Industrial Systems MASTER-K]	○	[DeviceNet]	○
[Hirata HNC]	○	[Ethernet(MICROCOMPUTER)]	-
[IAI ROBO CYLINDER]	○	[Ethernet(SLMP), Gateway]	○
[IAI X-SEL]	○	[Ethernet(CC-Link IE Field Network Basic)]	-
[SICK Flexi Soft]	○	[Ethernet(MELSERVO), Gateway]	○

(67)MODBUS Communication Control Function (GS570 to GS576, GS590 to GS596, GS597 to GS603, GS604 to GS610, GS611 to GS617)

When some controllers do not comply with the specifications, this function enables the GOT to reduce the communication delay in the MODBUSnetwork.

When the MODBUS/RTU master connection or the MODBUS/TCP master connection is used, each device enables a function code, or operates as shown below.

The MODBUS Communication Control Function contains two types: the MODBUS Communication Control Function (Common) and the MODBUS Communication Control Function (CH1 to CH4). For the MODBUS Communication Control Function (Common), the device values are applied to all relevant channels. For the MODBUS Communication Control Function (CH1 to CH4), the device values are applied to each applicable channel.

Use GS579 to determine which type of the MODBUS Communication Control Function is applied.

➟(68) Channel Setting of MODBUS Communication Control Function (GS579)

When applicable devices store a value as shown below, the GOT operates with the values specified in the communication setting of the utility.

- For the MODBUS Communication Control Function (Common), GS571 to GS576 each store 0.
- For the MODBUS Communication Control Function (CH1), GS591 to GS596 each store 0.
- For the MODBUS Communication Control Function (CH2), GS598 to GS603 each store 0.
- For the MODBUS Communication Control Function (CH3), GS605 to GS610 each store 0.
- For the MODBUS Communication Control Function (CH4), GS612 to GS617 each store 0.

Device					Function
Common	CH1	CH2	CH3	CH4	
GS570.b0	GS590.b0	GS597.b0	GS604.b0	GS611.b0	When the bit turns on, the function code 0Fh (write multiple coils) is not available.
GS570.b1	GS590.b1	GS597.b1	GS604.b1	GS611.b1	When the bit turns on, the function code 10h (write multiple registers) is not available.
GS570.b2 to b15	GS590.b2 to b15	GS597.b2 to b15	GS604.b2 to b15	GS611.b2 to b15	Use prohibited
GS571	GS591	GS598	GS605	GS612	Set the maximum number of devices (1 to 2000) for a message with function code 01h (read coils). When 0 is set, the maximum number of devices is set as shown below. • MODBUS/TCP: 1000 • MODBUS/RTU: 2000 When a value other than the above is set, the maximum number of devices is 2000.
GS572	GS592	GS599	GS606	GS613	Set the maximum number of devices (1 to 2000) for a message with function code 02h (read input relays). When 0 is set, the maximum number of devices is set as shown below. • MODBUS/TCP: 1000 • MODBUS/RTU: 2000 When a value other than the above is set, the maximum number of devices is 2000.
GS573	GS593	GS600	GS607	GS614	Set the maximum number of devices (1 to 125) for a message with function code 03h (read holding registers). When a value other than 1 to 125 is set, the maximum number of devices is 125.
GS574	GS594	GS601	GS608	GS615	Set the maximum number of devices (1 to 125) for a message with the function code 04h (read input registers). When a value other than 1 to 125 is set, the maximum number of devices is 125.
GS575	GS595	GS602	GS609	GS616	Set the maximum number of devices for a message with the function code 0Fh (write multiple coils). The following shows the setting range of the maximum number of device points. • MODBUS/TCP: 1 to 800 • MODBUS/RTU: 1 to 1968 When 0 is set, the maximum number of devices is 800. When a value other than the above is set, the maximum value in the setting range is applied.

Device					Function
Common	CH1	CH2	CH3	CH4	
GS576	GS596	GS603	GS610	GS617	Set the maximum number of devices for a message with the function code 10h (write multiple registers). The following shows the setting range of the maximum number of devices. • MODBUS/TCP: 1 to 100 • MODBUS/RTU: 1 to 123 When 0 is set, the maximum number of devices is 100. When a value other than the above is set, the maximum value in the setting range is applied.

Point

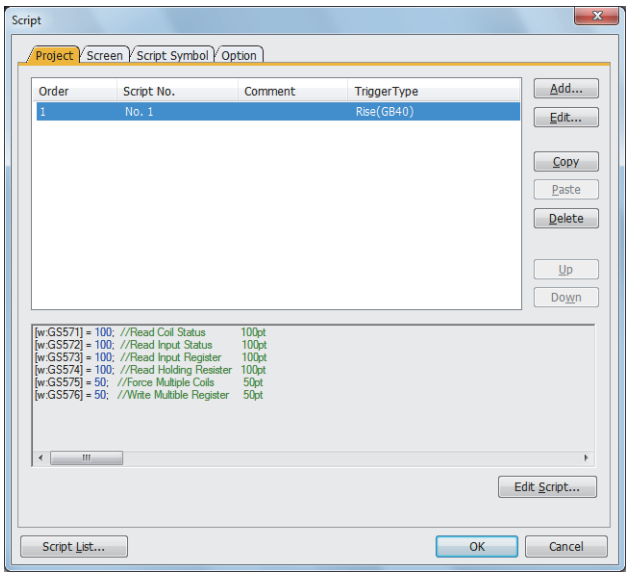
(1) **Function codes supported by the GOT**

For details on the function codes supported by the GOT, refer to the following.

➟12.4.56 ■7 Function code ([MODBUS Slave(GOT:Master)])
12.4.57 ■6 Function code ([MODBUS Master(GOT:Slave)])

(2) **Setting MODBUS Communication Control Function**

Set the MODBUS Communication Control Function at the GOT startup with the project script or others.
Do not change the setting after the communication starts.
The communication error may occur.



Setting example of project script

(68)Channel Setting of MODBUS Communication Control Function (GS579)

The MODBUS Communication Control Function setting can be selected for each channel.
GT21 and GS21 support b0 and b1.

➟(67) MODBUS Communication Control Function (GS570 to GS576, GS590 to GS596, GS597 to GS603, GS604 to GS610, GS611 to GS617)

• b0: The MODBUS Communication Control Function for CH1 can be selected.
Turning on this bit applies the MODBUS Communication Control Function (CH1) (GS590 to GS596).
Turning off this bit applies the MODBUS Communication Control Function (Common) (GS570 to GS576).

• b1: The MODBUS Communication Control Function for CH2 can be selected.
Turning on this bit applies the MODBUS Communication Control Function (CH2) (GS597 to GS603).
Turning off this bit applies the MODBUS Communication Control Function (Common) (GS570 to GS576).

• b2: The MODBUS Communication Control Function for CH3 can be selected.
Turning on this bit applies the MODBUS Communication Control Function (CH3) (GS604 to GS610).
Turning off this bit applies the MODBUS Communication Control Function (Common) (GS570 to GS576).

• b3: The MODBUS Communication Control Function for CH4 can be selected.
Turning on this bit applies the MODBUS Communication Control Function (CH4) (GS611 to GS617).
Turning off this bit applies the MODBUS Communication Control Function (Common) (GS570 to GS576).

• b4 to b15: Use prohibited

(69)Microcomputer Connection Extended Setting (CH1 to CH4) (GS580 to GS583)

GT21 and GS21 support GS580.b0 and GS581.b0.

- b0: For the microcomputer connection (serial), when the bit turns on, if the data format of the message format is Format 12 or 13, communication packets are fully compatible with those of the SCHNEIDER EJH's memory link method.
  (ON: Fully compatible, OFF: Partly compatible)
  For the details on the message format of the microcomputer connection (serial), refer to the following.
  ➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
- b1 to b7: Use prohibited
- b8: For the microcomputer connection (Ethernet), when the bit turns on, if the data format of the message format is Format 3 or 4, communication packets are fully compatible with those of the GOT-F900 series microcomputer connection.
  (ON: Fully compatible, OFF: Partly compatible)
  For the details on the message format of the microcomputer connection (Ethernet), refer to the following.
  ➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1
- b9 to b15: Use prohibited

(70)CC-Link IE TSN Control (GS620)

- b0: When the bit is turned on, the firmware update of the CC-Link IE TSN communication unit is prohibited.
- b1 to b15: Use prohibited

(71)Operator Management Common Control (GS621)

Controls the operator information management.
GT21 and GS21 support b0 and b2.

- b0: Turning on this bit inactivates the delete button on the operator management screen. This disables deletion of the existing operator information.
  If the GOT has operator information that does not exist in the operator management file to be imported, the GOT retains its operator information.
  When the operator name or operator ID to be imported is the same as that of the import destination, the operator information is not imported.
- b1: Turning on this bit inactivates the edit button on the operator management screen. This disables editing of the operator information when an inactivated operator is selected.
  If both b0 and b1 are on, the inactivated operator information is not updated when an operator management information file is imported.
- b2: Turning on this bit inactivates the import button on the operator management screen.
- b3 to b15: Use prohibited

(72)System Screen Operation Restriction (GS622)

Restricts operation on the screens in the [Data] tab of the utility.
This device setting is applied when any of the relevant screens is displayed.
Turning on or off the signal while a relevant screen is displayed does not switch between restrictions.

- b0: Turning on this bit restricts access to the specified drives on the [Alarm info.], [Image file], [Recipe Information], [Logging info.], [Operation Log Information], and [SD card format] screens of the utility.
  Use GS623 or GS624 to specify the drives to which access is restricted.
- b1: Turning on this bit restricts the display of the [Package management] and [GOT data package acquisition] screens.
  When these screens are selected on the [Data] tab, an error dialog appears.
- b2: Turning on this bit restricts the display of the [SRAM management] screen.
  When this screen is selected on the [Data] tab, an error dialog appears.
- b3 to b15: Use prohibited

For details on the utility screens, refer to the following manual.
➟GOT2000 Series User's Manual (Utility)
For the available drives by GOT model, refer to the following.
➟1.2.7 Specifications of available devices

(73)Specify Drive to Prohibit Write Operation (System Screen) (GS623)

Prohibits writing to the specified drives when GS622.b0 is on.
On an access-restricted screen, if you display the contents of a drive to which writing is prohibited, the buttons relevant to writing become inactive.
If you perform conversion, copying, or moving of data to the drive to which writing is prohibited, the attempt fails and an error dialog appears.
This device setting is applied when any of the relevant screens is displayed.
Turning on or off the signal while a relevant screen is displayed does not switch between restrictions.

- b0: Turning on this bit prohibits writing to all drives.
- b1: Turning on this bit prohibits writing to drive A.
- b2: Turning on this bit prohibits writing to drive B.
- b3: Turning on this bit prohibits writing to drive E.
- b4: Turning on this bit prohibits writing to drive F.
- b5: Turning on this bit prohibits writing to drive G.
- b6: Turning on this bit prohibits writing to drive N.
- b7 to b15: Use prohibited

(74)Specify Drive to Hide (System Screen) (GS624)

Restricts access to specified drives when GS622.b0 is on.
If you perform conversion, copying, or moving of data to the drive to which access is restricted, the attempt fails and an error dialog appears.
This device setting is applied when any of the relevant screens is displayed.
Turning on or off the signal while a relevant screen is displayed does not switch between restrictions.

- b0: Turning on this bit restricts access to all drives.
  Since no operation is available on a relevant screen, the screen itself is not displayed.
- b1: Turning on this bit restricts access to drive A.
  When drive A is selected, the files are not displayed and the [Move], [Rename], [New folder], and [Del] buttons are inactivated.
  Drive A is not displayed on the SD card format screen.
- b2: Turning on this bit restricts access to drive B.
- b3: Turning on this bit restricts access to drive E.
- b4: Turning on this bit restricts access to drive F.
- b5: Turning on this bit restricts access to drive G.
- b6: Turning on this bit restricts access to drive N.
- b7 to b15: Use prohibited

(75)Touch Position Color Acquisition Ready signal (GS630)

- b0: Turning on the bit makes the GOT ready for acquiring the color information at the touched position on the GOT screen. In this status, even when an object or others is touched, the object or others does not function.
  Turning off the bit without acquiring the color information cancels the status.
- b1 to b15: Use prohibited

(76)Date Format Control (GS632)

Controls the date format used for the operation log information of the utility by turning b0 and b1 on or off.
This is available for the [Operation Log Data List] screen.
This is also available for the dialogs displayed from the [Operation Log Data List] screen.
The specified data format is applied to the [Operation Log Data List] screen when the screen is displayed.

GS632.b0	GS632.b1	Date format
OFF	OFF	Not controlled (Date format of the system language)
ON	OFF	Year, month, date
OFF	ON	Month, date, year
ON	ON	Date, month, year

(77)Specify Notification While Monitoring Stopped (GS633)

This device is available only when an overlap window is output to the display using the video output function.
Specify the screen on the display when the GOT screen transitions to a utility screen or extended system application screen while the video output function is used.

- 0: Displays the monitoring stopped message in the center of the screen.
  This message does not appear if the size of the overlap window to be output to the display is less than 190 dots × 56

dots.

• 1. Displays the screen specified using GS634.
The monitoring stopped message appears in the center of the screen when: 0 is specified for the screen number, the screen having the specified number does not exist, or the screen security level is insufficient.

• 2: Retains the screen on the display without notifying monitoring stopped.

When 3 or greater value is input, the value is handled as 0.

(78)Specify Screen No. to be Displayed While Monitoring Stopped (GS634)

Specify the screen number of the window to be displayed when GS633 is 1.
Only figures can be displayed on the window screen while monitoring is stopped.

(79)Base Screen Size Expansion Common Control (GS635)

• b0: Turning on this bit displays the specified area of the expanded base screen, when the screen is switched to an expanded base screen.
To specify the upper-left coordinates of the area to be in view, use GS636 and GS637.

• b1: Turning on this bit disables swiping to scroll the screen.

• b2 to b15: Use prohibited

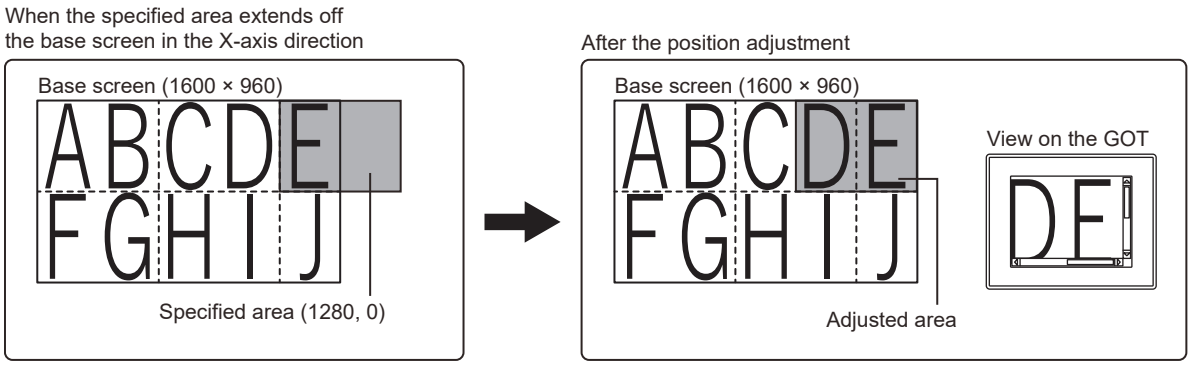
(80)Specify Expanded Base Screen Position (GS636 and GS637)

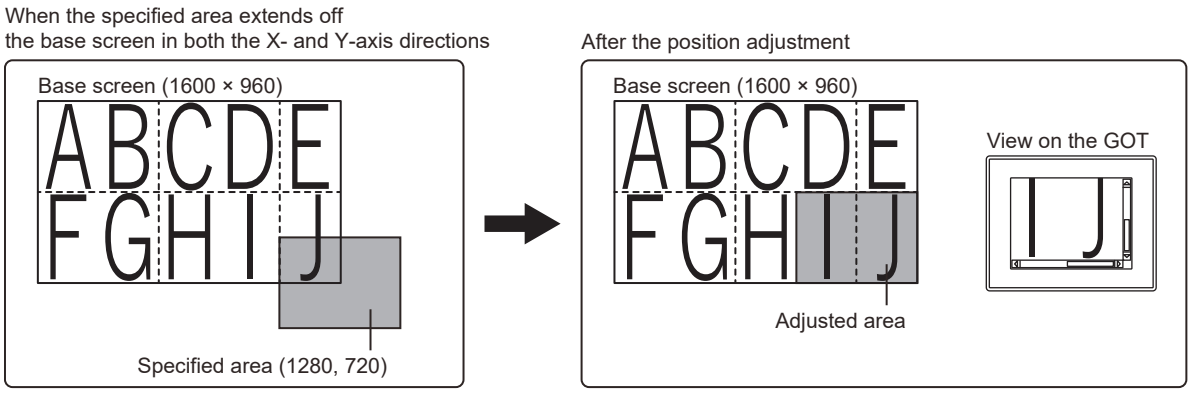
Specify the upper-left coordinates of the area to be in view, when the screen is switched to an expanded base screen.

• GS636: X coordinate

• GS637: Y coordinate

If the specified area extends off the base screen, the area is adjusted to fit within the base screen.
Example) Displaying an expanded base screen (1600 × 960) on GT27-V (640 × 480)





(81)GOT Reset Control (GS639)

GT21 and GS21 support b15 only.

• b0 to b13: Use prohibited

• b14: When the bit is turned on, all the GOT functions exit. (The GOT power can be turned off safely.)

• b15: When the bit is turned on, the software reset for the GOT is performed at the rising edge timing.

■6 Read device (GS1792 to GS2047)

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

For the GOT models that support each device, refer to the following.

➡■4 Read device list

(1) VNC Server Function Control (GS1792)

This is disabled when the GOT network interaction function is used.

- b0: When the bit is turned on, the device disables communication from the VNC client.
- b1: When the bit is turned on, the device disables operations from the VNC client.
- b2 to b7: Use prohibited
- b8: When the bit is turned on, the authorization guarantee time for the VNC server function is disabled.
- b9 to b15: Use prohibited

(2) Gesture Common Control (GS1794)

- b0: When the bit turns on, the object gesture function becomes disabled.
  The single touch operation of the object remains enabled.
- b1: When the bit turns on, the single touch operation of the object becomes disabled.
  The object gesture function remains enabled.
- b2 to b15: Use prohibited

(3) Authorization Status Control (GS1795)

Controls the authorization of the GOT network interaction function.
This device is activated in an applicable GOT in the control group.

- b0: When this bit turns on, the automatic acquisition of the authorization becomes disabled.
  On unauthorized equipment, even if you switch a screen to another screen in which the authorization control is enabled, the equipment cannot automatically obtain the authorization.
- b1 to b15: Use prohibited

(4) Authorization Management Control (GS1796)

Controls the authorization of the GOT network interaction function.
This device is activated in the master GOT in the control group.

- b0: When this bit turns on, equipment except the master GOT in the control group becomes prohibited from obtaining the authorization.
  The authorized equipment (other than the master GOT) loses the authorization.
  When the bit is used in combination with b1, the authorization can be released during the authorization guarantee time.
- b1: When this bit turns on, the authorization guarantee time becomes invalid.
- b2: When this bit turns on, all pieces of equipment including the master GOT in the control group become prohibited from obtaining the authorization.
  The authorized equipment loses the authorization.
  When the bit is used in combination with b1, the authorization can be released during the authorization guarantee time.
- b3 to b15: Use prohibited

(5) Log Viewer Common Control (GS1797)

Specify the behavior of the log viewer.

- b0: When this bit is turned on, the access authentication and the remote password authentication set for the connected controller are performed automatically if the controller IP address is identical to the one connected in the last session.
  The automatic authentication is performed with the user name and password used in the last session.
  At the first startup of the log viewer, the automatic authentication is not performed because no user name and password are recorded.
  When you start the log viewer with the special function switch (log viewer), the switch setting overrides the setting of this bit.
- b1 to b15: Use prohibited

(6) VNC Server GOT Processing Balance Control (GS1798)

Set the load balance between processing of the VNC server function and processing of the other functions in the GOT, whether or not the GOT is connected with the VNC client.

- b0: Turning on this bit prioritizes processing of the functions in the GOT.
  The number of the other processing delays caused by the VNC server function decreases.
- b1: Turning on this bit applies standard balance between processing of the VNC server function and processing of

the other functions in the GOT.

- b2: Turning on this bit prioritizes processing of the VNC server function.
  The speed of remote screen refresh is higher than that when b0 or b1 is on.
- b3: Turning on this bit prioritizes processing of the VNC server function.
  The priority on the processing of the VNC function and the speed of remote screen refresh are higher than those when b2 is on.
- b4: Turning on this bit prioritizes processing of the VNC server function.
  The priority on the processing of the VNC function and the speed of remote screen refresh are higher than those when b3 is on.
- b5 to b15: Use prohibited

When multiple bits are turned on, the bit having the smallest number is prioritized.
When all the bits are off, the GOT operates according to the setting of [GOT processing balance when VNC server is in operation].

➟10.5.4 [VNC Server] dialog

(7) Recipe Control (GS1800)

- b0 to b1: Use prohibited
- b2: When this bit is turned on, the recipe special control is executed.
- b3 to b13: Use prohibited
- b14: When this bit is turned on, the Operation Completed signal (GS1010.b14) and the Operation Error signal (GS1010.b15) turn off.

  ➟12.1.3 ■3 (32) Recipe Status(GS1010)
- b15: Use prohibited

(8) Recipe Special Control Action (GS1801)

Specify the control action. The action varies with the stored value.
0: Resets the Recipe Special Control Result device (GS1011) and the Recipe Special Control No. device (GS1012) to 0.
1: Reads a record from the target recipe data into GOT data registers (GD).
2: Overwrites the values of a record in the target recipe data with the values of GOT data registers (GD).
4: Outputs recipe information to GOT data registers (GD).
5: Searches the target recipe data based on the values of GOT data registers (GD).

(9) Recipe Special Control Target Type (GS1802)

Specify the target of the recipe special control.

- b0: When this signal is turned on, record information (record No., record attribute, and record name) is set as the control target.
- b1: When this signal is turned on, the update date and time of a record is set as the control target.
- b2: When this signal is turned on, the device values of a record are set as the control target.
- b3: When this signal is turned on, device comments are set as the control target.
- b4 to b15: Use prohibited

(10) Recipe Special Control Start GD Device No. (GS1803)

Specify the start device number of the GOT internal devices (GD) to be used.

(11) Recipe Special Control Recipe No. (GS1805)

Specify the recipe number of a target recipe setting.

(12) Recipe Special Control Record No. (GS1806)

Specify the record number of a target record.

(13) Recipe Special Control Row No. (GS1807)

Specify the start row of a record as necessary.
Subtract 1 from a target row number, and then set the result as the value of GS1807.
Example 1) To specify row No. 1, set GS1807 to 0.
Example 2) To specify row No. 65536, set GS1807 to 65535.

(14) Recipe Special Control Points (GS1808)

Specify the number of target rows of a record as necessary.
Starting from the row specified with GS1807, the specified number of rows are targeted for the recipe special control.

(15) Recipe Display (Record List) Control (GS1809)

- b0: Turning on this bit hides the confirmation or nonfiction dialog that appears during a record manipulation after this bit is turned on.

So, you can skip the confirmation step.
The manipulation result is notified by GS1015 and GS1016.

➟12.1.3 ■3 (37) Recipe Display (Record List) Target Record No. (GS1015)
12.1.3 ■3 (38) Recipe Display (Record List) Record Manipulation Result (GS1016)

- b1 to b14: Use prohibited
- b15: When this bit is turned on, GS1016 turns off.

  This bit is invalid when the recipe display (record list) is not displayed.
  When the recipe display (record list) is displayed while this bit is on, GS1016 turns off.

(16)Special Function Switch Special Control (GS1810)

- b0: Turning on this bit enables the iQSS utility special control function.

  While this signal is on, press the special function switch for which [iQSS Utility] is selected for [Switch Action] to execute the iQSS utility special control.
- b1 to b15: Use prohibited

For details on the iQSS utility special control function, refer to the following.

➟GOT2000 Series User's Manual (Monitor)

For the special function switch settings, refer to the following.

➟8.2.9 ■1 (2) (v) Setting for [iQSS Utility]

(17)iQSS Utility Special Control Start GD Device No. Specification (GS1811)

Specify the start device of the GD devices used for the iQSS utility special control.
Setting range: 0 to 65529.
Data type: Unsigned binary
Parameters are stored in seven GD devices from the start device specified using this device.
The following shows the structure of the parameters to be stored.
Example) When GD1000 is set as the start device

Storage device (GD)	Parameter
GD1000	Sensor device No.: 0 to 65534
GD1001	When connected to an RCPU, QCPU, or LCPU Start XY address: 0x0000 to 0x0FE0 When connected to an FX5CPU Intelligent Module No.: 0x01 to 0x10
GD1002	For the bit slave module Device address: 0 to 254 The device stores 0 when any value from 255 to 65535 is set. For the word slave module Device address: 0 to 510 The device stores 0 when any value from 511 to 65535 is set.
GD1003	Device I/O type • 0: Bit input • 64: Bit output • 128: Bit input/output • 256: Word input • 320: Word output • 384: Word input/output
GD1004	Screen to be displayed • 00: Monitor screen • 01: Parameter information screen b0 and b1 are used as parameters.
GD1005	Error code of the ASLINK slave module: 100 to 65535 For details on the error codes, refer to the following manual. ➟MELSEC iQ-R AnyWireASLINK Master Module User's Manual
GD1006	Error codes used for the iQSS utility special control function • 0: Normal startup • 1: Target network module not found • 2: Target CPU not found • 3: Information read error • 4: Target sensor device not found • 5: Profile not found • 6: Address/station number duplicated • 7: Incorrect profile

(18)iQSS Utility Special Control Number of Parameters (GS1812)

Specify the number of sensor devices used for the iQSS utility special control.
Data type: Unsigned binary
Example) When setting 500 to GS1811 and 2 to GS1812

- GD500 to GD506: Parameters to start the first sensor device are stored.
- GD507 to GD513: Parameters to start the second sensor device are stored.

(19)SD Card Access Switch Status Control (GS1820)

- b0: When the bit is turned on, the control for GS1820.b1 is enabled.
  When the bit is turned off, the control for GS1820.b1 is disabled.
- b1: When the bit is turned on, the access to the SD card is allowed.
- b2 to b15: Use prohibited

(20)USB Drive Common Control (GS1824)

- b0: When the bit is turned on, the USB memory connected to drive E on the GOT can be removed.
- b1: When the bit is turned on, the USB memory connected to drive F on the GOT can be removed.
- b2: When the bit is turned on, the USB memory connected to drive B on the GOT can be removed.
- b3: When the bit is turned on, the USB memory connected to drive G on the GOT can be removed.
- b4: When the bit is turned on, the USB memory connected to drive E on the GOT can be removed.
- b5: When the bit is turned on, the USB memory connected to drive F on the GOT can be removed.
- b6: When the bit is turned on, the USB memory connected to drive B on the GOT can be removed.
- b7: When the bit is turned on, the USB memory connected to drive G on the GOT can be removed.
- b8 to b15: Use prohibited

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

(21)Wireless Access Control (GS1840)

Controls the operations through a wireless LAN.

- b0: When this bit is turned on, writing the package data (containing system applications) is disabled through a wireless LAN.
- b1: When this bit is turned on, writing the package data (containing project data) is disabled through a wireless LAN.
- b2 to b7: Use prohibited
- b8: When this bit is turned on, reading data is disabled through a wireless LAN.
- b9 to b15: Use prohibited

(22)Label Name Resolution Control (GS1880)

- b0: Use prohibited
- b1: When this bit is turned on, the label name resolution is performed.
- b2: While this bit is on, executing the label name resolution resolves the label names that have been unresolved in the past resolution during the PLC initial processing.
  This operation does not resolve the unresolved label names resulting from the nonexistence of the relevant labels on the PLC side, and system alarm 328 occurs. Accordingly, you can find out which cause is responsible for the unresolved label names.

➟6.1.4 ■6 (2) Precautions for the label name resolution

- b3 to b15: Use prohibited

For how to use the bits, refer to the following.

➟6.1.4 ■5 (3) Label name resolution performed by a user

(23)Prioritize Touch Switch Operation Control (GS1885)

Prioritizes touch switch operations or the processing being executed.
This device is available only when a communication driver of [SHARP JW] is used.

- b0: When this bit turns on, operations of the touch switches to monitor CH1 are prioritized.
- b1: When this bit turns on, operations of the touch switches to monitor CH2 are prioritized.
- b2: When this bit turns on, operations of the touch switches to monitor CH3 are prioritized.
- b3: When this bit turns on, operations of the touch switches to monitor CH4 are prioritized.
- b4 to b15: Use prohibited

(24)GOT Mobile File Operation Security Level (GS1892)

Specify a security level with which file manipulations are allowed in the GOT Mobile function, ranging from 0 to 15.
If an invalid value is specified, 0 is assumed.
If 0 is specified, file manipulations are allowed without operator authentication and level authentication.

(25)GOT Mobile Common Control (GS1896)

Specify the behavior of the GOT Mobile function.

• b0: When this bit is turned on, the URL parameter (initscreen) is enabled.

➞■7 Usage

• b1: When this bit is turned on, file manipulations with the file manager are enabled.

• b2: When this bit is turned on, the addition of X-Frame-Options to the HTTP response header is disabled.

• b3 to b15: Use prohibited

(26)Time to Force Mobile Momentary Switch OFF (GS1899)

Set the time from when communication is lost between the GOT and a client until when the GOT forcibly turns off the touch switch being touched on the client.
If a touch switch is released on a client after the client loses communication with the GOT, the GOT does not recognize the release.
After a specified time (default: 3 seconds) elapses, the GOT forcibly turns off the touch switch.
The following shows the setting range.

Device value	Time to force the touch switch off
0 to 2, 31 or more	3000 ms (3 seconds)
3 to 30	300 ms to 3000 ms (Settable in units of 100 ms)

(27)GOT Ethernet Setting Change (GS1900 to GS1908)

Change the GOT Ethernet setting without using the utility.

Point

Precautions for changing the Ethernet setting

Make sure to restart the GOT after you change the Ethernet setting by using the GOT Ethernet Setting Change devices (GS1900 to GS1908).
Even though the new Ethernet setting is displayed in the utility, the GOT does not operates with the new setting until you restart the GOT.

The following shows the procedure for changing the Ethernet setting.

Step 1 Specify the category of an Ethernet setting item by using the GOT Ethernet Setting Change Category device (GS1900).

➞(28) GOT Ethernet Setting Change Category (GS1900)

Step 2 Store a new value to the New GOT Ethernet Setting device (GS1903 to GS1908) that corresponds to the Ethernet setting item to be changed.

➞(31) New GOT Ethernet Setting (GS1903 to GS1908)

Step 3 Turn on the relevant bit of the GOT Ethernet Setting Change Item device (GS1902) that corresponds to the New GOT Ethernet Setting device storing the new value.

➞(30) GOT Ethernet Setting Change Item (GS1902)

Step 4 Turn on the Execute GOT Ethernet Setting Change signal (GS1901.b0) to execute the Ethernet setting change.

➞(29) Execute GOT Ethernet Setting Change (GS1901)

Step 5 After the setting change has completed, the GOT Ethernet Setting Change Completed signal (GS1500.b1) and the GOT Ethernet Setting Changed signal (GS1500.b2) turn on.

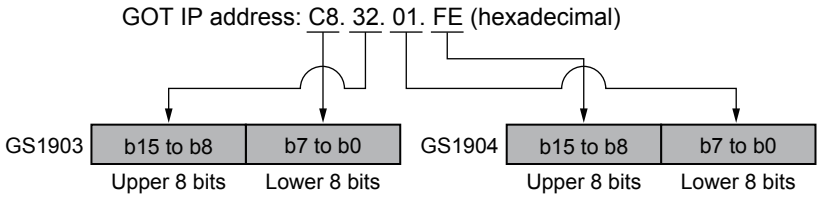
➞12.1.3 ■3 (91) GOT Ethernet Setting Change Status (GS1500)

Restart the GOT.

Example) When the GOT IP address for the Ethernet standard port of GT27 is changed to 200.50.1.254 (decimal)

Step 1 Store 1 to GS1900.

Step 2 Store new values to GS1903 and GS1904 as shown below.



Step 3 Turn on GS1902.b0.

Step 4 Turn on GS1901.b0 to execute the Ethernet setting change.

Step 5 After the setting change has completed, GS1500.b1 and GS1500.b2 turn on.
Restart the GOT.

For the details of the devices (GS1900 to GS1908) used for changing the GOT Ethernet setting, refer to the following.

➟(28) GOT Ethernet Setting Change Category (GS1900)
(29) Execute GOT Ethernet Setting Change (GS1901)
(30) GOT Ethernet Setting Change Item (GS1902)
(31) New GOT Ethernet Setting (GS1903 to GS1908)

(28)GOT Ethernet Setting Change Category (GS1900)

Specify the category of an Ethernet setting item to be changed.
The following shows the correspondence between the setting values and the categorized Ethernet setting items.

GOT	Setting value	Categorized Ethernet setting items
GT27 GT25-S GT25-V (excluding GT2505-V)	1	• GOT IP address for the Ethernet standard port • Subnet mask for the Ethernet standard port • Default gateway
	2	• Channel number • Host station • GOT network number • GOT station number
	3	• GOT IP address for the wireless LAN interface • Subnet mask for the wireless LAN interface
	4	• GOT IP address for the Ethernet extended port • Subnet mask for the Ethernet extended port • Setting to disable the Ethernet extended port
	5	• Channel number • Setting number in the connected Ethernet controller setting • Network number for a controller
	6	• Channel number • Setting number in the connected Ethernet controller setting • Station number of a controller
	7	• Channel number • Setting number in the connected Ethernet controller setting • IP address of a controller

GOT	Setting value	Categorized Ethernet setting items
GT25-W GS25	1	• GOT IP address for Ethernet standard port 1 • Subnet mask for Ethernet standard port 1 • Default gateway
	2	• Channel number • Host station • GOT network number • GOT station number
	3	• GOT IP address for the wireless LAN interface • Subnet mask for the wireless LAN interface
	4	• GOT IP address for Ethernet standard port 2 • Subnet mask for Ethernet standard port 2 • Default gateway
	5	• Channel number • Setting number in the connected Ethernet controller setting • Network number for a controller
	6	• Channel number • Setting number in the connected Ethernet controller setting • Station number of a controller
	7	• Channel number • Setting number in the connected Ethernet controller setting • IP address of a controller
GT2505-V GT25HSV GT23 GT21 GS21	1	• GOT IP address for the Ethernet standard port • Subnet mask for the Ethernet standard port • Default gateway
	2	• Channel number • Host station • GOT network number • GOT station number
	3	Invalid
	4	
	5	• Channel number • Setting number in the connected Ethernet controller setting • Network number for a controller
	6	• Channel number • Setting number in the connected Ethernet controller setting • Station number of a controller
	7	• Channel number • Setting number in the connected Ethernet controller setting • IP address of a controller

(29)Execute GOT Ethernet Setting Change (GS1901)

- b0: Turning on the bit executes the Ethernet setting change. The item to be changed is specified by using the GOT Ethernet Setting Change Category device (GS1900) and the GOT Ethernet Setting Change Item device (GS1902).
- b1 to b15: Use prohibited

(30)GOT Ethernet Setting Change Item (GS1902)

Set an Ethernet setting item to be changed. The category of the item is specified by using the GOT Ethernet Setting Change Category device (GS1900).

- b0 to b4: Turning on the bit sets the corresponding Ethernet setting item to be changed.

  The following shows the correspondence between the bits and the Ethernet setting items.

When GS1900 stores 1, 2, 3 or 4

GOT	GS1902	Ethernet setting item to be changed			
		When GS1900 stores 1	When GS1900 stores 2	When GS1900 stores 3	When GS1900 stores 4
GT27 GT25-S GT25-V (excluding GT2505-V)	b0	GOT IP address for the Ethernet standard port	Channel number	GOT IP address for the wireless LAN interface	GOT IP address for the Ethernet extended port
	b1	Use prohibited	Host station	Use prohibited	Use prohibited
	b2	Subnet mask for the Ethernet standard port	GOT network number	Subnet mask for the wireless LAN interface	Subnet mask for the Ethernet extended port
	b3	Use prohibited	GOT station number	Use prohibited	Use prohibited
	b4	Default gateway	Use prohibited		Setting to disable the Ethernet extended port
GT25-W GS25	b0	GOT IP address for Ethernet standard port 1	Channel number	GOT IP address for the wireless LAN interface	GOT IP address for Ethernet standard port 2
	b1	Use prohibited	Host station	Use prohibited	Use prohibited
	b2	Subnet mask for Ethernet standard port 1	GOT network number	Subnet mask for the wireless LAN interface	Subnet mask for Ethernet standard port 2
	b3	Use prohibited	GOT station number	Use prohibited	Use prohibited
	b4	Default gateway	Use prohibited		Setting to disable Ethernet standard port 2
GT2505-V GT25HS-V GT23 GT21 GS21	b0	GOT IP address for the Ethernet standard port	Channel number	Use prohibited	Use prohibited
	b1	Use prohibited	Host station		
	b2	Subnet mask for the Ethernet standard port	GOT network number		
	b3	Use prohibited	GOT station number		
	b4	Default gateway	Use prohibited		

When GS1900 stores 5, 6, or 7

GOT	GS1902	Ethernet setting item to be changed		
		When GS1900 stores 5	When GS1900 stores 6	When GS1900 stores 7
All models	b0	Channel number	Channel number	Channel number
	b1	Setting number in the connected Ethernet controller setting	Setting number in the connected Ethernet controller setting	Setting number in the connected Ethernet controller setting
	b2	Network number for a controller	Station number of a controller	IP address of a controller

• b5 to b15: Use prohibited

(31)New GOT Ethernet Setting (GS1903 to GS1908)

The device that corresponds to the Ethernet setting item to be changed stores a new value.
When the Execute GOT Ethernet Setting Change signal (GS1901.b0) is turned on, the Ethernet setting is updated with the new value.
The following shows the correspondence between the devices and the Ethernet setting items.
When GS1900 stores 1, 2, 3 or 4

<table>
<tr><th rowspan="2">GOT</th><th rowspan="2">New GOT Ethernet Setting device</th><th colspan="4">Ethernet setting item</th></tr>
<tr><th>When GS1900 stores 1</th><th>When GS1900 stores 2</th><th>When GS1900 stores 3</th><th>When GS1900 stores 4</th></tr>
<tr><td rowspan="8">GT27
GT25-S
GT25-V (excluding GT2505-V)</td><td>GS1903</td><td rowspan="2">GOT IP address for the Ethernet standard port</td><td>Channel number</td><td rowspan="2">GOT IP address for the wireless LAN interface</td><td rowspan="2">GOT IP address for the Ethernet extended port</td></tr>
<tr><td>GS1904</td><td>Host station</td></tr>
<tr><td>GS1905</td><td rowspan="2">Subnet mask for the Ethernet standard port</td><td>GOT network number</td><td rowspan="2">Subnet mask for the wireless LAN interface</td><td rowspan="2">Subnet mask for the Ethernet extended port</td></tr>
<tr><td>GS1906</td><td>GOT station number</td></tr>
<tr><td>GS1907</td><td rowspan="2">Default gateway</td><td rowspan="2">Use prohibited</td><td rowspan="2">Use prohibited</td><td>Setting to disable the Ethernet extended port</td></tr>
<tr><td>GS1908</td><td>Use prohibited</td></tr>
<tr><td rowspan="8">GT25-W
GS25</td><td>GS1903</td><td rowspan="2">GOT IP address for Ethernet standard port 1</td><td>Channel number</td><td rowspan="2">GOT IP address for the wireless LAN interface</td><td rowspan="2">GOT IP address for Ethernet standard port 2</td></tr>
<tr><td>GS1904</td><td>Host station</td></tr>
<tr><td>GS1905</td><td rowspan="2">Subnet mask for Ethernet standard port 1</td><td>GOT network number</td><td rowspan="2">Subnet mask for the wireless LAN interface</td><td rowspan="2">Subnet mask for Ethernet standard port 2</td></tr>
<tr><td>GS1906</td><td>GOT station number</td></tr>
<tr><td>GS1907</td><td rowspan="2">Default gateway</td><td rowspan="2">Use prohibited</td><td rowspan="2">Use prohibited</td><td>Setting to disable Ethernet standard port 2</td></tr>
<tr><td>GS1908</td><td>Use prohibited</td></tr>
<tr><td rowspan="8">GT2505-V
GT25HS-V
GT23
GT21
GS21</td><td>GS1903</td><td rowspan="2">GOT IP address for the Ethernet standard port</td><td>Channel number</td><td rowspan="8">Use prohibited</td><td rowspan="8">Use prohibited</td></tr>
<tr><td>GS1904</td><td>Host station</td></tr>
<tr><td>GS1905</td><td rowspan="2">Subnet mask for the Ethernet standard port</td><td>GOT network number</td></tr>
<tr><td>GS1906</td><td>GOT station number</td></tr>
<tr><td>GS1907</td><td rowspan="2">Default gateway</td><td rowspan="2">Use prohibited</td></tr>
<tr><td>GS1908</td></tr>
</table>

When GS1900 stores 5, 6, or 7

<table>
<tr><th rowspan="2">GOT</th><th rowspan="2">New GOT Ethernet Setting device</th><th colspan="3">Ethernet setting item</th></tr>
<tr><th>When GS1900 stores 5</th><th>When GS1900 stores 6</th><th>When GS1900 stores 7</th></tr>
<tr><td rowspan="4">All models</td><td>GS1903</td><td>Channel number</td><td>Channel number</td><td>Channel number</td></tr>
<tr><td>GS1904</td><td>Setting number in the connected Ethernet controller setting</td><td>Setting number in the connected Ethernet controller setting</td><td>Setting number in the connected Ethernet controller setting</td></tr>
<tr><td>GS1905</td><td>Network number for a controller</td><td>Station number of a controller</td><td rowspan="2">IP address of a controller</td></tr>
<tr><td>GS1906</td><td>Use prohibited</td><td>Use prohibited</td></tr>
</table>

The following shows how to set a new value.

(a) When the GOT Ethernet Setting Change Category device (GS1900) stores 1

Set new values in hexadecimal for the following items.

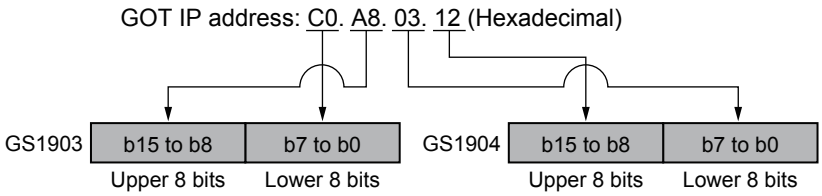
- GOT IP address for the Ethernet standard port or Ethernet standard port 1
- Subnet mask for the Ethernet standard port or Ethernet standard port 1
- Default gateway

The following shows the setting range of each item. (Decimal)

- GOT IP address: 0.0.0.0 to 223.255.255.255
- Subnet mask and default gateway: 0.0.0.0 to 255.255.255.255

If you do not use the subnet mask or default gateway, set the item to 0.0.0.

Example) When the GOT IP address for the Ethernet standard port of GT27 is changed to 192.168.3.18 (decimal)



(b) **When the GOT Ethernet Setting Change Category device (GS1900) stores 2**

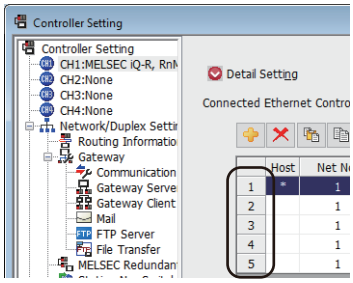
- Channel number

  Set the channel number of a controller for which the host station, GOT network number, or GOT station number is changed.
  The setting range is 1 to 4.
- Host station, GOT network number, and GOT station number

  Set the host station, GOT network number, or GOT station number for the controller connected to the specified channel.
  The following shows the setting range of each item.
  Host station: 1 to 128
  GOT network number: The setting range depends on the controller used.
  GOT station number: The setting range depends on the controller used.
  For details, refer to the following.

  ➟GOT2000 Series Connection Manual for a controller used

  To set the host station, specify a setting number existing in the connected Ethernet controller setting.



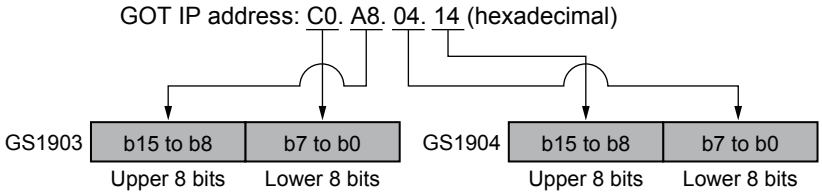
(c) **When the GOT Ethernet Setting Change Category device (GS1900) stores 3**

Set the GOT IP address or subnet mask for the wireless LAN interface in hexadecimal.
The following shows the setting range of each item. (Decimal)

- GOT IP address: 0.0.0.0 to 223.255.255.255
- Subnet mask: 0.0.0.0 to 255.255.255.255

  If you do not use the subnet mask, set the item to 0.0.0.0.

Example) When the GOT IP address for the wireless LAN interface of GT27 is changed to 192.168.4.20 (decimal)



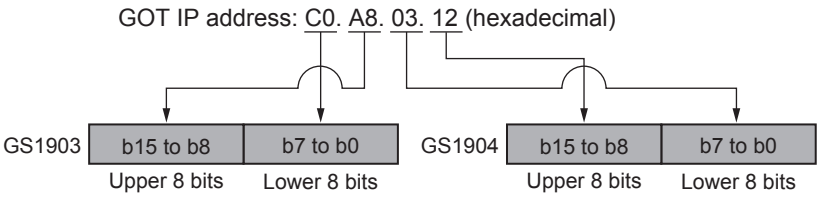
(d) **When the GOT Ethernet Setting Change Category device (GS1900) stores 4**

Set the GOT IP address or subnet mask for the Ethernet extended port or Ethernet standard port 2 in hexadecimal with GS1903 to GS1906.
The following shows the setting range of each item. (Decimal)

- GOT IP address: 0.0.0.0 to 223.255.255.255
- Subnet mask: 0.0.0.0 to 255.255.255.255

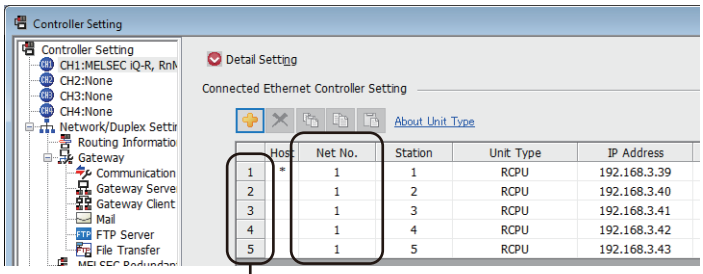
  If you do not use the subnet mask, set the item to 0.0.0.0.

Example) When the GOT IP address for the Ethernet extended port of GT27 is changed to 192.168.3.18 (decimal)



Set whether to disable the Ethernet extended port or Ethernet standard port 2 with GS1907.
To disable the Ethernet extended port or Ethernet standard port 2, turn on GS1907.b0.

(e) When the GOT Ethernet Setting Change Category device (GS1900) stores 5



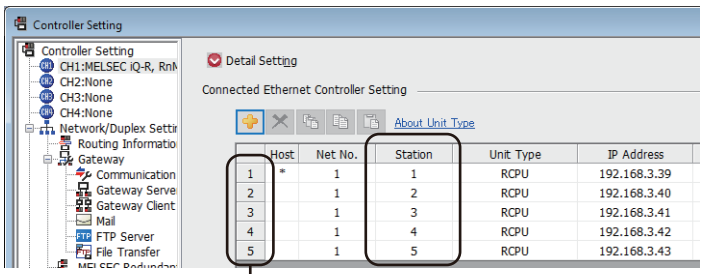
- Channel number and the setting number in the connected Ethernet controller setting

  Set the channel number and setting number of a controller for which the network number is changed.
  The following shows the setting range of each item.
  Channel number: 1 to 4
  Setting number in the connected Ethernet controller setting: 1 to 128
- Network number for a controller

  Set the network number for a controller.
  The setting range varies with the controller.
  For details, refer to the following.

  ➟GOT2000 Series Connection Manual for a controller used

(f) When the GOT Ethernet Setting Change Category device (GS1900) stores 6



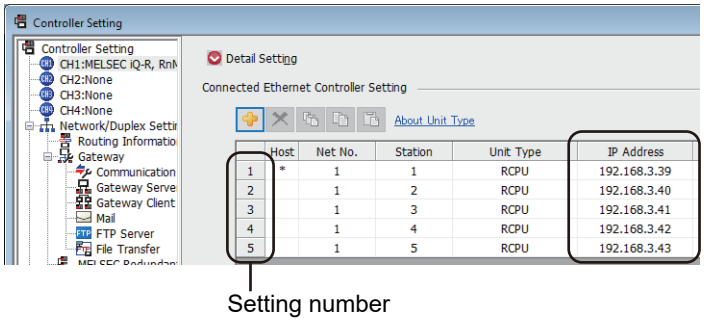
- Channel number and the setting number in the connected Ethernet controller setting

  Set the channel number and setting number of a controller whose station number is changed.
  The following shows the setting range of each item.
  Channel number: 1 to 4
  Setting number in the connected Ethernet controller setting: 1 to 128
- Station number of a controller

  Set the station number of a controller.
  The setting range varies with the controller.
  For details, refer to the following.

  ➟GOT2000 Series Connection Manual for a controller used

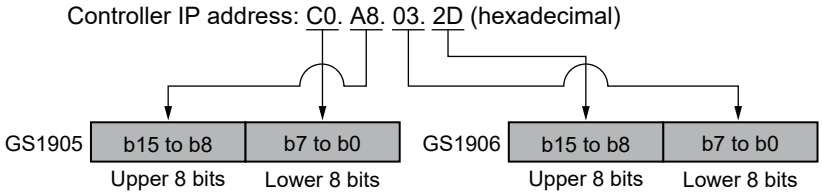
(g) **When the GOT Ethernet Setting Change Category device (GS1900) stores 7**



- Channel number and the setting number in the connected Ethernet controller setting

  Set the channel number and setting number of a controller whose IP address is changed.
  The following shows the setting range of each item.
  Channel number: 1 to 4
  Setting number in the connected Ethernet controller setting: 1 to 128
- IP address of a controller

  Set the IP address of a controller in hexadecimal.
  The setting range is 0.0.0.0 to 223.255.255.255 (decimal).
  Example) When the IP address of a controller is changed to 192.168.3.45 (decimal)



(32)Front USB Drive Additional Installation Control (GS1930)

To use this device, install BootOS version BA or later on the GOT.

- b0: When this bit turns on, even when a data storage is installed to the front USB drive of the GOT, the drive is not recognized.

  Any drive that is recognized before this bit turns on can be used as is.

(33)Full-screen Display Control signal (GS1998)

When the Extended Control signal (b7) of the video and RGB input common device is on, the Full-screen Display Control signal specifies the video window or the RGB screen to be displayed in full-screen size.
For the setting other than the following values, the operation is the same as when 0 is stored.
0: Does not display the video window in full-screen size. (The size of the video window or the RGB screen corresponds to the setting of each video window or the RGB screen.)
1 to 4: Displays the specified number of video window in full-screen size.
5: Displays the RGB screen in full-screen size.

(34)Video Window 1 to 4 and RGB Screen Extended Control signal (GS1999 to GS2006, GS2009 to GS2016, GS2019 to GS2026, GS2029 to GS2036, GS2039 to GS2045)

While the Extended Control signal (b7) of the video and RGB input common device is on, configure the setting for video windows 1 to 4 or the RGB screen.
The default display position of the video window is the upper left corner of the GOT screen.

Device					Function
Video window 1	Video window 2	Video window 3	Video window 4	RGB window	
GS1999	GS2009	GS2019	GS2029	*1	Specify the channel No. of the video window.

Device					Function
Video window 1	Video window 2	Video window 3	Video window 4	RGB window	
GS2000	GS2010	GS2020	GS2030	GS2039	Specify the display magnification of the video window or RGB screen. The display size, which is specified in the display size setting (width and height) for the video window or RGB screen, is used as the reference. • 7: 400% • 8: 200% • 0: 100% • 1: 87.5% • 2: 75% • 3: 62.5% • 4: 50% • 5: 37.5% • 6: 25% • Other than the above: 100%
GS2001	GS2011	GS2021	GS2031	GS2040	Specify the display size (width) of the video window or RGB screen in dots by using the size at 100% magnification as the reference. The actual display size (width) of the video window or RGB screen is enlarged or reduced according to the set display magnification. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2002	GS2012	GS2022	GS2032	GS2041	Specify the display size (height) of the video window or RGB screen in dots by using the size at 100% magnification as the reference. The actual display size (height) of the video window or RGB screen is enlarged or reduced according to the set display magnification. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2003	GS2013	GS2023	GS2033	GS2042	Using the upper left corner of the GOT screen as the origin point of coordinates, specify the display position (X coordinate) of the video window or RGB screen in dots. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2004	GS2014	GS2024	GS2034	GS2043	Using the upper left corner of the GOT screen as the origin point of coordinates, specify the display position (Y coordinate) of the video window or RGB screen in dots. Specify the display magnification within a range of the lower resolution in the video image or the GOT.
GS2005	GS2015	GS2025	GS2035	GS2044	Specify the origin point (X coordinate) of the clip area of the video image. Specify the display magnification within a range of the resolution of the video image.
GS2006	GS2016	GS2026	GS2036	GS2045	Specify the origin point (Y coordinate) of the clip area of the video image. Specify the display magnification within a range of the resolution of the video image.

*1 Specify a channel number with b14 and b15 of the device specified for [Video/RGB Input Common].

➟10.6.4 ■8 Setting items of [Video/RGB Input Common] device

12.2 Correspondence between the setting of [Controller Type] and the controller used

Set [Manufacturer] and [Controller Type] in the [Controller Setting] window according to the controller to be used.
The following shows the supported controllers and the corresponding settings of [Manufacturer] and [Controller Type] in the [Controller Setting] window.

➟■1 [MITSUBISHI ELECTRIC]
■2 [IAI]
■3 [Azbil]
■4 [OMRON]
■5 [KEYENCE]
■6 [KOYO]
■7 [JTEKT]
■8 [SHARP]
■9 [SHINKO]
■10 [CHINO]
■11 [TOSHIBA]
■12 [SHIBAURA MACHINE]
■13 [PANASONIC]
■14 [HITACHI]
■15 [Hirata HNC]
■16 [FUJI]
■17 [Muratec]
■18 [YASKAWA]
■19 [YOKOGAWA]
■20 [RKC]
■21 [AB]
■22 [GE]
■23 [LS IS]
■24 [Mitsubishi Electric India]
■25 [SICK]
■26 [SIEMENS]
■27 [CLPA]
■28 [MODBUS]
■29 [ODVA]
■30 [OPC]
■31 [PROFIBUS]
■32 [Others]

■1 [MITSUBISHI ELECTRIC]

Set the channel of the controller to be connected with the GOT.

(1) Setting

Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Refer to the following to configure the settings.

Point

Channel No. 2 to 4

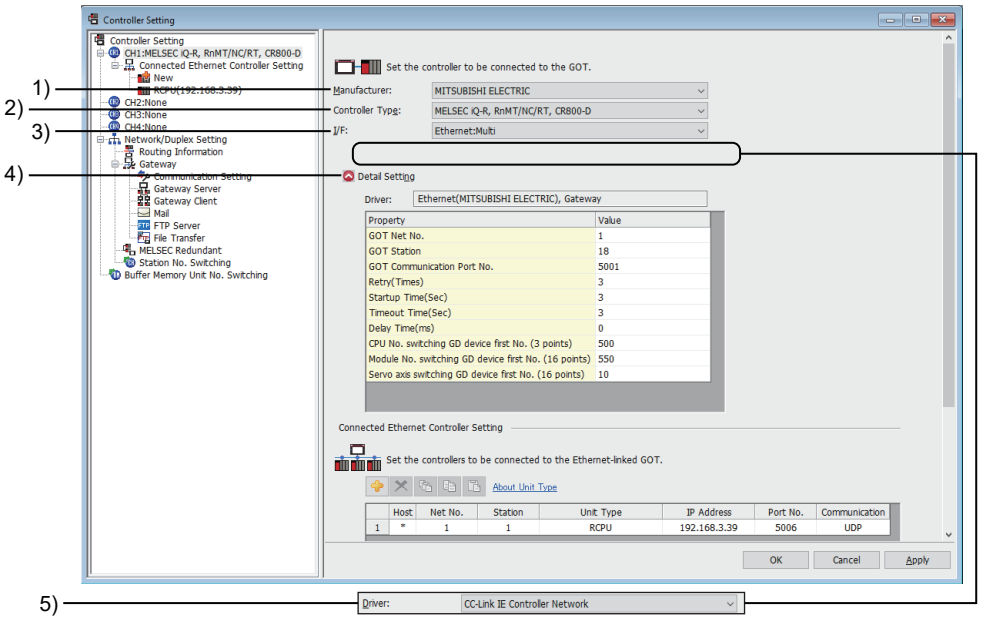
Set channel No. 2 to 4 when using the multi-channel function.

For the details of the multi-channel function, refer to the following.

➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1

(2) Setting item

The following shows the setting items.



1) **[Manufacturer]**

Select [MITSUBISHI ELECTRIC].

Select the manufacturer of the controller connected to the GOT.

2) **[Controller Type]**

The following table lists available controllers.

Controller type	Model name
[MELSEC MX Controller]	MXR300-16, MXR300-32, MXR300-64 MXR500-128, MXR500-256 MXF100-8-N32, MXF100-8-P32 MXF100-16-N32, MXF100-16-P32
[MELSEC iQ-R, RnMT/NC/RT, CR800-D]	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU R16MTCPU, R32MTCPU, R64MTCPU R08PCPU, R16PCPU, R32PCPU, R120PCPU R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU R08PSFCPU, R16PSFCPU, R32PSFCPU, R120PSFCPU R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU R12CCPU-V R102WCPU-W MR-J5-G(-RJ)*2 MR-J5W2-G*2 MR-J5W3-G*2 MR-J5D□-G*2 MR-J5(W)-□B(-RJ)*1 MR-J4(W)-*B(-RJ) *1 MR-J4-GF(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1 MR-JET-G*2 CNC C80(R16NCCPU-S1) CR800-R(R16RTCPU), CR800-D FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0-NE

Controller type	Model name
[MELSEC iQ-R, RnMT/RT, CR800-D]	R00CPU, R01CPU, R02CPU, R04CPU, R08CPU, R16CPU, R32CPU, R120CPU R16MTCPU, R32MTCPU, R64MTCPU R08PCPU, R16PCPU, R32PCPU, R120PCPU R08SFCPU, R16SFCPU, R32SFCPU, R120SFCPU R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU R12CCPU-V R102WCPU-W MR-J5-G(-RJ)*2 MR-J5W2-G*2 MR-J5W3-G*2 MR-J5D□-G*2 MR-J5(W)-□B(-RJ)*1 MR-J4(W)-*B(-RJ) *1 MR-J4-GF(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1 MR-JET-G*2 CR800-R(R16RTCPU), CR800-D FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0-NE
[MELSEC iQ-L]	L04HCPU, L08HCPU, L16HCPU, L32HCPU MR-J4(W)-*B(-RJ) *1 MR-J4-GF(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1
[MELSEC iQ-F]	FX5U FX5UC FX5UJ FX5S MR-J5-G(-RJ)*2 MR-J5W2-G*2 MR-J5W3-G*2 MR-J4(W)-*B(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1 MR-JET-G*2

Controller type	Model name
[MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700]	Q00JCPU Q00CPU, Q01CPU, Q02CPU Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU Q12PRHCPU, Q25PRHCPU Q172CPU, Q173CPU Q172CPUN, Q173CPUN Q172HCPU, Q173HCPU Q00UJCPU, Q00UJCPU-S8 Q00UCPU, Q01UCPU, Q02UCPU Q03UDCPU Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU, Q20UDHCPU, Q26UDHCPU Q03UDECPU Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS, Q24DHCCPU-VG QS001CPU Q172DCPU, Q173DCPU, Q172DCPU-S1, Q173DCPU-S1, Q172DSCPU, Q173DSCPU Q170MCPU, Q170MSCPU, Q170MSCPU-S1 MR-MQ100 CNC C70(Q173NCCPU) CRnQ-700(Q172DRCPU), CR750-Q(Q172DRCPU), CR751-Q(Q172DRCPU) CR800-Q(Q172DSRCPU) CRnD-700, CR75 0-D, CR75 1-D MR-J5(W)-□B(-RJ) *1 MR-J4(W)-*B(-RJ) *1 MR-J4-GF(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1 FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0-NE

Controller type	Model name
[MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]	Q00JCPU Q00CPU, Q01CPU, Q02CPU Q02HCPU, Q06HCPU, Q12HCPU, Q25HCPU Q02PHCPU, Q06PHCPU, Q12PHCPU, Q25PHCPU Q12PRHCPU, Q25PRHCPU Q00UJCPU, Q00UJCPU-S8 Q00UCPU, Q01UCPU, Q02UCPU Q03UDCPU Q04UDHCPU, Q06UDHCPU, Q10UDHCPU, Q13UDHCPU Q20UDHCPU, Q26UDHCPU Q03UDECPU Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU Q04UDPVCPU, Q06UDPVCPU, Q13UDPVCPU, Q26UDPVCPU Q12DCCPU-V, Q24DHCCPU-V, Q24DHCCPU-LS, Q26DHCCPU-LS, Q24DHCCPU-VG Q172CPU, Q173CPU Q172CPUN, Q173CPUN Q172HCPU, Q173HCPU Q172DCPU, Q173DCPU, Q172DCPU-S1, Q173DCPU-S1 Q172DSCPU, Q173DSCPU Q170MCPU, Q170MSCPU, Q170MSCPU-S1 MR-MQ100 CRnQ-700(Q172DRCPU), CR750-Q(Q172DRCPU), CR751-Q(Q172DRCPU) CR800-Q(Q172DSRCPU) CRnD-700, CR75 0-D, CR75 1-D MR-J5(W)-□B(-RJ) *1 FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0-NE
[MELSEC-QnA, MELDAS C6*]	Q2ACPU, Q2ACPU-S1, Q3ACPU, Q4ACPU, Q4ARCPU Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1 MELDAS C6(FCA C6), MELDAS C64(FCA C64)
[MELSEC-QnA]	Q2ACPU, Q2ACPU-S1, Q3ACPU, Q4ACPU, Q4ARCPU Q2ASCPU, Q2ASCPU-S1, Q2ASHCPU, Q2ASHCPU-S1

Controller type	Model name
[MELSEC-L]	L02CPU, L06CPU, L26CPU, L26CPU-BT L02CPU-P, L06CPU-P, L26CPU-P, L26CPU-PBT L02SCPU, L02SCPU-P NZ2GF-ETB MR-J4(W)-*B(-RJ) *1 MR-J4-GF(-RJ) *1 MR-JE-*B *1 MR-JE-*BF *1 FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0-NE
[MELSEC-A]	A2UCPU, A2UCPU-S1, A3UCPU, A4UCPU A2ACPU, A2ACPUP21, A2ACPUR21, A2ACPU-S1, A2ACPUP21-S1, A2ACPUR21-S1 A3ACPU, A3ACPUP21, A3ACPUR21 A1NCPU, A1NCPUP21, A1NCPUR21 A2NCPU, A2NCPUP21, A2NCPUR21, A2NCPU-S1, A2NCPUP21-S1, A2NCPUR21-S1 A3NCPU, A3NCPUP21, A3NCPUR21 A2USCPU, A2USCPU-S1, A2USHCPU-S1 A1SCPU, A1SCPUC24-R2, A1SHCPU A2SCPU, A2SHCPU A1SJCPU, A1SJCPU-S3, A1SJHCPU A0J2HCPU, A0J2HCPUP21, A0J2HCPUR21, A0J2HCPU-DC24 A2CCPU, A2CCPUP21, A2CCPUR21, A2CCPUC24 A2CCPUC24-PRF, A2CJCPU-S3 A1FXCPU A273UCPU, A273UHCPU, A273UHCPU-S3 A373UCPU, A373UCPU-S3 A171SCPU, A171SCPU-S3, A171SCPU-S3N A171SHCPU, A171SHCPUN A172SHCPU, A172SHCPUN, A173UHCPU
[MELSEC-FX]	FX0, FX0S, FX0N FX1, FX1S, FX1N, FX1NC FX2, FX2C, FX2N, FX2NC FX3S, FX3G, FX3GC, FX3GE, FX3U, FX3UC
[MELSEC-WS]	WS0-CPU0, WS0-CPU1, WS0-CPU3
[MELIPC]	MI5122-VW
[MELSERVO-J2M-P8A]	MR-J2M-P8A
[MELSERVO-J2M-*DU]	MR-J2M-*DU
[MELSERVO-J2S-*A]	MR-J2S-*A
[MELSERVO-J2S-*CP]	MR-J2S-*CP
[MELSERVO-J2S-*CL]	MR-J2S-*CL
[MELSERVO-J3-*A]	MR-J3-*A
[MELSERVO-J3-*T]	MR-J3-*T
[MELSERVO-J4-*A, -JE-*A]	MR-J4-*A, MR-JE-*A
[MELSERVO-J4-*A-RJ]	MR-J4-*A-RJ
[MELSERVO-JE-*C]	MR-JE-*C

Controller type	Model name
[MELSERVO-J5(W)-*G(-RJ), -JET-*G]	MR-J5-G(-RJ) MR-J5W2-G MR-J5W3-G MR-JET-G MR-J5D□-G
[FREQROL 500/700/800, SENSORLESS SERVO]	FR-A5□0(L) FR-F5□0(L) FR-V5□0(L) FR-E5□0(C), FR-E5□0S, FR-E5□0W FR-S5□0(E)(-R)(-C), FR-S5□0S(E)(-R), FR-S5□0W(E)(-R) FR-F5□0J(F) FR-D7□0, FR-D7□0S, FR-D7□0W FR-F7□0PJ(F) FR-E7□0, FR-E7□0S, FR-E7□0W FR-A7□0 FR-B-□□□□ (A700 specification) FR-B3-(N)(H)□□□□ (A700 specification) FR-B-□□□□ (A800 specification) FR-B3-(N)(H)□□□□ (A800 specification) FR-F7□0 FR-F7□0P FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E FR-E7□0EX MD-CX522-□K MD-CX522-□K-A0
[FREQROL 800]	FR-B-□□□□ (A800 specification) FR-B3-(N)(H)□□□□ (A800 specification) FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E

Controller type	Model name
[FREQROL 800/E700NE(Batch monitor)]	FR-E7□0-NE FR-A8□0, FR-A8□2, FR-A8□6 FR-A8□0-E, FR-A8□2-E, FR-A8□6-E FR-A8□0-GF, FR-A8□2-GF FR-A8□0-CRN, FR-A8□2-CRN FR-A8□0-E-CRN, FR-A8□2-E-CRN FR-A8□0-R2R, FR-A8□2-R2R FR-A8□0-E-R2R, FR-A8□2-E-R2R FR-A8□0-GN, FR-A8□2-GN FR-A8□0-AWH FR-A8□0-E-AWH FR-A8□0-LC FR-A8□0-E-LC FR-F8□0, FR-F8□2, FR-F8□6 FR-F8□0-E, FR-F8□2-E FR-E8□0, FR-E8□0-E FR-D8□0 FR-D8□0-E
[Laser Displacement Sensor MH11]	MH11CTMF-N, MH11CTMF-NNA, MH11CTMF-P, MH11CTMF-PNA

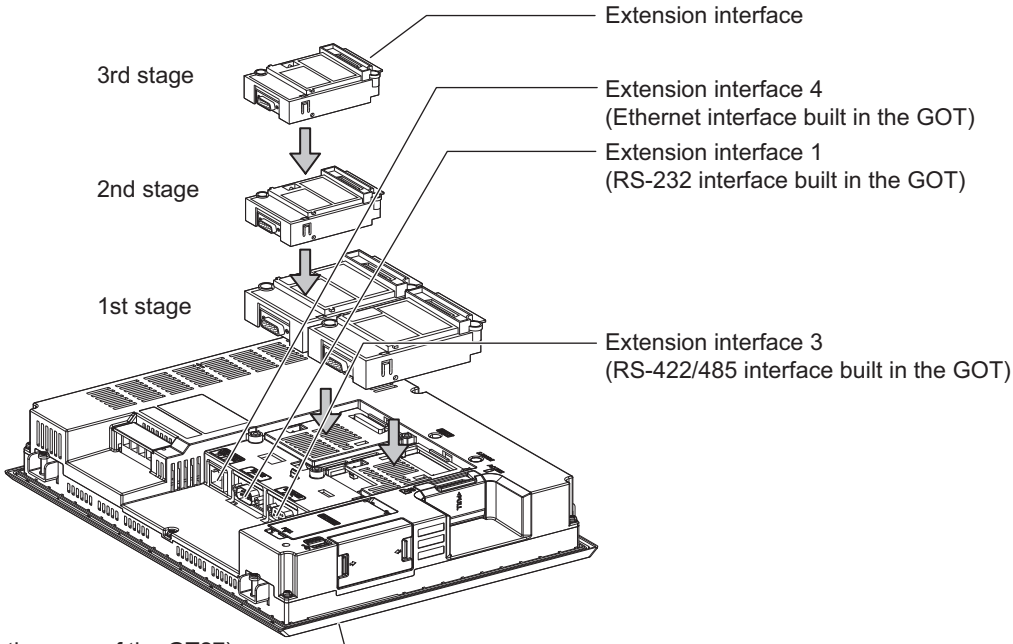
*1 The controller is connectable to the GOT through a motion controller or a simple motion module.

*2 The controller is connectable to the GOT through a Motion module.

3) **[I/F]**

Available interfaces differ depending on the GOT used.

Set [I/F] according to the interface used and the position of the communication unit mounted on the GOT.



(Example: In the case of the GT27)

4) **[Detail Setting]**

Configure the settings including the baud rate and the data length of the communication driver used.

5) **[Driver]**

This item appears when communication drivers are selectable according to the settings of [Controller Type] and [I/F].

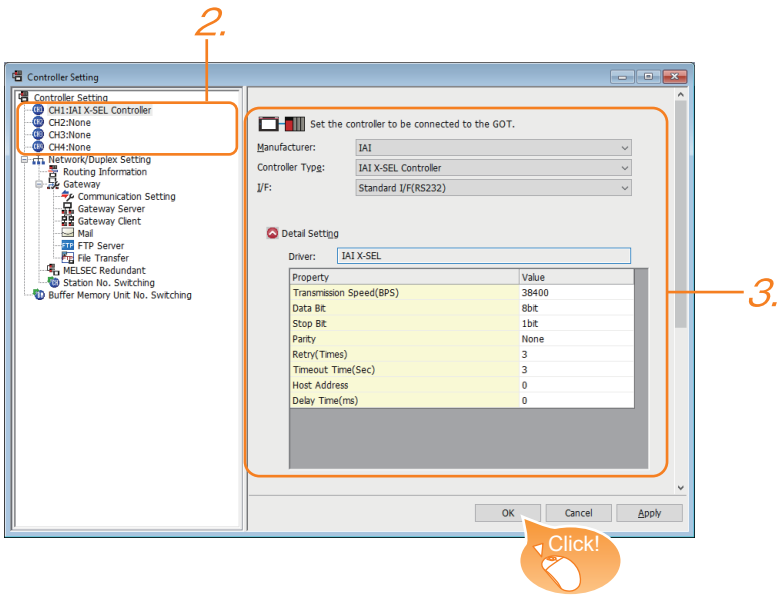
Select the communication driver to be written to the GOT.

Refer to the following to configure the setting.

➟GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1

■2 [IAI]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [IAI]
- [Controller Type]
  When connecting to X-SEL, SSEL, ASEL, PSEL, or RSEL: [IAI X-SEL Controller]
  When connecting to PCON, ACON, SCON, or ERC2: [IAI ROBO CYLINDER]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

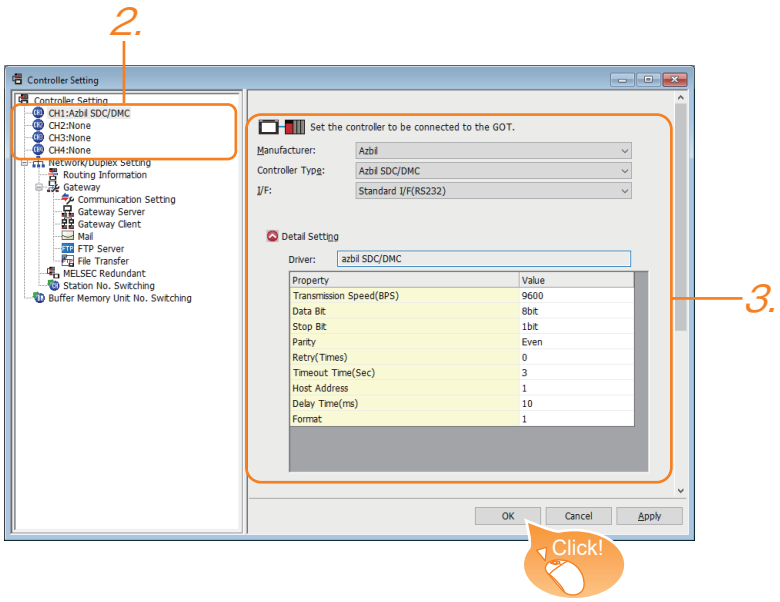
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■3 [Azbil]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [Azbil]
- [Controller Type]
  When connecting to DMC50 or AHC2001: [Azbil DMC50]
  When connecting to the models other than DMC50]: [Azbil SDC/DMC]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

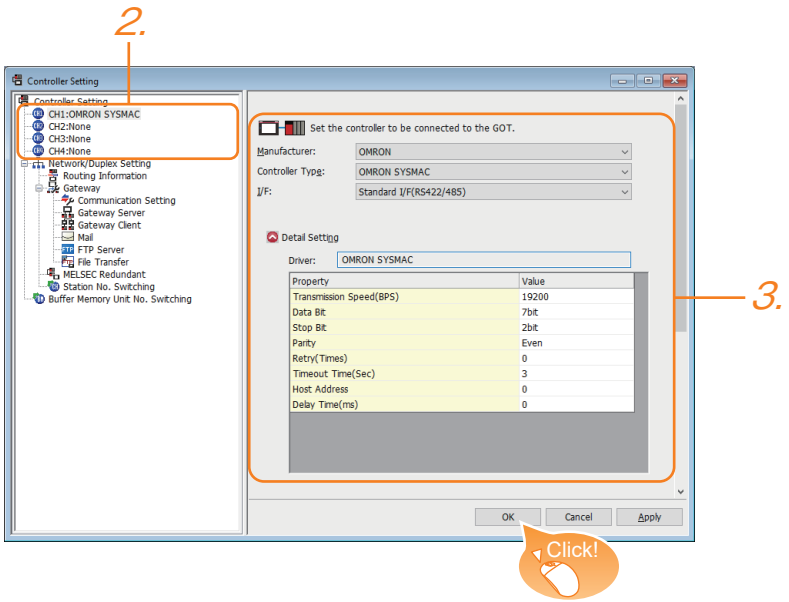
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■4 [OMRON]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [OMRON]
- [Controller Type]: select either of the following according to the model to be connected.
  [OMRON SYSMAC]
  [OMRON NJ/NX]
  [OMRON THERMAC/INPANEL NEO]
  [OMRON Digital Temperature Controller]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

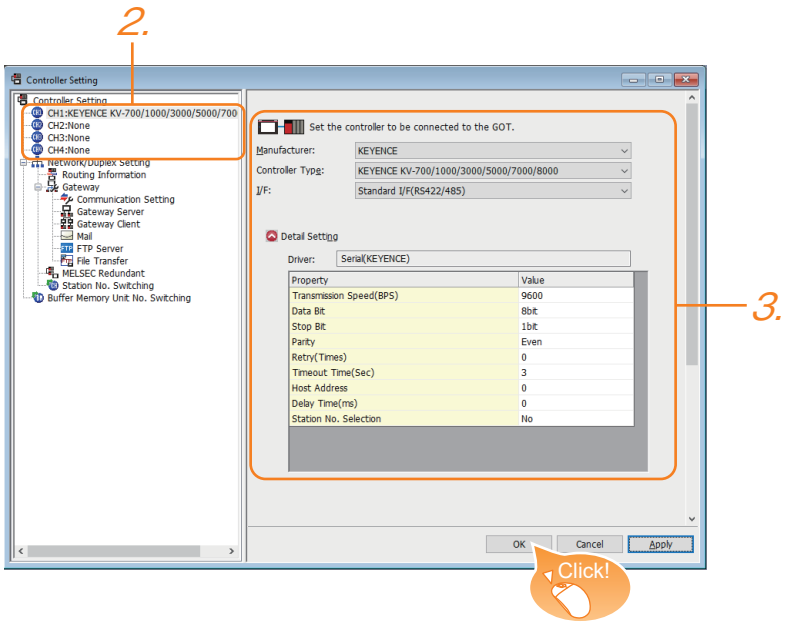
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■5 [KEYENCE]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [KEYENCE]
- [Controller Type]: [KEYENCE KV-700/1000/3000/5000/7000/8000]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

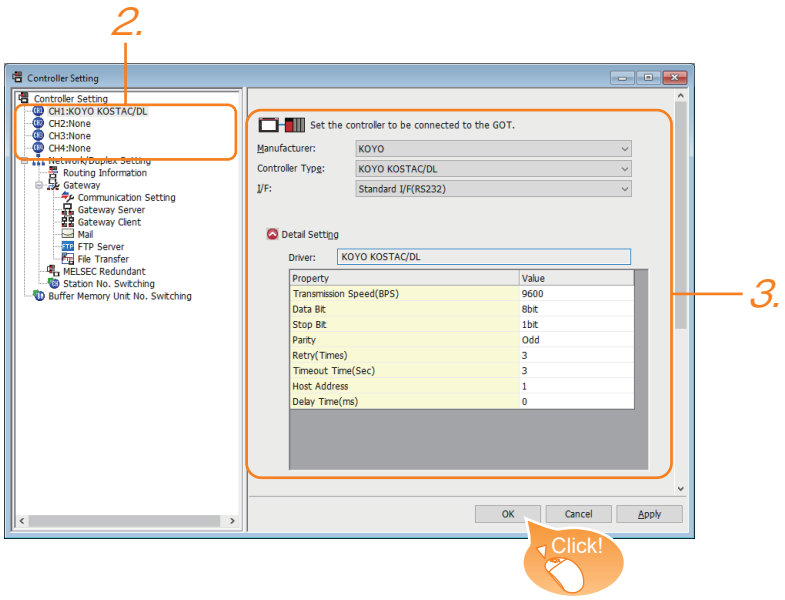
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■6 [KOYO]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [KOYO]
- [Controller Type]: [KOYO KOSTAC/DL]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

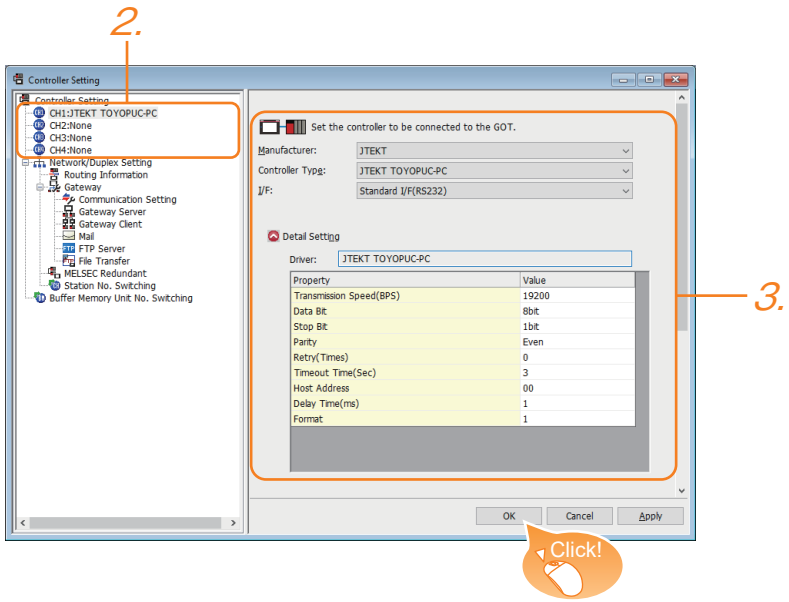
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■7 [JTEKT]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [JTEKT]
- [Controller Type]: [JTEKT TOYOPUC-PC]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

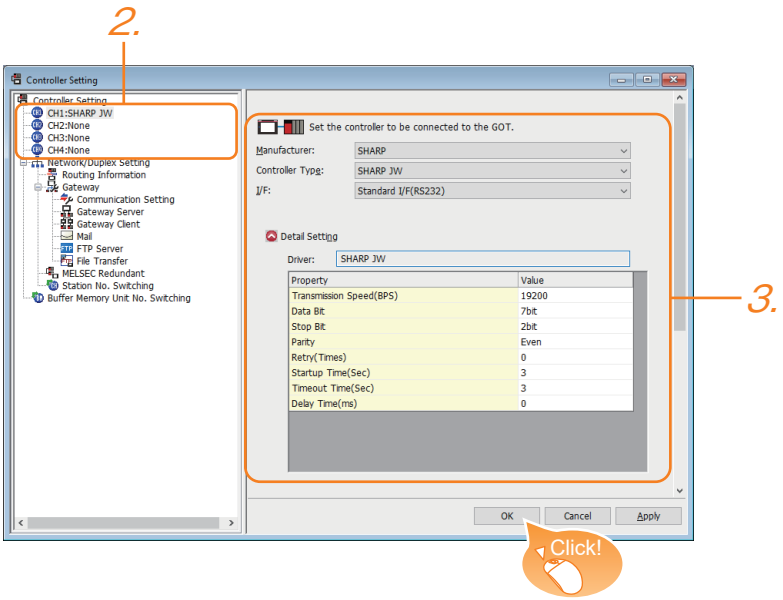
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■8 [SHARP]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [SHARP]
- [Controller Type]: [SHARP JW]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

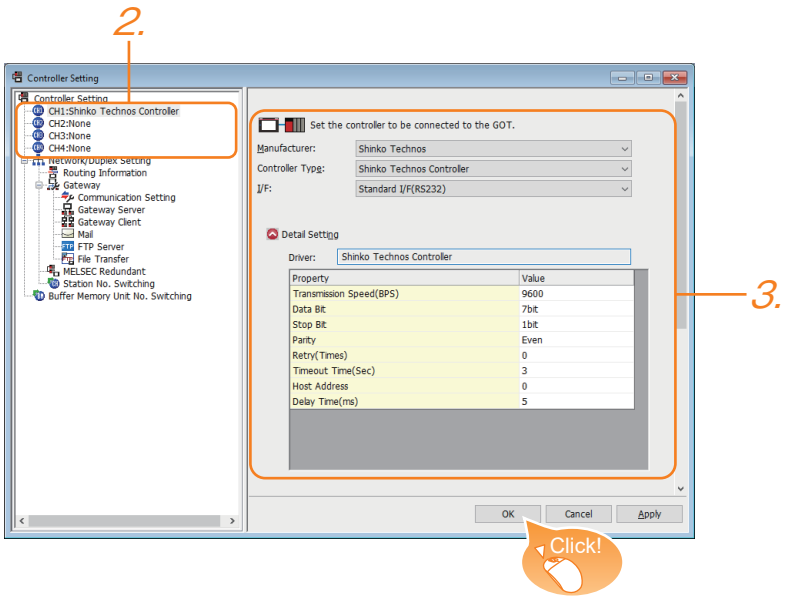
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■9 [SHINKO]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [SHINKO]
- [Controller Type]: [Shinko Technos Controller]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

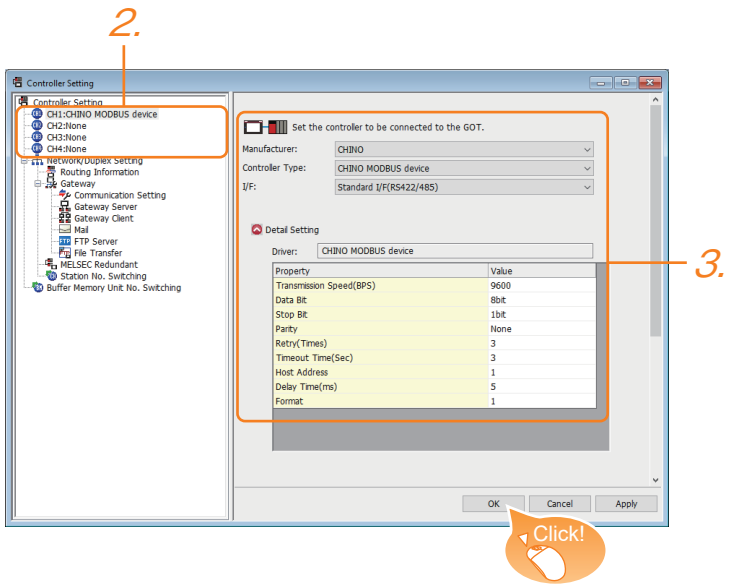
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■10 [CHINO]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [CHINO]
- [Controller Type]: [CHINO MODBUS device]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

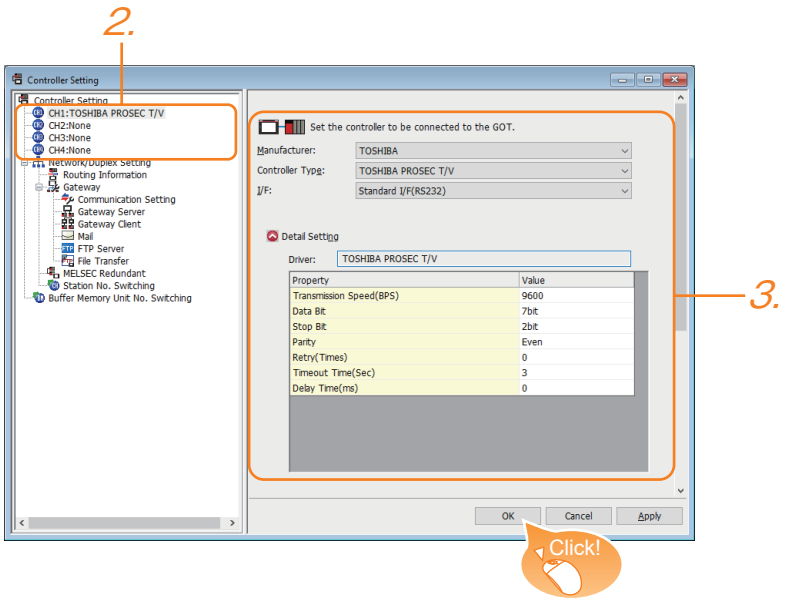
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■11 [TOSHIBA]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [TOSHIBA]
- [Controller Type]: select either of the following according to the model to be connected.
  [TOSHIBA PROSEC T/V]
  [TOSHIBA Unified Controller nv]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

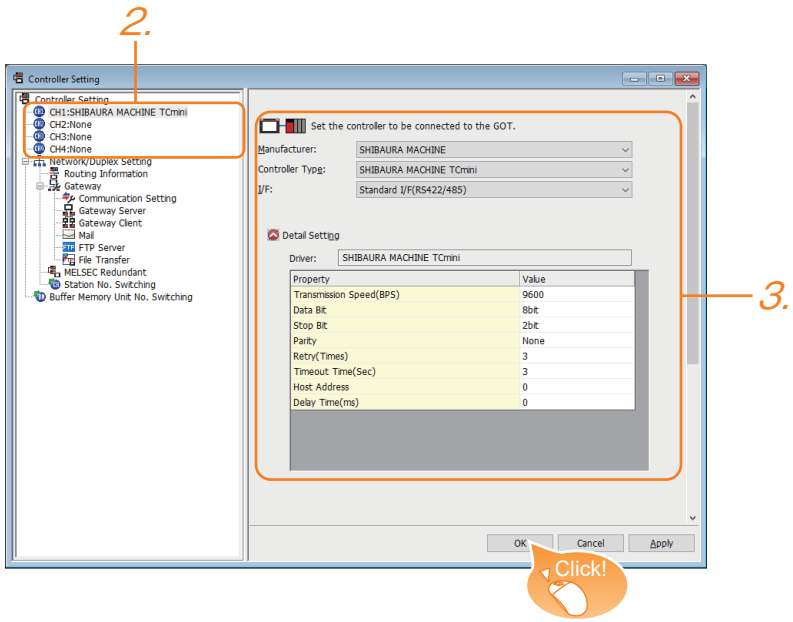
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■12 [SHIBAURA MACHINE]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [SHIBAURA MACHINE]
- [Controller Type]: [SHIBAURA MACHINE TCmini]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

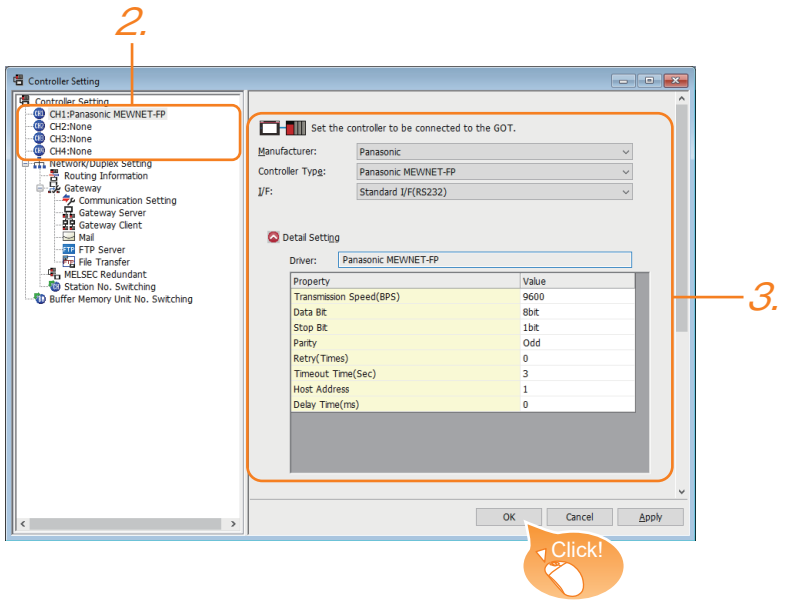
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■13 [PANASONIC]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [Panasonic]
- [Controller Type]: select either of the following according to the model to be connected.
  [Panasonic MEWNET-FP]
  [Panasonic FP7]
  [Panasonic MINAS A4]
  [Panasonic MINAS A5]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

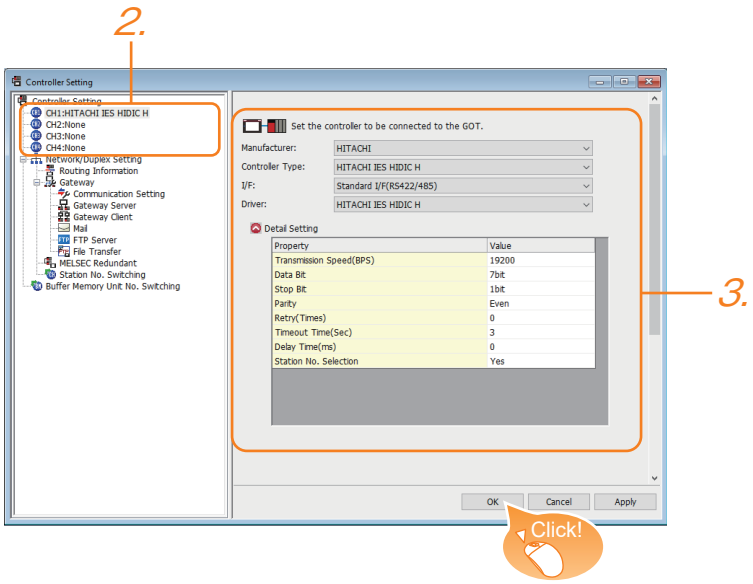
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1

■14 [HITACHI]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [HITACHI]
- [Controller Type]: select either of the following according to the model to be connected.
  [HITACHI IES EHV]
  [HITACHI IES HIDIC H]
  [HITACHI S10VE]
  [HITACHI S10mini/S10V]
- [I/F]: The interface to be used
- [Driver]: This item appears when [Controller Type] is set to [HITACHI HIDIC H].
  [HITACHI IES HIDIC H]
  [HITACHI IES HIDIC H(Protocol2)]
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

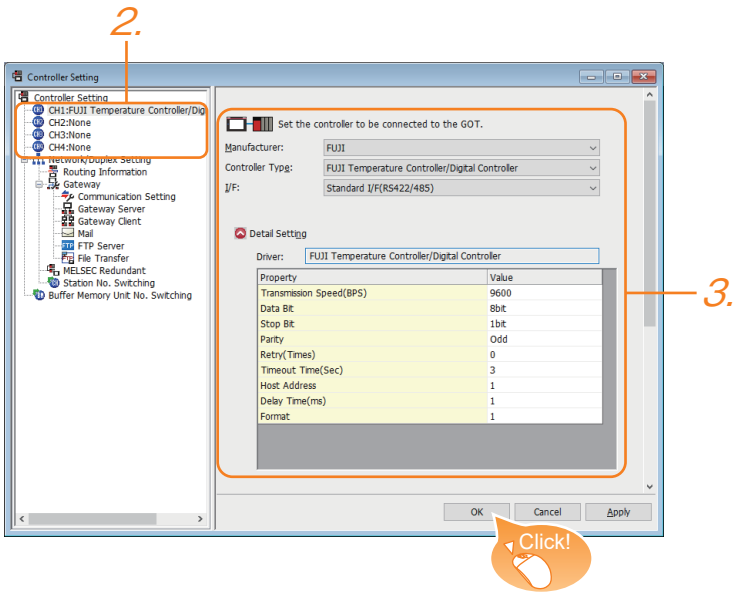
➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■15 [Hirata HNC]

For the setting details, contact our company.

■16 [FUJI]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [FUJI]
- [Controller Type]: select either of the following according to the model to be connected.
  [FUJI MICREX-F]
  [FUJI Temperature Controller/Digital Controller]
  [FUJI MICREX-SX SPH]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

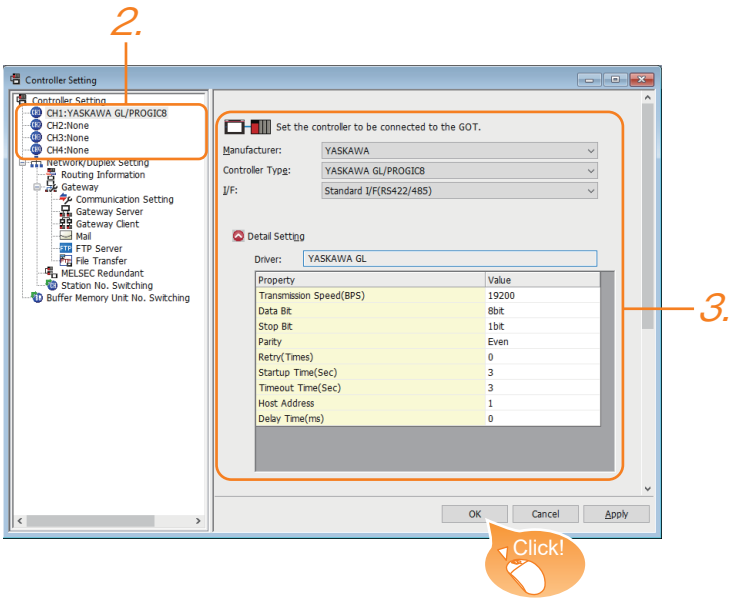
➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■17 [Muratec]

For the setting details, contact our company.

■18 [YASKAWA]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [YASKAWA]
- [Controller Type]: select either of the following according to the model to be connected.
  [YASKAWA GL/PROGIC8]
  [YASKAWA CP9200(H)]
  [YASKAWA CP9300MS(MC compatible)]
  [YASKAWA MP2000/MP900/CP9200SH]
  [YASKAWA MP3000]
  [YASKAWA Robot Controller]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

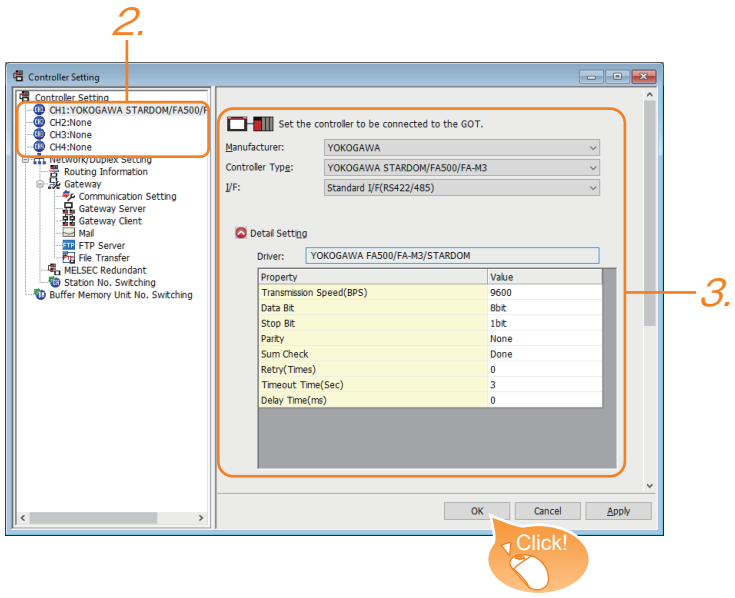
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■19 [YOKOGAWA]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [YOKOGAWA]
- [Controller Type]: select either of the following according to the model to be connected.
  [YOKOGAWA STARDOM/FA500/FA-M3]
  [YOKOGAWA GREEN/UT100/UT2000/UTAdvanced]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

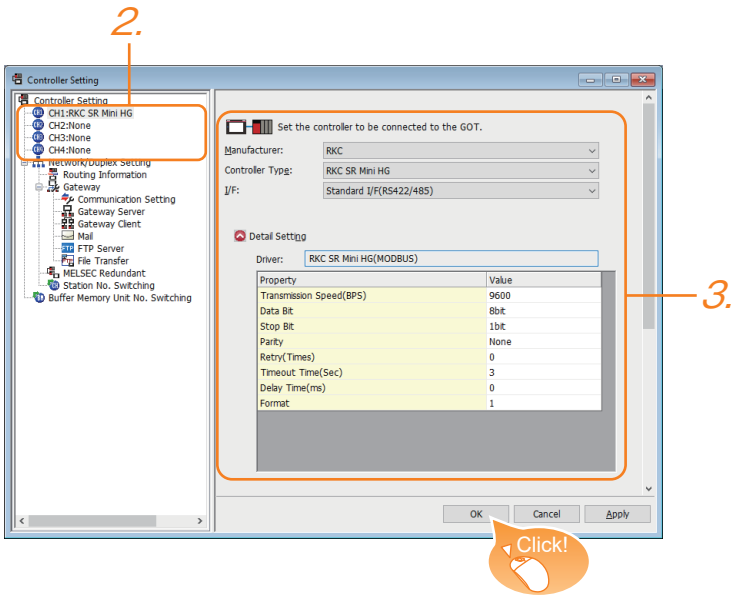
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■20 [RKC]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [RKC]
- [Controller Type]: [RKC SR Mini HG]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

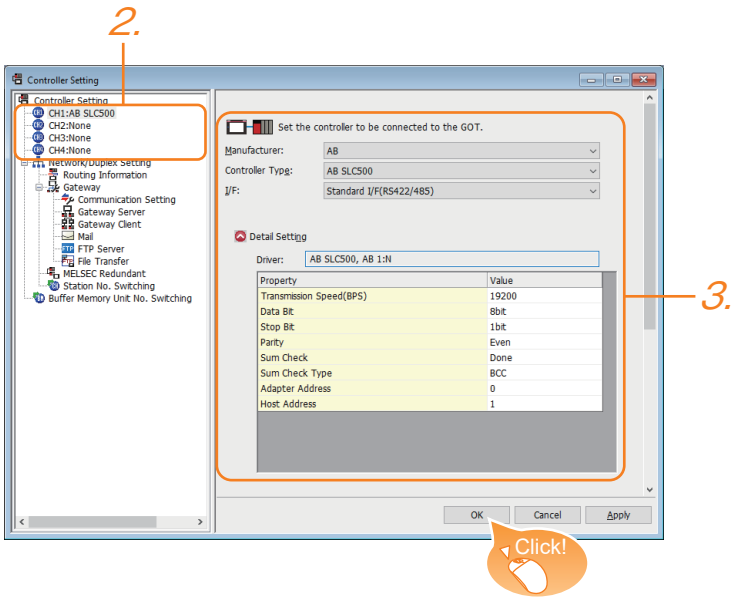
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■21 [AB]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [AB]
- [Controller Type]: select either of the following according to the model to be connected.

  [AB SLC500]
  [AB MicroLogix]
  [AB MicroLogix (Extended)]
  [AB Control/CompactLogix]
  [AB Control/CompactLogix(Tag)]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

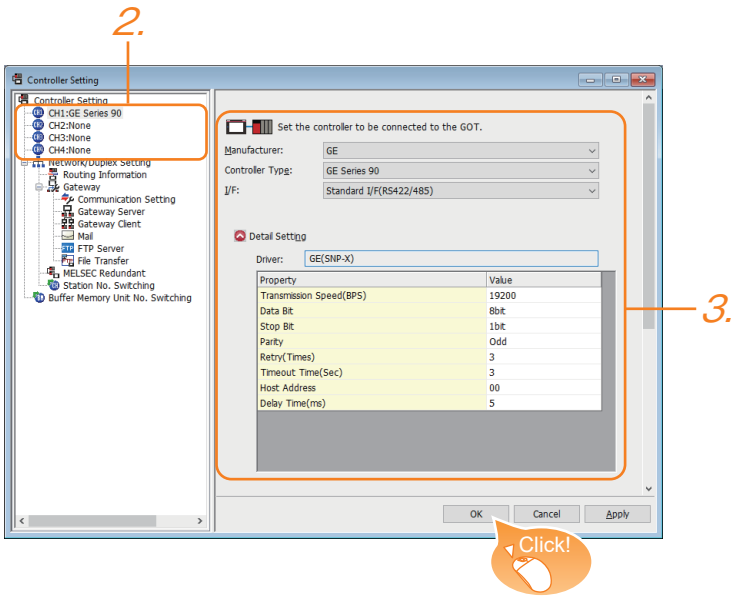
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■22 [GE]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [GE]
- [Controller Type]: [GE Series 90]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

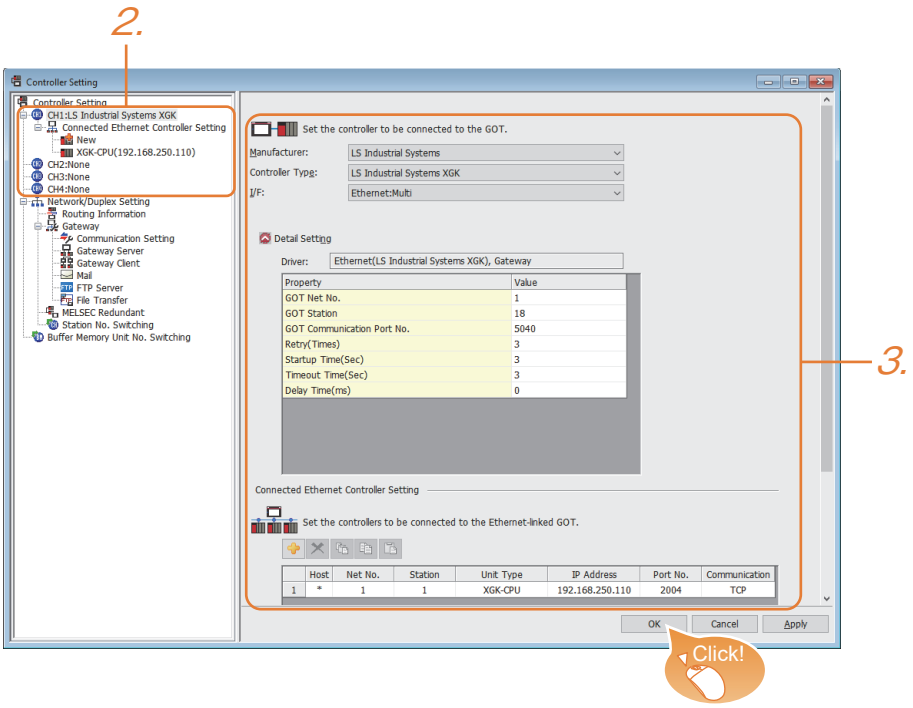
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■23 [LS IS]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [LS IS]
- [Controller Type]: select either of the following according to the model to be connected.
  [LS Industrial Systems XGK]
  [LS Industrial Systems MASTER-K]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.
- [Connected Ethernet Controller Setting]: Register the controller to be connected.

Step 4 When you have completed the setting, click the [OK] button.

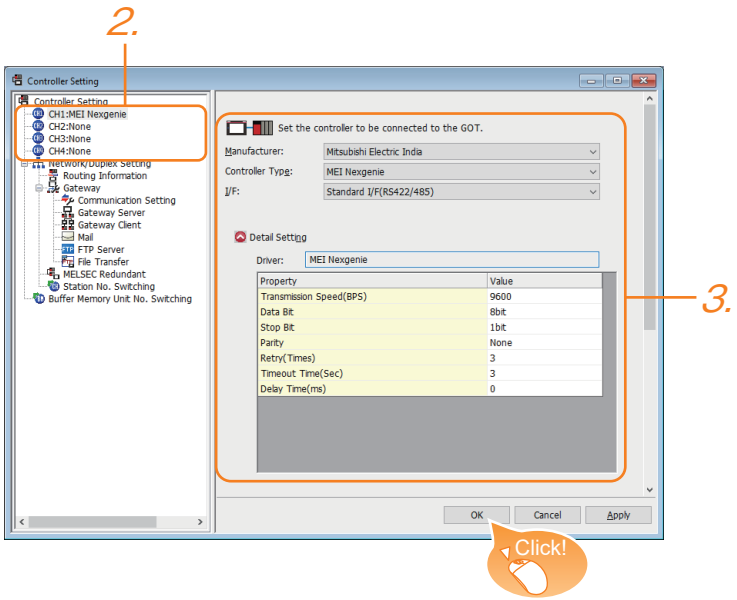
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■24 [Mitsubishi Electric India]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [Mitsubishi Electric India]
- [Controller Type]: [MEI Nexgenie]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

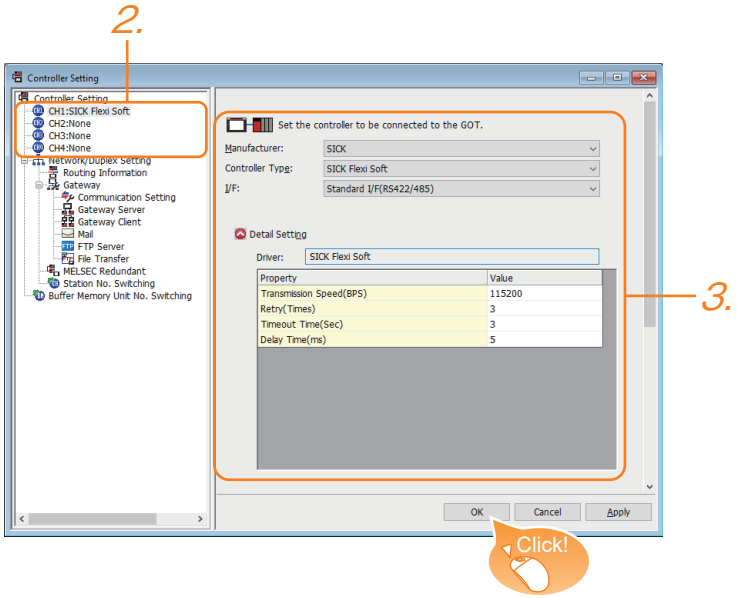
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■25 [SICK]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [SICK]
- [Controller Type]: [SICK Flexi Soft]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

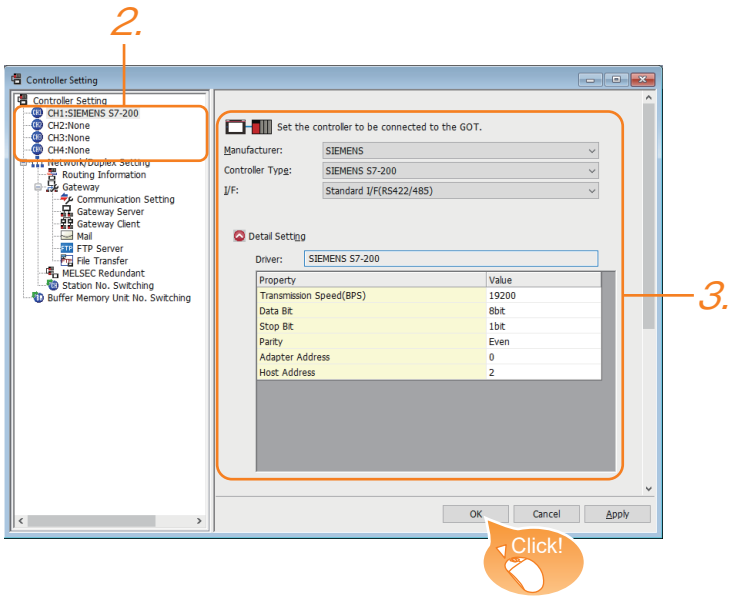
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■26 [SIEMENS]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [SIEMENS]
- [Controller Type]: select either of the following according to the model to be connected.
  [SIEMENS S7-200]
  [SIEMENS S7-200(CN/SMART)]
  [SIEMENS S7-300/400]
  [SIEMENS S7(Ethernet)]
  [SIEMENS OP(Ethernet)]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

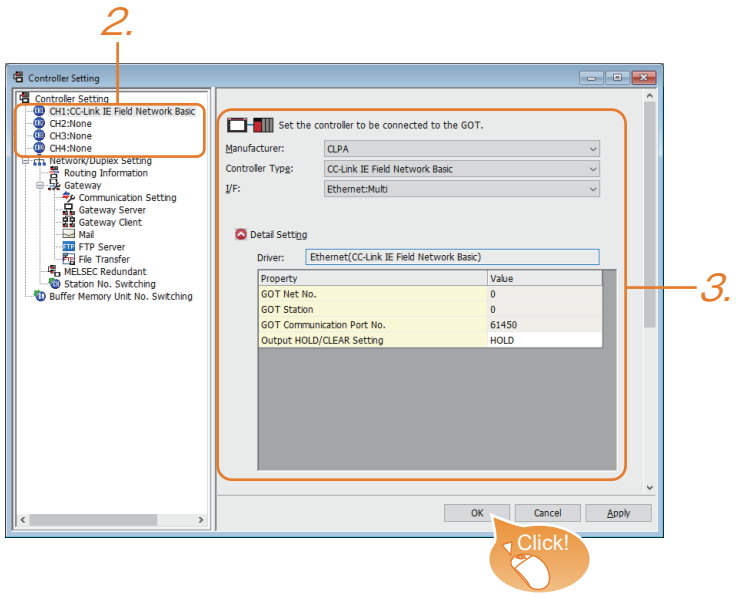
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1

■27 [CLPA]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [CLPA]
- [Controller Type]: select either of the following according to the model to be connected.
  [CC-Link IE Field Network Basic]
  [SLMP]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

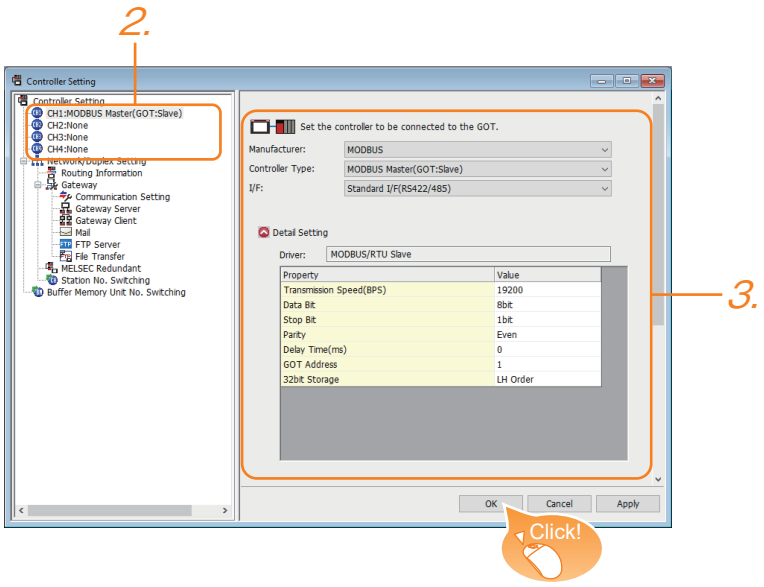
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

■28 [MODBUS]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [MODBUS]
- [Controller Type]: select one of the following items according to the controller to be connected.
  [MODBUS Slave(GOT:Master)]
  [MODBUS Master(GOT:Slave)]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

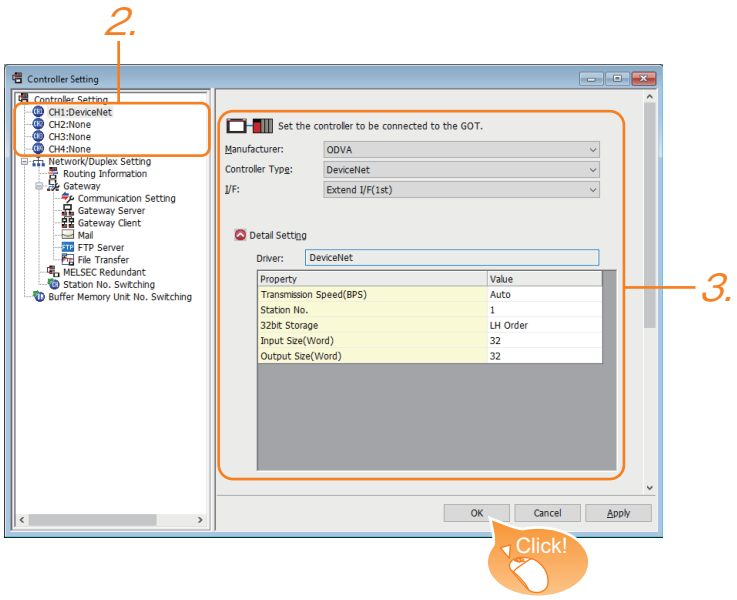
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

■29 [ODVA]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [ODVA]
- [Controller Type]: [DeviceNet]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

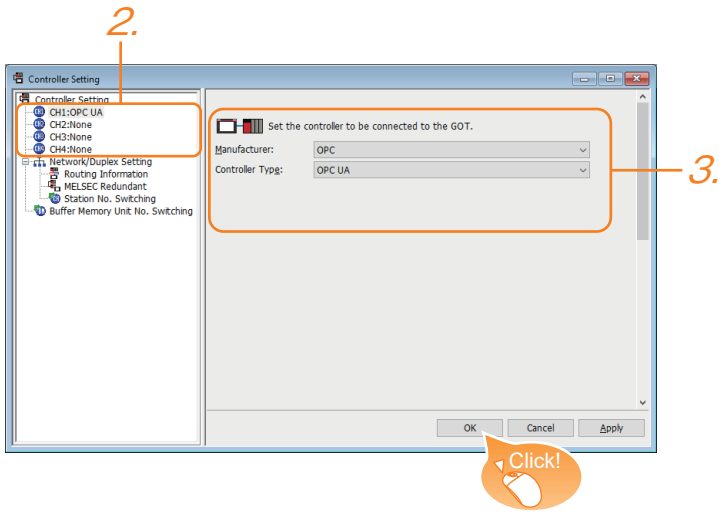
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

■30 [OPC]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

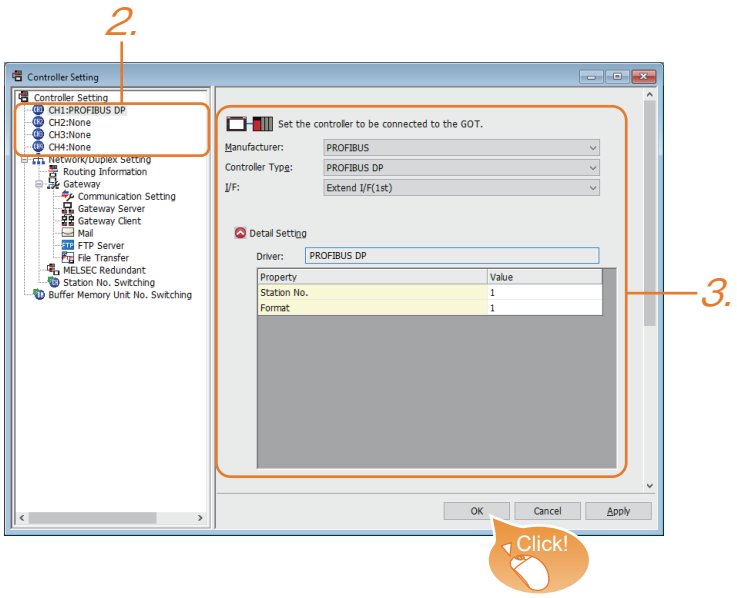
Step 3 Set the following items.

- [Manufacturer]: [OPC]
- [Controller Type]: [OPC UA]

Step 4 When you have completed the setting, click the [OK] button.

■31 [PROFIBUS]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [PROFIBUS]
- [Controller Type]: [PROFIBUS DP]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

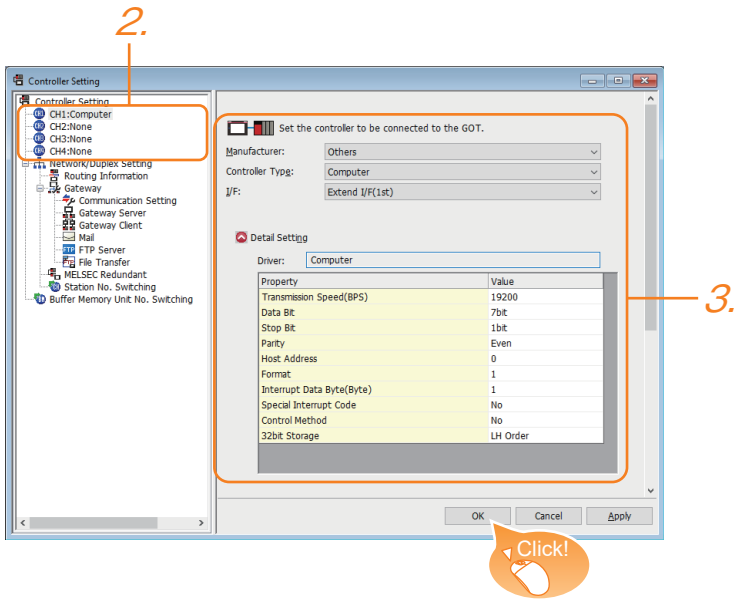
Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

■32 [Others]

Set the channel of the controller to be connected with the GOT.



Step 1 Select [Common] → [Controller Setting] from the menu.

Step 2 The [Controller Setting] window appears. select the channel No. to be used from the list menu.

Step 3 Set the following items.

- [Manufacturer]: [Other]
- [Controller Type]: [Computer]
- [I/F]: The interface to be used
- [Detail Setting]: Configure the settings according to the use environment.

Step 4 When you have completed the setting, click the [OK] button.

Point

The controller setting can be checked in [I/F Communication Setting].
For details, refer to the following.

➟GOT2000 Series Connection Manual (Microcomputers, MODBUS/Fieldbus Products, Peripherals) For GT Works3 Version1

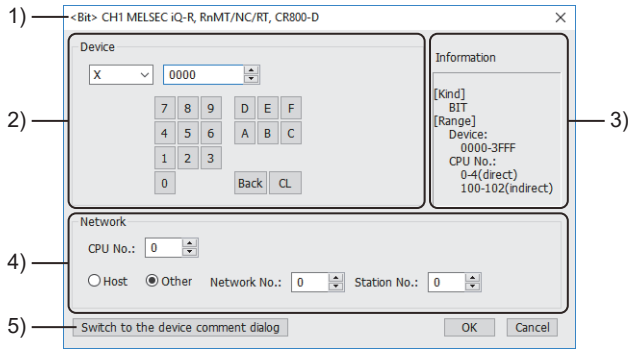
12.3 Device Range and Settings of Mitsubishi Electric Equipment

This section describes the range of devices settable in GT Designer3 for each of Mitsubishi Electric products connected to the GOT.
The settable range varies with the selection for [Controller Type] in the [Controller Setting] window.
Configure the device setting according to the specifications of the controller to be used.
Device specifications differ depending on the controller model even among the controllers of the same series.
If a non-existent device or a device number out of the range is set for an object, other objects for which correct devices are set may not be monitored.

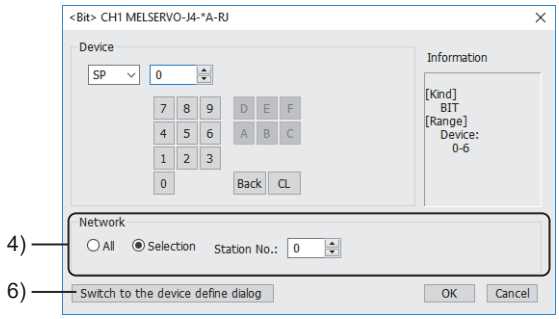
➟12.3.1 Device setting dialog (Mitsubishi Electric equipment)
12.3.2 [MELSEC MX Controller]
12.3.3 [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]
12.3.4 [MELSEC iQ-L]
12.3.5 [MELSEC iQ-F]
12.3.6 [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]
12.3.7 [MELSEC QnA, MELDAS C6*]
12.3.8 [MELSEC-L]
12.3.9 [MELSEC-A]
12.3.10 [MELSEC-FX]
12.3.11 [MELSEC-WS]
12.3.12 [MELIPC]
12.3.13 [MELSERVO-J2M-P8A]
12.3.14 [MELSERVO-J2M-*DU]
12.3.15 [MELSERVO-J2S-*A]
12.3.16 [MELSERVO-J2S-*CP]
12.3.17 [MELSERVO-J2S-*CL]
12.3.18 [MELSERVO-J3-*A]
12.3.19 [MELSERVO-J3-*T]
12.3.20 [MELSERVO-J4-*A, -JE-*A]
12.3.21 [MELSERVO-J4-*A-RJ]
12.3.22 [MELSERVO-JE-*C]
12.3.23 [MELSERVO-J5(W)-*G(-RJ), -JET-*G]
12.3.24 [FREQROL 500/700/800, SENSORLESS SERVO]
12.3.25 [FREQROL 800]
12.3.26 [FREQROL 800/E700NE(Batch monitor)]
12.3.27 [Laser Displacement Sensor MH11]

12.3.1 Device setting dialog (Mitsubishi Electric equipment)

Set a device to be monitored.



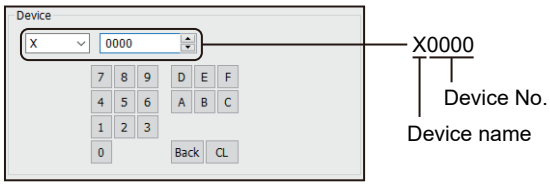
[MELSEC iQ-R, RnMT/NC/RT, CR800-D]



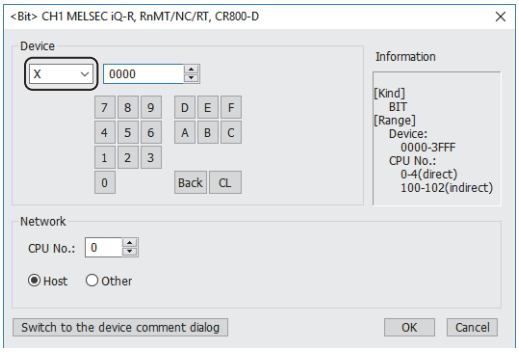
[MELSERVO-J4-*A-RJ]

1) Title
Data type and channel number of the device to be set

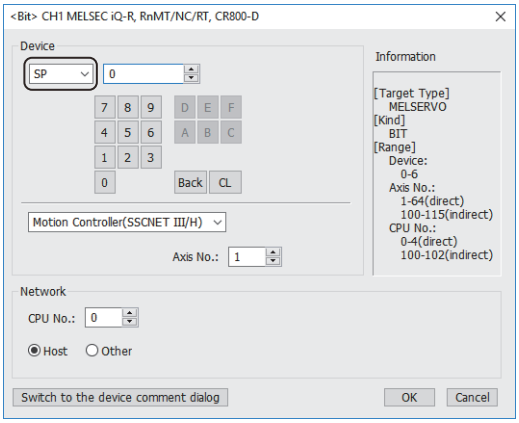
2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X0000



The setting items vary with the selected device name.



When [X] is selected for the device name



When [SP] is selected for the device name

3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Network]
Set the station number of the controller to be monitored.
The setting items depend on the controller setting.

➟■1 Network setting for connection to the Mitsubishi Electric PLC
■2 Network setting for connection to the Mitsubishi Electric servo amplifier
■3 Network setting for connection to the Mitsubishi Electric inverter

5) [Switch to the device comment dialog] button

You can open the device comment setting dialog to check the device comments imported to GT Designer3.

➟6.1.6 ■5 Device comment setting dialog

6) [Switch to the device define dialog] button

You can open the device definition setting dialog to check the definitions of the virtual servo amplifier or inverter devices.

➟6.1.6 ■6 Device definition setting dialog

For the formats of devices, refer to the following.

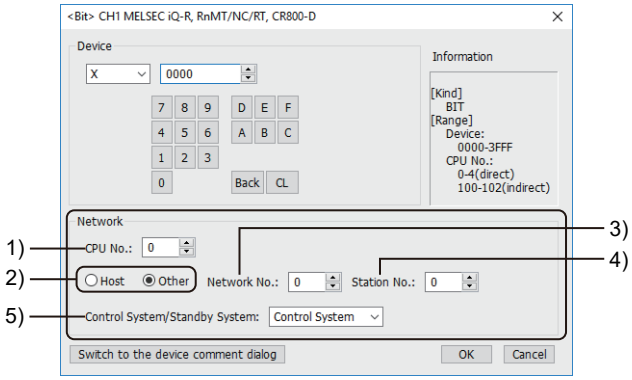
➟6.1.1 Formats of devices, labels, and tags

For the specifications of each device, refer to the following.

➟12.3.2 [MELSEC MX Controller]
12.3.3 [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]
12.3.4 [MELSEC iQ-L]
12.3.5 [MELSEC iQ-F]
12.3.6 [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]
12.3.7 [MELSEC QnA, MELDAS C6*]
12.3.8 [MELSEC-L]
12.3.9 [MELSEC-A]
12.3.10 [MELSEC-FX]
12.3.11 [MELSEC-WS]
12.3.12 [MELIPC]
12.3.13 [MELSERVO-J2M-P8A]
12.3.14 [MELSERVO-J2M-*DU]
12.3.15 [MELSERVO-J2S-*A]
12.3.16 [MELSERVO-J2S-*CP]
12.3.17 [MELSERVO-J2S-*CL]
12.3.18 [MELSERVO-J3-*A]
12.3.19 [MELSERVO-J3-*T]
12.3.20 [MELSERVO-J4-*A, -JE-*A]
12.3.21 [MELSERVO-J4-*A-RJ]
12.3.22 [MELSERVO-JE-*C]
12.3.23 [MELSERVO-J5(W)-*G(-RJ), -JET-*G]
12.3.24 [FREQROL 500/700/800, SENSORLESS SERVO]
12.3.25 [FREQROL 800]
12.3.26 [FREQROL 800/E700NE(Batch monitor)]
12.3.27 [Laser Displacement Sensor MH11]

■1 Network setting for connection to the Mitsubishi Electric PLC

Configure the following settings for connecting to a Mitsubishi Electric PLC.
Example) Device setting dialog for [MELSEC iQ-R, RnMT/NC/RT, CR800-D]



1) [CPU No.]
Set the CPU number of the controller.
➥(1) Setting the CPU No.

2) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

When monitoring link relay (B) and link register (W) assigned in link parameter and network parameter, select [Host].
If [Other] is selected, the cyclic transmission will be changed to the transient transmission irrespective of the network type, resulting in delay of the object display.
Set RX, RY, RWw, RWr, LB, or LW as [Host] when monitoring a cyclic device.

3) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

4) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

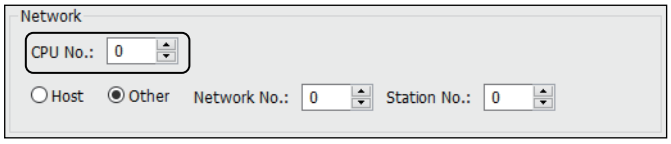
5) [Control System/Standby System]
This item can be set only when [Use the function of MELSEC Redundant] is selected in [MELSEC Redundant] of the [Controller Setting] window.
The following shows the items to be selected.
- [Control System]
- [Standby System]

Example) Display terminology of the control system

1-1/1-S W0.b0
[-S] is displayed for a device of the standby system.

➥5.5.3 Configuring the setting of the MELSEC redundant function

(1) Setting the CPU No.



The setting range depends on the system configuration of the monitoring target.

Item	Description
When monitoring a single CPU system	Set the CPU No. to [0].
When monitoring a multiple CPU system	Set the CPU No. to any of [1] to [4].
When GT SoftGOT2000 on the PC CPU module is connected using the bus connection	Do not specify 0 for [CPU No.]. When 0 is specified, the monitoring target is set to the PC CPU module that cannot be monitored.
When monitoring an inverter	Set the CPU No. to [0].

To specify a CPU number with the value of a GOT data register (GD), refer to the following.

➟(2) Indirect specification of a CPU number

(2) Indirect specification of a CPU number

To set a GOT data register (GD) to specify a CPU number, set [CPU No. switching GD device first No. (3 points)] in the [Controller Setting] window.

➟5.5.1 ■4 [Controller Setting]

In GT SoftGOT2000, set [CPU No. switching GD device first No. (3 points)] in the [Communication Setup] dialog.

➟GT SoftGOT2000 Version1 Operating Manual

The following shows the correspondence between CPU numbers and GOT data registers (GD).
Example) When 500 is set to [CPU No. switching GD device first No. (3 points)]
Three consecutive devices, starting from GD500, are set to specify CPU numbers.

CPU number	GOT data registers (GD)	Setting range
100	GD500	[1] to [4] (Setting an invalid value causes a communication timeout error.)
101	GD501	
102	GD502	

Upon the GOT startup, 0 is stored in the specified GD devices until values are set.
If you set the GD devices on the screen that appears upon the GOT startup, a communication timeout error occurs.
To avoid such situation, set the GD devices so that their values are retained at a power failure.

➟5.2.12 Configuring the settings for retaining GOT internal device data at power failure ([Internal Device Retention])

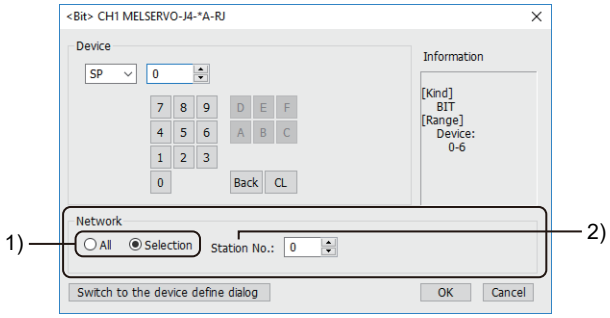
When specifying GD devices for multiple channels, set different GD devices to [CPU No. switching GD device first No. (3 points)].

GD10 to GD25 are used to specify the monitoring targets, such as the station number of an inverter.
When setting GD devices for a different channel, set different GD devices to [CPU No. switching GD device first No. (3 points)].

Do not change the value of the specified device while a touch switch with the bit momentary is being pressed.
Doing so may cause the touch switch to exhibit unintended behavior.

■2 Network setting for connection to the Mitsubishi Electric servo amplifier

Example) Device setting dialog of [MELSERVO-J4-*A-RJ]



1) Monitor target specification

Set the monitoring target of the set device.

Item	Description
[All]	Select this item when writing data to all servo amplifiers connected. During a monitoring, the servo amplifier of the station No. 0 is monitored. When inputting data by the numerical input, the data is written to all servo amplifiers connected during inputting and the servo amplifier of the station No. 0 is monitored during other than inputting (displaying). When [All] is selected for a device, network No. 0 and station No. FF are displayed in the device list window and the printed report.
[Selection]	Specify the station number of a servo amplifier to be monitored.

2) [Station No.]

This item appears when [Selection] is selected for the monitor target specification.

The setting range is [0] to [31] (direct) or [100] to [115] (indirect).

For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number (for connection to a servo amplifier)

For the network settings of [MELSERVO-JE-*C] and [MELSERVO-J5(W)-*G(-RJ), -JET-*G], refer to the following.

➟(2) For the network settings for [MELSERVO-JE-*C] and [MELSERVO-J5(W)-*G(-RJ), -JET-*G]

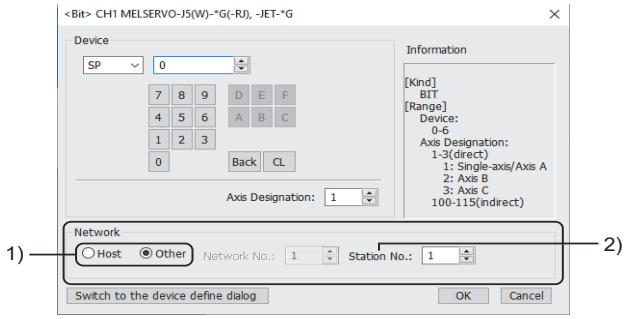
(1) Indirect specification of a station number (for connection to a servo amplifier)

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data registers (GD)	Setting range
100	GD10	[0] to [31] Setting a value outside the range causes a timeout error.
101	GD11	
:	:	
114	GD24	
115	GD25	

(2) For the network settings for [MELSERVO-JE-*C] and [MELSERVO-J5(W)-*G(-RJ), -JET-*G]



1) Station type specification

Select the station type (host or other) for the controller to be monitored.

- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

2) [Station No.]

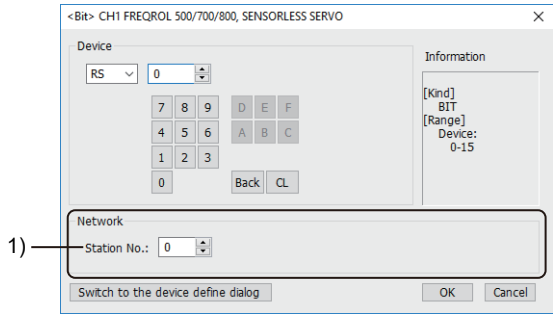
This item appears when [Other] is selected for the station type.

Specify a station number.

■3 Network setting for connection to the Mitsubishi Electric inverter

➟(1) Network setting for [FREQROL 500/700/800, SENSORLESS SERVO]
(3) Network setting for [FREQROL 800]
(4) Network setting for [FREQROL 800/E700NE(Batch monitor)]

(1) Network setting for [FREQROL 500/700/800, SENSORLESS SERVO]



1) [Station No.]

Set the station number of the inverter to be monitored.

The setting range is [0] to [31] (direct) or [100] to [115] (indirect).

For indirect specification of a station number, refer to the following.

➟(2) Indirect specification of a station number (for connecting an inverter)

(2) Indirect specification of a station number (for connecting an inverter)

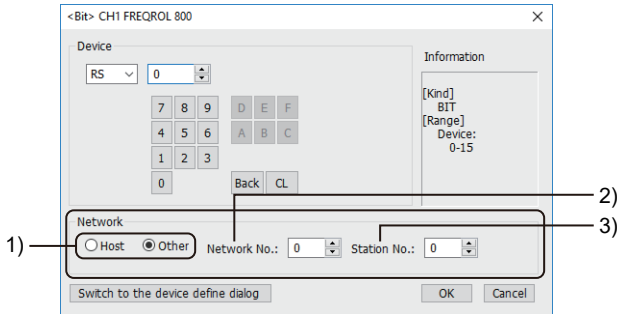
When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data registers (GD)	Setting range
100	GD10	[0] to [31] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

Do not change the value of the specified device while a touch switch with the bit momentary is being pressed. Doing so may cause the touch switch to exhibit unintended behavior.

(3) Network setting for [FREQROL 800]



1) Station type specification

Select the station type (host or other) for the controller to be monitored.

• [Host]: The controller to be monitored is the host station.
• [Other]: The controller to be monitored is not the host station.

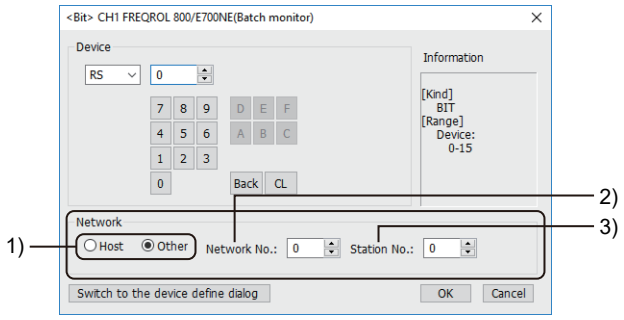
2) [Network No.]
This item appears when [Other] is selected for the station type.
The setting depends on the connection type between the GOT and the inverter.

Connection type	Description
Serial communication connection	[Network No.] is not used.
Ethernet connection	Specify a network number. The setting range is [1] to [239].

3) [Station No.]
This item appears when [Other] is selected for the station type.
Set the station number of the inverter to be monitored.
The setting depends on the connection type between the GOT and the inverter.

Connection type	Description
Serial communication connection	The setting range is [0] to [31] (direct) or [100] to [115] (indirect). For indirect specification of a station number, refer to the following. ➟(2) Indirect specification of a station number (for connecting an inverter)
Ethernet connection	The setting range is [1] to [120].

(4) Network setting for [FREQROL 800/E700NE(Batch monitor)]



1) Station type specification
Select the station type (host or other) for the controller to be monitored.
• [Host]: The controller to be monitored is the host station.
• [Other]: The controller to be monitored is not the host station.

2) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.
The setting range is [1] to [239].

3) [Station No.]
This item appears when [Other] is selected for the station type.
Set the station number of the inverter to be monitored.
The setting range is [1] to [120].

12.3.2 [MELSEC MX Controller]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC MX Controller])
	➟■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])
	➟■3 Availability of writing/reading data to/from bit devices ([MELSEC MX Controller])
Specifications of word devices	➟■4 Monitoring-supported word devices ([MELSEC MX Controller])
	➟■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])
	➟■6 Availability of writing/reading data to/from word devices ([MELSEC MX Controller])
Specifications of double-word devices	➟■7 Monitoring-supported double-word devices ([MELSEC MX Controller])
	➟■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])
	➟■9 Availability of writing/reading data to/from double-word devices ([MELSEC MX Controller])
Specifications of virtual servo amplifier devices	➟■10 Virtual servo amplifier devices ([MELSEC MX Controller])
	➟■11 Precautions for virtual servo amplifier devices ([MELSEC MX Controller])
Specifications of virtual inverter devices	➟■12 Virtual inverter devices ([MELSEC MX Controller])

■1 Monitoring-supported bit devices ([MELSEC MX Controller])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.2 ■3 Availability of writing/reading data to/from bit devices ([MELSEC MX Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 3FFF	○	○
Y	Output relay	Hexadecimal	0000 to 3FFF	○	○
B	Link relay	Hexadecimal	0000000 to 9FF9FFF	○	○
M	Internal relay	Decimal	0 to 167747583	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S	Step relay	Decimal	0 to 16383	×	×
F	Annunciator	Decimal	0 to 131071	○	○
TC	Timer coil	Decimal	0 to 9319295	○	○ (Not usable as word data)
TT	Timer contact	Decimal	0 to 9319295	○	○ (Not usable as word data)
CC	Counter coil	Decimal	0 to 9319295	○	○ (Not usable as word data)
CT	Counter contact	Decimal	0 to 9319295	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
SC	Retentive timer coil	Decimal	0 to 9319295	○	○ (Not usable as word data)
SS	Retentive timer contact	Decimal	0 to 9319295	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	0000000 to 9FF9FFF	○	○
SM	Special relay	Decimal	0 to 9999	○	○
RX	Remote input	Hexadecimal	0000 to 3FFF	○	○
RY	Remote output	Hexadecimal	0000 to 3FFF	○	○
LB	Link relay	Hexadecimal	0000 to 7FFF	○	○
LTC	Long timer coil	Decimal	0 to 2621055	○	○ (Not usable as word data)
LTT	Long timer contact	Decimal	0 to 2621055	○	○ (Not usable as word data)
LCC	Long counter coil	Decimal	0 to 4933727	○	○ (Not usable as word data)
LCT	Long counter contact	Decimal	0 to 4933727	○	○ (Not usable as word data)
LSC	Long retentive timer coil	Decimal	0 to 2621055	○	○ (Not usable as word data)
LSS	Long retentive timer contact	Decimal	0 to 2621055	○	○ (Not usable as word data)
SAX	Safety input relay	Hexadecimal	0000 to 2FFF	×	×
SAY	Safety output relay	Hexadecimal	0000 to 2FFF	×	×
SAB	Safety link relay	Hexadecimal	00000 to 9BFFF	×	×
SAM	Safety internal relay	Decimal	0 to 638975	×	×
SATC	Safety timer coil	Decimal	0 to 35487	×	×
SATT	Safety timer contact	Decimal	0 to 35487	×	×
SACC	Safety counter coil	Decimal	0 to 35487	×	×
SACT	Safety counter contact	Decimal	0 to 35487	×	×
SASC	Safety retentive timer coil	Decimal	0 to 35487	×	×
SASS	Safety retentive timer contact	Decimal	0 to 35487	×	×
SASM	Safety special relay	Decimal	0 to 4095	×	×
BL	SFC block	Decimal	0 to 319	×	×
BLS	Step relay (block)	Decimal	BL(SFC Block No.)-S(Device) Notation example: BL1-S3 • SFC Block No. (decimal): 0 to 319 • Device (decimal): 0 to 511	×	×
SP[*2]	Servo amplifier request	Decimal	➡12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
OM*2	Operation mode selection	Decimal	➟12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×
TMB*2	Instruction demand (for test operation)	Decimal	➟12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×
OTI*2	One-touch tuning instruction	Decimal	➟12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×
GFDI*2	Gear failure diagnosis instruction	Decimal	➟12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×
ECCDI*2	Encoder communication circuit diagnosis instruction	Decimal	➟12.3.2 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])	×	×
JnX	Link input (link direct)	Hexadecimal	J(Network No.n)-X(Device) Notation example: J1-X0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnY	Link output (link direct)	Hexadecimal	J(Network No.n)-Y(Device) Notation example: J1-Y0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnB	Link relay (link direct)	Hexadecimal	J(Network No.n)-B(Device) Notation example: J1-B0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 1FFFF	○	○
JnSB	Link special relay (link direct)	Hexadecimal	J(Network No.n)-SB(Device) Notation example: J1-SB000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to FFF	○	○
IOST*3	I/O terminal monitor	Decimal	0 to 127	×	×
CMD*3	Operation command	Decimal	0 to 63	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.2 ■10 Virtual servo amplifier devices ([MELSEC MX Controller])

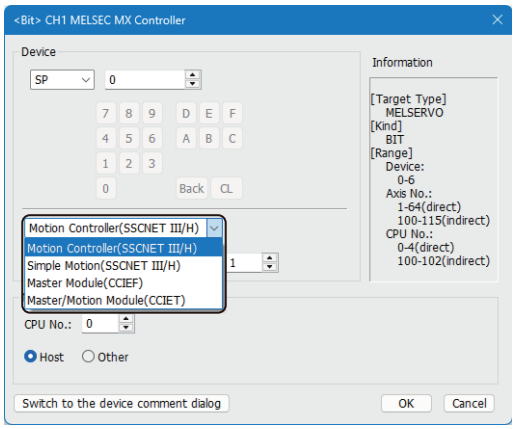
*3 Virtual inverter device

For the details, refer to the following.

➟12.3.2 ■12 Virtual inverter devices ([MELSEC MX Controller])

■2 Setting virtual bit devices for servo amplifiers ([MELSEC MX Controller])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.
Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Motion Controller(SSCNET III/H)]	A(Axis No.)-SP(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A64-SP0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-SP0
	[Master Module(CCIEF)]	SP(Device) • Device (decimal): 0 to 6	SP0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-SP(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-SP0

Device name	Device notation and setting range		Notation example
OM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OM(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	A64-OM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	UFF-A64-OM0
	[Master Module(CCIEF)]	OM(Device) • Device (decimal): 0 to 2, 4 to 5	OM0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	AA3-OM0
TMB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMB(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	A64-TMB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	UFF-A64-TMB1
	[Master Module(CCIEF)]	TMB(Device) • Device (decimal): 1 to 6	TMB1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	AA3-TMB1
OTI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-OTI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-OTI0
	[Master Module(CCIEF)]	OTI(Device) • Device (decimal): 0 to 5	OTI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OTI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-OTI0
GFDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-GFDI1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-GFDI1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-GFDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-GFDI0
ECCDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-ECCDI1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-ECCDI1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ECCDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ECCDI0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➟(1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
(2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■3 Availability of writing/reading data to/from bit devices ([MELSEC MX Controller])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/-	-/-	R/-	R/-	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LB	R/W	-/-	R/W	R/W	-/-
LTC	R/W	-/-	-/-	-/-	-/-
LTT	R/W	-/-	-/-	-/-	-/-
LCC	R/W	-/-	-/-	-/-	-/-
LCT	R/W	-/-	-/-	-/-	-/-
LSC	R/W	-/-	-/-	-/-	-/-
LSS	R/W	-/-	-/-	-/-	-/-
SAX	R/-	-/-	R/-	R/-	-/-
SAY	R/-	-/-	R/-	R/-	-/-
SAB	R/-	-/-	R/-	R/-	-/-
SAM	R/-	-/-	R/-	R/-	-/-
SATC	R/-	-/-	-/-	-/-	-/-
SATT	R/-	-/-	-/-	-/-	-/-
SACC	R/-	-/-	-/-	-/-	-/-
SACT	R/-	-/-	-/-	-/-	-/-
SASC	R/-	-/-	-/-	-/-	-/-
SASS	R/-	-/-	-/-	-/-	-/-
SASM	R/-	-/-	R/-	R/-	-/-
BL	R/W	-/-	-/-	-/-	-/-
BLS	R/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
GFDI	-/W	-/-	-/-	-/-	-/-
ECCDI	-/W	-/-	-/-	-/-	-/-
JnX	R/W	-/-	R/W	R/W	-/-
JnY	R/W	-/-	R/W	R/W	-/-
JnB	R/W	-/-	R/W	R/W	-/-
JnSB	R/W	-/-	R/W	R/W	-/-
IOST	R/-	-/-	-/-	-/-	-/-
CMD	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC MX Controller])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.2 ■6 Availability of writing/reading data to/from word devices ([MELSEC MX Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
TN	Timer current value	Decimal	0 to 9319295	○	○
CN	Counter current value	Decimal	0 to 9319295	○	○
SN	Retentive timer current value	Decimal	0 to 9319295	○	○
D	Data register	Decimal	0 to 10484223	○	○
SD	Special register	Decimal	0 to 9999	○	○
W	Link register	Hexadecimal	000000 to 9FF9FF	○	○
SW	Link special register	Hexadecimal	000000 to 9FF9FF	○	○
R	File register	Decimal	0 to 32767	○	○
ER	Extension file register(Block)	Decimal	ER (R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 318 • Device (decimal): 0 to 32767	○	○
ZR	Extension file register	Decimal	0 to 10452991	○	○
Z	Index register	Decimal	0 to 23	○	○ (Not usable as bit data)
G	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No. (hexadecimal): 00 to FF • Device (decimal): 0 to 268435455 For the module No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	○	○
Ww[*3]	Remote register	Hexadecimal	0000 to 1FFF	○	○
Wr[*3]	Remote register	Hexadecimal	0000 to 1FFF	○	○
LW	Link register	Hexadecimal	00000 to 1FFFF	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
#	Motion device	Decimal	0 to 108287	○	○
U3E0	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E1	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E2	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E3	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
SATN	Safety timer (current value)	Decimal	0 to 35487	×	×
SACN	Safety counter (current value)	Decimal	0 to 35487	×	×
SASN	Safety retentive timer (current value)	Decimal	0 to 35487	×	×
SAD	Safety data register	Decimal	0 to 39935	×	×
SASD	Safety special register	Decimal	0 to 4095	×	×
SAW	Safety link register	Hexadecimal	0000 to 9BFF	×	×
PA[*2]	Basic parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PB[*2]	Gain filter parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PC[*2]	Extension setting parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PD[*2]	I/O setting parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PO[*2]	Option unit parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PS[*2]	Special parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PU[*2]	Multi encoder parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PT[*2]	Positioning control parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PL[*2*4]	Motor extension parameter Linear servo motor/DD motor setting parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PN[*2]	Network setting parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PVS[*2*5]	Position extension parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
ST[*2]	Status display	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PE*2	Extension setting No.2 parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
PF*2	Extension setting No.3 parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
NPA*2	Network basic parameter	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
ALM*2	Alarm (current alarm J4A extend)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
	Alarm (alarm history J4A extend)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
	Alarm (alarm history J5G extend)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
POS*2	Point table (position)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
SPD*2	Point table (speed)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
ACT*2	Point table (acceleration time constant)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
DCT*2	Point table (deceleration time constant)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
DWL*2	Point table (dwell)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
AUX*2	Point table (auxiliary function)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
MCD*2	Point table (M code)	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
MD*2	Machine diagnosis data	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
GFDS*2	Gear failure diagnosis data	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
ECCDS*2	Encoder communication circuit diagnosis data	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
OTS*2	One-touch tuning data	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
DI*2	External Input signal	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×
DO*2	External output signal	Decimal	➟12.3.2 ■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
JnW	Link register (link direct)	Hexadecimal	J(Network No.n)-W(Device) Notation example: J1-W00000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 00000 to 1FFFF*8	○	○
JnSW	Link special register (link direct)	Hexadecimal	J(Network No.n)-SW(Device) Notation example: J1-SW000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to FFF	○	○
U3E0G	CPU buffer memory access device	Decimal	U3E0-G(Device) Notation example: U3E0-G100 • Device (decimal): 0 to 268435455	○	○
U3E1G	CPU buffer memory access device	Decimal	U3E1-G(Device) Notation example: U3E1-G100 • Device (decimal): 0 to 268435455	○	○
U3E2G	CPU buffer memory access device	Decimal	U3E2-G(Device) Notation example: U3E2-G100 • Device (decimal): 0 to 268435455	○	○
U3E3G	CPU buffer memory access device	Decimal	U3E3-G(Device) Notation example: U3E3-G100 • Device (decimal): 0 to 268435455	○	○
RD	Refresh data register	Decimal	0 to 4194303	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.2 ■10 Virtual servo amplifier devices ([MELSEC MX Controller])

*3 Not available to GT21 and GS21.

*4 The device name depends on the servo amplifier.

MR-J5-G(-RJ) or MR-J5W□-G: Motor extension parameter

Other than MR-J5-G(-RJ) or MR-J5W□-G: Linear servo motor/DD motor setting parameter

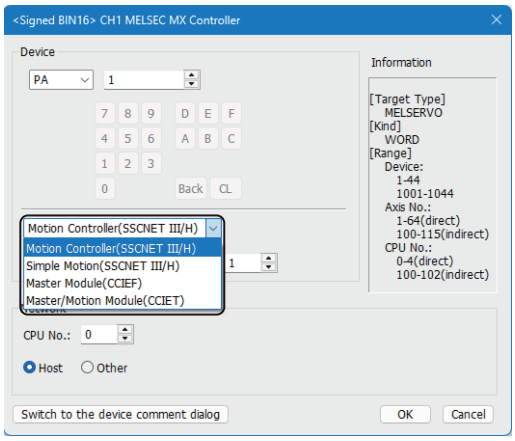
*5 PVS is a virtual device corresponding to the servo parameter (PV) of MR-J5-G(-RJ), MR-J5W□-G, and MR-JET-G.

Use the virtual device (PVS) to read/write data from/to the servo parameter (PV).

■5 Setting virtual word devices for servo amplifiers ([MELSEC MX Controller])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.

Item	Description
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PA(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A64-PA1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A64-PA1
	[Master Module(CCIEF)]	PA (Device) • Device (decimal): 1 to 44, 1001 to 1044	PA1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PA(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PA1
PB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PB(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	A64-PB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	UFF-A64-PB1
	[Master Module(CCIEF)]	PB(Device) • Device (decimal): 1 to 92, 1001 to 1092	PB1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	AA3-PB1
PC	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PC(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	A64-PC1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	UFF-A64-PC1
	[Master Module(CCIEF)]	PC(Device) • Device (decimal): 1 to 90, 1001 to 1090	PC1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PC(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PC1

Device name	Device notation and setting range		Notation example
PD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A64-PD1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A64-PD1
	[Master Module(CCIEF)]	PD(Device) • Device (decimal): 1 to 72, 1001 to 1072	PD1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PD1
PO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	A64-PO1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	UFF-A64-PO1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	AA3-PO1
PS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A64-PS1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A64-PS1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PS1
PU	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PU(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A64-PU1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PU(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A64-PU1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PU(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PU1
PT	[Master Module(CCIEF)]	PT(Device) • Device (decimal): 1 to 90, 1001 to 1090	PT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PT1

Device name	Device notation and setting range		Notation example
PL	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PL(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A64-PL1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A64-PL1
	[Master Module(CCIEF)]	PL(Device) • Device (decimal): 1 to 72, 1001 to 1072	PL1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PL1
PN	[Master Module(CCIEF)]	PN(Device) • Device (decimal): 1 to 32, 1001 to 1032	PN1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PN(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PN1
PVS	[Master/Motion Module(CCIET)]	AA(Axis designation)-PVS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PVS1
ST	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ST(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	A64-ST0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	UFF-A64-ST0
	[Master Module(CCIEF)]	ST(Device) • Device (decimal): 0 to 73	ST0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ST(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	AA3-ST0
PE	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PE(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	A64-PE1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	UFF-A64-PE1
	[Master Module(CCIEF)]	PE(Device) • Device (decimal): 1 to 88, 1001 to 1088	PE1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PE(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	AA3-PE1
PF	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PF(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A64-PF1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A64-PF1
	[Master Module(CCIEF)]	PF(Device) • Device (decimal): 1 to 99, 1001 to 1099	PF1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PF(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PF1

Device name	Device notation and setting range		Notation example
NPA	[Master/Motion Module(CCIET)]	NPA(Device) • Device (decimal): 1 to 15, 2001 to 2032	NPA1
ALM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALM(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	A64-ALM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	UFF-A64-ALM0
	[Master Module(CCIEF)]	ALM(Device) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	ALM0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ALM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	AA3-ALM0
POS	[Master Module(CCIEF)]	POS(Device) • Device (decimal): 1 to 255, 1001 to 1255	POS1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-POS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-POS1
SPD	[Master Module(CCIEF)]	SPD(Device) • Device (decimal): 1 to 255, 1001 to 1255	SPD1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-SPD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-SPD1
ACT	[Master Module(CCIEF)]	ACT(Device) • Device (decimal): 1 to 255, 1001 to 1255	ACT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ACT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-ACT1
DCT	[Master Module(CCIEF)]	DCT(Device) • Device (decimal): 1 to 255, 1001 to 1255	DCT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DCT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DCT1
DWL	[Master Module(CCIEF)]	DWL(Device) • Device (decimal): 1 to 255, 1001 to 1255	DWL1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DWL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DWL1
AUX	[Master Module(CCIEF)]	AUX(Device) • Device (decimal): 1 to 255, 1001 to 1255	AUX1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-AUX(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-AUX1
MCD	[Master/Motion Module(CCIET)]	AA(Axis designation)-MCD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-MCD1

Device name	Device notation and setting range		Notation example
MD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-MD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	A64-MD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	UFF-A64-MD0
	[Master Module(CCIEF)]	MD(Device) • Device (decimal): 0 to 21	MD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-MD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	AA3-MD0
GFDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-GFDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-GFDS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-GFDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-GFDS0
ECCDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-ECCDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-ECCDS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ECCDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-ECCDS0
OTS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	A64-OTS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	UFF-A64-OTS0
	[Master Module(CCIEF)]	OTS(Device) • Device (decimal): 0 to 5, 3000	OTS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OTS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	AA3-OTS0
DI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	A64-DI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	UFF-A64-DI0
	[Master Module(CCIEF)]	DI(Device) • Device (decimal): 0 to 12	DI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	AA3-DI0

Device name	Device notation and setting range		Notation example
DO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A64-DO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-DO0
	[Master Module(CCIEF)]	DO(Device) • Device (decimal): 0 to 6	DO0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-DO0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC MX Controller])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
ER	R/W	R/W	R/W	R/W
ZR	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
Ww	R/W	R/W	R/W	R/W
Wr	R/W	R/W	R/W	R/W
LW	R/W	R/W	R/W	R/W
#	R/W	R/W	-/-	R/W
U3E0	R/W	R/W	R/W	R/W
U3E1	R/W	R/W	R/W	R/W
U3E2	R/W	R/W	R/W	R/W
U3E3	R/W	R/W	R/W	R/W
SATN	R/-	R/-	-/-	-/-
SACN	R/-	R/-	-/-	-/-
SASN	R/-	R/-	-/-	-/-
SAD	R/-	R/-	-/-	R/-
SASD	R/-	R/-	-/-	R/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
SAW	R/-	R/-	-/-	R/-
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-
PS	R/W	R/W	-/-	-/-
PU	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
PVS	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
NPA*1	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
GFDS	R/-	R/-	-/-	-/-
ECCDS	R/-	R/-	-/-	-/-
OTS*2	R/W	R/W	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-
JnW	R/W	R/W	R/W	R/W
JnSW	R/W	R/W	-/-	R/W
U3E0G	R/W	R/W	R/W	R/W
U3E1G	R/W	R/W	R/W	R/W
U3E2G	R/W	R/W	R/W	R/W
U3E3G	R/W	R/W	R/W	R/W
RD	R/W	R/W	R/W	R/W

*1 Only reading is available for NPA1 and NPA2001 to NPA2032.
*2 Only reading is available for OTS0 to OTS5.

■7 Monitoring-supported double-word devices ([MELSEC MX Controller])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.2 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC MX Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LTN	Long timer current value	Decimal	0 to 2621055	×	×
LCN	Long counter current value	Decimal	0 to 4933727	×	×
LSN	Long retentive timer current value	Decimal	0 to 2621055	×	×
ZZ	Index register (32 bits)	Decimal	0 to 22	×	×
LZ	Index register (32 bits)	Decimal	0 to 11	×	×
ALD*2	Life diagnosis	Decimal	➡12.3.2 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])	×	×
TMI*2	Input signal for test operation (for test operation)	Decimal	➡12.3.2 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])	×	×
TMO*2	Forced output of signal pin (for test operation)	Decimal	➡12.3.2 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])	×	×
TMD*2	Set data (for test operation)	Decimal	➡12.3.2 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])	×	×
AL*3	Faults history	Decimal	0 to 899	×	×
LPr*3*4	Parameter (32-bit)	Decimal	0 to 1500	×	×
OP*3	Operation parameter	Decimal	0 to 5	×	×
PV*3	Current value monitor	Decimal	1 to 143	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➡12.3.2 ■10 Virtual servo amplifier devices ([MELSEC MX Controller])

*3 Virtual inverter device

For the details, refer to the following.

➡12.3.2 ■12 Virtual inverter devices ([MELSEC MX Controller])

*4 If you specify LPr900 to LPr935, the following item is displayed in the device setting dialog.

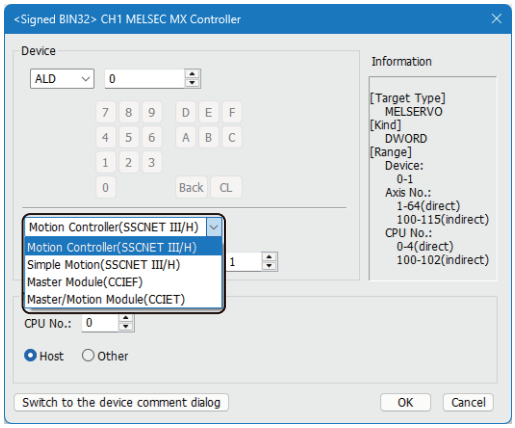
• [Setting items (for calibration parameters)]: [Bias/gain value], [Analog input value]

Enclose the device number in parentheses when selecting [Analog input value].
Example 1) Notation when [Bias/gain value] is selected: LPr900
Example 2) Notation when [Analog input value] is selected: LPr(900)
When LPr900 or LPr901 (Calibration parameter) is specified, selecting [Bias/gain value] or [Analog input value] does not affect the monitoring target.

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC MX Controller])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-ALD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-ALD0
	[Master Module(CCIEF)]	ALD(Device) • Device (decimal): 0 to 1	ALD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ALD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ALD0

Device name	Device notation and setting range		Notation example
TMI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	A64-TMI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	UFF-A64-TMI0
	[Master Module(CCIEF)]	TMI(Device) • Device (decimal): 0 to 2	TMI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	AA3-TMI0
TMO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0	A64-TMO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0	UFF-A64-TMO0
	[Master Module(CCIEF)]	TMO(Device) • Device (decimal): 0	TMO0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0	AA3-TMO0
TMD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	A64-TMD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	UFF-A64-TMD0
	[Master Module(CCIEF)]	TMD(Device) • Device (decimal): 0 to 1, 3	TMD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	AA3-TMD0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➥12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC MX Controller])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LTN	-/-	R/W	-/-	-/-
LCN	-/-	R/W	-/-	-/-
LSN	-/-	R/W	-/-	-/-
ZZ	-/-	R/W	-/-	-/-
LZ	-/-	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-
AL	-/-	R/-	-/-	-/-
LPr	-/-	R/W	-/-	-/-
OP	-/-	R/W	-/-	-/-
PV	-/-	R/-	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC MX Controller])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	⇒(1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	⇒(2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	⇒(3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	⇒(4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDI	⇒(5) Gear failure diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDI	⇒(6) Encoder communication circuit diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	⇒(7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	⇒(8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	⇒(9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PD	⇒(10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PO	⇒(11) Option unit parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PS	⇒(12) Special parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PU	⇒(13) Multi encoder parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PT	⇒(14) Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PL	⇒(15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PN	⇒(16) Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PVS	⇒(17) Position extension parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	⇒(18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	⇒(19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	⇒(20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
NPA	⇒(21) Network basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	⇒(22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	⇒(23) Specifications of ALM260 to ALM275, ALM280 to ALM295, and ALM300 to ALM315 ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
POS	⇒(24) Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
SPD	⇒(25) Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Reference
ACT	➟(26) Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DCT	➟(27) Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DWL	➟(28) Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AUX	➟(29) Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MCD	➟(30) Point table (M code) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	➟(31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDS	➟(32) Gear failure diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDS	➟(33) Encoder communication circuit diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	➟(34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	➟(35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (36) External input signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (37) External input signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (38) External input signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (39) External input signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (40) External input signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (41) External input signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	➟(42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (43) External output signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (44) External output signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (45) External output signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (46) External output signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (47) External output signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (48) External output signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	➟(49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	➟(50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	➟(51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	➟(52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■11 Precautions for virtual servo amplifier devices ([MELSEC MX Controller])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■12 Virtual inverter devices ([MELSEC MX Controller])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.

Virtual device name	Reference
IOST	➟(1) I/O terminal monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
CMD	➟(2) Operation command ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➟(3) Operation when turning on/off one of the CMD3 to CMD12 devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➟(4) Operation when turning on/off one of the CMD48 to CMD52 devices (MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AL	➟(5) Alarm history ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
LPr	➟(6) Parameter (32-bit) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OP	➟(7) Operation parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PV	➟(8) Current value monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➥■1 Monitoring-supported bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
Specifications of word devices	➥■4 Monitoring-supported word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
Specifications of double-word devices	➥■7 Monitoring-supported double-word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
Specifications of virtual servo amplifier devices	➥■10 Virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➥■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
Specifications of virtual inverter devices	➥■12 Virtual inverter devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■1 Monitoring-supported bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.3 ■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 3FFF	○	○
Y	Output relay	Hexadecimal	0000 to 3FFF	○	○
B*4	Link relay	Hexadecimal	0000000 to 9A61FFF	○	○
M*4	Internal relay	Decimal	0 to 161882111	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S*5	Step relay	Decimal	0 to 16383	×	×
F	Annunciator	Decimal	0 to 131071	○	○
TC*4	Timer coil	Decimal	0 to 8993439	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
TT[*4]	Timer contact	Decimal	0 to 8993439	○	○ (Not usable as word data)
CC[*4]	Counter coil	Decimal	0 to 8993439	○	○ (Not usable as word data)
CT[*4]	Counter contact	Decimal	0 to 8993439	○	○ (Not usable as word data)
SC[*4]	Retentive timer coil	Decimal	0 to 8993439	○	○ (Not usable as word data)
SS[*4]	Retentive timer contact	Decimal	0 to 8993439	○	○ (Not usable as word data)
SB[*4]	Link special relay	Hexadecimal	0000000 to 9A61FFF	○	○
SM	Special relay	Decimal	0 to 4095	○	○
RX	Remote input	Hexadecimal	0000 to 3FFF	○	○
RY	Remote output	Hexadecimal	0000 to 3FFF	○	○
LB	Link relay	Hexadecimal	0000 to 7FFF	○	○
LTC[*4]	Long timer coil	Decimal	0 to 2529407	○	○ (Not usable as word data)
LTT[*4]	Long timer contact	Decimal	0 to 2529407	○	○ (Not usable as word data)
LCC[*4]	Long counter coil	Decimal	0 to 4761215	○	○ (Not usable as word data)
LCT[*4]	Long counter contact	Decimal	0 to 4761215	○	○ (Not usable as word data)
LSC[*4]	Long retentive timer coil	Decimal	0 to 2529407	○	○ (Not usable as word data)
LSS[*4]	Long retentive timer contact	Decimal	0 to 2529407	○	○ (Not usable as word data)
SAX	Safety input relay	Hexadecimal	0000 to 2FFF	×	×
SAY	Safety output relay	Hexadecimal	0000 to 2FFF	×	×
SAB	Safety link relay	Hexadecimal	00000 to 9BFFF	×	×
SAM	Safety internal relay	Decimal	0 to 638975	×	×
SATC	Safety timer coil	Decimal	0 to 35487	×	×
SATT	Safety timer contact	Decimal	0 to 35487	×	×
SACC	Safety counter coil	Decimal	0 to 35487	×	×
SACT	Safety counter contact	Decimal	0 to 35487	×	×
SASC	Safety retentive timer coil	Decimal	0 to 35487	×	×
SASS	Safety retentive timer contact	Decimal	0 to 35487	×	×
SASM	Safety special relay	Decimal	0 to 4095	×	×
BL	SFC block	Decimal	0 to 319	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
BLS	Step relay (block)	Decimal	BL(SFC Block No.)-S(Device) Notation example: BL1-S3 • SFC Block No. (decimal): 0 to 319 • Device (decimal): 0 to 511	×	×
SP[*2]	Servo amplifier request	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
OM[*2]	Operation mode selection	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
TMB[*2]	Instruction demand (for test operation)	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
OTI[*2]	One-touch tuning instruction	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
GFDI[*2]	Gear failure diagnosis instruction	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
ECCDI[*2]	Encoder communication circuit diagnosis instruction	Decimal	➟12.3.3 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
JnX	Link input (link direct)	Hexadecimal	J(Network No.n)-X(Device) Notation example: J1-X0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnY	Link output (link direct)	Hexadecimal	J(Network No.n)-Y(Device) Notation example: J1-Y0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnB	Link relay (link direct)	Hexadecimal	J(Network No.n)-B(Device) Notation example: J1-B0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 7FFF[*6]	○	○
JnSB	Link special relay (link direct)	Hexadecimal	J(Network No.n)-SB(Device) Notation example: J1-SB000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to FFF	○	○
IOST[*3]	I/O terminal monitor	Decimal	0 to 127	×	×
CMD[*3]	Operation command	Decimal	0 to 63	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.3 ■10 Virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

*3 Virtual inverter device

For the details, refer to the following.

➟12.3.3 ■12 Virtual inverter devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

*4 For the maximum number of devices when an extended SRAM cassette is installed, refer to the following.

➟MELSEC iQ-R CPU Module User's Manual (Application)

*5 If a bit-specified word device is used in the random read processing, GT SoftGOT2000 (Single channel) or GT Simulator3 uses the value of the bit device in block No. 0 only.

The bit device status depends on the SFC program status (active or inactive). When the SFC program is inactive, the bit device is off (stores 0).

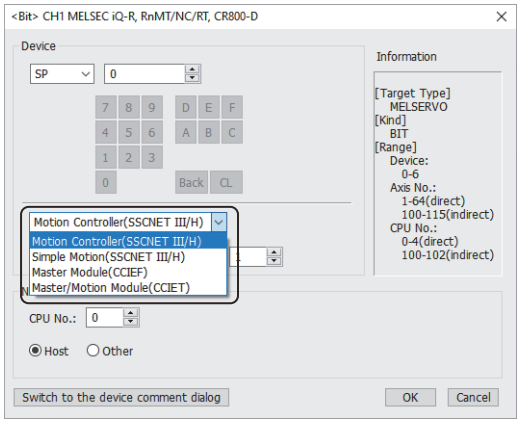
If a step relay (S) is used in the random read processing, specify the relevant step relay (block) (BLS) on GT SoftGOT2000 or GT Simulator3.

*6 The device range for a PLC with the CC-Link IE TSN master/local module (1000BASE-SX model) (RJ71GN11-SX) installed is 00000 to 1FFFF.

■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Motion Controller(SSCNET III/H)]	A(Axis No.)-SP(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A64-SP0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-SP0
	[Master Module(CCIEF)]	SP(Device) • Device (decimal): 0 to 6	SP0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-SP(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-SP0

Device name	Device notation and setting range		Notation example
OM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OM(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	A64-OM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	UFF-A64-OM0
	[Master Module(CCIEF)]	OM(Device) • Device (decimal): 0 to 2, 4 to 5	OM0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	AA3-OM0
TMB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMB(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	A64-TMB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	UFF-A64-TMB1
	[Master Module(CCIEF)]	TMB(Device) • Device (decimal): 1 to 6	TMB1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	AA3-TMB1
OTI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-OTI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-OTI0
	[Master Module(CCIEF)]	OTI(Device) • Device (decimal): 0 to 5	OTI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OTI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-OTI0
GFDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-GFDI1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-GFDI1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-GFDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-GFDI0
ECCDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-ECCDI1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-ECCDI1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ECCDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ECCDI0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➟(1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
(2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

(1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

To set a GOT data register to specify a module number, set [Module No. switching GD device first No. (16 points)] in the [Controller Setting] window.

➟5.5.1 ■4 [Controller Setting]

In GT SoftGOT2000, set [Module No. switching GD device first No. (16 points)] in the [Communication Setup] dialog.

➟GT SoftGOT2000 Version1 Operating Manual

The following shows the correspondence between module numbers and GOT data registers (GD).
Example) When 550 is set to [Module No. switching GD device first No. (16 points)]
Sixteen consecutive devices, starting from GD550, are set to specify module numbers.

Module No.	GOT data registers (GD)	Setting range
100	GD550	[000] to [0FF] ([001] to [010] when [MELSEC iQ-F] is selected for [Controller Type] in the [Controller Setting] window) Setting a value outside the above range causes a device range error.
101	GD551	
:	:	
10E	GD564	
10F	GD565	

Upon the GOT startup, 0 is stored in the specified GD devices until values are set.
If you set the GD devices on the screen that appears upon the GOT startup, module No.0 is monitored unintentionally, or a device range error occurs.
To avoid such situation, set the GD devices so that their values are retained at a power failure.

➟5.2.12 Configuring the settings for retaining GOT internal device data at power failure ([Internal Device Retention])

When setting GD devices for multiple channels, set different GD devices to [Module No. switching GD device first No. (16 points)].

GD10 to GD25 are used to specify the monitoring targets, such as the station number of an inverter.
When setting GD devices for a different channel, set different GD devices to [Module No. switching GD device first No. (16 points)].

Do not change the value of the specified device while a touch switch with the bit momentary is being pressed.
Doing so may cause the touch switch to exhibit unintended behavior.

(2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

To use GOT data registers (GD) to specify an axis number or axis designation, set [Servo axis switching GD device first No. (16 points)] in the [Controller Setting] window.

➟5.5.1 ■4 [Controller Setting]

In GT SoftGOT2000, set [Servo axis switching GD device first No. (16 points)] in the [Communication Setup] dialog.

➟GT SoftGOT2000 Version1 Operating Manual

The following shows the relationship between the axis number or axis designation and the GOT data register (GD).
Example) When 10 is set to [Servo axis switching GD device first No. (16 points)]
Sixteen consecutive devices, starting from GD10, are set to specify an axis number.

Axis No. or axis designation	GOT data registers (GD)	Setting range
100	GD10	• Axis number [1] to [64] • Axis designation [1]: Single-axis/Axis A [2]: Axis B [3]: Axis C Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

Upon the GOT startup, 0 is stored in the specified GD devices until values are set.

If you set the GD devices on the screen that appears upon the GOT startup, a device range error occurs.
To avoid such situation, set the GD devices so that their values are retained at a power failure.

➡5.2.12 Configuring the settings for retaining GOT internal device data at power failure ([Internal Device Retention])

When specifying GD devices for multiple channels, set different GD devices to [Servo axis switching GD device first No. (16 points)].

GD10 to GD25 are used to specify the monitoring targets, such as the station number of an inverter.
When setting GD devices for a different channel, set different GD devices to [Servo axis switching GD device first No. (16 points)].

Do not change the value of the specified device while a touch switch with the bit momentary is being pressed.
Doing so may cause the touch switch to exhibit unintended behavior.

■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/-	-/-	R/-	R/-	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LB	R/W	-/-	R/W	R/W	-/-
LTC	R/W	-/-	-/-	-/-	-/-
LTT	R/W	-/-	-/-	-/-	-/-
LCC	R/W	-/-	-/-	-/-	-/-
LCT	R/W	-/-	-/-	-/-	-/-
LSC	R/W	-/-	-/-	-/-	-/-
LSS	R/W	-/-	-/-	-/-	-/-
SAX	R/-	-/-	R/-	R/-	-/-
SAY	R/-	-/-	R/-	R/-	-/-
SAB	R/-	-/-	R/-	R/-	-/-
SAM	R/-	-/-	R/-	R/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SATC	R/-	-/-	-/-	-/-	-/-
SATT	R/-	-/-	-/-	-/-	-/-
SACC	R/-	-/-	-/-	-/-	-/-
SACT	R/-	-/-	-/-	-/-	-/-
SASC	R/-	-/-	-/-	-/-	-/-
SASS	R/-	-/-	-/-	-/-	-/-
SASM	R/-	-/-	R/-	R/-	-/-
BL	R/W	-/-	-/-	-/-	-/-
BLS	R/W	-/-	-/-	-/-	-/-
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
GFDI	-/W	-/-	-/-	-/-	-/-
ECCDI	-/W	-/-	-/-	-/-	-/-
JnX	R/W	-/-	R/W	R/W	-/-
JnY	R/W	-/-	R/W	R/W	-/-
JnB	R/W	-/-	R/W	R/W	-/-
JnSB	R/W	-/-	R/W	R/W	-/-
IOST	R/-	-/-	-/-	-/-	-/-
CMD	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.3 ■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TN*4	Timer current value	Decimal	0 to 8993439	○	○
CN*4	Counter current value	Decimal	0 to 8993439	○	○
SN*4	Retentive timer current value	Decimal	0 to 8993439	○	○
D*4	Data register	Decimal	0 to 10117631	○	○
SD	Special register	Decimal	0 to 4095	○	○
W*4	Link register	Hexadecimal	000000 to 9A61FF	○	○
SW*4	Link special register	Hexadecimal	000000 to 9A61FF	○	○
R	File register	Decimal	0 to 32767	○	○
ER	Extension file register(Block)	Decimal	ER (R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 255 • Device (decimal): 0 to 32767	○	○
ZR*4	Extension file register	Decimal	0 to 10027007	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
Z	Index register	Decimal	0 to 23	○	○ (Not usable as bit data)
G	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No. (hexadecimal): 00 to FF • Device (decimal): 0 to 268435455 For the module No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	○	○
Ww[*3]	Remote register	Hexadecimal	0000 to 1FFF	○	○
Wr[*3]	Remote register	Hexadecimal	0000 to 1FFF	○	○
LW	Link register	Hexadecimal	00000 to 1FFFF	○	○
#	Motion device	Decimal	0 to 108287	○	○
U3E0[*5]	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E1[*5]	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E2[*5]	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
U3E3[*5]	Multiple CPU high speed transmission memory	Decimal	0 to 12287	○	○
SATN	Safety timer (current value)	Decimal	0 to 35487	×	×
SACN	Safety counter (current value)	Decimal	0 to 35487	×	×
SASN	Safety retentive timer (current value)	Decimal	0 to 35487	×	×
SAD	Safety data register	Decimal	0 to 39935	×	×
SASD	Safety special register	Decimal	0 to 4095	×	×
SAW	Safety link register	Hexadecimal	0000 to 9BFF	×	×
PA[*2]	Basic parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PB[*2]	Gain filter parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PC[*2]	Extension setting parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PD[*2]	I/O setting parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PO[*2]	Option unit parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PS[*2]	Special parameter	Decimal	12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PU*2	Multi encoder parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PT*2	Positioning control parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PL*2*6	Motor extension parameter Linear servo motor/DD motor setting parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PN*2	Network setting parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PVS*2*7	Position extension parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
ST*2	Status display	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PE*2	Extension setting No.2 parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
PF*2	Extension setting No.3 parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
NPA*2	Network basic parameter	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
ALM*2	Alarm (current alarm J4A extend)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
	Alarm (alarm history J4A extend)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
	Alarm (alarm history J5G extend)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
POS*2	Point table (position)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
SPD*2	Point table (speed)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
ACT*2	Point table (acceleration time constant)	Decimal	⇒12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
DCT[*2]	Point table (deceleration time constant)	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
DWL[*2]	Point table (dwell)	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
AUX[*2]	Point table (auxiliary function)	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
MCD[*2]	Point table (M code)	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
MD[*2]	Machine diagnosis data	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
GFDS[*2]	Gear failure diagnosis data	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
ECCDS[*2]	Encoder communication circuit diagnosis data	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
OTS[*2]	One-touch tuning data	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
DI[*2]	External Input signal	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
DO[*2]	External output signal	Decimal	➟12.3.3 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
JnW	Link register (link direct)	Hexadecimal	J(Network No.n)-W(Device) Notation example: J1-W00000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 00000 to 1FFFF[*8]	○	○
JnSW	Link special register (link direct)	Hexadecimal	J(Network No.n)-SW(Device) Notation example: J1-SW000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to FFF	○	○
U3E0G	CPU buffer memory access device	Decimal	U3E0-G(Device) Notation example: U3E0-G100 • Device (decimal): 0 to 268435455	○	○
U3E1G	CPU buffer memory access device	Decimal	U3E1-G(Device) Notation example: U3E1-G100 • Device (decimal): 0 to 268435455	○	○
U3E2G	CPU buffer memory access device	Decimal	U3E2-G(Device) Notation example: U3E2-G100 • Device (decimal): 0 to 268435455	○	○
U3E3G	CPU buffer memory access device	Decimal	U3E3-G(Device) Notation example: U3E3-G100 • Device (decimal): 0 to 268435455	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RD	Refresh data register	Decimal	0 to 1048575	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.3 ■10 Virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

*3 Not available to GT21 and GS21.

*4 For the maximum number of devices when an extended SRAM cassette is installed, refer to the following.

➟MELSEC iQ-R CPU Module User's Manual (Application)

*5 For monitoring the multiple CPU high speed transmission memory, the CPU buffer memory access device (HG) for RCPU is monitored.

The CPU buffer memory access device (G) is not monitored.

*6 The device name depends on the servo amplifier.

MR-J5-G(-RJ) or MR-J5W□-G: Motor extension parameter

Other than MR-J5-G(-RJ) or MR-J5W□-G: Linear servo motor/DD motor setting parameter

*7 PVS is a virtual device corresponding to the servo parameter (PV) of MR-J5-G(-RJ), MR-J5W□-G, and MR-JET-G.

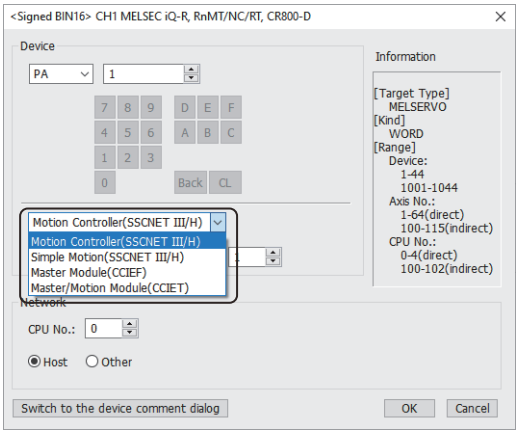
Use the virtual device (PVS) to read/write data from/to the servo parameter (PV).

*8 The device range for a PLC with the CC-Link IE TSN master/local module (1000BASE-SX model) (RJ71GN11-SX) installed is 00000 to 83FFF.

■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PA(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A64-PA1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A64-PA1
	[Master Module(CCIEF)]	PA (Device) • Device (decimal): 1 to 44, 1001 to 1044	PA1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PA(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PA1
PB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PB(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	A64-PB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	UFF-A64-PB1
	[Master Module(CCIEF)]	PB(Device) • Device (decimal): 1 to 92, 1001 to 1092	PB1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	AA3-PB1
PC	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PC(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	A64-PC1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	UFF-A64-PC1
	[Master Module(CCIEF)]	PC(Device) • Device (decimal): 1 to 90, 1001 to 1090	PC1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PC(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PC1
PD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A64-PD1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A64-PD1
	[Master Module(CCIEF)]	PD(Device) • Device (decimal): 1 to 72, 1001 to 1072	PD1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PD1

Device name	Device notation and setting range		Notation example
PO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	A64-PO1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	UFF-A64-PO1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	AA3-PO1
PS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A64-PS1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A64-PS1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PS1
PU	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PU(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A64-PU1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PU(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A64-PU1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PU(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PU1
PT	[Master Module(CCIEF)]	PT(Device) • Device (decimal): 1 to 90, 1001 to 1090	PT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PT1
PL	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PL(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A64-PL1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A64-PL1
	[Master Module(CCIEF)]	PL(Device) • Device (decimal): 1 to 72, 1001 to 1072	PL1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PL1
PN	[Master Module(CCIEF)]	PN(Device) • Device (decimal): 1 to 32, 1001 to 1032	PN1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PN(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PN1
PVS	[Master/Motion Module(CCIET)]	AA(Axis designation)-PVS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PVS1

Device name	Device notation and setting range		Notation example
ST	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ST(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	A64-ST0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	UFF-A64-ST0
	[Master Module(CCIEF)]	ST(Device) • Device (decimal): 0 to 73	ST0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ST(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 73	AA3-ST0
PE	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PE(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	A64-PE1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	UFF-A64-PE1
	[Master Module(CCIEF)]	PE(Device) • Device (decimal): 1 to 88, 1001 to 1088	PE1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PE(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	AA3-PE1
PF	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PF(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A64-PF1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A64-PF1
	[Master Module(CCIEF)]	PF(Device) • Device (decimal): 1 to 99, 1001 to 1099	PF1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-PF(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PF1
NPA	[Master/Motion Module(CCIET)]	NPA(Device) • Device (decimal): 1 to 15, 2001 to 2032	NPA1
ALM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALM(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	A64-ALM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	UFF-A64-ALM0
	[Master Module(CCIEF)]	ALM(Device) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	ALM0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ALM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3, 11 to 84, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	AA3-ALM0

Device name	Device notation and setting range		Notation example
POS	[Master Module(CCIEF)]	POS(Device) • Device (decimal): 1 to 255, 1001 to 1255	POS1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-POS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-POS1
SPD	[Master Module(CCIEF)]	SPD(Device) • Device (decimal): 1 to 255, 1001 to 1255	SPD1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-SPD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-SPD1
ACT	[Master Module(CCIEF)]	ACT(Device) • Device (decimal): 1 to 255, 1001 to 1255	ACT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ACT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-ACT1
DCT	[Master Module(CCIEF)]	DCT(Device) • Device (decimal): 1 to 255, 1001 to 1255	DCT1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DCT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DCT1
DWL	[Master Module(CCIEF)]	DWL(Device) • Device (decimal): 1 to 255, 1001 to 1255	DWL1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DWL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DWL1
AUX	[Master Module(CCIEF)]	AUX(Device) • Device (decimal): 1 to 255, 1001 to 1255	AUX1
	[Master/Motion Module(CCIET)]	AA(Axis designation)-AUX(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-AUX1
MCD	[Master/Motion Module(CCIET)]	AA(Axis designation)-MCD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-MCD1
MD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-MD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	A64-MD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	UFF-A64-MD0
	[Master Module(CCIEF)]	MD(Device) • Device (decimal): 0 to 21	MD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-MD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	AA3-MD0

Device name	Device notation and setting range		Notation example
GFDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-GFDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-GFDS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-GFDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-GFDS0
ECCDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A64-ECCDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-ECCDS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ECCDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-ECCDS0
OTS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTS(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	A64-OTS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	UFF-A64-OTS0
	[Master Module(CCIEF)]	OTS(Device) • Device (decimal): 0 to 5, 3000	OTS0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-OTS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	AA3-OTS0
DI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	A64-DI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	UFF-A64-DI0
	[Master Module(CCIEF)]	DI(Device) • Device (decimal): 0 to 12	DI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 12	AA3-DI0
DO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A64-DO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-DO0
	[Master Module(CCIEF)]	DO(Device) • Device (decimal): 0 to 6	DO0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-DO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-DO0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
ER	R/W	R/W	R/W	R/W
ZR	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
Ww	R/W	R/W	R/W	R/W
Wr	R/W	R/W	R/W	R/W
LW	R/W	R/W	R/W	R/W
#	R/W	R/W	-/-	R/W
U3E0	R/W	R/W	R/W	R/W
U3E1	R/W	R/W	R/W	R/W
U3E2	R/W	R/W	R/W	R/W
U3E3	R/W	R/W	R/W	R/W
SATN	R/-	R/-	-/-	-/-
SACN	R/-	R/-	-/-	-/-
SASN	R/-	R/-	-/-	-/-
SAD	R/-	R/-	-/-	R/-
SASD	R/-	R/-	-/-	R/-
SAW	R/-	R/-	-/-	R/-
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-
PS	R/W	R/W	-/-	-/-
PU	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PVS	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
NPA*1	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
GFDS	R/-	R/-	-/-	-/-
ECCDS	R/-	R/-	-/-	-/-
OTS*2	R/W	R/W	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-
JnW	R/W	R/W	R/W	R/W
JnSW	R/W	R/W	-/-	R/W
U3E0G	R/W	R/W	R/W	R/W
U3E1G	R/W	R/W	R/W	R/W
U3E2G	R/W	R/W	R/W	R/W
U3E3G	R/W	R/W	R/W	R/W
RD	R/W	R/W	R/W	R/W

*1 Only reading is available for NPA1 and NPA2001 to NPA2032.

*2 Only reading is available for OTS0 to OTS5.

■7 Monitoring-supported double-word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following table shows monitoring-supported double-word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.3 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LTN*4	Long timer current value	Decimal	0 to 2529407	×	×
LCN*4	Long counter current value	Decimal	0 to 4761215	×	×
LSN*4	Long retentive timer current value	Decimal	0 to 2529407	×	×
ZZ	Index register (32 bits)	Decimal	0 to 22	×	×
LZ	Index register (32 bits)	Decimal	0 to 11	×	×
ALD*2	Life diagnosis	Decimal	➥12.3.3 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI*2	Input signal for test operation (for test operation)	Decimal	➟12.3.3 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
TMO*2	Forced output of signal pin (for test operation)	Decimal	➟12.3.3 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
TMD*2	Set data (for test operation)	Decimal	➟12.3.3 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])	×	×
AL*3	Faults history	Decimal	0 to 899	×	×
LPr*3*5	Parameter (32-bit)	Decimal	0 to 1500	×	×
OP*3	Operation parameter	Decimal	0 to 5	×	×
PV*3	Current value monitor	Decimal	1 to 143	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.3 ■10 Virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

*3 Virtual inverter device

For the details, refer to the following.

➟12.3.3 ■12 Virtual inverter devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

*4 For the maximum number of devices when an extended SRAM cassette is installed, refer to the following.

➟MELSEC iQ-R CPU Module User's Manual (Application)

*5 If you specify LPr900 to LPr935, the following item is displayed in the device setting dialog.

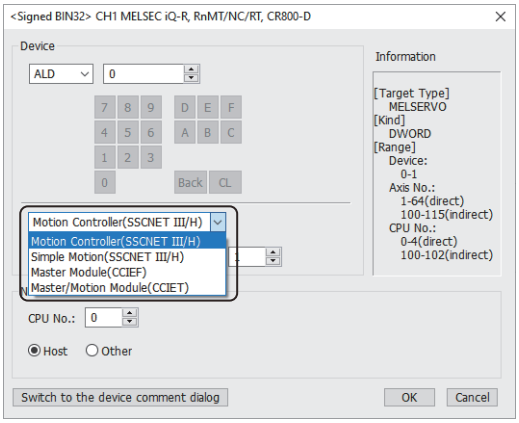
• [Setting items (for calibration parameters)]: [Bias/gain value], [Analog input value]

Enclose the device number in parentheses when selecting [Analog input value].
Example 1) Notation when [Bias/gain value] is selected: LPr900
Example 2) Notation when [Analog input value] is selected: LPr(900)
When LPr900 or LPr901 (Calibration parameter) is specified, selecting [Bias/gain value] or [Analog input value] does not affect the monitoring target.

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (RD77MS). The following items are displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (RD77GF).
[Master/Motion Module(CCIET)]	Select this item to connect the GOT through the master station on the CC-Link IE TSN and a Motion module (RD78G(H)). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A64-ALD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-ALD0
	[Master Module(CCIEF)]	ALD(Device) • Device (decimal): 0 to 1	ALD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-ALD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ALD0

Device name	Device notation and setting range		Notation example
TMI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMI(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	A64-TMI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	UFF-A64-TMI0
	[Master Module(CCIEF)]	TMI(Device) • Device (decimal): 0 to 2	TMI0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	AA3-TMI0
TMO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMO(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0	A64-TMO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0	UFF-A64-TMO0
	[Master Module(CCIEF)]	TMO(Device) • Device (decimal): 0	TMO0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0	AA3-TMO0
TMD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMD(Device) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	A64-TMD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	UFF-A64-TMD0
	[Master Module(CCIEF)]	TMD(Device) • Device (decimal): 0 to 1, 3	TMD0
	[Master/Motion Module(CCIET)]	AA(Axis designation)-TMD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	AA3-TMD0

For indirect specification of a module number, axis number, or axis designation, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LTN	-/-	R/W	-/-	-/-
LCN	-/-	R/W	-/-	-/-
LSN	-/-	R/W	-/-	-/-
ZZ	-/-	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LZ	-/-	R/W	-/-	-/-
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-
AL	-/-	R/-	-/-	-/-
LPr	-/-	R/W	-/-	-/-
OP	-/-	R/W	-/-	-/-
PV	-/-	R/-	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	➟(2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	➟(3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	➟(4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDI	➟(5) Gear failure diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDI	➟(6) Encoder communication circuit diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	➟(7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	➟(8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	➟(9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PD	➟(10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PO	➟(11) Option unit parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PS	➟(12) Special parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PU	➟(13) Multi encoder parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PT	➟(14) Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PL	➟(15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PN	➟(16) Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PVS	➟(17) Position extension parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	➟(18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	➟(19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	➟(20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
NPA	➟(21) Network basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	➟(22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➟(23) Specifications of ALM260 to ALM275, ALM280 to ALM295, and ALM300 to ALM315 ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
POS	➟(24) Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Reference
SPD	⇒(25) Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ACT	⇒(26) Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DCT	⇒(27) Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DWL	⇒(28) Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AUX	⇒(29) Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MCD	⇒(30) Point table (M code) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	⇒(31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDS	⇒(32) Gear failure diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDS	⇒(33) Encoder communication circuit diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	⇒(34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	⇒(35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (36) External input signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (37) External input signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (38) External input signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (39) External input signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (40) External input signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (41) External input signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	⇒(42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (43) External output signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (44) External output signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (45) External output signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (46) External output signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (47) External output signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (48) External output signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	⇒(49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	⇒(50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	⇒(51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	⇒(52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

(1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
SP0	Status display data clear	-	○	○	○	○	○	○	○	○
SP1	Current alarm clear	-	○	○	○	○	○	○	○	○
SP2	Alarm history clear	-	○	○	○	○	○	○	○	○
SP3	External input signal prohibited	-	○	○	○	○	○	○	○	○
SP4	External output signal prohibited	-	○	○	○	○	○	○	○	○
SP5	External input signal resumed	-	○	○	○	○	○	○	○	○
SP6	External output signal resumed	-	○	○	○	○	○	○	○	○

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
OM0	Normal mode (not test operation mode)	-	○	○	○	○	×	×	×	×
	Cancel test operation mode		×	×	×	×	○	○	○	○
OM1	JOG operation	-	○	○	○	○	○	○	○	○
OM2	Positioning operation	-	○	○	○	○	○	○	○	○
OM3	For manufacturer setting	-	×	×	×	×	×	×	×	×
OM4	Output signal (DO) forced output	-	○	○	○	○	○	○	○	○
OM5	Single-step feed operation	-	×	○	×	×	○	○	○	○
OM6	For manufacturer setting	-	×	×	×	×	×	×	×	×

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
TMB1	Temporary stop command	-	○	○	○	○	×	×	×	×
	Pause		×	×	×	×	○	○	○	○
TMB2	Test operation (positioning operation) start command	-	○	○	○	○	○	○	○	○
TMB3	Forward rotation direction	-	○	○	○	○	○	○	○	○
TMB4	Reverse rotation direction	-	○	○	○	○	○	○	○	○
TMB5	Restart for remaining distance	-	○	○	○	○	○	○	○	○
TMB6	Remaining distance clear	-	○	○	○	○	○	○	○	○

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
OTI0	One-touch tuning start command (Basic mode)	-	○	○	○	○	○	○	○	○
OTI1	One-touch tuning start command (High mode)	-	○	○	○	○	○	○	○	○
OTI2	One-touch tuning start command (Low mode)	-	○	○	○	○	○	○	○	○
OTI3	One-touch tuning stop command	-	○	○	○	○	○	○	○	○
OTI4	Return to initial value	-	○	○	○	○	○	○	○	○
OTI5	Return to value before adjustment	-	○	○	○	○	○	○	○	○

When using the one-touch tuning instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(5) Gear failure diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
GFDI0	Backlash estimation start command	-	×	×	×	×	○	×	○	○
GFDI1	Backlash estimation stop command	-	×	×	×	×	○	×	○	○

When using the gear failure diagnosis instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(6) Encoder communication circuit diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ECCDI0	CN2 encoder communication circuit diagnosis start command	-	×	×	×	×	○	○	○	○
ECCDI1	CN2L encoder communication circuit diagnosis start command	-	×	×	×	×	○	○	○	○

When using the encoder communication circuit diagnosis instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA44: Writing data to the RAM of a servo amplifier
- PA1001 to PA1044: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PA1, PA1001	Operation mode	**STY	○	○	×	×	○	×	○	○
PA2, PA1002	Regenerative brake option	**REG	○	○	○	○	○	○	○	○
PA3, PA1003	Absolute position detection system	*ABS	○	○	○	○	○	○	○	○
PA4, PA1004	Function selection A-1	*AOP1	○	○	○	○	○	○	○	○
PA5, PA1005	For manufacturer setting	-	×	×	×	×	×	×	×	×
PA6, PA1006	Electronic gear numerator	*CMX	×	○	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PA7, PA1007	Electronic gear denominator	*CDV	×	○	×	×	○	○	○	○
PA8, PA1008	Auto tuning mode	ATU	○	○	○	○	○	○	○	○
PA9, PA1009	Auto tuning response	RSP	○	○	○	○	○	○	○	○
PA10, PA1010	In-position range	INP	○	○	○	○	○	○	○	○
PA11, PA1011	Forward rotation torque limit/positive direction thrust limit	TLP	×	○	×	×	×	×	×	×
	Forward rotation torque limit		×	×	×	×	○	○	○	○
PA12, PA1012	Reverse rotation torque limit/negative direction thrust limit	TLN	×	○	×	×	×	×	×	×
	Reverse rotation torque limit		×	×	×	×	○	○	○	○
PA13, PA1013	For manufacturer setting	-	×	×	×	×	×	×	×	×
PA14, PA1014	Rotation direction selection/ travel direction selection	*POL	○	○	○	○	×	×	×	×
	Moving direction selection		×	×	×	×	○	○	○	○
PA15, PA1015	Encoder output pulse	*ENR	○	○	×	×	○	×	○	○
PA16, PA1016	Encoder output pulse 2	*ENR2	○	○	×	×	○	×	○	○
PA17, PA1017	Servo motor series setting	**MSR	○	○	×	×	○	×	○	○
PA18, PA1018	Servo motor type setting	**MTY	○	○	×	×	○	×	○	○
PA19, PA1019	Parameter block	*BLK	○	○	○	○	○	○	○	○
PA20, PA1020	Tough drive setting	*TDS	○	○	○	○	○	○	○	○
PA21, PA1021	Function selection A-3	*AOP3	○	○	○	○	○	○	○	○
PA22, PA1022	Position control composition selection	**PCS	○	○	×	×	○	○	○	○
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT	○	○	○	○	○	○	○	○
PA24, PA1024	Function selection A-4	AOP4	○	○	○	○	○	○	○	○
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV	○	○	○	○	○	○	○	○
PA26, PA1026	Function selection A-5	*AOP5	○	○	○	○	○	○	○	○
PA27, PA1027	Hot-line forced stop function	*HTL	×	×	○	○	×	×	×	×
PA28, PA1028	Function selection A-6	**AOP6	×	×	×	×	○	○	○	○
PA29 to PA33, PA1029 to PA1033	For manufacturer setting	-	×	×	×	×	×	×	×	×
PA34, PA1034	Quick tuning permissible travel distance	QDIS	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PA35 to PA44, PA1035 to PA1044	For manufacturer setting	-	×	×	×	×	×	×	×	×

(8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB92: Writing data to the RAM of a servo amplifier
- PB1001 to PB1092: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT	○	○	○	○	○	○	○	○
PB2, PB1002	Vib. supp. ctrl tuning mode (Adv. vib. supp. ctrl II)	VRFT	○	○	○	○	○	○	○	○
PB3, PB1003	Torque feedback loop gain	TFBGN	○	×	○	○	×	×	○	×
PB4, PB1004	Feed forward gain	FFC	○	○	○	○	○	○	○	○
PB5, PB1005	For manufacturer setting	-	×	×	×	×	×	×	×	×
PB6, PB1006	Load inertia moment ratio/ Load mass ratio	GD2	○	○	○	○	○	○	○	○
PB7, PB1007	Model loop gain	PG1	○	○	○	○	○	○	○	○
PB8, PB1008	Position loop gain	PG2	○	○	○	○	○	○	○	○
PB9, PB1009	Speed loop gain	VG2	○	○	○	○	○	○	○	○
PB10, PB1010	Speed integral compensation	VIC	○	○	○	○	○	○	○	○
PB11, PB1011	Speed differential compensation	VDC	○	○	○	○	○	○	○	○
PB12, PB1012	Overshoot amount compensation	OVA	○	○	○	○	○	○	○	○
PB13, PB1013	Machine resonance suppression filter 1	NH1	○	○	○	○	○	○	○	○
PB14, PB1014	Notch shape selection 1	NHQ1	○	○	○	○	○	○	○	○
PB15, PB1015	Machine resonance suppression filter 2	NH2	○	○	○	○	○	○	○	○
PB16, PB1016	Notch shape selection 2	NHQ2	○	○	○	○	○	○	○	○
PB17, PB1017	Shaft resonance suppression filter	NHF	○	○	○	○	○	○	○	○
PB18, PB1018	Low-pass filter setting	LPF	○	○	○	○	○	○	○	○
PB19, PB1019	Vibration suppression control 1 - Vibration frequency	VRF11	○	○	○	○	○	○	○	○
PB20, PB1020	Vibration suppression control 1 - Resonance freq.	VRF12	○	○	○	○	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PB21, PB1021	Vib. supp. ctrl. 1 - Vibration frequency damping	VRF13	○	○	○	○	○	○	○	○
PB22, PB1022	Vib. supp. ctrl. 1 - Resonance frequency damping	VRF14	○	○	○	○	○	○	○	○
PB23, PB1023	Low-pass filter selection	VFBF	○	○	○	○	○	○	○	○
PB24, PB1024	Slight vibration suppression control	*MVS	○	○	○	○	○	○	○	○
PB25, PB1025	Function selection B-1	*BOP1	○	○	○	○	○	○	○	○
PB26, PB1026	Gain changing function	*CDP	○	○	○	○	○	○	○	○
PB27, PB1027	Gain changing condition	CDL	○	○	○	○	○	○	○	○
PB28, PB1028	Gain changing time constant	CDT	○	○	○	○	○	○	○	○
PB29, PB1029	Gain changing - Load in. mom. rat./Load mass rat.	GD2B	○	○	○	○	○	○	○	○
PB30, PB1030	Gain changing position loop gain	PG2B	○	○	○	○	○	○	○	○
PB31, PB1031	Gain changing speed loop gain	VG2B	○	○	○	○	○	○	○	○
PB32, PB1032	Gain changing speed integral compensation	VICB	○	○	○	○	○	○	○	○
PB33, PB1033	Vib. supp. ctrl. 1 - Vib. frq. after gain changing	VRF11B	○	○	○	○	○	○	○	○
PB34, PB1034	Vib. supp. ctrl. 1 - Res. frq. after gain changing	VRF12B	○	○	○	○	○	○	○	○
PB35, PB1035	Vib. supp. ctrl. 1 - Vib. frq. damping after gain chng	VRF13B	○	○	○	○	○	○	○	○
PB36, PB1036	Vib. supp. ctrl. 1 - Res. frq. damping after gain chng	VRF14B	○	○	○	○	○	○	○	○
PB37 to PB44, PB1037 to PB1044	For manufacturer setting	-	×	×	×	×	×	×	×	×
PB45, PB1045	Command notch filter	CNHF	○	○	○	○	○	○	○	○
PB46, PB1046	Machine resonance suppression filter 3	NH3	○	○	○	○	○	○	○	○
PB47, PB1047	Notch shape selection 3	NHQ3	○	○	○	○	○	○	○	○
PB48, PB1048	Machine resonance suppression filter 4	NH4	○	○	○	○	○	○	○	○
PB49, PB1049	Notch shape selection 4	NHQ4	○	○	○	○	○	○	○	○
PB50, PB1050	Machine resonance suppression filter 5	NH5	○	○	○	○	○	○	○	○
PB51, PB1051	Notch shape selection 5	NHQ5	○	○	○	○	○	○	○	○
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21	○	○	○	○	○	○	○	○
PB53, PB1053	Vibration suppression control 2 - Resonance freq.	VRF22	○	○	○	○	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PB54, PB1054	Vib. supp. ctrl. 2 - Vibration frequency damping	VRF23	○	○	○	○	○	○	○	○
PB55, PB1055	Vib. supp. ctrl. 2 - Resonance frequency damping	VRF24	○	○	○	○	○	○	○	○
PB56, PB1056	Vib. supp. ctrl. 2 - Vib. frq. after gain changing	VRF21B	○	○	○	○	○	○	○	○
PB57, PB1057	Vib. supp. ctrl. 2 - Res. frq. after gain changing	VRF22B	○	○	○	○	○	○	○	○
PB58, PB1058	Vib. supp. ctrl. 2 - Vib. frq. damping after gain chng	VRF23B	○	○	○	○	○	○	○	○
PB59, PB1059	Vib. supp. ctrl. 2 - Res. frq. damping after gain chng	VRF24B	○	○	○	○	○	○	○	○
PB60, PB1060	Gain changing model loop gain	PG1B	○	○	○	○	○	○	○	○
PB61 to PB64, PB1061 to PB1064	For manufacturer setting	-	×	×	×	×	×	×	×	×
PB65, PB1065	Gain changing 2 condition	CDL2	×	×	×	×	○	○	○	○
PB66, PB1066	Gain changing 2 time constant	CDT2	×	×	×	×	○	○	○	○
PB67, PB1067	Gain changing 2 - Load in. mom. rat./Load mass rat.	GD2C	×	×	×	×	○	○	○	○
PB68, PB1068	Gain changing 2 position loop gain	PG2C	×	×	×	×	○	○	○	○
PB69, PB1069	Gain changing 2 speed loop gain	VG2C	×	×	×	×	○	○	○	○
PB70, PB1070	Gain changing 2 speed integral compensation	VICC	×	×	×	×	○	○	○	○
PB71, PB1071	Vib. supp. ctrl. 1 - Vib. frq. after gain changing 2	VRF11C	×	×	×	×	○	○	○	○
PB72, PB1072	Vib. supp. ctrl. 1 - Res. frq. after gain changing 2	VRF12C	×	×	×	×	○	○	○	○
PB73, PB1073	Vib. supp. ctrl. 1 - Vib. frq. damping aft. gain chng2	VRF13C	×	×	×	×	○	○	○	○
PB74, PB1074	Vib. supp. ctrl. 1 - Res. frq. damping aft. gain chng2	VRF14C	×	×	×	×	○	○	○	○
PB75, PB1075	Vib. supp. ctrl. 2 - Vib. frq. after gain changing 2	VRF21C	×	×	×	×	○	○	○	○
PB76, PB1076	Vib. supp. ctrl. 2 - Res. frq. after gain changing 2	VRF22C	×	×	×	×	○	○	○	○
PB77, PB1077	Vib. supp. ctrl. 2 - Vib. frq. damping aft. gain chng2	VRF23C	×	×	×	×	○	○	○	○
PB78, PB1078	Vib. supp. ctrl. 2 - Res. frq. damping aft. gain chng2	VRF24C	×	×	×	×	○	○	○	○
PB79, PB1079	Gain changing 2 model loop gain	PG1C	×	×	×	×	○	○	○	○
PB80, PB1080	For manufacturer setting	-	×	×	×	×	×	×	×	×
PB81, PB1081	Command filter	*CFIL	×	×	×	×	○	○	○	○
PB82, PB1082	Position command smoothing filter time constant	PFT	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PB83 to PB92, PB1083 to PB1092	For manufacturer setting	-	×	×	×	×	×	×	×	×

(9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC90: Writing data to the RAM of a servo amplifier
- PC1001 to PC1090: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PC1, PC1001	Error excessive alarm level	ERZ	○	○	○	○	○	○	○	○
PC2, PC1002	Electromagnetic brake sequence output	MBR	○	○	○	○	○	○	○	○
PC3, PC1003	Encoder output pulse selection	*ENRS	○	○	×	×	○	×	○	○
PC4, PC1004	Function selection C-1	**COP1	○	○	○	○	○	○	○	○
PC5, PC1005	Function selection C-2	**COP2	○	○	○	○	○	○	○	○
PC6, PC1006	Function selection C-3	*COP3	○	○	○	○	○	○	○	○
PC7, PC1007	Zero speed	ZSP	○	○	○	○	○	○	○	○
PC8, PC1008	Overspeed alarm detection level	OSL	○	○	○	○	○	○	○	○
PC9, PC1009	Analog monitor 1 output	MOD1	○	○	×	×	○	×	○	○
PC10, PC1010	Analog monitor 2 output	MOD2	○	○	×	×	○	×	○	○
PC11, PC1011	Analog monitor 1 offset	MO1	○	○	×	×	○	×	○	○
PC12, PC1012	Analog monitor 2 offset	MO2	○	○	×	×	○	×	○	○
PC13, PC1013	Analog monitor - Feedback position output standard data - Low	MOSDL	○	×	×	×	×	×	×	×
PC14, PC1014	Analog monitor - Feedback position output standard data - High	MOSDH	○	×	×	×	×	×	×	×
PC15, PC1015	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC16, PC1016	Function selection C-3A	*COP3A	×	×	×	×	○	×	○	○
PC17, PC1017	Function selection C-4	**COP4	○	○	○	○	○	×	○	○
PC18, PC1018	Function selection C-5	*COP5	○	○	○	○	×	×	×	×
PC19, PC1019	Function selection C-6	*COP6	×	○	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PC20, PC1020	Function selection C-7	*COP7	○	○	○	○	○	○	○	○
PC21, PC1021	Alarm history clear	*BPS	○	○	○	○	○	○	○	○
PC22 and PC23, PC1022 and PC1023	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC24, PC1024	Forced stop deceleration time constant	RSBR	○	○	○	○	○	○	○	○
PC25, PC1025	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC26, PC1026	Function selection C-8	**COP8	○	○	×	×	○	×	○	○
PC27, PC1027	Function selection C-9	**COP9	○	○	×	×	○	○	○	○
PC28, PC1028	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC29, PC1029	Function selection C-B	*COPB	○	○	○	○	○	○	○	○
PC30, PC1030	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC31, PC1031	Vertical ax.freefall prevention compensation amount	RSUP1	○	○	○	○	○	○	○	○
PC32 to PC36, PC1032 to PC1036	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC37, PC1037	Function selection C-D	**COPD	×	×	×	×	×	×	×	○
PC38, PC1038	Error excessive warning level	ERW	○	○	○	○	○	○	○	○
PC39, PC1039	Collision detection level 1	TLW1	×	×	×	×	×	×	×	○
PC40, PC1040	Collision detection level 2	TLW2	×	×	×	×	×	×	×	○
PC41, PC1041	Function selection C-J	*COPJ	×	×	×	×	×	×	○	○
PC42 to PC44, PC1042 to PC1044	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC45, PC1045	Drive unit function selection 1	*DUOP1	×	×	×	×	×	×	×	○
PC46, PC1046	Drive unit function selection 2	*DUOP2	×	×	×	×	×	×	○	○
PC47 to PC64, PC1047 to PC1064	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC65, PC1065	Zero speed 2 level	ZSP2L	×	×	×	×	○	×	○	○
PC66, PC1066	Zero speed 2 filter time	ZSP2F	×	×	×	×	○	×	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PC67, PC1067	Following error output level	FEWL	×	○	×	×	×	×	×	×
		FEW	×	×	×	×	○	○	○	○
PC68, PC1068	Following error output level	FEWH	×	○	×	×	×	×	×	×
PC69, PC1069	Following error output filter time	FEWF	×	○	×	×	○	○	○	○
PC70, PC1070	In-position 2 output range	INP2R	×	×	×	×	○	×	○	○
PC71, PC1071	In-position 2 output filter time	INP2F	×	×	×	×	○	×	○	○
PC72, PC1072	Speed reached 2 output range	SA2R	×	×	×	×	○	×	○	○
PC73, PC1073	Speed reached 2 output filter time	SA2F	×	×	×	×	○	×	○	○
PC74 to PC75, PC1074 to PC1075	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC76, PC1076	Function selection C-E	*COPE	×	○	×	×	○	○	○	○
PC77, PC1077	Internal torque limit 2	TL2	×	○	×	×	×	×	×	○
PC78, PC1078	Function selection C-F	*COPF	×	×	×	×	○	○	○	○
PC79, PC1079	Function selection C-G	*COPG	×	×	×	×	○	○	○	○
PC80, PC1080	For manufacturer setting	-	×	×	×	×	×	×	×	×
PC81, PC1081	Function selection C-H	**COPH	×	×	×	×	○	×	×	○
PC82 to PC90, PC1082 to PC1090	For manufacturer setting	-	×	×	×	×	×	×	×	×

(10)I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PD1 to PD72: Writing data to the RAM of a servo amplifier
- PD1001 to PD1072: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PD1, PD1001	Input signal automatic on selection 1	*DIA1	×	○	×	×	○	○	○	○
PD2, PD1002	Input signal automatic on selection 2	*DIA2	○	×	×	○	×	×	×	○
PD3, PD1003	Input device selection 1	*DI1	×	○	×	○	○	○	○	○
PD4, PD1004	Input device selection 2	*DI2	×	○	×	○	○	○	○	○
PD5, PD1005	Input device selection 3	*DI3	×	○	×	○	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PD6, PD1006	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD7, PD1007	Output device selection 1	*DO1	○	○	○	○	○	○	○	○
PD8, PD1008	Output device selection 2	*DO2	○	○	×	○	○	○	○	○
PD9, PD1009	Output device selection 3	*DO3	○	○	×	○	○	○	○	○
PD10, PD1010	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD11, PD1011	Input filter setting	*DIF	○	○	○	○	○	○	○	○
PD12, PD1012	Function selection D-1	*DOP1	○	○	○	○	○	○	○	○
PD13, PD1013	Function selection D-2	*DOP2	○	○	○	○	○	○	○	○
PD14, PD1014	Function selection D-3	*DOP3	○	○	○	○	○	○	○	○
PD15, PD1015	Driver communication setting	*IDCS	○	×	×	×	×	×	×	○
PD16, PD1016	Driver communication setting - Master - Transmit data selection 1	*MD1	○	×	×	×	×	×	×	○
PD17, PD1017	Driver communication setting - Master - Transmit data selection 2	*MD2	○	×	×	×	×	×	×	○
PD18 and PD19, PD1018 and PD1019	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD20, PD1020	Driver communication setting - Slave - Master axis No. selection 1	*SLA1	○	×	×	×	×	×	×	○
PD21 to PD29, PD1021 to PD1029	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD30, PD1030	Master-slave operation - Torque command coefficient on slave	TLC	○	×	×	×	×	×	×	○
PD31, PD1031	Master-slave operation - Speed limit coefficient on slave	VLC	○	×	×	×	×	×	×	○
PD32, PD1032	Master-slave operation - Speed limit adjusted value on slave	VLL	○	×	×	×	×	×	×	○
PD33 to PD36, PD1033 to PD1036	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD37, PD1037	Touch probe function selection	*TPOP	×	○	×	×	×	×	×	×
PD38, PD1038	Input device selection 4	*DI4	×	×	×	×	○	×	○	○
PD39, PD1039	Input device selection 5	*DI5	×	×	×	×	○	×	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PD40, PD1040	For manufacturer setting	-	×	×	×	×	×	×	×	○
PD41, PD1041	Function selection D-4	*DOP4	×	○	×	×	○	○	○	○
PD42 to PD50, PD1042 to PD1050	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD51, PD1051	Input device selection 3-2	*DI3W2	×	×	×	×	○	×	○	○
PD52 to PD59, PD1052 to PD1059	For manufacturer setting	-	×	×	×	×	×	×	×	×
PD60, PD1060	DI pin polarity selection	*DIP	×	×	×	×	○	○	○	○
PD61 to PD72, PD1061 to PD1072	For manufacturer setting	-	×	×	×	×	×	×	×	×

(11)Option unit parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PO1 to PO2: Writing data to the RAM of a servo amplifier
- PO1001 to PO1002: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PO1 to PO2, PO1001 to PO1002	For manufacturer setting	-	×	×	×	×	×	×	×	×

(12)Special parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PS1 to PS99: Writing data to the RAM of a servo amplifier
- PS1001 to PS1099: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PS1 to PS99, PS1001 to PS1099	For manufacturer setting	-	×	×	×	×	×	×	×	×

(13)Multi encoder parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PU1 to PU44: Writing data to the RAM of a servo amplifier

• PU1001 to PU1044: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PU1 to PU44, PU1001 to PU1044	For manufacturer setting	-	×	×	×	×	×	×	×	×

(14)Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

• PT1 to PT90: Writing data to the RAM of a servo amplifier

• PT1001 to PT1090: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PT1, PT1001	Command mode selection	**CTY	×	○	×	×	○	○	○	×
PT2, PT1002	Function selection T-1	*TOP1	×	×	×	×	○	×	○	×
PT3, PT1003	Feeding function selection	*FTY	×	○	×	×	×	×	×	×
PT4, PT1004	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT5, PT1005	Home position return speed	ZRF	×	○	×	×	○	○	○	×
PT6, PT1006	Creep speed	CRF	×	○	×	×	○	○	○	×
PT7, PT1007	Home position shift distance	ZST	×	○	×	×	○	○	○	×
PT8, PT1008	Home position return position data	ZPS	×	×	×	×	○	○	○	×
PT9, PT1009	Moving distance after proximity dog	DCT	×	○	×	×	○	○	○	×
PT10, PT1010	Stopper type home position return stopper time	ZTM	×	○	×	×	○	○	○	×
PT11, PT1011	Stopper type home position return torque limit value	ZTT	×	○	×	×	○	○	○	×
PT12, PT1012	Rough match output range	CRP	×	○	×	×	○	×	○	×
PT13 to PT14, PT1013 to PT1014	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT15, PT1015	Software limit +	LMPL	×	○	×	×	×	×	×	×
	Software position limit+	LMP	×	×	×	×	○	○	○	×
PT16, PT1016	Software limit +	LMPH	×	○	×	×	×	×	×	×
PT17, PT1017	Software limit -	LMNL	×	○	×	×	×	×	×	×
	Software position limit-	LMN	×	×	×	×	○	○	○	×

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PT18, PT1018	Software limit -	LMNH	×	○	×	×	×	×	×	×
PT19, PT1019	Position range output address +	*LPPL	×	○	×	×	×	×	×	×
	Position range output 1 address+	*LPP1	×	×	×	×	○	×	○	×
PT20, PT1020	Position range output address +	*LPPH	×	○	×	×	×	×	×	×
PT21, PT1021	Position range output address -	*LNPL	×	○	×	×	×	×	×	×
	Position range output 1 address-	*LNP1	×	×	×	×	○	×	○	×
PT22, PT1022	Position range output address -	*LNPH	×	○	×	×	×	×	×	×
PT23 to PT28, PT1023 to PT1028	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT29, PT1029	Function selection T-3	*TOP3	×	○	×	×	○	○	○	×
PT30 to PT33, PT1030 to PT1033	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT34, PT1034	Point table default	*PDEF	×	○	×	×	×	×	×	×
	Positioning operation data default	*PDEF	×	×	×	×	×	×	○	×
PT35 to PT37, PT1035 to PT1037	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT38, PT1038	Function selection T-7	*TOP7	×	×	×	×	×	×	○	×
PT39 to PT40, PT1039 to PT1040	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT41, PT1041	Home position return inhibit selection	ORP	×	○	×	×	×	×	×	×
	Function selection T-8	TOP8	×	×	×	×	○	○	○	×
PT42 to PT44, PT1042 to PT1044	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT45, PT1045	Home position return method	HMM	×	○	×	×	○	○	○	×
PT46 to PT48, PT1046 to PT1048	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT49, PT1049	Acceleration time constant	STA	×	○	×	×	○	×	○	×
PT50, PT1050	Deceleration time constant	STB	×	○	×	×	○	×	○	×

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PT51, PT1051	S-pattern acceleration/ deceleration time constant	STC	×	○	×	×	○	×	○	×
PT52, PT1052	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT53, PT1053	Torque slope	TQS	×	×	×	×	○	×	○	×
PT54, PT1054	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT55, PT1055	Function selection T-8	*TOP8	×	○	×	×	×	×	×	×
	Function selection T-10	*TOP10	×	×	×	×	○	○	○	×
PT56, PT1056	Home position return acceleration time constant	HMA	×	○	×	×	○	○	○	×
PT57, PT1057	Home position return deceleration time constant	HMB	×	○	×	×	○	○	○	×
PT58 to PT61, PT1058 to PT1061	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT62, PT1062	Remote register-based position/speed specifying method selection	*DSS	×	○	×	×	×	×	×	×
PT63 to PT64, PT1063 to PT1064	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT65, PT1065	Jog speed command	PVC	×	○	×	×	×	×	×	×
	Profile speed command		×	×	×	×	○	×	○	×
PT66, PT1066	Maximum profile speed	MPVC	×	×	×	×	○	×	○	×
PT67, PT1067	Speed limit	VLMT	×	○	×	×	○	○	○	×
PT68, PT1068	Function selection T-11	TOP11	×	×	×	×	○	○	○	×
PT69, PT1069	Home position shift distance (extension parameter)	ZSTH	×	○	×	×	×	×	×	×
PT70, PT1070	For manufacturer setting	-	×	×	×	×	×	×	×	×
PT71, PT1071	Travel distance after proximity dog (extension parameter)	DCTH	×	○	×	×	×	×	×	×
PT72 to PT90, PT1072 to PT1090	For manufacturer setting	-	×	×	×	×	×	×	×	×

(15)Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PL1 to PL72: Writing data to the RAM of a servo amplifier
- PL1001 to PL1072: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PL1, PL1001	Linear servo motor/DD motor function selection 1	**LIT1	○	○	×	×	×	×	×	○
	Function selection L-1		×	×	×	×	○	×	○	○
PL2, PL1002	Linear encoder resolution - Numerator	**LIM	○	○	×	×	○	×	○	○
PL3, PL1003	Linear encoder resolution setting Denominator	**LID	○	○	×	×	○	×	○	○
PL4, PL1004	Linear servo motor/DD motor function selection 2	*LIT2	○	○	×	×	×	×	×	○
	Function selection L-2		×	×	×	×	○	×	○	○
PL5, PL1005	Position deviation error detection level	LB1	○	○	×	×	○	×	○	○
PL6, PL1006	Speed deviation error detection level	LB2	○	○	×	×	○	×	○	○
PL7, PL1007	Torque/thrust deviation error detection level	LB3	○	○	×	×	×	×	×	×
	Torque deviation error detection level		×	×	×	×	○	×	○	○
PL8, PL1008	Linear servo motor/DD motor function selection 3	*LIT3	○	○	×	×	×	×	×	○
	Function selection L-3		×	×	×	×	○	×	○	○
PL9, PL1009	Magnetic pole detection voltage level	LPWM	○	○	×	×	○	×	○	○
PL10 to PL16, PL1010 to PL1016	For manufacturer setting	-	×	×	×	×	×	×	×	×
PL17, PL1017	Magnetic pole detection - Minute position detection method - Function selection	LTSTS	○	○	×	×	○	×	○	○
PL18, PL1018	Magnetic pole detection - Minute position detection method - Identification signal amplitude	IDLV	○	○	×	×	○	×	○	○
PL19 to PL72, PL1019 to PL1072	For manufacturer setting	-	×	×	×	×	×	×	×	×

(16)Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PN1 to PN32: Writing data to the RAM of a servo amplifier
- PN1001 to PN1032: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PN1, PN1001	For manufacturer setting	-	×	×	×	×	×	×	×	×
PN2, PN1002	Communication error detection time	CERT	×	○	×	×	○	○	○	×
PN3, PN1003	Communication mode setting for CC-Link IE communication	**NEMD	×	○	×	×	×	×	×	×
PN4, PN1004	CC-Link IE communication network number	**NENO	×	○	×	×	×	×	×	×
PN5, PN1005	Communication error detection frequency setting	CERI	×	○	×	×	○	○	○	×
PN6, PN1006	Function selection N-1	NOP1	×	○	×	×	×	×	×	×
PN7 to PN12, PN1007 to PN1012	For manufacturer setting	-	×	×	×	×	×	×	×	×
PN13, PN1013	Network protocol setup	NPS	×	×	×	×	×	×	○	×
PN14 to PN19, PN1014 to PN1019	For manufacturer setting	-	×	×	×	×	×	×	×	×
PN20, PN1020	Automatic parameter backup update interval	**PABI	×	×	×	×	○	○	○	×
PN21, PN1021	For manufacturer setting	-	×	×	×	×	×	×	×	×
PN22, PN1022	Function selection N-5	NOP5	×	×	×	×	×	×	○	×
PN23 to PN32, PN1023 to PN1032	For manufacturer setting	-	×	×	×	×	×	×	×	×

(17)Position extension parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PVS1 to PVS32: Writing data to the RAM of a servo amplifier
- PVS1001 to PVS1032: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PVS1, PVS1001	Profile speed command extension setting	PVC2	×	×	×	×	○	×	○	×
PVS2, PVS1002	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS3, PVS1003	Maximum profile speed extension setting	MPVCE	×	×	×	×	○	×	○	×
PVS4, PVS1004	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS5, PVS1005	Profile acceleration	PACC	×	×	×	×	○	×	○	×
PVS6, PVS1006	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS7, PVS1007	Profile deceleration	PDEC	×	×	×	×	○	×	○	×
PVS8, PVS1008	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS9, PVS1009	Forced stop deceleration	RSBDEC	×	×	×	×	○	○	○	×
PVS10, PVS1010	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS11, PVS1011	Home position return speed extension setting	ZRFE	×	×	×	×	○	○	○	×
PVS12, PVS1012	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS13, PVS1013	Creep speed extension setting	CRFE	×	×	×	×	○	○	○	×
PVS14, PVS1014	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS15, PVS1015	Home position return acceleration	HMACC	×	×	×	×	○	○	○	×
PVS16, PVS1016	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS17, PVS1017	Home position return deceleration	HMDEC	×	×	×	×	○	○	○	×
PVS18, PVS1018	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS19, PVS1019	Speed reached 2 output range extension setting	SA2RE	×	×	×	×	○	×	○	×
PVS20, PVS1020	Zero speed 2 level extension setting	ZSP2LE	×	×	×	×	○	×	○	×
PVS21, PVS1021	Speed limit extension setting	VLMTE	×	×	×	×	○	○	○	×
PVS22, PVS1022	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS23, PVS1023	Speed unit conversion electronic gear numerator	*VCMX	×	×	×	×	○	○	○	×

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PVS24, PVS1024	Speed unit conversion electronic gear denominator	*VCDV	×	×	×	×	○	○	○	×
PVS25, PVS1025	Acceleration unit conversion electronic gear nmrtr.	*ACMX	×	×	×	×	○	○	○	×
PVS26, PVS1026	Acceleration unit conversion electronic gear dnmntr.	*ACDV	×	×	×	×	○	○	○	×
PVS27 to PVS28, PVS1027 to PVS1028	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS29, PVS1029	Acceleration limit	ACCLMT	×	×	×	×	×	×	○	×
PVS30, PVS1030	For manufacturer setting	-	×	×	×	×	×	×	×	×
PVS31, PVS1031	Deceleration limit	DECLMT	×	×	×	×	×	×	○	×
PVSS32, PVS1032	For manufacturer setting	-	×	×	×	×	×	×	×	×

(18)Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ST0	Cumulative feedback pulses	-	○	○	×	×	○	○	○	○
ST1	Servo motor speed	-	○	○	×	×	○	○	○	○
ST2	Droop pulses	-	○	○	×	×	○	○	○	○
ST3	Cumulative command pulses	-	○	○	×	×	○	○	○	○
ST4	Command pulse frequency	-	○	○	×	×	○	○	○	○
ST5 and ST6	For manufacturer setting	-	×	×	×	×	×	×	×	×
ST7	Regenerative load ratio	-	○	○	×	×	○	○	○	○
ST8	Effective load ratio	-	○	○	×	×	○	○	○	○
ST9	Peak load ratio	-	○	○	×	×	○	○	○	○
ST10	Instantaneous torque	-	○	○	×	×	×	×	×	○
	Torque/Instantaneous torque		×	×	×	×	○	○	○	○
ST11	Position within one-revolution	-	○	○	×	×	○	○	○	○
ST12	ABS counter	-	○	○	×	×	○	○	○	○
ST13	Load to motor inertia ratio	-	○	○	×	×	○	○	○	○
ST14	Bus voltage	-	○	○	×	×	○	○	○	○
ST15	Load-side cumulative feedback pulses	-	○	○	×	×	○	×	○	○
ST16	Load-side encoder droop pulses	-	×	○	×	×	○	×	○	○
ST17	Load-side encoder information 1	-	○	○	×	×	○	×	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ST18	Load-side encoder information 2	-	○	○	×	×	○	×	○	○
ST19	Analog monitor output voltage 1	-	○	○	×	×	×	×	×	×
ST20	Analog monitor output voltage 2	-	○	○	×	×	×	×	×	×
ST21	AB phase output pulse F/B integrated value	-	○	○	×	×	×	×	×	×
ST22	Temperature of servo motor thermistor	-	○	○	×	×	○	○	○	○
ST23	Servo motor-side cumulative feedback pulses (before gear)	-	○	○	×	×	×	×	×	×
	Cumulative feedback pulses (Motor unit)	-	×	×	×	×	○	○	○	○
ST24	Electrical angle	-	○	○	×	×	○	×	○	○
ST25 to ST29	For manufacturer setting	-	×	×	×	×	×	×	×	×
ST30	Motor/load side position difference	-	×	○	×	×	○	×	○	○
ST31	Motor/load side speed difference	-	×	○	×	×	○	×	○	○
ST32	Encoder inside temperature	-	○	○	×	×	○	○	○	○
ST33	Settling time	-	○	○	×	×	○	○	○	○
ST34	Oscillation detection frequency	-	○	○	×	×	○	○	○	○
ST35	Number of tough drive operations	-	○	○	×	×	○	○	○	○
ST36 to ST39	For manufacturer setting	-	×	×	×	×	×	×	×	×
ST40	Unit power consumption	-	○	○	×	×	○	○	○	○
ST41	Unit total power consumption	-	○	○	×	×	○	○	○	○
ST42	Position actual value	-	×	○	×	×	×	×	×	×
	Current position	-	×	×	×	×	○	○	○	×
ST43	Command position	-	×	○	×	×	○	○	○	×
ST44	Command remaining distance	-	×	○	×	×	×	×	×	×
	Remaining command distance	-	×	×	×	×	○	○	○	×
ST45	Point table No.	-	×	○	×	×	×	×	×	×
	Command number	-	×	×	×	×	○	○	○	×
ST46 to ST73	For manufacturer setting	-	×	×	×	×	×	×	×	×

(19)Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PE1 to PE88: Writing data to the RAM of a servo amplifier
- PE1001 to PE1088: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PE1, PE1001	Fully closed loop function selection 1	**FCT1	○	○	×	×	○	×	○	○
PE2, PE1002	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE3, PE1003	Fully closed loop function selection 2	*FCT2	○	○	×	×	○	×	○	○
PE4, PE1004	Fully closed loop ctrl. - F/B pls. elec. gear 1 nmrtr.	**FBN	○	○	×	×	○	×	○	○
PE5, PE1005	Fully closed loop ctrl. - F/B pls. elec. gear 1 dnmntr.	**FBD	○	○	×	×	○	×	○	○
PE6, PE1006	Fully closed loop ctrl. - Spd. dev. err. detection level	BC1	○	○	×	×	○	×	○	○
PE7, PE1007	Fully closed loop ctrl. - Pos. dev. err. detection level	BC2	○	○	×	×	○	×	○	○
PE8, PE1008	Fully closed dual feedback filter	DUF	○	○	×	×	○	×	○	○
PE9, PE1009	For manufacturer setting	-	×	×	×	×	○	×	○	×
PE10, PE1010	Fully closed loop function selection 3	FCT3	○	○	×	×	○	×	○	○
PE11 to PE33, PE1011 to PE1033	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE34, PE1034	Fully closed loop control - Feedback pulse electronic gear 2 - Numerator	**FBN2	○	○	×	×	×	×	×	×
PE35, PE1035	Fully closed loop control - Feedback pulse electronic gear 2 - Denominator	**FBD2	○	○	×	×	×	×	×	×
PE36 to PE40, PE1036 to PE1040	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE41, PE1041	Function selection E-3	EOP3	○	○	○	○	○	○	○	○
PE42 to PE43, PE1042 to PE1043	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE44, PE1044	Lost motion positive side compensation value sel.	LMCP	○	○	○	○	○	○	○	○
PE45, PE1045	Lost motion negative side compensation value sel.	LMCN	○	○	○	○	○	○	○	○
PE46, PE1046	Lost motion filter setting	LMFLT	○	○	○	○	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PE47, PE1047	Torque offset	TOF	○	○	○	○	○	○	○	○
PE48, PE1048	Lost motion compensation function selection	*LMOP	○	○	○	○	○	○	○	○
PE49, PE1049	Lost motion compensation timing	LMCD	○	○	○	○	○	○	○	○
PE50, PE1050	Lost motion compensation dead zone	LMCT	○	○	○	○	○	○	○	○
PE51, PE1051	Load-side encoder resolution setting	**EDV2	×	×	×	×	×	×	○	○
PE52, PE1052	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE53, PE1053	Maximum torque limit 1	TLMX1	×	×	×	×	○	○	○	○
PE54 to PE64, PE1054 to PE1064	For manufacturer setting	-	×	×	×	×	×	×	×	×
PE65, PE1065	Collision detection friction torque	TRUB	×	×	×	×	×	×	×	○
PE66, PE1066	Collision detection viscosity friction torque	VFTQ	×	×	×	×	×	×	×	○
PE67, PE1067	Collision detection restoration torque	CLTQ	×	×	×	×	×	×	×	○
PE68, PE1068	Tandem control function selection	**TANC	×	×	×	×	×	×	×	○
PE69, PE1069	Tandem control function setting	*TCOP	×	×	×	×	×	×	×	○
PE70, PE1070	Interaxial torque deviation permissible level	TTRQ	×	×	×	×	×	×	×	○
PE71, PE1071	Interaxial speed deviation permissible level	TPOSI	×	×	×	×	×	×	×	○
PE72 to PE88, PE1072 to PE1088	For manufacturer setting	-	×	×	×	×	×	×	×	×

(20)Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- PF1 to PF99: Writing data to the RAM of a servo amplifier
- PF1001 to PF1099: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PF1, PF1001	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF2, PF1002	Function selection F-2	*FOP2	○	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PF3 to PF5, PF1003 to PF1005	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF6, PF1006	Function selection F-5	*FOP5	○	○	○	○	○	○	○	○
PF7 to PF11, PF1007 to PF1011	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF12, PF1012	Electronic dynamic brake operating time	DBT	○	○	○	○	○	○	○	○
PF13 to PF17, PF1013 to PF1017	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF18, PF1018	STO diagnostic error detection time	**STOD	×	○	×	○	○	×	○	○
PF19, PF1019	Friction failure prediction compen. coefficient 1	TSL	×	○	×	×	○	×	○	○
PF20, PF1020	Friction failure prediction compen. coefficient 2	TIC	×	○	×	×	○	×	○	○
PF21, PF1021	Drive recorder switching time setting	DRT	○	○	○	○	○	○	○	○
PF22, PF1022	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF23, PF1023	Vibration tough drive - Oscillation detection level	OSCL1	○	○	○	○	○	○	○	○
PF24, PF1024	Vibration tough drive function selection	*OSCL2	○	○	○	○	×	×	×	×
	Function selection F-9	*FOP9	×	×	×	×	○	○	○	○
PF25, PF1025	SEMI-F47 function - Instantaneous power failure detection time	CVAT	○	○	○	○	×	×	×	×
	SEMI-F47 Inst pwr.fail.det.t. (Inst pwr.fail.tuf.drv.)		×	×	×	×	○	○	○	○
PF26 to PF28, PF1026 to PF1028	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF29, PF1029	Function selection F-10	*FOP10	×	×	×	×	×	×	○	○
PF30, PF1030	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF31, PF1031	Machine diagnosis func. - Friction judgment speed(	FRIC	○	○	○	○	○	○	○	○
PF32, PF1032	Oscillation detection alarm time	*VIBT	×	×	×	×	○	○	○	○
PF33, PF1033	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF34, PF1034	Machine diagnosis function selection	*MFP	×	○	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PF35 to PF39, PF1035 to PF1039	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF40, PF1040	Machine failure prediction parameter	MFPP	×	○	×	×	○	×	○	○
PF41, PF1041	Trouble prediction motor total move distance	FPMT	×	×	×	×	×	×	×	×
	Failure prediction - Servo motor total move distance		×	×	×	×	○	×	○	○
PF42, PF1042	Friction failure prediction average characteristic	PAV	×	○	×	×	○	×	○	○
PF43, PF1043	Friction failure prediction standard deviation	PSD	×	○	×	×	○	×	○	○
PF44, PF1044	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF45, PF1045	Vibration failure prediction average characteristic	VAV	×	○	×	×	○	×	○	○
PF46, PF1046	Vibration failure prediction standard deviation	VSC	×	○	×	×	×	×	×	×
		VSD	×	×	×	×	○	×	○	○
PF47, PF1047	Servo motor total move distance offset	TMO	×	×	×	×	○	×	○	○
PF48 to PF65, PF1048 to PF1065	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF66, PF1066	Gear ratio setting for backlash estimation	BLG	×	×	×	×	○	×	○	○
PF67, PF1067	Backlash nominal value	BLN	×	×	×	×	○	×	○	○
PF68, PF1068	Backlash threshold magnification	BLTT	×	×	×	×	○	×	○	○
PF69, PF1069	Static friction failure prediction avg. characteristic	SPAV2	×	×	×	×	○	×	○	○
PF70, PF1070	Static friction failure prediction standard deviation	SPSD2	×	×	×	×	○	×	○	○
PF71, PF1071	Belt failure prediction function selection	BFP	×	×	×	×	○	×	○	○
PF72, PF1072	Belt tension at installation	SBT	×	×	×	×	○	×	○	○
PF73, PF1073	Belt tension at extension	ABT	×	×	×	×	○	×	○	○
PF74, PF1074	Static friction at installation	SSF	×	×	×	×	○	×	○	○
PF75, PF1075	Static friction at extension	ASF	×	×	×	×	○	×	○	○
PF76, PF1076	Belt tension error threshold	BTS	×	×	×	×	○	×	○	○
PF77 to PF78, PF1077 to PF1078	For manufacturer setting	-	×	×	×	×	×	×	×	×
PF79, PF1079	Event history setting	EVS	×	×	×	×	×	×	×	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
PF80, PF1080	Drive recorder Operation condition selection	DRMC	×	×	×	×	○	○	○	○
PF81, PF1081	Drive recorder Sampling operation selection	DRMS	×	×	×	×	○	○	○	○
PF82, PF1082	Drive recorder Trigger operation selection	DRTM	×	×	×	×	○	○	○	○
PF83, PF1083	Drive recorder Trigger operation axis common sel.	**DRTAX	×	×	×	×	○	×	○	○
PF84, PF1084	Drive recorder Trigger channel selection	DRTC	×	×	×	×	○	○	○	○
PF85, PF1085	Drive recorder Trigger level setting 1	DRTL1	×	×	×	×	○	○	○	○
PF86, PF1086	Drive recorder Trigger level setting 2	DRTL2	×	×	×	×	○	○	○	○
PF87, PF1087	Drive recorder Analog channel setting 1	DRAC1	×	×	×	×	○	○	○	○
PF88, PF1088	Drive recorder Analog channel setting 2	DRAC2	×	×	×	×	○	○	○	○
PF89, PF1089	Drive recorder Analog channel setting 3	DRAC3	×	×	×	×	○	○	○	○
PF90, PF1090	Drive recorder Analog channel setting 4	DRAC4	×	×	×	×	○	○	○	○
PF91, PF1091	Drive recorder Digital channel setting 1	DRDC1	×	×	×	×	○	○	○	○
PF92, PF1092	Drive recorder Digital channel setting 2	DRDC2	×	×	×	×	○	○	○	○
PF93, PF1093	Drive recorder Digital channel setting 3	DRDC3	×	×	×	×	○	○	○	○
PF94, PF1094	Drive recorder Digital channel setting 4	DRDC4	×	×	×	×	○	○	○	○
PF95, PF1095	Drive recorder History clear	**DRCLR	×	×	×	×	○	○	○	○
PF96 to PF99, PF1096 to PF1099	For manufacturer setting	-	×	×	×	×	×	×	×	×

(21)Network basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Set [Data Type] and [Format] as shown below for the objects for which this device is set.

- [Data Type]: [Unsigned BIN32]
- [Format]: [Hexadecimal]

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
NPA1	IP address setting	-	×	×	×	×	○	○	○	×
NPA2	IP address	-	×	×	×	×	○	○	○	×
NPA3	Use prohibited	-	×	×	×	×	×	×	×	×
NPA4	Subnet mask	-	×	×	×	×	○	○	○	×
NPA5	Use prohibited	-	×	×	×	×	×	×	×	×
NPA6	For manufacturer setting	-	×	×	×	×	×	×	×	×
NPA7	Use prohibited	-	×	×	×	×	×	×	×	×

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
NPA8	Host name	-	×	×	×	×	○	○	○	×
NPA9 to NPA11	For manufacturer setting	-	×	×	×	×	×	×	×	×
NPA12	Communication speed	-	×	×	×	×	×	×	○	×
NPA2001 to NPA2032	Host name expansion area	-	×	×	×	×	○	○	○	×

(22)Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM0	Current alarm number	-	○	○	○	○	○	○	○	○
ALM1	Detailed data of current alarms	-	○	○	○	○	○	○	○	○
ALM2[*1]	Currently occurring alarm number and detail number	-	×	×	×	×	○	○	○	○
ALM11	Servo status(alarm) Cumulative feedback pulses	-	○	○	○	○	○	○	○	○
ALM12	Servo status(alarm) Servo motor speed	-	○	○	○	○	○	○	○	○
ALM13	Servo status(alarm) Droop pulses	-	○	○	○	○	○	○	○	○
ALM14	Servo status(alarm) Cumulative command pulses	-	○	○	○	○	○	○	○	○
ALM15	Servo status(alarm) Command pulse frequency	-	○	○	○	○	○	○	○	○
ALM16 and ALM17	For manufacturer setting	-	×	×	×	×	×	×	×	×
ALM18	Servo status(alarm) Regenerative load ratio	-	○	○	○	○	○	○	○	○
ALM19	Servo status(alarm) Effective load ratio	-	○	○	○	○	○	○	○	○
ALM20	Servo status(alarm) Peak load ratio	-	○	○	○	○	○	○	○	○
ALM21	Servo status(alarm) Instantaneous torque	-	○	○	○	○	×	×	×	×
	Servo status(alarm) Torque/Instantaneous torque		×	×	×	×	○	○	○	○
ALM22	Servo status(alarm) Position within one-revolution	-	○	○	○	○	○	○	○	○
ALM23	Servo status(alarm) ABS counter	-	○	○	○	○	○	○	○	○
ALM24	Servo status(alarm) Load to motor inertia ratio	-	○	○	○	○	○	○	○	○
ALM25	Servo status(alarm) Bus voltage	-	○	○	○	○	○	○	○	○
ALM26	Servo status(alarm) Load-side cumulative feedback pulses	-	○	○	○	○	○	×	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM27	Servo status(alarm) Load-side droop pulses	-	×	○	×	×	○	×	○	○
ALM28	Servo status(alarm) Load-side encoder information 1	-	○	○	○	○	○	×	○	○
ALM29	Servo status(alarm) Load-side encoder information 2	-	○	○	○	○	○	×	○	○
ALM30	Servo status(alarm) Analog monitor output voltage 1	-	○	○	○	○	×	×	×	×
ALM31	Servo status(alarm) Analog monitor output voltage 2	-	○	○	○	○	×	×	×	×
ALM32	Servo status(alarm) AB phase output pulse F/B integrated value	-	○	○	○	○	×	×	×	×
ALM33	Servo status(alarm) Temperature of servo motor thermistor	-	○	○	○	○	○	○	○	○
ALM34	Servo status(alarm) Servo motor-side cumulative feedback pulses (before gear)	-	○	○	○	○	×	×	×	×
	Servo status(alarm) Cumulative feedback pulses (Motor unit)		×	×	×	×	○	○	○	○
ALM35	Servo status(alarm) Electrical angle	-	○	○	○	○	○	×	○	○
ALM36 to ALM40	For manufacturer setting	-	×	×	×	×	×	×	×	×
ALM41	Servo status(alarm) Motor/load side position difference	-	×	○	×	×	○	×	○	○
ALM42	Servo status(alarm) Motor/load side speed difference	-	×	○	×	×	○	×	○	○
ALM43	Servo status(alarm) Encoder inside temperature	-	○	×	○	○	×	×	×	×
	Servo status(alarm) Encoder inside temperature	-	×	○	×	×	○	○	○	○
ALM44	Servo status(alarm) Settling time	-	○	×	○	○	×	×	×	×
	Servo status(alarm) Settling time	-	×	○	×	×	○	○	○	○
ALM45	Servo status(alarm) Oscillation detection frequency	-	○	×	○	○	×	×	×	×
	Servo status(alarm) Oscillation detection frequency	-	×	○	×	×	○	○	○	○
ALM46	Servo status(alarm) Number of tough drive operations	-	○	×	○	○	×	×	×	×
	Servo status(alarm) Number of tough drive operations	-	×	○	×	×	○	○	○	○
ALM47 to ALM50	For manufacturer setting	-	×	×	×	×	×	×	×	×

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM51	Servo status(alarm) Unit power consumption	-	○	○	○	○	○	○	○	○
ALM52	Servo status(alarm) Unit total power consumption	-	○	○	○	○	○	○	○	○
ALM53	Servo status(alarm) Position actual value	-	×	○	×	×	×	×	×	×
	Servo status(alarm) Current position	-	×	×	×	×	○	○	○	×
ALM54	Servo status(alarm) Command position	-	×	○	×	×	○	○	○	×
ALM55	Servo status(alarm) Command remaining distance	-	×	○	×	×	×	×	×	×
	Servo status(alarm) Remaining command distance	-	×	×	×	×	○	○	○	×
ALM56	Servo status(alarm) Point table No.	-	×	○	×	×	×	×	×	×
	Servo status(alarm) Command number	-	×	×	×	×	○	○	○	×
ALM57 to ALM59	For manufacturer setting	-	×	×	×	×	×	×	×	×
ALM200	Alarm number from Alarm History most recent alarm	-	○	○	○	○	○	○	○	○
ALM201	Alarm number from Alarm History 1st alarm in past	-	○	○	○	○	○	○	○	○
ALM202	Alarm number from Alarm History 2nd alarm in past	-	○	○	○	○	○	○	○	○
ALM203	Alarm number from Alarm History 3rd alarm in past	-	○	○	○	○	○	○	○	○
ALM204	Alarm number from Alarm History 4th alarm in past	-	○	○	○	○	○	○	○	○
ALM205	Alarm number from Alarm History 5th alarm in past	-	○	○	○	○	○	○	○	○
ALM206	Alarm number from Alarm History 6th alarm in past	-	○	○	○	○	○	○	○	○
ALM207	Alarm number from Alarm History 7th alarm in past	-	○	○	○	○	○	○	○	○
ALM208	Alarm number from Alarm History 8th alarm in past	-	○	○	○	○	○	○	○	○
ALM209	Alarm number from Alarm History 9th alarm in past	-	○	○	○	○	○	○	○	○
ALM210	Alarm number from Alarm History 10th alarm in past	-	○	○	○	○	○	○	○	○
ALM211	Alarm number from Alarm History 11th alarm in past	-	○	○	○	○	○	○	○	○
ALM212	Alarm number from Alarm History 12th alarm in past	-	○	○	○	○	○	○	○	○
ALM213	Alarm number from Alarm History 13th alarm in past	-	○	○	○	○	○	○	○	○
ALM214	Alarm number from Alarm History 14th alarm in past	-	○	○	○	○	○	○	○	○
ALM215	Alarm number from Alarm History 15th alarm in past	-	○	○	○	○	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM220	Alarm occurrence time in alarm history most recent alarm	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: most recent alarm	-	×	×	×	×	○	○	○	○
ALM221	Alarm occurrence time in alarm history 1st alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 1st alarm in past	-	×	×	×	×	○	○	○	○
ALM222	Alarm occurrence time in alarm history 2nd alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 2nd alarm in past	-	×	×	×	×	○	○	○	○
ALM223	Alarm occurrence time in alarm history 3rd alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 3rd alarm in past	-	×	×	×	×	○	○	○	○
ALM224	Alarm occurrence time in alarm history 4th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 4th alarm in past	-	×	×	×	×	○	○	○	○
ALM225	Alarm occurrence time in alarm history 5th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 5th alarm in past	-	×	×	×	×	○	○	○	○
ALM226	Alarm occurrence time in alarm history 6th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 6th alarm in past	-	×	×	×	×	○	○	○	○
ALM227	Alarm occurrence time in alarm history 7th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 7th alarm in past	-	×	×	×	×	○	○	○	○
ALM228	Alarm occurrence time in alarm history 8th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 8th alarm in past	-	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM229	Alarm occurrence time in alarm history 9th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 9th alarm in past	-	×	×	×	×	○	○	○	○
ALM230	Alarm occurrence time in alarm history 10th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 10th alarm in past	-	×	×	×	×	○	○	○	○
ALM231	Alarm occurrence time in alarm history 11th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 11th alarm in past	-	×	×	×	×	○	○	○	○
ALM232	Alarm occurrence time in alarm history 12th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 12th alarm in past	-	×	×	×	×	○	○	○	○
ALM233	Alarm occurrence time in alarm history 13th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 13th alarm in past	-	×	×	×	×	○	○	○	○
ALM234	Alarm occurrence time in alarm history 14th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 14th alarm in past	-	×	×	×	×	○	○	○	○
ALM235	Alarm occurrence time in alarm history 15th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm occurrence time (cumulative power-on time) in alarm history: 15th alarm in past	-	×	×	×	×	○	○	○	○
ALM240	Detailed alarm from Alarm History most recent alarm	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: most recent alarm	-	×	×	×	×	○	○	○	○
ALM241	Detailed alarm from Alarm History 1st alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 1st alarm in past	-	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM242	Detailed alarm from Alarm History 2nd alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 2nd alarm in past	-	×	×	×	×	○	○	○	○
ALM243	Detailed alarm from Alarm History 3rd alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 3rd alarm in past	-	×	×	×	×	○	○	○	○
ALM244	Detailed alarm from Alarm History 4th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 4th alarm in past	-	×	×	×	×	○	○	○	○
ALM245	Detailed alarm from Alarm History 5th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 5th alarm in past	-	×	×	×	×	○	○	○	○
ALM246	Detailed alarm from Alarm History 6th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 6th alarm in past	-	×	×	×	×	○	○	○	○
ALM247	Detailed alarm from Alarm History 7th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 7th alarm in past	-	×	×	×	×	○	○	○	○
ALM248	Detailed alarm from Alarm History 8th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 8th alarm in past	-	×	×	×	×	○	○	○	○
ALM249	Detailed alarm from Alarm History 9th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 9th alarm in past	-	×	×	×	×	○	○	○	○
ALM250	Detailed alarm from Alarm History 10th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 10th alarm in past	-	×	×	×	×	○	○	○	○
ALM251	Detailed alarm from Alarm History 11th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 11th alarm in past	-	×	×	×	×	○	○	○	○
ALM252	Detailed alarm from Alarm History 12th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 12th alarm in past	-	×	×	×	×	○	○	○	○
ALM253	Detailed alarm from Alarm History 13th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 13th alarm in past	-	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM254	Detailed alarm from Alarm History 14th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 14th alarm in past	-	×	×	×	×	○	○	○	○
ALM255	Detailed alarm from Alarm History 15th alarm in past	-	○	○	○	○	×	×	×	×
	Alarm detail number in alarm history: 15th alarm in past	-	×	×	×	×	○	○	○	○
ALM260	Alarm occurrence time (year, month) in alarm history: most recent alarm	-	×	×	×	×	○	○	○	○
ALM261	Alarm occurrence time (year, month) in alarm history: 1st alarm in past	-	×	×	×	×	○	○	○	○
ALM262	Alarm occurrence time (year, month) in alarm history: 2nd alarm in past	-	×	×	×	×	○	○	○	○
ALM263	Alarm occurrence time (year, month) in alarm history: 3rd alarm in past	-	×	×	×	×	○	○	○	○
ALM264	Alarm occurrence time (year, month) in alarm history: 4th alarm in past	-	×	×	×	×	○	○	○	○
ALM265	Alarm occurrence time (year, month) in alarm history: 5th alarm in past	-	×	×	×	×	○	○	○	○
ALM266	Alarm occurrence time (year, month) in alarm history: 6th alarm in past	-	×	×	×	×	○	○	○	○
ALM267	Alarm occurrence time (year, month) in alarm history: 7th alarm in past	-	×	×	×	×	○	○	○	○
ALM268	Alarm occurrence time (year, month) in alarm history: 8th alarm in past	-	×	×	×	×	○	○	○	○
ALM269	Alarm occurrence time (year, month) in alarm history: 9th alarm in past	-	×	×	×	×	○	○	○	○
ALM270	Alarm occurrence time (year, month) in alarm history: 10th alarm in past	-	×	×	×	×	○	○	○	○
ALM271	Alarm occurrence time (year, month) in alarm history: 11th alarm in past	-	×	×	×	×	○	○	○	○
ALM272	Alarm occurrence time (year, month) in alarm history: 12th alarm in past	-	×	×	×	×	○	○	○	○
ALM273	Alarm occurrence time (year, month) in alarm history: 13th alarm in past	-	×	×	×	×	○	○	○	○
ALM274	Alarm occurrence time (year, month) in alarm history: 14th alarm in past	-	×	×	×	×	○	○	○	○
ALM275	Alarm occurrence time (year, month) in alarm history: 15th alarm in past	-	×	×	×	×	○	○	○	○
ALM280	Alarm occurrence time (date, hour) in alarm history: most recent alarm	-	×	×	×	×	○	○	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM281	Alarm occurrence time (date, hour) in alarm history: 1st alarm in past	-	×	×	×	×	○	○	○	○
ALM282	Alarm occurrence time (date, hour) in alarm history: 2nd alarm in past	-	×	×	×	×	○	○	○	○
ALM283	Alarm occurrence time (date, hour) in alarm history: 3rd alarm in past	-	×	×	×	×	○	○	○	○
ALM284	Alarm occurrence time (date, hour) in alarm history: 4th alarm in past	-	×	×	×	×	○	○	○	○
ALM285	Alarm occurrence time (date, hour) in alarm history: 5th alarm in past	-	×	×	×	×	○	○	○	○
ALM286	Alarm occurrence time (date, hour) in alarm history: 6th alarm in past	-	×	×	×	×	○	○	○	○
ALM287	Alarm occurrence time (date, hour) in alarm history: 7th alarm in past	-	×	×	×	×	○	○	○	○
ALM288	Alarm occurrence time (date, hour) in alarm history: 8th alarm in past	-	×	×	×	×	○	○	○	○
ALM289	Alarm occurrence time (date, hour) in alarm history: 9th alarm in past	-	×	×	×	×	○	○	○	○
ALM290	Alarm occurrence time (date, hour) in alarm history: 10th alarm in past	-	×	×	×	×	○	○	○	○
ALM291	Alarm occurrence time (date, hour) in alarm history: 11th alarm in past	-	×	×	×	×	○	○	○	○
ALM292	Alarm occurrence time (date, hour) in alarm history: 12th alarm in past	-	×	×	×	×	○	○	○	○
ALM293	Alarm occurrence time (date, hour) in alarm history: 13th alarm in past	-	×	×	×	×	○	○	○	○
ALM294	Alarm occurrence time (date, hour) in alarm history: 14th alarm in past	-	×	×	×	×	○	○	○	○
ALM295	Alarm occurrence time (date, hour) in alarm history: 15th alarm in past	-	×	×	×	×	○	○	○	○
ALM300	Alarm occurrence time (minute, second) in alarm history: most recent alarm	-	×	×	×	×	○	○	○	○
ALM301	Alarm occurrence time (minute, second) in alarm history: 1st alarm in past	-	×	×	×	×	○	○	○	○
ALM302	Alarm occurrence time (minute, second) in alarm history: 2nd alarm in past	-	×	×	×	×	○	○	○	○
ALM303	Alarm occurrence time (minute, second) in alarm history: 3rd alarm in past	-	×	×	×	×	○	○	○	○
ALM304	Alarm occurrence time (minute, second) in alarm history: 4th alarm in past	-	×	×	×	×	○	○	○	○

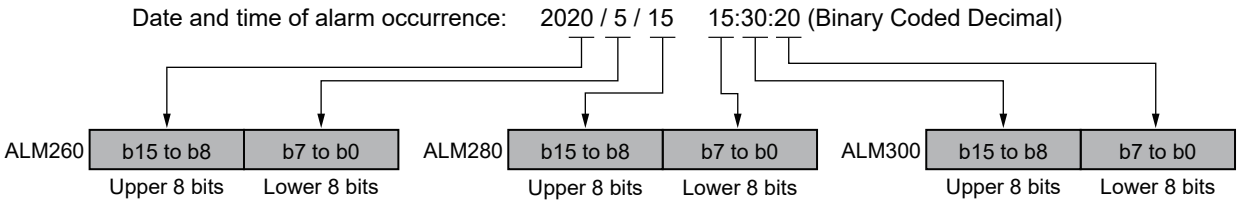
Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALM305	Alarm occurrence time (minute, second) in alarm history: 5th alarm in past	-	×	×	×	×	○	○	○	○
ALM306	Alarm occurrence time (minute, second) in alarm history: 6th alarm in past	-	×	×	×	×	○	○	○	○
ALM307	Alarm occurrence time (minute, second) in alarm history: 7th alarm in past	-	×	×	×	×	○	○	○	○
ALM308	Alarm occurrence time (minute, second) in alarm history: 8th alarm in past	-	×	×	×	×	○	○	○	○
ALM309	Alarm occurrence time (minute, second) in alarm history: 9th alarm in past	-	×	×	×	×	○	○	○	○
ALM310	Alarm occurrence time (minute, second) in alarm history: 10th alarm in past	-	×	×	×	×	○	○	○	○
ALM311	Alarm occurrence time (minute, second) in alarm history: 11th alarm in past	-	×	×	×	×	○	○	○	○
ALM312	Alarm occurrence time (minute, second) in alarm history: 12th alarm in past	-	×	×	×	×	○	○	○	○
ALM313	Alarm occurrence time (minute, second) in alarm history: 13th alarm in past	-	×	×	×	×	○	○	○	○
ALM314	Alarm occurrence time (minute, second) in alarm history: 14th alarm in past	-	×	×	×	×	○	○	○	○
ALM315	Alarm occurrence time (minute, second) in alarm history: 15th alarm in past	-	×	×	×	×	○	○	○	○

*1 Set [Data Type] and [Format] as shown below for the objects for which this device is set.

- [Data Type]: [Unsigned BIN32]
- [Format]: [Hexadecimal]

(23)Specifications of ALM260 to ALM275, ALM280 to ALM295, and ALM300 to ALM315 ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The date and time of alarm occurrence are stored in BCD code in the upper eight bits and lower eight bits of each device.
The time zone setting of the controller is applied to the date and time to be acquired.
Example) When the date and time of the most recent alarm occurrence is 15:30:20 May 15, 2020



In either of the following cases, 0 is stored.

- When the date and time of alarm occurrence are those of 1999 or earlier
- When the controller is MR-J5(W)-B(-RJ)

(24)Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- POS1 to POS255: Writing data to the RAM of a servo amplifier
- POS1001 to POS1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
POS1 to POS255, POS1001 to POS1255	Point table/position data No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(25)Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- SPD1 to SPD255: Writing data to the RAM of a servo amplifier
- SPD1001 to SPD1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
SPD1 to SPD255, SPD1001 to SPD1255	Point table/speed data No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(26)Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- ACT1 to ACT255: Writing data to the RAM of a servo amplifier
- ACT1001 to ACT1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ACT1 to ACT255, ACT1001 to ACT1255	Point table/acceleration time constant No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(27)Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- DCT1 to DCT255: Writing data to the RAM of a servo amplifier
- DCT1001 to DCT1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
DCT1 to DCT255, DCT1001 to DCT1255	Point table/deceleration time constant No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(28)Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- DWL1 to DWL255: Writing data to the RAM of a servo amplifier
- DWL1001 to DWL1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
DWL1 to DWL255, DWL1001 to DWL1255	Point table/dwell No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(29)Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- AUX1 to AUX255: Writing data to the RAM of a servo amplifier
- AUX1001 to AUX1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
AUX1 to AUX255, AUX1001 to AUX1255	Point table/auxiliary function No. 1 to No. 255	-	×	○	×	×	○	○	○	×

(30)Point table (M code) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Use an appropriate device according to the write destination of the servo amplifier.

- MCD1 to MCD255: Writing data to the RAM of a servo amplifier

• MCD1001 to MCD1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
MCD1 to MCD255, MCD1001 to MCD1255	Point table/M code No. 1 to No. 255	-	×	×	×	×	○	○	○	×

(31)Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
MD0	Machine diagnosis data, station number	-	○	○	○	○	○	○	○	○
MD1	Machine diagnosis data shift judgment (test mode)	-	○	○	○	○	○	○	○	○
MD2[*1]	Machine diagnosis data status	-	○	○	○	○	○	○	○	○
MD3[*2]	Machine diagnosis data coulomb friction torque in positive direction	-	○	○	○	○	○	○	○	○
MD4[*2]	Machine diagnosis data friction torque at rated speed in positive direction	-	○	○	○	○	○	○	○	○
MD5[*2]	Machine diagnosis data coulomb friction torque in negative direction	-	○	○	○	○	○	○	○	○
MD6[*2]	Machine diagnosis data friction torque at rated speed in negative direction	-	○	○	○	○	○	○	○	○
MD7[*2]	Machine diagnosis data oscillation frequency (motor is stopped)	-	○	○	○	○	○	○	○	○
MD8[*2]	Machine diagnosis data vibration level (motor is stopped)	-	○	○	○	○	○	○	○	○
MD9[*2]	Machine diagnosis data oscillation frequency (motor is operating)	-	○	○	○	○	○	○	○	○
MD10[*2]	Machine diagnosis data vibration level (motor is operating)	-	○	○	○	○	○	○	○	○
MD11	Machine diagnosis data, rated speed at forward or reverse rotation torque	-	×	○	×	×	○	○	○	○
MD12	Machine diagnosis data friction based fault prediction prepare status	-	×	○	×	×	×	×	×	×
	Machine diagnosis data: friction failure prediction - threshold creation progress		×	×	×	×	○	○[*3]	○	○
MD13	Machine diagnosis data vibration based fault prediction prepare status	-	×	○	×	×	×	×	×	×
	Machine diagnosis data: vibration failure prediction - threshold creation progress		×	×	×	×	○	○[*3]	○	○

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
MD14	Machine diagnosis data motor total move distance	-	×	○	×	×	○	○*3	○	○
MD15	Machine diagnosis data, friction failure prediction, upper threshold at forward rotation torque, lower threshold at reverse rotation torque	-	×	○	×	×	○	○*3	○	○
MD16	Machine diagnosis data, friction failure prediction, lower threshold at forward rotation torque, upper threshold at reverse rotation torque	-	×	○	×	×	○	○*3	○	○
MD17	Machine diagnosis data vibration level threshold	-	×	○	×	×	×	×	×	×
	Machine diagnosis data: vibration failure prediction - threshold acquisition		×	×	×	×	○	○*3	○	○
MD18	Machine diagnosis data trouble prediction status	-	×	○	×	×	○	○*3	○	○
MD19	Machine diagnosis data: Belt tension estimation value	-	×	×	×	×	○	○*3	○	○
MD20	Machine diagnosis data: static friction used in failure prediction	-	×	×	×	×	○	○*3	○	○
MD21	Machine diagnosis data: Belt tension threshold estimation	-	×	×	×	×	○	○*3	○	○

*1 While the servo amplifier is estimating the corresponding machine status in the machine diagnosis, do not write data to the parameters of the servo amplifier from another GOT.
Doing so may cause the servo amplifier to malfunction.

*2 When MD2 indicates that the servo amplifier does not complete the machine diagnosis (is estimating or warning of the machine status), do not monitor MD3 to MD6 (friction states) and MD7 to MD10 (vibration/oscillation states).
To start monitoring those devices upon the estimation completion, set [Trigger] in the applicable object settings.

*3 The commands assigned to MD12 to MD21 are not supported by MR-JET-G.
When the commands are used, the read values will be indefinite.

(32)Gear failure diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
GFDS0	Backlash estimation (threshold)	-	×	×	×	×	○	×	○	○
GFDS1	Backlash estimation (estimation value)	-	×	×	×	×	○	×	○	○
GFDS2	Backlash estimation (estimation progress)	-	×	×	×	×	○	×	○	○
GFDS3	Backlash estimation (status)	-	×	×	×	×	○	×	○	○
GFDS4	Backlash error number	-	×	×	×	×	○	×	○	○
GFDS5	Backlash estimation move distance	-	×	×	×	×	○	×	○	○

(33)Encoder communication circuit diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ECCDS0	CN2 encoder communication circuit diagnosis possibility	-	×	×	×	×	○	○	○	○
ECCDS1	CN2L encoder communication circuit diagnosis possibility	-	×	×	×	×	○	○	○	○
ECCDS2	CN2 encoder communication circuit diagnosis status	-	×	×	×	×	○	○	○	○
ECCDS3	CN2L encoder communication circuit diagnosis status	-	×	×	×	×	○	○	○	○
ECCDS4	CN2 encoder communication circuit diagnosis result	-	×	×	×	×	○	○	○	○
ECCDS5	CN2L encoder communication circuit diagnosis result	-	×	×	×	×	○	○	○	○

(34)One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
OTS0	One-touch tuning status confirmation	-	○	○	○	○	○	○	○	○
OTS1	Error code list	-	○	○	○	○	○	○	○	○
OTS2	Setting time	-	○	○	○	○	○	○	○	○
OTS3	Overshoot amount	-	○	○	○	○	○	○	○	○
OTS4	One-touch tuning command mode	-	×	×	×	×	○	○	○	○
OTS5	Load inertia moment ratio	-	×	×	×	×	○	○	○	○
OTS3000 *1	Read/write permissible move distance	-	×	×	×	×	○	○	○	○

*1 Writing is not available when a negative value is set for the device value.

(35)External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	The input device statuses corresponding to the setting values 0000 to 001F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI1	Input device statuses	-	The input device statuses corresponding to the setting values 0020 to 003F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI2	Input device statuses	-	The input device statuses corresponding to the setting values 0040 to 005F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J5 User's Manual (Hardware)
DI4	Statuses of input devices switched on through communication	-	The input device statuses switched on through communications (corresponding to the setting values 0000 to 001F) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI5	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0020 to 003F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI6	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0040 to 005F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)

(36)External input signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	The input device statuses corresponding to the setting values 0000 to 001F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI1	Input device statuses	-	The input device statuses corresponding to the setting values 0020 to 003F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI2	Input device statuses	-	The input device statuses corresponding to the setting values 0040 to 005F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J5 User's Manual (Hardware)
DI4	Statuses of input devices switched on through communication	-	The input device statuses switched on through communications (corresponding to the setting values 0000 to 001F) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI5	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0020 to 003F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI6	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0040 to 005F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)

(37)External input signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	The input device statuses corresponding to the setting values 0000 to 001F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI1	Input device statuses	-	The input device statuses corresponding to the setting values 0020 to 003F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI2	Input device statuses	-	The input device statuses corresponding to the setting values 0040 to 005F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J5 User's Manual (Hardware)

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI4	Statuses of input devices switched on through communication	-	The input device statuses switched on through communications (corresponding to the setting values 0000 to 001F) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI5	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0020 to 003F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DI6	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0040 to 005F of the following) are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)

(38)External input signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol
DI0	Input device statuses	-
DI1	Input device statuses	-
DI2	Input device statuses	-
DI3	External input pin statuses	-
DI4	Statuses of input devices switched on through communication	-
DI5	Statuses of input devices switched on through communication	-
DI6	Statuses of input devices switched on through communication	-

(39)External input signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	System information
DI1	Input device statuses	-	System information
DI2	Input device statuses	-	System information
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-JE-_B SERVO AMPLIFIER INSTRUCTION MANUAL
DI4	Statuses of input devices switched on through communication	-	System information
DI5	Statuses of input devices switched on through communication	-	System information
DI6	Statuses of input devices switched on through communication	-	System information

(40)External input signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	System information
DI1	Input device statuses	-	System information
DI2	Input device statuses	-	System information
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J4-_GF_(-RJ) Servo Amplifier Instruction Manual (Motion Mode)
DI4	Statuses of input devices switched on through communication	-	System information
DI5	Statuses of input devices switched on through communication	-	System information

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI6	Statuses of input devices switched on through communication	-	System information

(41)External input signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	System information
DI1	Input device statuses	-	System information
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J4-_B_(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL
DI4	Statuses of input devices switched on through communication	-	System information
DI5	Statuses of input devices switched on through communication	-	System information

(42)External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	The output device statuses corresponding to the setting values 8000 to 801F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO1	Output device statuses	-	The output device statuses corresponding to the setting values 8020 to 803F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO2	Output device statuses	-	The output device statuses corresponding to the setting values 8040 to 805F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-J5 User's Manual (Hardware)

(43)External output signal in MR-J5D□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	The output device statuses corresponding to the setting values 8000 to 801F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO1	Output device statuses	-	The output device statuses corresponding to the setting values 8020 to 803F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO2	Output device statuses	-	The output device statuses corresponding to the setting values 8040 to 805F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-J5 User's Manual (Hardware)

(44)External output signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	The output device statuses corresponding to the setting values 8000 to 801F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO1	Output device statuses	-	The output device statuses corresponding to the setting values 8020 to 803F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO2	Output device statuses	-	The output device statuses corresponding to the setting values 8040 to 805F of the following are read. Pr. PF91_Drive recorder - Digital channel setting 1 (DRDC1)
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➥MR-J5 User's Manual (Hardware)

(45)External output signal in MR-JET-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol
DO0	Output device statuses	-
DO1	Output device statuses	-
DO2	Output device statuses	-
DO4	External output pin statuses	-

(46)External output signal in MR-JE-B and MR-JE-BF ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	System information
DO1	Output device statuses	-	System information
DO2	Output device statuses	-	System information
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➥MR-JE-_B SERVO AMPLIFIER INSTRUCTION MANUAL

(47)External output signal in MR-J4-GF(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	System information
DO1	Output device statuses	-	System information
DO2	Output device statuses	-	System information
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➥MR-J4-_GF_(-RJ) Servo Amplifier Instruction Manual (Motion Mode)

(48)External output signal in MR-J4(W)-□B-RJ ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	System information
DO1	Output device statuses	-	System information
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-J4-_B_(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL

(49)Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
ALD0	Cumulative power-on time	-	○	○	○	○	○	○	○	○
ALD1	Number of inrush current switching times	-	○	○	○	○	○	○	○	○

(50)Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
TMI0	Input signal for test operation 1	-	○	○	○	○	○	○	○	○
TMI1	Input signal for test operation 2	-	○	○	○	○	○	○	○	○
TMI2	Input signal for test operation 3	-	×	×	×	×	×	×	×	×

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(51)Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
TMO0	Forced output of signal pin	-	○	○	○	○	○	○	○	○

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(52)Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4(W)-□B(-RJ)	MR-J4-GF(-RJ)	MR-JE-□B	MR-JE-□BF	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G	MR-J5-□B(-RJ)
TMD0	Writes the speed (test mode)	-	○	○	○	○	×	×	×	×
	Motor speed		×	×	×	×	○	○	○	○
	Command speed		×	×	×	×	×	×	×	×
TMD1	Writes the acceleration/ deceleration time constant (test mode)	-	○	○	○	○	×	×	×	×
	Write acceleration/ deceleration time constant		×	×	×	×	○	○	○	○
TMD3	Writes the moving distance (test mode)	-	○	○	○	○	×	×	×	×
	Move distance		×	×	×	×	○	○	○	○

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

(1) When handling real numbers for virtual servo amplifier devices

For the servo amplifier, if a real number is written to a virtual device, only the integer portion of the number is stored into the device.

Example) When 12.34 is entered with the numerical input on the GOT, the value is written as 1234 to the device of the servo amplifier.

If the data type of the virtual servo amplifier device is set to [Real], the value after the writing may differ from the one before the writing.

Additionally, the monitoring process may take a longer time.

Therefore, select one of the following items as the data type of the virtual device.

- Signed 16-bit binary data
- Unsigned 16-bit binary data
- Signed 32-bit binary data
- Unsigned 32-bit binary data

When you use the value of the virtual servo amplifier device, remember that only the integer portion of the value is stored in the device.

To display a real number on the numerical display or numerical input object, set [Format] to [Real] and select [Adjust Decimal Point Range] in the object setting.

(2) Data type and format settings for using virtual servo amplifier devices

To specify virtual servo amplifier devices in the object setting or other settings, the data type and format must be set according to the notation of the values handled by the virtual devices.

For notation of the virtual device values, refer to the following.

➟Instruction manual for the servo amplifier used
MR Configurator2 HELP

When real numbers are stored in virtual devices, set the data type as shown below instead of setting [Real].

The following shows a setting example for using virtual servo amplifier devices for an object.

Example) When using a numerical display

Notation of the virtual device values	Setting
Decimal number (positive values only)	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 65536 or more) • [Format]: [Unsigned Decimal]
Decimal number (positive and negative values)	• [Data Type]: [Signed BIN16] ([Signed BIN32] for -32769 or less, and 32768 or more) • [Format]: [Signed Decimal]
Hexadecimal number	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 0x10000 or more) • [Format]: [Hexadecimal]
Decimal point notation (positive values only)	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] as necessary) • [Format]: [Real] • [Digits (Integral)]: Set the number of digits in the integral portion. • [Digits (Fractional)]: Set the number of digits in the fractional portion. • [Adjust Decimal Point Range]: Selected
Decimal point notation (positive and negative values)	• [Data Type]: [Signed BIN16] ([Signed BIN32] as necessary) • [Format]: [Real] • [Digits (Integral)]: Set the number of digits in the integral portion. • [Digits (Fractional)]: Set the number of digits in the fractional portion. • [Adjust Decimal Point Range]: Selected
When the notation varies by digit	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 0x10000 or more) • [Format]: [Hexadecimal] • On the [Operation/Script] tab, select [Data Operation] for [Operation Type], and set [Bit Mask] or [Bit Shift].

(3) Specifying consecutive virtual servo amplifier devices

The GOT does not support writing/reading data to/from consecutive virtual servo amplifier devices.

■12 Virtual inverter devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.

Virtual device name	Reference
IOST	➟(1) I/O terminal monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
CMD	➟(2) Operation command ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➟(3) Operation when turning on/off one of the CMD3 to CMD12 devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
	➟(4) Operation when turning on/off one of the CMD48 to CMD52 devices (MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AL	➟(5) Alarm history ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
LPr	➟(6) Parameter (32-bit) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OP	➟(7) Operation parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PV	➟(8) Current value monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The lists of virtual devices shown in this section explain the FR-A800 Plus series, FR-E800 series and FR-D800 series models using the following abbreviations.

Series	Abbreviation	Model
FR-A800 Plus series	CRN	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN
	R2R	FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R
	AWH	FR-A8□0-AWH FR-A8□0-E-AWH
	LC	FR-A8□0-LC FR-A8□0-E-LC
FR-E800 series	E800	FR-E8□0
	E	FR-E8□0-E
FR-D800 series	D800	FR-D8□0
	E	FR-D8□0-E

(1) I/O terminal monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series		FR-D800 series		FR-E700 series
			E800	E	D800	E	FR-E7□0-NE
IOST1	Input terminal STF/DI0	○*1	○*1	○*1	○*1	○*1	○*1
IOST2	Input terminal STR/DI1	○*1	○*1	○*1	○*1	○*1	○*1
IOST3	Input terminal RL	○*1	○*1	×	○*1	○*1	○*1
IOST4	Input terminal RM	○*1	○*1	×	○*1	○*1	○*1
IOST5	Input terminal RH	○*1	○*1	×	○*1	○*1	○*1
IOST6	Input terminal RT	○*1	×	×	×	×	×
IOST7	Input terminal AU	○*1	×	×	×	×	×
IOST8	Input terminal JOG	○*1	×	×	×	×	×
IOST9	Input terminal CS	○*1	×	×	×	×	×
IOST10	Input terminal MRS	○*1	○*1	×	×	×	○*1
IOST11	Input terminal STOP	○*1	×	×	×	×	×
IOST12	Input terminal RES	○*1	○*1	×	×	×	○*1
IOST32	Output terminal RUN	○*1	○*1	×	○*1	○*1	○*1
IOST33	Output terminal SU	○*1	×	×	×	×	×
IOST34	Output terminal IPF	○*1	×	×	×	×	×
IOST35	Output terminal OL	○*1	×	×	×	×	×
IOST36	Output terminal FU	○*1	○*1	×	○*1	×	○*1
IOST37	Output terminal ABC1	○*1	○*1	○*1	○*1	○*1	○*1
IOST38	Output terminal ABC2	○*1	×	×	×	×	×
IOST39	Output terminal SO	○	×	×	×	×	×
IOST48	NET Y1 output	×	○*1*2	○*1*2	○*1	○*1	×
IOST49	NET Y2 output	×	○*1*2	○*1*2	○*1	○*1	×
IOST50	NET Y3 output	×	○*1*2	○*1*2	○*1	○*1	×
IOST51	NET Y4 output	×	○*1*2	○*1*2	○*1	○*1	×
IOST64	Option input terminal X0	○	○	○	×	×	×
IOST65	Option input terminal X1	○	○	○	×	×	×
IOST66	Option input terminal X2	○	○	○	×	×	×
IOST67	Option input terminal X3	○	○	○	×	×	×
IOST68	Option input terminal X4	○	○	○	×	×	×
IOST69	Option input terminal X5	○	○	○	×	×	×
IOST70	Option input terminal X6	○	○	○	×	×	×
IOST71	Option input terminal X7	○	○	○	×	×	×
IOST72	Option input terminal X8	○	○	○	×	×	×
IOST73	Option input terminal X9	○	○	○	×	×	×
IOST74	Option input terminal X10	○	○	○	×	×	×
IOST75	Option input terminal X11	○	○	○	×	×	×
IOST76	Option input terminal X12	○	○	○	×	×	×
IOST77	Option input terminal X13	○	○	○	×	×	×
IOST78	Option input terminal X14	○	○	○	×	×	×
IOST79	Option input terminal X15	○	○	○	×	×	×

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series		FR-D800 series		FR-E700 series
			E800	E	D800	E	FR-E7□0-NE
IOST80	Option input terminal DY	○	○	○	×	×	×
IOST96	Option output terminal Y0/DO0	○*1	○*1	○*1	×	×	×
IOST97	Option output terminal Y1/DO1	○*1	○*1	○*1	×	×	×
IOST98	Option output terminal Y2/DO2	○*1	○*1	○*1	×	×	×
IOST99	Option output terminal Y3/DO3	○*1	○*1	○*1	×	×	×
IOST100	Option output terminal Y4/DO4	○*1	○*1	○*1	×	×	×
IOST101	Option output terminal Y5/DO5	○*1	○*1	○*1	×	×	×
IOST102	Option output terminal Y6/DO6	○*1	○*1	○*1	×	×	×
IOST103	Option output terminal RA1	○*1	○*1	○*1	×	×	×
IOST104	Option output terminal RA2	○*1	○*1	○*1	×	×	×
IOST105	Option output terminal RA3	○*1	○*1	○*1	×	×	×

*1 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection) or Pr.190 to Pr.196 or Pr.313 to Pr.322 (output terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➟Manual of the inverter used

*2 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.
SERIAL (serial No.) is provided on the rating plate of the inverter.

(2) Operation command ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series
					FR-E7□0-NE
CMD0	Stop command	○	○	○	○
CMD1	Forward rotation command	○	○	○	○
CMD2	Reverse rotation command	○	○	○	○
CMD3*1	RL terminal	○*2	○*2	○*2	○*2
CMD4*1	RM terminal	○*2	○*2	○*2	○*2
CMD5*1	RH terminal	○*2	○*2	○*2	○*2
CMD6*1	RT terminal	○*2	○	×	○
CMD7*1	AU terminal	○*2	○	×	○
CMD8*1	JOG terminal	○ *2*3	○	×	×
CMD9*1	CS terminal	○ *2*3	×	×	×
CMD10*1	MRS terminal	○*2	○*2	×	○*2
CMD11*1	STOP terminal	○ *2*3	×	×	×
CMD12*1	RES terminal	○ *2*3	○ *2*3	×	○*2
CMD16	Alarm history clear	○	○	○	○
CMD24	Inverter reset	○	○	○	○
CMD32	Parameter clear	○	○	○	○
CMD33	Parameter clear (communication parameters are not cleared)	○	○	○	○
CMD34	All parameter clear	○	○	○	○
CMD35	All parameter clear (communication parameters are not cleared)	○	○	○	○
CMD48	NET X1 input	×	○*2*3*4	○ *2*3	×

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
CMD49	NET X2 input	×	○*2*3*4	○ *2*3	×
CMD50	NET X3 input	×	○*2*3*4	○ *2*3	×
CMD51	NET X4 input	×	○*2*3*4	○ *2*3	×
CMD52	NET X5 input	×	○*2*3*4	○ *2*3	×

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.
Change the settings of Pr.178 to Pr.189 (input terminal function selection).

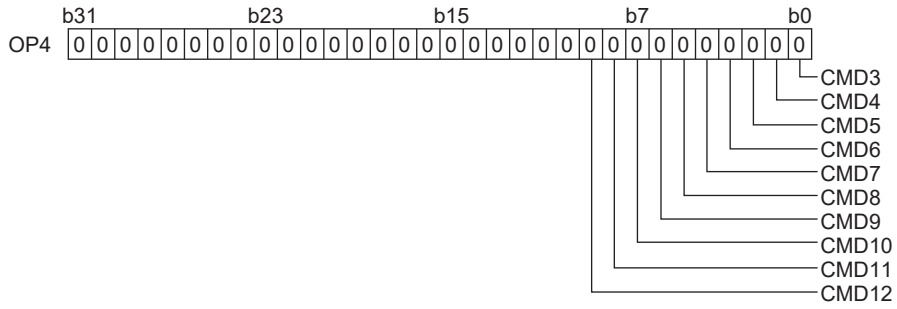
*4 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.
SERIAL (serial No.) is provided on the rating plate of the inverter.

When using the operation command, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.
Operation when a CMD device is turned on	➟(3) Operation when turning on/off one of the CMD3 to CMD12 devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) (4) Operation when turning on/off one of the CMD48 to CMD52 devices (MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

(3) Operation when turning on/off one of the CMD3 to CMD12 devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

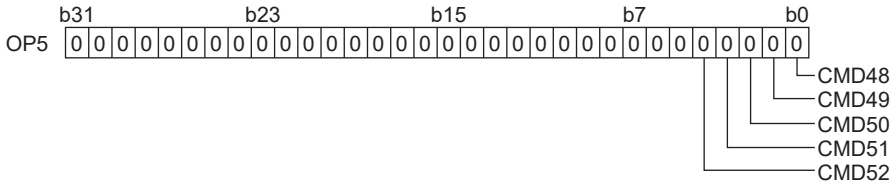
The CMD3 to CMD12 devices cannot be controlled simultaneously.
When you turn on/off one of the CMD3 to CMD12 devices, the rest of these devices are turned off.
Use OP4 to control multiple devices from CMD3 to CMD12 simultaneously.
The following shows the relationship between CMD3 to CMD12 and OP4.



Example) Turning on the CMD3 (RL terminal) and CMD12 (RES terminal) devices
For a hexadecimal value, write 0201.
For a decimal value, write 513.

(4) Operation when turning on/off one of the CMD48 to CMD52 devices (MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The CMD48 to CMD52 devices cannot be controlled simultaneously.
When you turn on/off one of the CMD48 to CMD52 devices, the rest of these devices are turned off.
Use OP5 to control multiple devices from CMD48 to CMD52 simultaneously.
The following shows the relationship between CMD48 to CMD52 and OP5.



Example) Turing on the CMD48 (NET X1 input) and CMD52 (NET X5 input) devices
For a hexadecimal value, write 0011.
For a decimal value, write 17.

(5) Alarm history ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
AL0	Current fault	○	○	○	○
AL1	Current warning 1	×	○	○	×
AL2	Current warning 2	×	○	○	×
AL100	Faults history 1 (symbol)	○	○	○	○
AL101	Faults history 1 (output frequency)	○	○	○	○
AL102	Faults history 1 (output current)	○	○	○	○
AL103	Faults history 1 (output voltage)	○	○	○	○
AL104	Faults history 1 (energization time)	○	○	○	○
AL105	Faults history 1 (year)	○	○	○	×
AL106	Faults history 1 (month)	○	○	○	×
AL107	Faults history 1 (day)	○	○	○	×
AL108	Faults history 1 (hour)	○	○	○	×
AL109	Faults history 1 (minute)	○	○	○	×
AL200	Faults history 2 (symbol)	○	○	○	○
AL201	Faults history 2 (output frequency)	○	○	○	○
AL202	Faults history 2 (output current)	○	○	○	○
AL203	Faults history 2 (output voltage)	○	○	○	○
AL204	Faults history 2 (energization time)	○	○	○	○
AL205	Faults history 2 (year)	○	○	○	×
AL206	Faults history 2 (month)	○	○	○	×
AL207	Faults history 2 (day)	○	○	○	×
AL208	Faults history 2 (hour)	○	○	○	×
AL209	Faults history 2 (minute)	○	○	○	×
AL300	Faults history 3 (symbol)	○	○	○	○
AL301	Faults history 3 (output frequency)	○	○	○	○
AL302	Faults history 3 (output current)	○	○	○	○
AL303	Faults history 3 (output voltage)	○	○	○	○
AL304	Faults history 3 (energization time)	○	○	○	○

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series
					FR-E7□0-NE
AL305	Faults history 3 (year)	○	○	○	×
AL306	Faults history 3 (month)	○	○	○	×
AL307	Faults history 3 (day)	○	○	○	×
AL308	Faults history 3 (hour)	○	○	○	×
AL309	Faults history 3 (minute)	○	○	○	×
AL400	Faults history 4 (symbol)	○	○	○	○
AL401	Faults history 4 (output frequency)	○	○	○	○
AL402	Faults history 4 (output current)	○	○	○	○
AL403	Faults history 4 (output voltage)	○	○	○	○
AL404	Faults history 4 (energization time)	○	○	○	○
AL405	Faults history 4 (year)	○	○	○	×
AL406	Faults history 4 (month)	○	○	○	×
AL407	Faults history 4 (day)	○	○	○	×
AL408	Faults history 4 (hour)	○	○	○	×
AL409	Faults history 4 (minute)	○	○	○	×
AL500	Faults history 5 (symbol)	○	○	○	○
AL501	Faults history 5 (output frequency)	○	○	○	○
AL502	Faults history 5 (output current)	○	○	○	○
AL503	Faults history 5 (output voltage)	○	○	○	○
AL504	Faults history 5 (energization time)	○	○	○	○
AL505	Faults history 5 (year)	○	○	○	×
AL506	Faults history 5 (month)	○	○	○	×
AL507	Faults history 5 (day)	○	○	○	×
AL508	Faults history 5 (hour)	○	○	○	×
AL509	Faults history 5 (minute)	○	○	○	×
AL600	Faults history 6 (symbol)	○	○	○	○
AL601	Faults history 6 (output frequency)	○	○	○	○
AL602	Faults history 6 (output current)	○	○	○	○
AL603	Faults history 6 (output voltage)	○	○	○	○
AL604	Faults history 6 (energization time)	○	○	○	○
AL605	Faults history 6 (year)	○	○	○	×
AL606	Faults history 6 (month)	○	○	○	×
AL607	Faults history 6 (day)	○	○	○	×
AL608	Faults history 6 (hour)	○	○	○	×
AL609	Faults history 6 (minute)	○	○	○	×
AL700	Faults history 7 (symbol)	○	○	○	○
AL701	Faults history 7 (output frequency)	○	○	○	○
AL702	Faults history 7 (output current)	○	○	○	○

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
AL703	Faults history 7 (output voltage)	○	○	○	○
AL704	Faults history 7 (energization time)	○	○	○	○
AL705	Faults history 7 (year)	○	○	○	×
AL706	Faults history 7 (month)	○	○	○	×
AL707	Faults history 7 (day)	○	○	○	×
AL708	Faults history 7 (hour)	○	○	○	×
AL709	Faults history 7 (minute)	○	○	○	×
AL800	Faults history 8 (symbol)	○	○	○	○
AL801	Faults history 8 (output frequency)	○	○	○	○
AL802	Faults history 8 (output current)	○	○	○	○
AL803	Faults history 8 (output voltage)	○	○	○	○
AL804	Faults history 8 (energization time)	○	○	○	○
AL805	Faults history 8 (year)	○	○	○	×
AL806	Faults history 8 (month)	○	○	○	×
AL807	Faults history 8 (day)	○	○	○	×
AL808	Faults history 8 (hour)	○	○	○	×
AL809	Faults history 8 (minute)	○	○	○	×

(6) Parameter (32-bit) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

The virtual device numbers (LPr) used in the GOT correspond to the inverter parameter numbers.
For the inverter parameters, refer to the following.

➟Manual of the inverter used

When using a parameter (32-bit), note the following.

Precautions	Description
When setting [8888] or [9999] to a 32-bit parameter (Lpr) of an inverter	[8888] and [9999] are used for particular purposes. From the GOT, if you set these numbers to a 32-bit parameter that can accept a value with a fractional part, you are recommended to set the data type to [Real].

(7) Operation parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
OP0	Operation frequency(RAM)	○	○	○	○
OP1	Operation frequency (EEPROM)	○	○	○	○
OP2	Operation mode	○	○	○	○
OP3	Operating status	○	○	○	○

Virtual device name		Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
OP4*1*2*3	-	Input terminal command	○	○	○	○
	b0	CMD3: RL terminal				
	b1	CMD4: RM terminal				
	b2	CMD5: RH terminal				
	b3	CMD6: RT terminal				
	b4	CMD7: AU terminal				
	b5	CMD8: JOG terminal				
	b6	CMD9: CS terminal				
	b7	CMD10: MRS terminal				
	b8	CMD11: STOP terminal				
	b9	CMD12: RES terminal				
OP5*2	-	Input terminal command (extend)	×	○*4	○*3	×
	b0	CMD48: NET X1 input				
	b1	CMD49: NET X2 input				
	b2	CMD50: NET X3 input				
	b3	CMD51: NET X4 input				
	b4	CMD52: NET X5 input				

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.
Change the settings of Pr.178 to Pr.189 (input terminal function selection).

*4 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.
SERIAL (serial No.) is provided on the rating plate of the inverter.

(8) Current value monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV1	Output frequency/speed	×	×	×	○	×	×	×	×	×	○
	Output frequency	○	○	○	×	○	○	○	○	○	×
PV2	Output current	○	○	○	○	○	○	○	○	○	○
PV3	Output voltage	○	○	○	○	○	○	○	○	○	○
PV5	Frequency setting value/ speed setting	×	×	×	○	×	×	×	×	×	○
	Frequency setting value	○	○	○	×	○	○	○	○	○	×
PV6	Speed/machine speed	○	○	○	○	×	○	○	○	○	×
	Operation speed	×	×	×	×	○	×	×	×	×	×
PV7	Motor torque	○	○	○	○	○	○	○	○	○	○
PV8	Converter output voltage	○	○	○	○	○	○	○	○	○	○
PV9	Regenerative brake duty	○	○	○	○	○	×	○	○	○	○
PV10	Electronic thermal O/L relay load factor	○	○	○	○	○	○	○	○	○	○
PV11	Output current peak value	○	○	○	○	○	○	○	○	○	○

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV12	Converter output voltage peak value	○	○	○	○	○	○	○	○	○	○
PV13	Input power	○	○	○	○	○	○	○	○	○	×
PV14	Output power	○	○	○	○	○	○	○	○	○	○
PV17	Load meter	○	○	○	○	○	○	○	○	○	×
PV18	Motor excitation current	○	○	○	○	○	○	○	○	○	×
PV19	Position pulse	○	○	×	×	○	×	○	○	×	×
	Analog output signal for dancer tension control	×	×	○	○	×	×	×	×	×	×
PV20	Cumulative energization time	○	○	○	○	○	○	○	○	○	○
PV22	Orientation status	○	○	×	×	○	×	○	○	×	×
	Winding diameter	×	×	○	○	×	×	×	×	×	×
PV23	Actual operation time	○	○	○	○	○	○	○	○	○	○
PV24	Motor load factor	○	○	○	○	○	○	○	○	○	○
PV25	Cumulative power	○	○	○	○	○	○	○	○	○	○
PV26	Position command (lower digits)	×	○	×	×	×	×	○	○	×	×
	Line speed command	×	×	○	○	×	×	×	×	×	×
PV27	Position command (upper digits)	×	○	×	×	×	×	○	○	×	×
	Actual line speed	×	×	○	○	×	×	×	×	×	×
PV28	Current position (lower digits)	×	○	×	×	×	×	○	○	×	×
	Dancer compensation speed	×	×	○	○	×	×	×	×	×	×
PV29	Current position (upper digits)	×	○	×	×	×	×	○	○	×	×
	Winding length (upper + lower)	×	×	○	○	×	×	×	×	×	×
PV30	Droop pulse (lower digits)	×	○	×	×	×	×	○	○	×	×
	Analog output signal 2 for dancer tension control	×	×	○	○	×	×	×	×	×	×
PV31	Droop pulse (upper digits)	×	○	×	×	×	×	○	○	×	×
	Line speed pulse monitor	×	×	○	○	×	×	×	×	×	×
PV32	Torque command	○	○	○	○	○	×	○	○	○	×
PV33	Torque current command	○	○	○	○	○	×	○	○	○	×
PV34	Motor output	○	○	○	○	○	○	×	×	×	×
PV35	Feedback pulse	○	○	○	○	○	×	○	○	×	×
PV36	Torque (positive polarity for driving torque/ negative polarity for regenerative braking torque)	○	○	○	○	○	×	×	×	×	×
PV37	Heat sink temperature	×	×	×	×	×	×	×	×	○	×
PV38	Trace status	×	○	○	○	×	×	×	×	×	×
PV39	SSCNET III(/H) communication status	○	○	×	×	○	×	×	×	×	×
PV40	PLC function user monitor 1	○	○	○	○	○	○	○	○	×	×
PV41	PLC function user monitor 2	○	○	○	○	○	○	○	○	×	×

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV42	PLC function user monitor 3	○	○	○	○	○	○	○	○	×	×
PV43	Station number (RS-485 terminals)	×	○	○	○	×	×	×	×	×	×
PV44	Station number (PU)	×	○	○	○	×	×	×	×	×	×
PV45	Station number (CC-Link)	×	○	○	○	×	×	×	×	×	×
PV46	Motor temperature	○	○	○	○	○	×	×	×	×	×
PV50	Energy saving effect	○	○	○	○	○	○	○	○	×	×
	Power saving effect / Energy saving effect	×	×	×	×	×	×	×	×	○	×
PV51	Cumulative energy saving	○	○	○	○	○	○	○	○	×	×
	Cumulative saved energy / Cumulative energy saving	×	×	×	×	×	×	×	×	○	×
PV52	PID set point	○	○	○	○	○	○	○	○	○	○
PV53	PID measured value	○	○	○	○	○	○	○	○	○	○
PV54	PID deviation	○	○	○	○	○	○	○	○	○	○
PV61	Motor thermal load factor	○	○	○	○	○	○	○	○	○	○
PV62	Inverter thermal load factor	○	○	○	○	○	○	○	○	○	○
PV63	Cumulative power 2	×	×	×	×	×	×	×	×	×	○
	Winding length (upper)	×	×	○	○	×	×	×	×	×	×
PV64	PTC thermistor resistance	○	○	○	○	○	○	○	○	○	×
PV65	Ideal speed command	×	×	×	×	×	×	○	○	×	×
PV67	PID measured value 2	○	○	○	○	○	○	○	○	○	×
PV68	Emergency drive status	×	×	×	×	×	×	○	○	○	×
PV69	PID input pressure value	×	×	×	×	×	○	×	×	×	×
PV71	Cumulative pulse	○	○	○	○	○	×	○	○	×	×
PV72	Cumulative pulse overflow times	○	○	○	○	○	×	○	○	×	×
PV73	Cumulative pulse (control terminal option)	○	○	○	○	○	×	×	×	×	×
PV74	Cumulative pulse overflow times (control terminal option)	○	○	○	○	○	×	×	×	×	×
PV75	Multi-revolution counter	○	○	×	×	○	×	×	×	×	×
PV77	32-bit cumulative energy (lower 16 bits)	×	×	×	○	×	×	×	×	×	×
PV78	32-bit cumulative energy (upper 16 bits)	×	×	×	○	×	×	×	×	×	×
PV79	32-bit cumulative energy (lower 16 bits)	×	×	×	○	×	×	×	×	×	×
PV80	32-bit cumulative energy (upper 16 bits)	×	×	×	○	×	×	×	×	×	×
PV81	BACnet reception status	×	×	×	×	×	○	○	○	×	×
	Tension command after taper compensation	×	×	○	○	×	×	×	×	×	×
PV82	BACnet token pass counter	×	×	×	×	×	○	○	○	×	×
	Winding diameter compensation torque command	×	×	○	○	×	×	×	×	×	×

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV83	BACnet valid APDU counter	×	×	×	×	×	○	○	○	×	×
	Inertia compensation	×	×	○	○	×	×	×	×	×	×
PV84	BACnet communication error counter	×	×	×	×	×	○	○	○	×	×
	Mechanical loss compensation	×	×	○	○	×	×	×	×	×	×
PV85	BACnet terminal FM/CA output level	×	×	×	×	×	○	○	○	×	×
	Terminal 1 input voltage	×	×	○	○	×	×	×	×	×	×
PV86	BACnet terminal AM output level	×	×	×	×	×	○	○	○	×	×
	Terminal 1 input after calibration (%)	×	×	○	○	×	×	×	×	×	×
PV87	Remote output value 1	○	○	○	○	○	○	×	×	×	×
PV88	Remote output value 2	○	○	○	○	○	○	×	×	×	×
PV89	Remote output value 3	○	○	○	○	○	○	×	×	×	×
PV90	Remote output value 4	○	○	○	○	○	○	×	×	×	×
PV91	PID manipulated variable	○	○	○	○	○	○	○	○	○	×
PV92	Second PID set point	○	○	×	×	○	○	×	×	×	×
	PID torque control actual tension	×	×	○	×	×	×	×	×	×	×
PV93	Second PID measured value	○	○	×	×	○	○	×	×	×	×
	PID torque control manipulated tension	×	×	○	×	×	×	×	×	×	×
PV94	Second PID deviation	○	○	×	×	○	○	×	×	×	×
PV95	Second PID measured value 2	○	○	×	×	○	○	×	×	×	×
PV96	Second PID manipulated variable	○	○	×	×	○	○	×	×	×	×
PV97	Dancer main set speed (For FR-E800 and FR-E800-E, dancer main speed setting)	○	○	×	×	○	×	○	○	○	×
	Winding diameter compensation speed	×	×	○	○	×	×	×	×	×	×
PV98	Control circuit temperature	○	○	○	○	○	○	×	×	○	×

12.3.4 [MELSEC iQ-L]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC iQ-L])
	➟■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])
	➟■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-L])
Specifications of word devices	➟■4 Monitoring-supported word devices ([MELSEC iQ-L])
	➟■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])
	➟■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-L])
Specifications of double-word devices	➟■7 Monitoring-supported double-word devices ([MELSEC iQ-L])
	➟■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])
	➟■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-L])
Specifications of virtual servo amplifier devices	➟■10 Virtual servo amplifier devices ([MELSEC iQ-L])
	➟■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-L])

■1 Monitoring-supported bit devices ([MELSEC iQ-L])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.4 ■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 2FFF	○	○
Y	Output relay	Hexadecimal	0000 to 2FFF	○	○
B	Link relay	Hexadecimal	000000 to D69FFF	○	○
M	Internal relay	Decimal	0 to 14065663	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S*3	Step relay	Decimal	0 to 16383	×	×
F	Annunciator	Decimal	0 to 32767	○	○
TC	Timer coil	Decimal	0 to 781407	○	○ (Not usable as word data)
TT	Timer contact	Decimal	0 to 781407	○	○ (Not usable as word data)
CC	Counter coil	Decimal	0 to 781407	○	○ (Not usable as word data)
CT	Counter contact	Decimal	0 to 781407	○	○ (Not usable as word data)
SC	Retentive timer coil	Decimal	0 to 781407	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SS	Retentive timer contact	Decimal	0 to 781407	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	000000 to D69FFF	○	○
SM	Special relay	Decimal	0 to 4095	○	○
LTC	Long timer coil	Decimal	0 to 219775	○	○ (Not usable as word data)
LTT	Long timer contact	Decimal	0 to 219775	○	○ (Not usable as word data)
LCC	Long counter coil	Decimal	0 to 413695	○	○ (Not usable as word data)
LCT	Long counter contact	Decimal	0 to 413695	○	○ (Not usable as word data)
LSC	Long retentive timer coil	Decimal	0 to 219775	○	○ (Not usable as word data)
LSS	Long retentive timer contact	Decimal	0 to 219775	○	○ (Not usable as word data)
BL	SFC block	Decimal	0 to 319	×	×
BLS	Step relay (block)	Decimal	BL(SFC block No.)-S(Device) Notation example: BL1-S3 • SFC Block No. (decimal): 0 to 319 • Device (decimal): 0 to 511	×	×
SP*2	Servo amplifier request	Decimal	➥12.3.4 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])	×	×
OM*2	Operation mode selection	Decimal	➥12.3.4 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])	×	×
TMB*2	Instruction demand (for test operation)	Decimal	➥12.3.4 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])	×	×
OTI*2	One-touch tuning instruction	Decimal	➥12.3.4 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➥12.3.4 ■10 Virtual servo amplifier devices ([MELSEC iQ-L])

*3 If a bit-specified word device is used in the random read processing, GT SoftGOT2000 (Single channel) or GT Simulator3 uses the value of the bit device in block No. 0 only.

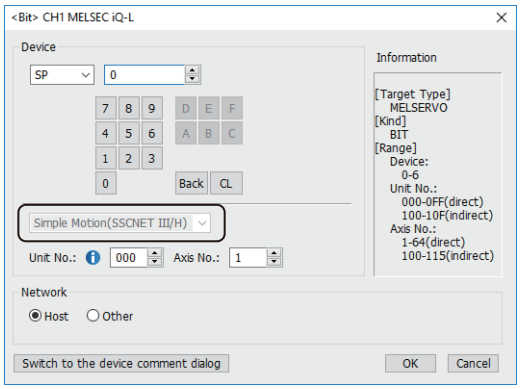
The bit device status depends on the SFC program status (active or inactive). When the SFC program is inactive, the bit device is off (stores 0).

If a step relay (S) is used in the random read processing, specify the relevant step relay (block) (BLS) on GT SoftGOT2000 or GT Simulator3.

■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

When [MELSEC iQ-L] is selected, the connection type is fixed as shown in the following table.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-SP0
OM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	UFF-A64-OM0
TMB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	UFF-A64-TMB1
OTI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A64-OTI0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-L])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
S	R/-	-/-	R/-	R/-	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
LTC	R/W	-/-	-/-	-/-	-/-
LTT	R/W	-/-	-/-	-/-	-/-
LCC	R/W	-/-	-/-	-/-	-/-
LCT	R/W	-/-	-/-	-/-	-/-
LSC	R/W	-/-	-/-	-/-	-/-
LSS	R/W	-/-	-/-	-/-	-/-
BL	R/W	-/-	-/-	-/-	-/-
BLS	R/W	-/-	-/-	-/-	-/-
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC iQ-L])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.4 ■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TN	Timer current value	Decimal	0 to 781407	○	○
CN	Counter current value	Decimal	0 to 781407	○	○
SN	Retentive timer current value	Decimal	0 to 781407	○	○
D	Data register	Decimal	0 to 879103	○	○
SD	Special register	Decimal	0 to 4095	○	○
W	Link register	Hexadecimal	00000 to D69FF	○	○
SW	Link special register	Hexadecimal	00000 to D69FF	○	○
R	File register	Decimal	0 to 32767	○	○
ER	Extension file register(Block)	Decimal	ER(R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 255 • Device (decimal): 0 to 32767	○	○
ZR	Extension file register	Decimal	0 to 819199	○	○
Z	Index register	Decimal	0 to 23	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
G	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No. (hexadecimal): 00 to FF • Device (decimal): 0 to 65535 For the module No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	○	○
PA*2	Basic parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PB*2	Gain filter parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PC*2	Extension setting parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PD*2	I/O setting parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PL*2	Linear servo motor/DD motor setting parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
ST*2	Status display	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PE*2	Extension setting No.2 parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
PF*2	Extension setting No.3 parameter	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
ALM*2	Alarm (current alarm J4A extend)	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
ALM*2	Alarm (alarm history J4A extend)	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
MD*2	Machine diagnosis data	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
OTS*2	One-touch tuning data	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
DI*2	External input signal	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
DO*2	External output signal	Decimal	➟12.3.4 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])	×	×
U3E0G	CPU buffer memory access device	Decimal	U3E0-G(Device) Notation example: U3E0-G100 • Device (decimal): 0 to 65535	○	○
RD	Refresh data register	Decimal	0 to 1048575	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

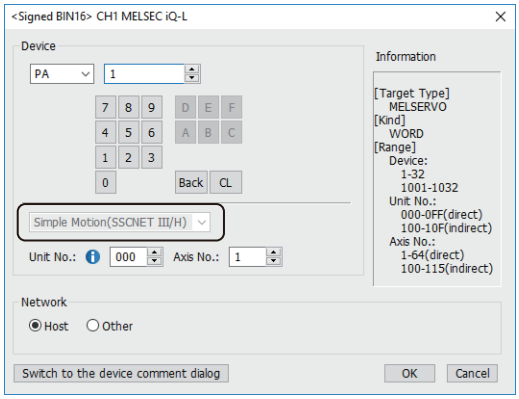
For the details, refer to the following.

➟12.3.4 ■10 Virtual servo amplifier devices ([MELSEC iQ-L])

■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

When [MELSEC iQ-L] is selected, the connection type is fixed as shown in the following table.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	UFF-A64-PA1
PB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A64-PB1
PC	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 80, 1001 to 1080	UFF-A64-PC1
PD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 48, 1001 to 1048	UFF-A64-PD1
PL	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 48, 1001 to 1048	UFF-A64-PL1
ST	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	UFF-A64-ST0
PE	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A64-PE1
PF	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A64-PF1
ALM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 11 to 59, 200 to 215, 220 to 235, 240 to 255	UFF-A64-ALM0
MD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 18	UFF-A64-MD0

Device name	Device notation and setting range		Notation example
OTS	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3	UFF-A64-OTS0
DI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A64-DI0
DO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	UFF-A64-DO0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-L])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
ER	R/W	R/W	R/W	R/W
ZR	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-
U3E0G	R/W	R/W	R/W	R/W

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
RD	R/W	R/W	R/W	R/W

■7 Monitoring-supported double-word devices ([MELSEC iQ-L])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.4 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LTN	Long timer current value	Decimal	0 to 219775	×	×
LCN	Long counter current value	Decimal	0 to 413695	×	×
LSN	Long retentive timer current value	Decimal	0 to 219775	×	×
ZZ	Index register (32 bits)	Decimal	0 to 22	×	×
LZ	Index register (32 bits)	Decimal	0 to 11	×	×
ALD*2	Life diagnosis	Decimal	➡12.3.4 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])	×	×
TMI*2	Input signal for test operation (for test operation)	Decimal	➡12.3.4 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])	×	×
TMO*2	Forced output of signal pin (for test operation)	Decimal	➡12.3.4 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])	×	×
TMD*2	Set data (for test operation)	Decimal	➡12.3.4 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

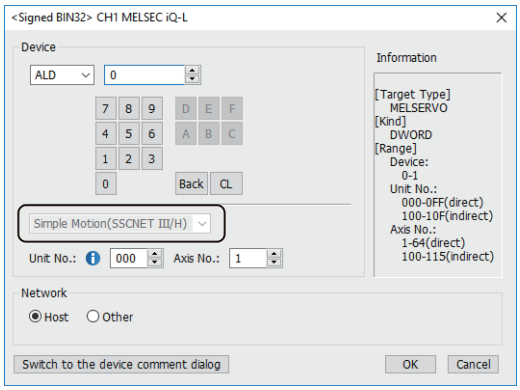
*2 Virtual servo amplifier device
For the details, refer to the following.

➡12.3.4 ■10 Virtual servo amplifier devices ([MELSEC iQ-L])

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

When [MELSEC iQ-L] is selected, the connection type is fixed as shown in the following table.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A64-ALD0
TMI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	UFF-A64-TMI0
TMO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0	UFF-A64-TMO0
TMD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 64 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	UFF-A64-TMD0

For indirect specification of a module or axis number, refer to the following.

➥12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-L])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LTN	-/-	R/W	-/-	-/-
LCN	-/-	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LSN	-/-	R/W	-/-	-/-
ZZ	-/-	R/W	-/-	-/-
LZ	-/-	R/W	-/-	-/-
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC iQ-L])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟12.3.3 ■10 (1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	➟12.3.3 ■10 (2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	➟12.3.3 ■10 (3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	➟12.3.3 ■10 (4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	➟12.3.3 ■10 (7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	➟12.3.3 ■10 (8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	➟12.3.3 ■10 (9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PD	➟12.3.3 ■10 (10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PL	➟12.3.3 ■10 (15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	➟12.3.3 ■10 (18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	➟12.3.3 ■10 (19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	➟12.3.3 ■10 (20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	➟12.3.3 ■10 (22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	➟12.3.3 ■10 (31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	➟12.3.3 ■10 (34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	➟12.3.3 ■10 (35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	➟12.3.3 ■10 (42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	➟12.3.3 ■10 (49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	➟12.3.3 ■10 (50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	➟12.3.3 ■10 (51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	➟12.3.3 ■10 (52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-L])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.5 [MELSEC iQ-F]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC iQ-F])
	➟■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])
	➟■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-F])
Specifications of word devices	➟■4 Monitoring-supported word devices ([MELSEC iQ-F])
	➟■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])
	➟■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-F])
Specifications of double-word devices	➟■7 Monitoring-supported double-word devices ([MELSEC iQ-F])
	➟■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])
	➟■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-F])
Specifications of virtual servo amplifier devices	➟■10 Virtual servo amplifier devices ([MELSEC iQ-F])
	➟■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-F])

■1 Monitoring-supported bit devices ([MELSEC iQ-F])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.5 ■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-F])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Octal	0000 to 1777	○	○
Y	Output relay	Octal	0000 to 1777	○	○
B	Link relay	Hexadecimal	0000 to 7FFF	○	○
M	Internal relay	Decimal	0 to 32767	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S	Step relay	Decimal	0 to 4095	○	○
F	Annunciator	Decimal	0 to 32767	○	○
TC	Timer coil	Decimal	0 to 1023	○	○ (Not usable as word data)
TT	Timer contact	Decimal	0 to 1023	○	○ (Not usable as word data)
CC	Counter coil	Decimal	0 to 1023	○	○ (Not usable as word data)
CT	Counter contact	Decimal	0 to 1023	○	○ (Not usable as word data)
SC	Retentive timer coil	Decimal	0 to 1023	○	○ (Not usable as word data)
SS	Retentive timer contact	Decimal	0 to 1023	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SB	Link special relay	Hexadecimal	0000 to 7FFF	○	○
SM	Special relay	Decimal	0 to 9999	○	○
RX*3	Remote input	Hexadecimal	0000 to 3FFF	○	○
RY*3	Remote output	Hexadecimal	0000 to 3FFF	○	○
LCC	Long counter coil	Decimal	0 to 1023	○	○ (Not usable as word data)
LCT	Long counter contact	Decimal	0 to 1023	○	○ (Not usable as word data)
BL	SFC block	Decimal	0 to 31	×	×
BLS	Step relay (block)	Decimal	0 to 511	×	×
SP*2	Servo amplifier request	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×
OM*2	Operation mode selection	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×
TMB*2	Instruction demand (for test operation)	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×
OTI*2	One-touch tuning instruction	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×
GFDI*2	Gear failure diagnosis instruction	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×
ECCDI*2	Encoder communication circuit diagnosis instruction	Decimal	➟12.3.5 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

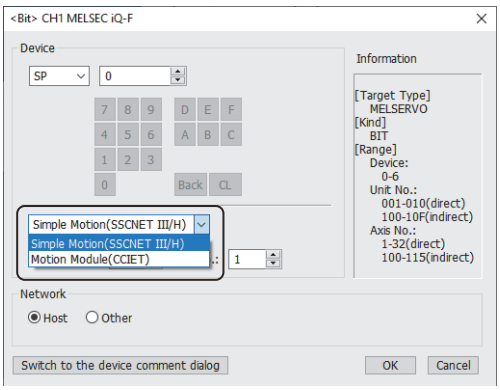
➟12.3.5 ■10 Virtual servo amplifier devices ([MELSEC iQ-F])

*3 The target device of the host station can be monitored only.

Monitoring the target device of any other station causes a system error.

■2 Setting virtual bit devices for servo amplifiers ([MELSEC iQ-F])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.
Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Motion Module(CCIET)]	Select this item to connect the GOT through a Motion module (FX5-nSSC-G). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	U10-A32-SP0
	[Motion Module(CCIET)]	AA(Axis designation)-SP(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-SP0
OM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	U10-A32-OM0
	[Motion Module(CCIET)]	AA(Axis designation)-OM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	AA3-OM0
TMB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	U10-A32-TMB1
	[Motion Module(CCIET)]	AA(Axis designation)-TMB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	AA3-TMB1

Device name	Device notation and setting range		Notation example
OTI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	U10-A32-OTI0
	[Motion Module(CCIET)]	AA(Axis designation)-OTI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-OTI0
GFDI	[Motion Module(CCIET)]	AA(Axis designation)-GFDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-GFDI0
ECCDI	[Motion Module(CCIET)]	AA(Axis designation)-ECCDI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ECCDI0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-F])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LCC	R/W	-/-	-/-	-/-	-/-
LCT	R/W	-/-	-/-	-/-	-/-
BL	R/W	-/-	-/-	-/-	-/-
BLS	R/W	-/-	-/-	-/-	-/-
SP	-/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
GFDI	-/W	-/-	-/-	-/-	-/-
ECCDI	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC iQ-F])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.5 ■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-F])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TN	Timer current value	Decimal	0 to 1023	○	○
CN	Counter current value	Decimal	0 to 1023	○	○
SN	Retentive timer current value	Decimal	0 to 1023	○	○
D	Data register	Decimal	0 to 7999	○	○
SD	Special register	Decimal	0 to 11999	○	○
W	Link register	Hexadecimal	0000 to 7FFF	○	○
SW	Link special register	Hexadecimal	0000 to 7FFF	○	○
R*4	File register	Decimal	0 to 32767	○	○
Z	Index register	Decimal	0 to 23	○	○ (Not usable as bit data)
G*5	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: U10-G100 • Unit No. (hexadecimal): 01 to 10 • Device (decimal): 0 to 262143 For the unit No., set the module number of the intelligent function module.	○	○
Ww*3	Remote register	Hexadecimal	0000 to 1FFF	○	○
Wr*3	Remote register	Hexadecimal	0000 to 1FFF	○	○
PA*2	Basic parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PB*2	Gain filter parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PC*2	Extension setting parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PD*2	I/O setting parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PO*2	Option unit parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PS*2	Special parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PU*2	Multi encoder parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PT*2	Positioning control parameters	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PL*2*6	Motor extension setting parameter Linear servo motor/DD motor setting parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PN*2	Network setting parameters	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PVS*2*7	Position extension parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
ST*2	Status display	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PE*2	Extension setting No.2 parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
PF*2	Extension setting No.3 parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
NPA*2	Network basic parameter	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
ALM*2	Alarm (current alarm J4A extend)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
ALM*2	Alarm (alarm history J4A extend)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
POS*2	Point table (position)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
SPD*2	Point table (speed)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
ACT*2	Point table (acceleration time constant)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
DCT*2	Point table (deceleration time constant)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
DWL*2	Point table (dwell)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
AUX*2	Point table (auxiliary function)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
MCD*2	Point table (M code)	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
MD*2	Machine diagnosis data	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
GFDS*2	Gear failure diagnosis data	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
ECCDS*2	Encoder communication circuit diagnosis data	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
OTS*2	One-touch tuning data	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
DI*2	External input signal	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×
DO*2	External output signal	Decimal	➟12.3.5 ■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.5 ■10 Virtual servo amplifier devices ([MELSEC iQ-F])

*3 The target device of the host station can be monitored only.
Monitoring the target device of any other station causes a system error.

*4 Available for the file register of block No. switched with the RSET instruction.

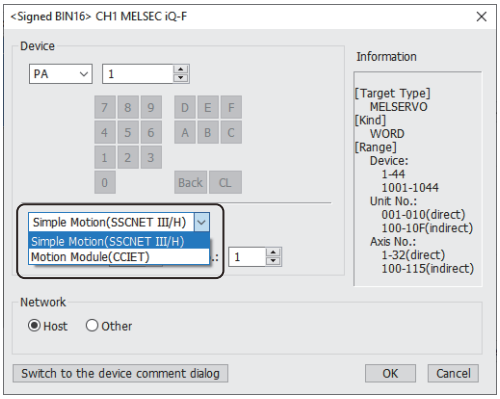
*5 Only the intelligent function module on the station connected to GOT can be specified.
Set the buffer memory within the address range of the buffer memory existing in the intelligent function module.

*6 The device name depends on the servo amplifier.
MR-J5-G(-RJ) or MR-J5W□-G: Motor extension setting parameter
Other than MR-J5-G(-RJ) or MR-J5W□-G: Linear servo motor/DD motor setting parameter

*7 PVS is a virtual device corresponding to the servo parameter (PV) of MR-J5-G(-RJ), MR-J5W □ -G, and MR-JET-G.
Use the virtual device (PVS) to read/write data from/to the servo parameter (PV).

■5 Setting virtual word devices for servo amplifiers ([MELSEC iQ-F])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.
Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Motion Module(CCIET)]	Select this item to connect the GOT through a Motion module (FX5-nSSC-G). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	U10-A32-PA1
	[Motion Module(CCIET)]	AA(Axis designation)-PA(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PA1
PB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	U10-A32-PB1
	[Motion Module(CCIET)]	AA(Axis designation)-PB(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	AA3-PB1

Device name	Device notation and setting range		Notation example
PC	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	U10-A32-PC1
	[Motion Module(CCIET)]	AA(Axis designation)-PC(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PC1
PD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	U10-A32-PD1
	[Motion Module(CCIET)]	AA(Axis designation)-PD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PD1
PO	[Motion Module(CCIET)]	AA(Axis designation)-PO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	AA3-PO1
PS	[Motion Module(CCIET)]	AA(Axis designation)-PS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PS1
PU	[Motion Module(CCIET)]	AA(Axis designation)-PU(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	AA3-PU1
PT	[Motion Module(CCIET)]	AA(Axis designation)-PT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	AA3-PT1
PL	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	U10-A32-PL1
	[Motion Module(CCIET)]	AA(Axis designation)-PL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	AA3-PL1
PN	[Motion Module(CCIET)]	AA(Axis designation)-PN(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PN1
PVS	[Motion Module(CCIET)]	AA(Axis designation)-PVS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	AA3-PVS1
ST	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	U10-A32-ST0
	[Motion Module(CCIET)]	AA(Axis designation)-ST(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	AA3-ST0
PE	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	U10-A32-PE1
	[Motion Module(CCIET)]	AA(Axis designation)-PE(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	AA3-PE1

Device name	Device notation and setting range		Notation example
PF	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	U10-A32-PF1
	[Motion Module(CCIET)]	AA(Axis designation)-PF(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	AA3-PF1
NPA	[Motion Module(CCIET)]	NPA(Device) • Device (decimal): 1 to 12, 2001 to 2032	NPA1
ALM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 11 to 59, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	U10-A32-ALM0
	[Motion Module(CCIET)]	AA(Axis designation)-ALM(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 11 to 59, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	AA3-ALM0
POS	[Motion Module(CCIET)]	AA(Axis designation)-POS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-POS1
SPD	[Motion Module(CCIET)]	AA(Axis designation)-SPD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-SPD1
ACT	[Motion Module(CCIET)]	AA(Axis designation)-ACT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-ACT1
DCT	[Motion Module(CCIET)]	AA(Axis designation)-DCT(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DCT1
DWL	[Motion Module(CCIET)]	AA(Axis designation)-DWL(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-DWL1
AUX	[Motion Module(CCIET)]	AA(Axis designation)-AUX(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-AUX1
MCD	[Motion Module(CCIET)]	AA(Axis designation)-MCD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	AA3-MCD1
MD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	U10-A32-MD0
	[Motion Module(CCIET)]	AA(Axis designation)-MD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	AA3-MD0
GFDS	[Motion Module(CCIET)]	AA(Axis designation)-GFDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-GFDS0
ECCDS	[Motion Module(CCIET)]	AA(Axis designation)-ECCDS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	AA3-ECCDS0

Device name	Device notation and setting range		Notation example
OTS	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	U10-A32-OTS0
	[Motion Module(CCIET)]	AA(Axis designation)-OTS(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	AA3-OTS0
DI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	U10-A32-DI0
	[Motion Module(CCIET)]	AA(Axis designation)-DI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	AA3-DI0
DO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	U10-A32-DO0
	[Motion Module(CCIET)]	AA(Axis designation)-DO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	AA3-DO0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-F])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
Ww	R/W	R/W	R/W	R/W
Wr	R/W	R/W	R/W	R/W
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PS	R/W	R/W	-/-	-/-
PU	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
PVS	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
NPA	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
GFDS	R/-	R/-	-/-	-/-
ECCDS	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

■7 Monitoring-supported double-word devices ([MELSEC iQ-F])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.5 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-F])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LCN	Long counter current value	Decimal	0 to 1023	×	×
LZ	Index register (32 bits)	Decimal	0 to 11	×	×
ALD*2	Life diagnosis	Decimal	➟12.3.5 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])	×	×
TMI*2	Input signal for test operation (for test operation)	Decimal	➟12.3.5 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])	×	×
TMO*2	Forced output of signal pin (for test operation)	Decimal	➟12.3.5 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])	×	×
TMD*2	Set data (for test operation)	Decimal	➟12.3.5 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])	×	×

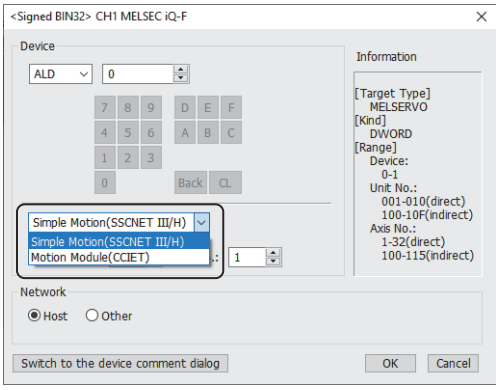
*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device
For the details, refer to the following.
➟12.3.5 ■10 Virtual servo amplifier devices ([MELSEC iQ-F])

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC iQ-F])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.
Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Connection through a Simple Motion module • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Motion Module(CCIET)]	Select this item to connect the GOT through a Motion module (FX5-nSSC-G). After the selection, set a device that enables axis designation to display the following item. • [Axis Designation]: Set the axis to be monitored.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	U10-A32-ALD0
	[Motion Module(CCIET)]	AA(Axis designation)-ALD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	AA3-ALD0
TMI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	U10-A32-TMI0
	[Motion Module(CCIET)]	AA(Axis designation)-TMI(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	AA3-TMI0
TMO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0	U10-A32-TMO0
	[Motion Module(CCIET)]	AA(Axis designation)-TMO(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0	AA3-TMO0

Device name	Device notation and setting range		Notation example
TMD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 01 to 10 (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	U10-A32-TMD0
	[Motion Module(CCIET)]	AA(Axis designation)-TMD(Device) • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	AA3-TMD0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC iQ-F])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LCN	-/-	R/W	-/-	-/-
LZ	-/-	R/W	-/-	-/-
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC iQ-F])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟12.3.3 ■10 (1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	➟12.3.3 ■10 (2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	➟12.3.3 ■10 (3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	➟12.3.3 ■10 (4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDI	➟12.3.3 ■10 (5) Gear failure diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDI	➟12.3.3 ■10 (6) Encoder communication circuit diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	➟12.3.3 ■10 (7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	➟12.3.3 ■10 (8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	➟12.3.3 ■10 (9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PD	➟12.3.3 ■10 (10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PO	➟12.3.3 ■10 (11) Option unit parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PS	➟12.3.3 ■10 (12) Special parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Reference
PU	⇒12.3.3 ■10 (13) Multi encoder parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PT	⇒12.3.3 ■10 (14) Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PL	⇒12.3.3 ■10 (15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PN	⇒12.3.3 ■10 (16) Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PVS	⇒12.3.3 ■10 (17) Position extension parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	⇒12.3.3 ■10 (18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	⇒12.3.3 ■10 (19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	⇒12.3.3 ■10 (20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
NPA	⇒12.3.3 ■10 (21) Network basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	⇒12.3.3 ■10 (22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
POS	⇒12.3.3 ■10 (24) Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
SPD	⇒12.3.3 ■10 (25) Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ACT	⇒12.3.3 ■10 (26) Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DCT	⇒12.3.3 ■10 (27) Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DWL	⇒12.3.3 ■10 (28) Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AUX	⇒12.3.3 ■10 (29) Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MCD	⇒12.3.3 ■10 (30) Point table (M code) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	⇒12.3.3 ■10 (31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDS	⇒12.3.3 ■10 (32) Gear failure diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDS	⇒12.3.3 ■10 (33) Encoder communication circuit diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	⇒12.3.3 ■10 (34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	⇒12.3.3 ■10 (35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	⇒12.3.3 ■10 (42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	⇒12.3.3 ■10 (49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	⇒12.3.3 ■10 (50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	⇒12.3.3 ■10 (51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	⇒12.3.3 ■10 (52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-F])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.6 [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■3 Availability of writing/reading data to/from bit devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
Specifications of word devices	➟■4 Monitoring-supported word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■6 Availability of writing/reading data to/from word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
Specifications of double-word devices	➟■7 Monitoring-supported double-word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■9 Availability of writing/reading data to/from double-word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
Specifications of virtual servo amplifier devices	➟■10 Virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
	➟■11 Precautions for virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])
Specifications of virtual inverter devices	➟■12 Virtual inverter devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

■1 Monitoring-supported bit devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.6 ■3 Availability of writing/reading data to/from bit devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 3FFF	○	○
Y	Output relay	Hexadecimal	0000 to 3FFF	○	○
B	Link relay	Hexadecimal	00000 to 9FFFF	○	○
M*4	Internal relay	Decimal	0 to 61439	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S	Step relay	Decimal	0 to 32767	○	○
F	Annunciator	Decimal	0 to 32767	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC*4	Timer coil	Decimal	0 to 32767	○	○ (Not usable as word data)
TT*4	Timer contact	Decimal	0 to 32767	○	○ (Not usable as word data)
CC*4	Counter coil	Decimal	0 to 32767	○	○ (Not usable as word data)
CT*4	Counter contact	Decimal	0 to 32767	○	○ (Not usable as word data)
SC*4	Retentive timer coil	Decimal	0 to 32767	○	○ (Not usable as word data)
SS*4	Retentive timer contact	Decimal	0 to 32767	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	0000 to 7FFF	○	○
SM	Special relay	Decimal	0 to 2255	○	○
RX	Remote input	Hexadecimal	0000 to 3FFF	○	○
RY	Remote output	Hexadecimal	0000 to 3FFF	○	○
LB	Link relay	Hexadecimal	0000 to 7FFF	○	○
SP*2	Servo amplifier request	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
OM*2	Operation mode selection	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
TMB*2	Instruction demand (for test operation)	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
OTI*2	One-touch tuning instruction	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
IOST*3	I/O terminal monitor	Decimal	0 to 127	×	×
CMD*3	Operation command	Decimal	0 to 63	×	×
GFDI*2	Gear failure diagnosis instruction	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
ECCDI*2	Encoder communication circuit diagnosis instruction	Decimal	12.3.6 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.6 ■10 Virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

*3 Virtual inverter device

For the details, refer to the following.

➟12.3.6 ■12 Virtual inverter devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

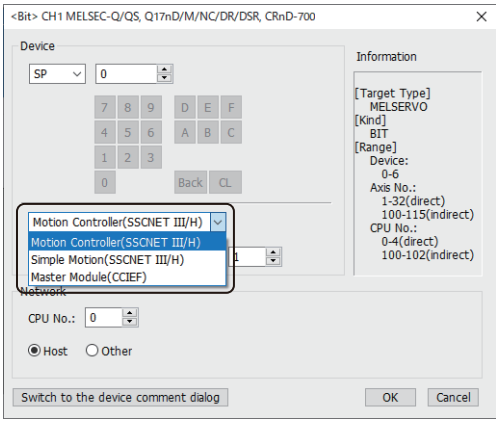
*4 Do not use the local device set in a MELSEC-Q system.

Doing so disables the correct monitoring.

■2 Setting virtual bit devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (QD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (QD77GF).

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Motion Controller(SSCNET III/H)]	A(Axis No.)-SP(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A32-SP0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A32-SP0
	[Master Module(CCIEF)]	SP(Device) • Device (decimal): 0 to 6	SP0

Device name	Device notation and setting range		Notation example
OM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OM(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	A32-OM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	UFF-A32-OM0
	[Master Module(CCIEF)]	OM(Device) • Device (decimal): 0 to 2, 4 to 5	OM0
TMB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMB(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	A32-TMB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	UFF-A32-TMB1
	[Master Module(CCIEF)]	TMB(Device) • Device (decimal): 1 to 6	TMB1
OTI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTI(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A32-OTI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A32-OTI0
	[Master Module(CCIEF)]	OTI(Device) • Device (decimal): 0 to 5	OTI0
GFDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDI(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A32-GFDI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A32-GFDI0
ECCDI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDI(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A32-ECCDI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A32-ECCDI0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■3 Availability of writing/reading data to/from bit devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
The GOT can only read data from the device when the QS001CPU is used.
To write data to the consecutive devices of a Q172DR(CR750-Q), use the Q172DR(CR750-Q) with firmware version R6b or later.
R/W: Both read and write
R/-: Read only
-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LB	R/W	-/-	R/W	R/W	-/-
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
IOST	R/-	-/-	-/-	-/-	-/-
CMD	-/W	-/-	-/-	-/-	-/-
GFDI	-/W	-/-	-/-	-/-	-/-
ECCDI	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.6 ■6 Availability of writing/reading data to/from word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TN*6	Timer current value	Decimal	0 to 32767	○	○
CN*6	Counter current value	Decimal	0 to 32767	○	○
SN*6	Retentive timer current value	Decimal	0 to 32767	○	○
D*3*5*6	Data register	Decimal	0 to 4910079	○	○
SD	Special register	Decimal	0 to 2255	○	○
W*3*5	Link register	Hexadecimal	000000 to 4AEBFF	○	○
SW	Link special register	Hexadecimal	0000 to 7FFF	○	○
R*3*4	File register	Decimal	0 to 32767	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
ER[*3*9]	Extension file register(Block)	Decimal	ER(R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 255 • Device (decimal): 0 to 32767	○	○
ZR[*3*5*7*9]	Extension file register	Decimal	0 to 4849663	○	○
Z	Index register	Decimal	0 to 19	○	○ (Not usable as bit data)
G[*9]	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No. (hexadecimal): 00 to FF • Device (decimal): 0 to 65535 For the module No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	○	○
Ww[*8]	Remote register	Hexadecimal	0000 to 1FFF	○	○
Wr[*8]	Remote register	Hexadecimal	0000 to 1FFF	○	○
LW	Link register	Hexadecimal	00000 to 1FFFF	○	○
#	Motion device	Decimal	0 to 12287	○	○
U3E0	Multiple CPU high speed transmission memory	Decimal	U3E0-G(Device) Notation example: U3E0-10000 • Device (decimal): 10000 to 24335	○	○
U3E1	Multiple CPU high speed transmission memory	Decimal	U3E1-G(Device) Notation example: U3E1-10000 • Device (decimal): 10000 to 24335	○	○
U3E2	Multiple CPU high speed transmission memory	Decimal	U3E2-(Device) Notation example: U3E2-10000 • Device (decimal): 10000 to 24335	○	○
U3E3	Multiple CPU high speed transmission memory	Decimal	U3E3-(Device) Notation example: U3E3-10000 • Device (decimal): 10000 to 24335	○	○
PA[*2]	Basic parameter	Decimal	12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PB[*2]	Gain filter parameter	Decimal	12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PC[*2]	Extension setting parameter	Decimal	12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PD[*2]	I/O setting parameter	Decimal	12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PO[*2]	Option unit parameter	Decimal	12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PS*2	Special parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PU*2	Multi encoder parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PT*2	Positioning control parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PL*2	Linear servo motor/DD motor setting parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PN*2	Network setting parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
ST*2	Status display	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PE*2	Extension setting No.2 parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
PF*2	Extension setting No.3 parameter	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
ALM*2	Alarm (current alarm J4A extend)	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
	Alarm (alarm history J4A extend)	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
	Alarm (alarm history J5G extend)	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
POS*2	Point table (position)	Decimal	➟12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SPD*2	Point table (speed)	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
ACT*2	Point table (acceleration time constant)	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
DCT*2	Point table (deceleration time constant)	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
DWL*2	Point table (dwell)	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
AUX*2	Point table (auxiliary function)	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
MD*2	Machine diagnosis data	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
GFDS*2	Gear failure diagnosis data	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
ECCDS*2	Encoder communication circuit diagnosis data	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
OTS*2	One-touch tuning data	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
DI*2	External input signal	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
DO*2	External output signal	Decimal	➡12.3.6 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➡12.3.6 ■10 Virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

*3 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer.

Otherwise, read or write at GOT will be erroneous.

*4 Available for the file register of block No. switched with the RSET instruction.

*5 Available for the file register of block number of file name switched with the QDRSET instruction.

*6 Do not use the local device set in a MELSEC-Q system.
Doing so disables the correct monitoring.

*7 ZR1042432 to ZR4184063 cannot be used for GT SoftGOT2000.

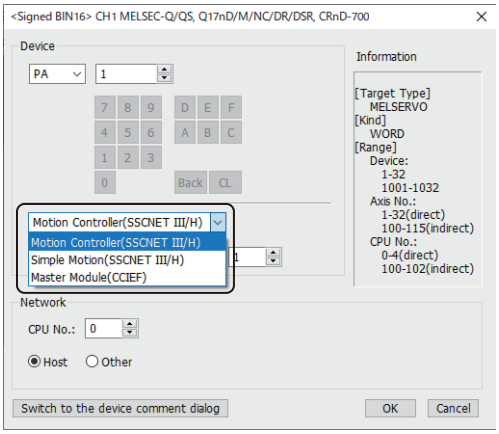
*8 Not available to GT21.

*9 Available to GT21 when a Universal model QCPU is connected only.

■5 Setting virtual word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (QD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (QD77GF).

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PA(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A32-PA1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A32-PA1
	[Master Module(CCIEF)]	PA(Device) • Device (decimal): 1 to 44, 1001 to 1044	PA1
PB	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PB(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	A32-PB1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	UFF-A32-PB1
	[Master Module(CCIEF)]	PB(Device) • Device (decimal): 1 to 92, 1001 to 1092	PB1

Device name	Device notation and setting range		Notation example
PC	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PC(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	A32-PC1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	UFF-A32-PC1
	[Master Module(CCIEF)]	PC(Device) • Device (decimal): 1 to 90, 1001 to 1090	PC1
PD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PD(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A32-PD1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A32-PD1
	[Master Module(CCIEF)]	PD(Device) • Device (decimal): 1 to 72, 1001 to 1072	PD1
PO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PO(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	A32-PO1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	UFF-A32-PO1
PS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PS(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A32-PS1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A32-PS1
PU	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PU(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	A32-PU1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PU(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	UFF-A32-PU1
PT	[Master Module(CCIEF)]	PT(Device) • Device (decimal): 1 to 90, 1001 to 1090	PT1
PL	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PL(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	A32-PL1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	UFF-A32-PL1
	[Master Module(CCIEF)]	PL(Device) • Device (decimal): 1 to 72, 1001 to 1072	PL1
PN	[Master Module(CCIEF)]	PN(Device) • Device (decimal): 1 to 32, 1001 to 1032	PN1
ST	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ST(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	A32-ST0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	UFF-A32-ST0
	[Master Module(CCIEF)]	ST(Device) • Device (decimal): 0 to 48	ST0

Device name	Device notation and setting range		Notation example
PE	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PE(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	A32-PE1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	UFF-A32-PE1
	[Master Module(CCIEF)]	PE(Device) • Device (decimal): 1 to 88, 1001 to 1088	PE1
PF	[Motion Controller(SSCNET III/H)]	A(Axis No.)-PF(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	A32-PF1
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	UFF-A32-PF1
	[Master Module(CCIEF)]	PF(Device) • Device (decimal): 1 to 99, 1001 to 1099	PF1
ALM	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALM(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 11 to 59, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	A32-ALM0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 11 to 59, 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	UFF-A32-ALM0
	[Master Module(CCIEF)]	ALM(Device) • Device (decimal): 0 to 2, 11 to 59, 200 to 215, 220 to 235, 240 to 255	ALM0
POS	[Master Module(CCIEF)]	POS(Device) • Device (decimal): 1 to 255, 1001 to 1255	POS1
SPD	[Master Module(CCIEF)]	SPD(Device) • Device (decimal): 1 to 255, 1001 to 1255	SPD1
ACT	[Master Module(CCIEF)]	ACT(Device) • Device (decimal): 1 to 255, 1001 to 1255	ACT1
DCT	[Master Module(CCIEF)]	DCT(Device) • Device (decimal): 1 to 255, 1001 to 1255	DCT1
DWL	[Master Module(CCIEF)]	DWL(Device) • Device (decimal): 1 to 255, 1001 to 1255	DWL1
AUX	[Master Module(CCIEF)]	AUX(Device) • Device (decimal): 1 to 255, 1001 to 1255	AUX1
MD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-MD(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	A32-MD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	UFF-A32-MD0
	[Master Module(CCIEF)]	MD(Device) • Device (decimal): 0 to 21	MD0
GFDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-GFDS(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A32-GFDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-GFDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A32-GFDS0

Device name	Device notation and setting range		Notation example
ECCDS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ECCDS(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	A32-ECCDS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ECCDS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A32-ECCDS0
OTS	[Motion Controller(SSCNET III/H)]	A(Axis No.)-OTS(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	A32-OTS0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	UFF-A32-OTS0
	[Master Module(CCIEF)]	OTS(Device) • Device (decimal): 0 to 5	OTS0
DI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DI(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	A32-DI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A32-DI0
	[Master Module(CCIEF)]	DI(Device) • Device (decimal): 0 to 6	DI0
DO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-DO(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	A32-DO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	UFF-A32-DO0
	[Master Module(CCIEF)]	DO(Device) • Device (decimal): 0 to 4	DO0

For indirect specification of a module or axis number, refer to the following.

➥12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following shows the availability of writing/reading data to/from word devices by device type.
The GOT can only read data from the device when the QS001CPU is used.
To write data to the consecutive devices of a Q172DR(CR750-Q), use the Q172DR(CR750-Q) with firmware version R6b or later.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
ER	R/W	R/W	R/W	R/W
ZR	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
Ww	R/W	R/W	R/W	R/W
Wr	R/W	R/W	R/W	R/W
LW	R/W	R/W	R/W	R/W
#	R/W	R/W	-/-	R/W
U3E0	R/W	R/W	R/W	R/W
U3E1	R/W	R/W	R/W	R/W
U3E2	R/W	R/W	R/W	R/W
U3E3	R/W	R/W	R/W	R/W
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-
PS	R/W	R/W	-/-	-/-
PU	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
GFDS	R/-	R/-	-/-	-/-
ECCDS	R/-	R/-	-/-	-/-
OTS*1	R/W	R/W	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for OTS0 to OTS5.

■7 Monitoring-supported double-word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following table shows monitoring-supported double-word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.6 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
ALD*2	Life diagnosis	Decimal	➟12.3.6 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
TMI*2	Input signal for test operation (for test operation)	Decimal	➟12.3.6 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
TMO*2	Forced output of signal pin (for test operation)	Decimal	➟12.3.6 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
TMD*2	Set data (for test operation)	Decimal	➟12.3.6 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])	×	×
AL*3	Faults history	Decimal	0 to 899	×	×
LPr*3*4	Parameter (32-bit)	Decimal	0 to 1500	×	×
OP*3	Operation parameter	Decimal	0 to 5	×	×
PV*3	Current value monitor	Decimal	1 to 143	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.6 ■10 Virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

*3 Virtual inverter device

For the details, refer to the following.

➟12.3.6 ■12 Virtual inverter devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

*4 If you specify LPr900 to LPr935, the following item is displayed in the device setting dialog.

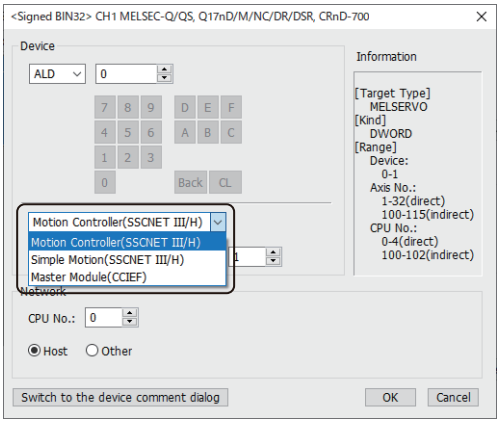
• [Setting items (for calibration parameters)]: [Bias/gain value], [Analog input value]

Enclose the device number in parentheses when selecting [Analog input value].
Example 1) Notation when [Bias/gain value] is selected: LPr900
Example 2) Notation when [Analog input value] is selected: LPr(900)
When LPr900 or LPr901 (Calibration parameter) is specified, selecting [Bias/gain value] or [Analog input value] does not affect the monitoring target.

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Motion Controller(SSCNET III/H)]	Select this item to connect the GOT through a Motion controller. The following item is displayed. • [Axis No.]: Set the axis number to be monitored.
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (QD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network or a Simple Motion module (QD77GF).

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-ALD(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	A32-ALD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A32-ALD0
	[Master Module(CCIEF)]	ALD(Device) • Device (decimal): 0 to 1	ALD0
TMI	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMI(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	A32-TMI0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	UFF-A32-TMI0
	[Master Module(CCIEF)]	TMI(Device) • Device (decimal): 0 to 2	TMI0
TMO	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMO(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0	A32-TMO0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0	UFF-A32-TMO0
	[Master Module(CCIEF)]	TMO(Device) • Device (decimal): 0	TMO0

Device name	Device notation and setting range		Notation example
TMD	[Motion Controller(SSCNET III/H)]	A(Axis No.)-TMD(Device) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	A32-TMD0
	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	UFF-A32-TMD0
	[Master Module(CCIEF)]	TMD(Device) • Device (decimal): 0 to 1, 3	TMD0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following shows the availability of writing/reading data to/from double-word devices by device type.
The GOT can only read data from the device when the QS001CPU is used.
To write data to the consecutive devices of a Q172DR(CR750-Q), use the Q172DR(CR750-Q) with firmware version R6b or later.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-
AL	-/-	R/-	-/-	-/-
LPr	-/-	R/W	-/-	-/-
OP	-/-	R/W	-/-	-/-
PV	-/-	R/-	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟12.3.3 ■10 (1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	➟12.3.3 ■10 (2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	➟12.3.3 ■10 (3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	➟12.3.3 ■10 (4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDI	➟12.3.3 ■10 (5) Gear failure diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDI	➟12.3.3 ■10 (6) Encoder communication circuit diagnosis instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	➟12.3.3 ■10 (7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	➟12.3.3 ■10 (8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	➟12.3.3 ■10 (9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Reference
PD	➟12.3.3 ■10 (10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PO	➟12.3.3 ■10 (11) Option unit parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PS	➟12.3.3 ■10 (12) Special parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PU	➟12.3.3 ■10 (13) Multi encoder parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PT	➟12.3.3 ■10 (14) Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PL	➟12.3.3 ■10 (15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PN	➟12.3.3 ■10 (16) Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	➟12.3.3 ■10 (18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	➟12.3.3 ■10 (19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	➟12.3.3 ■10 (20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	➟12.3.3 ■10 (22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
POS	➟12.3.3 ■10 (24) Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
SPD	➟12.3.3 ■10 (25) Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ACT	➟12.3.3 ■10 (26) Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DCT	➟12.3.3 ■10 (27) Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DWL	➟12.3.3 ■10 (28) Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AUX	➟12.3.3 ■10 (29) Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	➟12.3.3 ■10 (31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
GFDS	➟12.3.3 ■10 (32) Gear failure diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ECCDS	➟12.3.3 ■10 (33) Encoder communication circuit diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	➟12.3.3 ■10 (34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	➟12.3.3 ■10 (35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) 12.3.3 ■10 (37) External input signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	➟12.3.3 ■10 (42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]) 12.3.3 ■10 (44) External output signal in MR-J5(W)-□B(-RJ) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	➟12.3.3 ■10 (49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	➟12.3.3 ■10 (50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	➟12.3.3 ■10 (51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	➟12.3.3 ■10 (52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■11 Precautions for virtual servo amplifier devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■12 Virtual inverter devices ([MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700], [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.

Virtual device name	Reference
IOST	➟12.3.3 ■12 (1) I/O terminal monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
CMD	➟12.3.3 ■12 (2) Operation command ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AL	➟12.3.3 ■12 (5) Alarm history ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
LPr	➟12.3.3 ■12 (6) Parameter (32-bit) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OP	➟12.3.3 ■12 (7) Operation parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PV	➟12.3.3 ■12 (8) Current value monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.7 [MELSEC QnA, MELDAS C6*]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC QnA, MELDAS C6*])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSEC QnA, MELDAS C6*])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSEC QnA, MELDAS C6*])
	➟■4 Availability of writing/reading data to/from word devices ([MELSEC QnA, MELDAS C6*])

■1 Monitoring-supported bit devices ([MELSEC QnA, MELDAS C6*])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.7 ■2 Availability of writing/reading data to/from bit devices ([MELSEC QnA, MELDAS C6*])

○: Available
×: Not available

Device name*3*4		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 3FFF	0000 to 1FFF	○	○
Y	Output relay	Hexadecimal	0000 to 3FFF	0000 to 1FFF	○	○
B	Link relay	Hexadecimal	0000 to 7FFF	0000 to 7FFF	○	○
M*2	Internal relay	Decimal	0 to 32767	0 to 32767	○	○
L	Latch relay	Decimal	0 to 32767	0 to 32767	○	○
S	Step relay	Decimal	0 to 32767	0 to 32767	○	○
F	Annunciator	Decimal	0 to 32767	0 to 32767	○	○
TC*2	Timer coil	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
TT*2	Timer contact	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
CC*2	Counter coil	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
CT*2	Counter contact	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
SC*2	Retentive timer coil	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
SS*2	Retentive timer contact	Decimal	0 to 32767	0 to 32767	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	0000 to 07FF	0000 to 07FF	○	○
SM	Special relay	Decimal	0 to 2047	0 to 2047	○	○
RX	Remote input	Hexadecimal	000 to 7FF	-	○	○
RY	Remote output	Hexadecimal	000 to 7FF	-	○	○

Device name*3*4		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
LB	Link relay	Hexadecimal	0000 to 7FFF	-	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Do not use the local device set in a MELSEC-Q system.
Doing so disables the correct monitoring.

*3 When monitoring MELDAS C6/C64, if a word device outside the range is set, the value will be indefinite.
If a bit device outside the range is set, the object may not be displayed or the set function may fail to operate.
Check the set device using the device list of GT Designer3.

*4 Devices used by the MELDAS C6/C64 system cannot be used.

■2 Availability of writing/reading data to/from bit devices ([MELSEC QnA, MELDAS C6*])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LB	R/W	-/-	R/W	R/W	-/-

■3 Monitoring-supported word devices ([MELSEC QnA, MELDAS C6*])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.7 ■4 Availability of writing/reading data to/from word devices ([MELSEC QnA, MELDAS C6*])

○: Available
×: Not available

Device name*9*10		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
TN*6	Timer current value	Decimal	0 to 32767	0 to 32767	○	○
CN*6	Counter current value	Decimal	0 to 32767	0 to 32767	○	○

Device name[*9*10]		Device No. representation	Setting range		Specifications of EG devices[*1]	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
SN[*6]	Retentive timer current value	Decimal	0 to 32767	0 to 32767	○	○
D[*6]	Data register	Decimal	0 to 32767	0 to 32767	○	○
SD	Special register	Decimal	0 to 2047	0 to 2047	○	○
W	Link register	Hexadecimal	0000 to 7FFF	0000 to 7FFF	○	○
SW	Link special register	Hexadecimal	0000 to 07FF	0000 to 07FF	○	○
R[*2*3*5]	File register	Decimal	0 to 32767	0 to 32767	○	○
ER[*2*7]	Extension file register(Block)	Decimal	ER(R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 255 • Device (decimal): 0 to 32767	-	○	○
ZR[*2*4*5*7]	Extension file register	Decimal	0 to 1042431	-	○	○
Z	Index register	Decimal	0 to 15	0 to 15	○	○ (Not usable as bit data)
G[*7*8]	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No. (hexadecimal): 00 to FF • Device (decimal): 0 to 65535	-	○	○
Ww[*7]	Remote register	Hexadecimal	0000 to 1FFF	-	○	○
Wr[*7]	Remote register	Hexadecimal	0000 to 1FFF	-	○	○
LW	Link register	Hexadecimal	00000 to 1FFFF	-	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer.
(With exceptions of MELSEC-QnA)
Otherwise, read or write at GOT will be erroneous.

*3 Available for the file register of block No. switched with the RSET instruction.

*4 Available for the file register of block number of file name switched with the QDRSET instruction.

*5 Set a value within the range of registers that exist in the PLC

*6 Do not use the local device set in a MELSEC-Q system.
Doing so disables the correct monitoring.

*7 This cannot be monitored when the GOT multi-drop is connected.

*8 Only the intelligent function module on the station connected to GOT can be specified.
Set the buffer memory within the address range of the buffer memory existing in the intelligent function module.

*9 When monitoring MELDAS C6/C64, if a word device outside the range is set, the value will be indefinite.
If a bit device outside the range is set, the object may not be displayed or the set function may fail to operate.
Check the set device using the device list of GT Designer3.

*10 Devices used by the MELDAS C6/C64 system cannot be used.

■4 Availability of writing/reading data to/from word devices ([MELSEC QnA, MELDAS C6*])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	R/W
SD	R/W	R/W	-/-	R/W
W	R/W	R/W	-/-	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W
ER	R/W	R/W	-/-	R/W
ZR	R/W	R/W	-/-	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	-/-	R/W
Ww	R/W	R/W	-/-	R/W
Wr	R/W	R/W	-/-	R/W
LW	R/W	R/W	-/-	R/W

12.3.8 [MELSEC-L]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➡■1 Monitoring-supported bit devices ([MELSEC-L])
	➡■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])
	➡■3 Availability of writing/reading data to/from bit devices ([MELSEC-L])
Specifications of word devices	➡■4 Monitoring-supported word devices ([MELSEC-L])
	➡■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])
	➡■6 Availability of writing/reading data to/from word devices ([MELSEC-L])
Specifications of double-word devices	➡■7 Monitoring-supported double-word devices ([MELSEC-L])
	➡■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])
	➡■9 Availability of writing/reading data to/from double-word devices ([MELSEC-L])
Specifications of virtual servo amplifier devices	➡■10 Virtual servo amplifier devices ([MELSEC-L])
	➡■11 Precautions for virtual servo amplifier devices ([MELSEC-L])
Specifications of virtual inverter devices	➡■12 Virtual inverter devices ([MELSEC-L])

■1 Monitoring-supported bit devices ([MELSEC-L])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.8 ■3 Availability of writing/reading data to/from bit devices ([MELSEC-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 3FFF	○	○
Y	Output relay	Hexadecimal	0000 to 3FFF	○	○
B	Link relay	Hexadecimal	0000 to EFFF	○	○
M*4	Internal relay	Decimal	0 to 61439	○	○
L	Latch relay	Decimal	0 to 32767	○	○
S	Step relay	Decimal	0 to 8191	○	○
F	Annunciator	Decimal	0 to 32767	○	○
TC*4	Timer coil	Decimal	0 to 32767	○	○ (Not usable as word data)
TT*4	Timer contact	Decimal	0 to 32767	○	○ (Not usable as word data)
CC*4	Counter coil	Decimal	0 to 32767	○	○ (Not usable as word data)
CT*4	Counter contact	Decimal	0 to 32767	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SC*4	Retentive timer coil	Decimal	0 to 32767	○	○ (Not usable as word data)
SS*4	Retentive timer contact	Decimal	0 to 32767	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	0000 to 7FFF	○	○
SM	Special relay	Decimal	0 to 2047	○	○
RX	Remote input	Hexadecimal	0000 to 3FFF	○	○
RY	Remote output	Hexadecimal	0000 to 3FFF	○	○
SP*2	Servo amplifier request	Decimal	➟12.3.8 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])	×	×
OM*2	Operation mode selection	Decimal	➟12.3.8 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])	×	×
TMB*2	Instruction demand (for test operation)	Decimal	➟12.3.8 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])	×	×
OTI*2	One-touch tuning instruction	Decimal	➟12.3.8 ■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])	×	×
IOST*3	I/O terminal monitor	Decimal	0 to 127	×	×
CMD*3	Operation command	Decimal	0 to 63	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.8 ■10 Virtual servo amplifier devices ([MELSEC-L])

*3 Virtual inverter device

For the details, refer to the following.

➟12.3.8 ■12 Virtual inverter devices ([MELSEC-L])

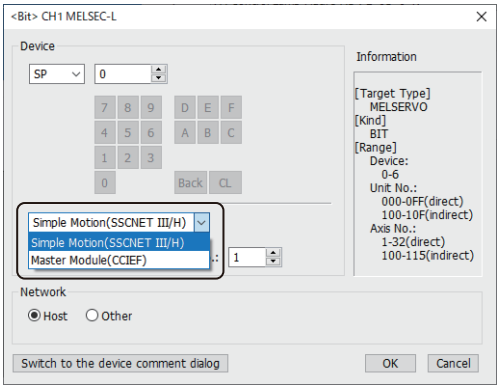
*4 Do not use the local device set in a MELSEC-L system.

If used, the correct monitoring is disabled.

D32768 or later can be used for data register (D).

■2 Setting virtual bit devices for servo amplifiers ([MELSEC-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.
Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (LD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
SP	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-SP(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A32-SP0
	[Master Module(CCIEF)]	SP(Device) • Device (decimal): 0 to 6	SP0
OM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	UFF-A32-OM0
	[Master Module(CCIEF)]	OM(Device) • Device (decimal): 0 to 2, 4 to 5	OM0
TMB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	UFF-A32-TMB1
	[Master Module(CCIEF)]	TMB(Device) • Device (decimal): 1 to 6	TMB1
OTI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	UFF-A32-OTI0
	[Master Module(CCIEF)]	OTI(Device) • Device (decimal): 0 to 5	OTI0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■3 Availability of writing/reading data to/from bit devices ([MELSEC-L])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
S	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
IOST	R/-	-/-	-/-	-/-	-/-
CMD	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MELSEC-L])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.8 ■6 Availability of writing/reading data to/from word devices ([MELSEC-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TN*6	Timer current value	Decimal	0 to 32767	○	○
CN*6	Counter current value	Decimal	0 to 32767	○	○
SN*6	Retentive timer current value	Decimal	0 to 32767	○	○
D*6	Data register	Decimal	0 to 421887	○	○
SD	Special register	Decimal	0 to 2047	○	○
W	Link register	Hexadecimal	00000 to 66FFF	○	○
SW	Link special register	Hexadecimal	0000 to 7FFF	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
R[*3*4]	File register	Decimal	0 to 32767	○	○
ZR[*3*5]	Extension file register	Decimal	0 to 393215	○	○
Z	Index register	Decimal	0 to 19	○	○ (Not usable as bit data)
G	Buffer memory (Intelligent function module)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G100 • Unit No.(hexadecimal): 00 to FF • Device (decimal): 0 to 65535 For the unit No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	○	○
Ww[*7]	Remote register	Hexadecimal	0000 to 1FFF	○	○
Wr[*7]	Remote register	Hexadecimal	0000 to 1FFF	○	○
PA[*2]	Basic parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PB[*2]	Gain filter parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PC[*2]	Extension setting parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PD[*2]	I/O setting parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PT[*2]	Positioning control parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PL[*2]	Linear servo motor/DD motor setting parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PN[*2]	Network setting parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
ST[*2*7]	Status display	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PE[*2]	Extension setting No.2 parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
PF[*2]	Extension setting No.3 parameter	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
ALM[*2*7]	Alarm (current alarm J4A extend)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
ALM[*2*7]	Alarm (alarm history J4A extend)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
POS[*2]	Point table (position)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
SPD[*2]	Point table (speed)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
ACT[*2]	Point table (acceleration time constant)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
DCT[*2]	Point table (deceleration time constant)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
DWL[*2]	Point table (dwell)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
AUX[*2]	Point table (auxiliary function)	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
MD*2*7	Machine diagnosis data	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
OTS*2*7	One-touch tuning data	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
DI*2	External input signal	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×
DO*2*7	External output signal	Decimal	➟12.3.8 ■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.8 ■10 Virtual servo amplifier devices ([MELSEC-L])

*3 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program.] by the PLC parameter of GX Developer.

Otherwise, read or write at GOT will be erroneous.

*4 Available for the file register of block No. switched with the RSET instruction.

*5 Available for the file register of block number of file name switched with the QDRSET instruction.

*6 Do not use the local device set in a MELSEC-L system.

If used, the correct monitoring is disabled.

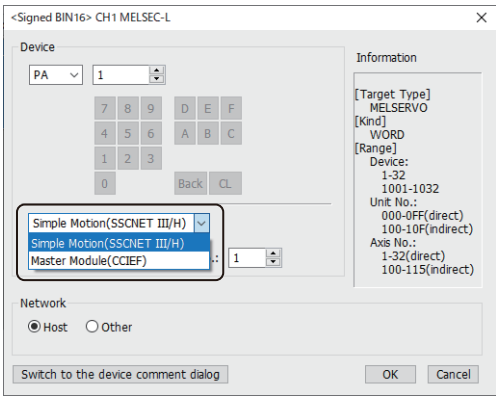
D32768 or later can be used for data register (D).

*7 This cannot be monitored when the GOT multi-drop is connected.

■5 Setting virtual word devices for servo amplifiers ([MELSEC-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (LD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
PA	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PA(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	UFF-A32-PA1
	[Master Module(CCIEF)]	PA(Device) • Device (decimal): 1 to 32, 1001 to 1032	PA1
PB	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PB(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A32-PB1
	[Master Module(CCIEF)]	PB(Device) • Device (decimal): 1 to 64, 1001 to 1064	PB1
PC	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PC(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 80, 1001 to 1080	UFF-A32-PC1
	[Master Module(CCIEF)]	PC(Device) • Device (decimal): 1 to 80, 1001 to 1080	PC1
PD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 48, 1001 to 1048	UFF-A32-PD1
	[Master Module(CCIEF)]	PD(Device) • Device (decimal): 1 to 48, 1001 to 1048	PD1
PT	[Master Module(CCIEF)]	PT(Device) • Device (decimal): 1 to 80, 1001 to 1080	PT1
PL	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PL(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 48, 1001 to 1048	UFF-A32-PL1
	[Master Module(CCIEF)]	PL(Device) • Device (decimal): 1 to 48, 1001 to 1048	PL1
PN	[Master Module(CCIEF)]	PN(Device) • Device (decimal): 1 to 32, 1001 to 1032	PN1
ST	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ST(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	UFF-A32-ST0
	[Master Module(CCIEF)]	ST(Device) • Device (decimal): 0 to 48	ST0
PE	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PE(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A32-PE1
	[Master Module(CCIEF)]	PE(Device) • Device (decimal): 1 to 64, 1001 to 1064	PE1
PF	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-PF(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 64, 1001 to 1064	UFF-A32-PF1
	[Master Module(CCIEF)]	PF(Device) • Device (decimal): 1 to 64, 1001 to 1064	PF1
ALM	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALM(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 11 to 59, 200 to 215, 220 to 235, 240 to 255	UFF-A32-ALM0
	[Master Module(CCIEF)]	ALM(Device) • Device (decimal): 0 to 1, 11 to 59, 200 to 215, 220 to 235, 240 to 255	ALM0

Device name	Device notation and setting range		Notation example
POS	[Master Module(CCIEF)]	POS(Device) • Device (decimal): 1 to 255, 1001 to 1255	POS1
SPD	[Master Module(CCIEF)]	SPD(Device) • Device (decimal): 1 to 255, 1001 to 1255	SPD1
ACT	[Master Module(CCIEF)]	ACT(Device) • Device (decimal): 1 to 255, 1001 to 1255	ACT1
DCT	[Master Module(CCIEF)]	DCT(Device) • Device (decimal): 1 to 255, 1001 to 1255	DCT1
DWL	[Master Module(CCIEF)]	DWL(Device) • Device (decimal): 1 to 255, 1001 to 1255	DWL1
AUX	[Master Module(CCIEF)]	AUX(Device) • Device (decimal): 1 to 255, 1001 to 1255	AUX1
MD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-MD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 18	UFF-A32-MD0
	[Master Module(CCIEF)]	MD(Device) • Device (decimal): 0 to 18	MD0
OTS	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-OTS(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 3	UFF-A32-OTS0
	[Master Module(CCIEF)]	OTS(Device) • Device (decimal): 0 to 3	OTS0
DI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	UFF-A32-DI0
	[Master Module(CCIEF)]	DI(Device) • Device (decimal): 0 to 6	DI0
DO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-DO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	UFF-A32-DO0
	[Master Module(CCIEF)]	DO(Device) • Device (decimal): 0 to 4	DO0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from word devices ([MELSEC-L])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	R/W	R/W
SD	R/W	R/W	R/W	R/W
W	R/W	R/W	R/W	R/W

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	R/W	R/W
ZR	R/W	R/W	R/W	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	R/W	R/W
Ww	R/W	R/W	R/W	R/W
Wr	R/W	R/W	R/W	R/W
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

■7 Monitoring-supported double-word devices ([MELSEC-L])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.8 ■9 Availability of writing/reading data to/from double-word devices ([MELSEC-L])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
ALD[*2]	Life diagnosis	Decimal	➡12.3.8 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])	×	×
TMI[*2]	Input signal for test operation (for test operation)	Decimal	➡12.3.8 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])	×	×
TMO[*2]	Forced output of signal pin (for test operation)	Decimal	➡12.3.8 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])	×	×
TMD[*2]	Set data (for test operation)	Decimal	➡12.3.8 ■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
AL*3	Faults history	Decimal	0 to 899	×	×
LPr*3	Parameter (32-bit)	Decimal	0 to 1500	×	×
OP*3	Operation parameter	Decimal	0 to 5	×	×
PV*3	Current value monitor	Decimal	1 to 143	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Virtual servo amplifier device

For the details, refer to the following.

➟12.3.8 ■10 Virtual servo amplifier devices ([MELSEC-L])

*3 Virtual inverter device

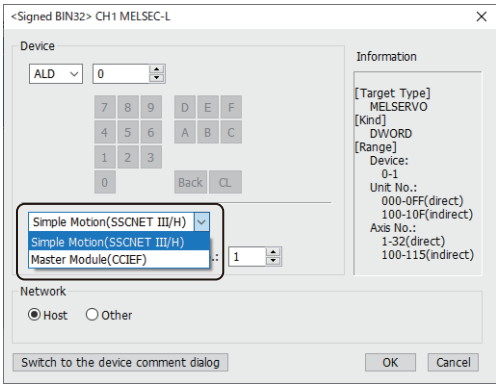
For the details, refer to the following.

➟12.3.8 ■12 Virtual inverter devices ([MELSEC-L])

■8 Setting virtual double-word devices for servo amplifiers ([MELSEC-L])

For virtual servo amplifier devices, the notation differs according to the connection type between the GOT and the servo amplifier.

Select one of the following according to the control type in the device setting dialog.



Item	Description
[Simple Motion(SSCNET III/H)]	Select this item to connect the GOT through a Simple Motion module (LD77MS). The following item is displayed. • [Unit No.]: Set the first 2 digits of the 3-digit number that represents the start I/O number of the Simple Motion module. • [Axis No.]: Set the axis number to be monitored.
[Master Module(CCIEF)]	Select this item to connect the GOT through the master station on the CC-Link IE Field Network.

The following shows the notation and setting range of virtual devices.

Device name	Device notation and setting range		Notation example
ALD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-ALD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	UFF-A32-ALD0
	[Master Module(CCIEF)]	ALD(Device) • Device (decimal): 0 to 1	ALD0
TMI	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMI(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	UFF-A32-TMI0
	[Master Module(CCIEF)]	TMI(Device) • Device (decimal): 0 to 2	TMI0

Device name	Device notation and setting range		Notation example
TMO	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMO(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0	UFF-A32-TMO0
	[Master Module(CCIEF)]	TMO(Device) • Device (decimal): 0	TMO0
TMD	[Simple Motion(SSCNET III/H)]	U(Unit No.)-A(Axis No.)-TMD(Device) • Unit No. (hexadecimal): 00 to FF (direct), 100 to 10F (indirect) • Axis No. (decimal): 1 to 32 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	UFF-A32-TMD0
	[Master Module(CCIEF)]	TMD(Device) • Device (decimal): 0 to 1, 3	TMD0

For indirect specification of a module or axis number, refer to the following.

➟12.3.3 ■2 (1) Indirect specification of a module number ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■9 Availability of writing/reading data to/from double-word devices ([MELSEC-L])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-
AL	-/-	R/-	-/-	-/-
LPr	-/-	R/W	-/-	-/-
OP	-/-	R/W	-/-	-/-
PV	-/-	R/-	-/-	-/-

■10 Virtual servo amplifier devices ([MELSEC-L])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟12.3.3 ■10 (1) Servo amplifier request ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OM	➟12.3.3 ■10 (2) Operation mode selection ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMB	➟12.3.3 ■10 (3) Instruction demand (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTI	➟12.3.3 ■10 (4) One-touch tuning instruction ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PA	➟12.3.3 ■10 (7) Basic parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PB	➟12.3.3 ■10 (8) Gain filter parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PC	➟12.3.3 ■10 (9) Extension setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PD	➟12.3.3 ■10 (10) I/O setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PT	➟12.3.3 ■10 (14) Positioning control parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

Virtual device name	Reference
PL	➟12.3.3 ■10 (15) Motor extension parameter, linear servo motor/DD motor setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PN	➟12.3.3 ■10 (16) Network setting parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ST	➟12.3.3 ■10 (18) Status display ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PE	➟12.3.3 ■10 (19) Extension setting No.2 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PF	➟12.3.3 ■10 (20) Extension setting No.3 parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALM	➟12.3.3 ■10 (22) Alarm ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
POS	➟12.3.3 ■10 (24) Point table (position) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
SPD	➟12.3.3 ■10 (25) Point table (speed) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ACT	➟12.3.3 ■10 (26) Point table (acceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DCT	➟12.3.3 ■10 (27) Point table (deceleration time constant) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DWL	➟12.3.3 ■10 (28) Point table (dwell) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AUX	➟12.3.3 ■10 (29) Point table (auxiliary function) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
MD	➟12.3.3 ■10 (31) Machine diagnosis data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OTS	➟12.3.3 ■10 (34) One-touch tuning data ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DI	➟12.3.3 ■10 (35) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
DO	➟12.3.3 ■10 (42) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
ALD	➟12.3.3 ■10 (49) Life Diagnosis ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMI	➟12.3.3 ■10 (50) Input signal for test operation (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMO	➟12.3.3 ■10 (51) Forced output of signal pin (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
TMD	➟12.3.3 ■10 (52) Set data (for test operation) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■11 Precautions for virtual servo amplifier devices ([MELSEC-L])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■12 Virtual inverter devices ([MELSEC-L])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.

Virtual device name	Reference
IOST	➟12.3.3 ■12 (1) I/O terminal monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
CMD	➟12.3.3 ■12 (2) Operation command ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
AL	➟12.3.3 ■12 (5) Alarm history ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
LPr	➟12.3.3 ■12 (6) Parameter (32-bit) ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
OP	➟12.3.3 ■12 (7) Operation parameter ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])
PV	➟12.3.3 ■12 (8) Current value monitor ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.9 [MELSEC-A]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➡■1 Monitoring-supported bit devices ([MELSEC-A])
	➡■2 Availability of writing/reading data to/from bit devices ([MELSEC-A])
Specifications of word devices	➡■3 Monitoring-supported word devices ([MELSEC-A])
	➡■4 Availability of writing/reading data to/from word devices ([MELSEC-A])

■1 Monitoring-supported bit devices ([MELSEC-A])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.9 ■2 Availability of writing/reading data to/from bit devices ([MELSEC-A])

For monitoring-supported bit devices in the multi-drop connection, refer to the range for GT21 and GS21 in the following table.
○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
X	Input relay	Hexadecimal	0000 to 1FFF	0000 to 1FFF	○	○
Y	Output relay	Hexadecimal	0000 to 1FFF	0000 to 1FFF	○	○
B	Link relay	Hexadecimal	0000 to 7FFF	0000 to 1FFF	○	○
M	Internal relay	Decimal	0 to 8999 9256 to 32767	0 to 8999	○	○
M*2	Special internal relay	Decimal	9000 to 9255	9000 to 9255	○	○
L	Latch relay	Decimal	0 to 32767	0 to 8191	○	○
F	Annunciator	Decimal	0 to 32767	0 to 2047	○	○
TC	Timer coil	Decimal	0 to 32767	0 to 2047	○	○ (Not usable as word data)
TT	Timer contact	Decimal	0 to 32767	0 to 2047	○	○ (Not usable as word data)
CC	Counter coil	Decimal	0 to 32767	0 to 1023	○	○ (Not usable as word data)
CT	Counter contact	Decimal	0 to 32767	0 to 1023	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	0000 to 07FF	-	○	○
RX	Remote input	Hexadecimal	000 to 7FF	-	○	○
RY	Remote output	Hexadecimal	000 to 7FF	-	○	○
LB	Link relay	Hexadecimal	0000 to 1FFF	-	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 If the special internal relay (M) is converted to the word device, treat 9000 of the device No. as 0 and set in multiples of 16.

Example) M9000, M9016, M9240

■2 Availability of writing/reading data to/from bit devices ([MELSEC-A])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-
LB	R/W	-/-	R/W	R/W	-/-

■3 Monitoring-supported word devices ([MELSEC-A])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.9 ■4 Availability of writing/reading data to/from word devices ([MELSEC-A])

For monitoring-supported word devices in the multi-drop connection, refer to the range for GT21 and GS21 in the following table.
○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
TN	Timer current value	Decimal	0 to 32767	0 to 2047	○	○
CN	Counter current value	Decimal	0 to 32767	0 to 1023	○	○
D	Data register	Decimal	0 to 8999 9256 to 32767	0 to 8999	○	○
D	Special data register	Decimal	9000 to 9255	9000 to 9255	○	○
W	Link register	Hexadecimal	0000 to 7FFF	0000 to 1FFF	○	○
SW	Link special register	Hexadecimal	0000 to 07FF	-	○	○
R	File register	Decimal	0 to 32767	0 to 8191	○	○
ER	Extension file register(Block)	Decimal	ER(R block)-(Device) Notation example: ER255-100 • R block (decimal): 0 to 255 • Device (decimal): 0 to 8191	-	○	○
ZR	Extension file register	Decimal	0 to 1042431	-	○	○

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, GT SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
Z	Index register	Decimal	0 to 6	0 to 6	○	○ (Not usable as bit data)
V	Index register	Decimal	0 to 6	0 to 6	○	○ (Not usable as bit data)
BM*2	Buffer memory (Intelligent function module)	Decimal	GM(R block)-(Device) Notation example: BMFF-100 • BM start No. (hexadecimal): 00 to FF • Device (decimal): 0 to 32767 For the BM start No., set the first 2 digits of the 3-digit number that represents the start I/O number of the buffer memory for the intelligent function module.	-	○	○ (Not usable as bit data)
Ww	Remote register	Hexadecimal	000 to 7FF	-	○	○
Wr	Remote register	Hexadecimal	000 to 7FF	-	○	○
LW	Link register	Hexadecimal	0000 to 1FFF	-	○	○
A	Accumulator	Decimal	0 to 1	0 to 1	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Only the intelligent function module on the station connected to GOT can be specified.
Set the buffer memory within the address range of the buffer memory existing in the intelligent function module.

■4 Availability of writing/reading data to/from word devices ([MELSEC-A])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	R/W
CN	R/W	R/W	-/-	R/W
D	R/W	R/W	-/-	R/W
W	R/W	R/W	-/-	R/W
SW	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W
ER*1	R/W	R/W	-/-	R/W
ZR	R/W	R/W	-/-	R/W
Z*2	R/W	R/W	-/-	-/-
V*2	R/W	R/W	-/-	R/W
BM	R/W	R/W	-/-	-/-
Ww	R/W	R/W	-/-	R/W
Wr	R/W	R/W	-/-	R/W
LW	R/W	R/W	-/-	R/W
A*3	R/W	R/W	-/-	R/W

*1 In the computer link connection, the bit specification writing of the word device to the ER29-0 (block 29 of the extension file register) or later of A3ACPU, A3UCPU, A4UCPU is not available.
When the bit specification writing of the word device is required, use the range of block No. 0 to 28.

*2 In the computer link connection, writing to the index register (such as the touch switch function and numerical input function) is not available.

*3 In the multi-drop connection (computer link connection between the CPU and the serial multi-drop connection unit), reading/writing data from/to an accumulator is not available.

12.3.10 [MELSEC-FX]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➡■1 Monitoring-supported bit devices ([MELSEC-FX])
	➡■2 Availability of writing/reading data to/from bit devices ([MELSEC-FX])
Specifications of word devices	➡■3 Monitoring-supported word devices ([MELSEC-FX])
	➡■4 Setting the buffer memory device ([MELSEC-FX])
	➡■5 Availability of writing/reading data to/from word devices ([MELSEC-FX])
Protection with a keyword	➡■6 Protection using a keyword ([MELSEC-FX])

■1 Monitoring-supported bit devices ([MELSEC-FX])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.10 ■2 Availability of writing/reading data to/from bit devices ([MELSEC-FX])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Octal	0000 to 0377	○	○
Y	Output relay	Octal	0000 to 0377	○	○
M	Auxiliary relay	Decimal	0 to 7679	○	○
M	Special aux relay	Decimal	8000 to 8511	○	○
S	State	Decimal	0 to 4095	○	○
T	Timer contact	Decimal	0 to 511	○	○ (Not usable as word data)
C	Counter contact	Decimal	0 to 255	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSEC-FX])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
S	R/W	-/-	R/W	R/W	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSEC-FX])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.10 ■5 Availability of writing/reading data to/from word devices ([MELSEC-FX])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T	Timer current value	Decimal	0 to 511	○	○
C*3	Counter current value	Decimal	0 to 255	○	○
D	Data register	Decimal	0 to 7999	○	○
D	Special data register	Decimal	8000 to 8511	○	○
R	Extension register	Decimal	0 to 32767	○	○
Z	Index register	Decimal	0 to 7	○	○ (Not usable as bit data)
V	Index register	Decimal	0 to 7	○	○ (Not usable as bit data)
BM*5	Buffer memory	Decimal	➟12.3.10 ■4 Setting the buffer memory device ([MELSEC-FX])	○	○
TS*2*4*6	Timer set value	Decimal	0 to 511	○	○
CS*3*4*6	Counter set value	Decimal	0 to 255	○	○

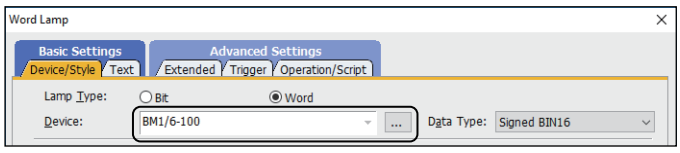
*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.
➟10.13 Monitoring a Controller through a GOT (Server/Client Function)
*2 Only 16-bit (1-word) specification is possible.
*3 For CS0 to CS199 and C0 to C199, only 16-bit (1-word) specification is allowed.
For CS200 to CS255 and C200 to C255, only 32-bit (2-word) specification is allowed.
*4 The setting values of the timer and counter, which are not used for the program, cannot be monitored.
If monitoring is executed, a reading error occurs.
*5 Usable only for special blocks or special units compatible with FX1N, FX1NC, FX2N, FX2NC, FX3G, FX3GC, FX3U, or FX3UC.
(Except FX0N-3A, FX2N-2AD, and FX2N-2DA)
*6 GT SoftGOT2000 and GT Simulator3 cannot monitor the set values.

■4 Setting the buffer memory device ([MELSEC-FX])

(1) Buffer memory format ([MELSEC-FX])

The following shows the format in the setting dialog of objects or others.

Example) Unit No.: 1, MASK: 6, Device: 100



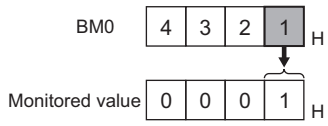
Device name	Format
Buffer memory	BM(Unit No.)/(MASK)-(Device)

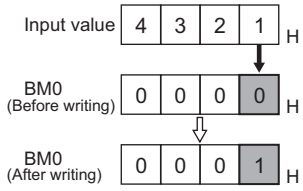
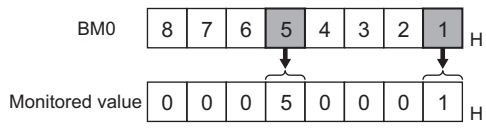
The buffer memory format includes the following elements.

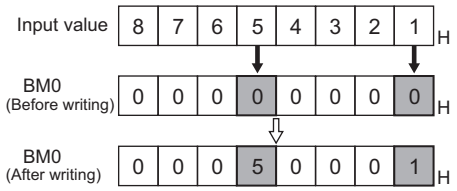
Item	Description	
MASK	Setting range	0 to 6
	Device No. representation	Decimal
	Explanation	Set this item when only specific bit of the buffer memory is monitored or written. When this item is 0, /(MASK) is unnecessary. For the processing corresponding to each setting value, refer to the following. "➡12.3.10 ■4 (2) MASK setting ([MELSEC-FX])"
Unit No.	Setting range	0 to 7 (direct), 100 to 115 (indirect)
	Device No. representation	Decimal
	Explanation	Set the unit No. of the special block or special unit to be monitored or written. The unit No. (No.0 to No.7) is assigned to the unit or block in order of distance from the main unit. For the details of the unit No., refer to the following. "➡User's Manual (Hardware) of the MELSEC-FX used For indirect specification of a unit No., refer to the following. "➡12.3.10 ■4 (3) Indirect specification of a unit No. ([MELSEC-FX])
Device	Setting range	0 to 32767
	Device No. representation	Decimal
	Explanation	Buffer memory

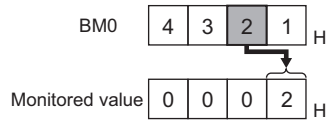
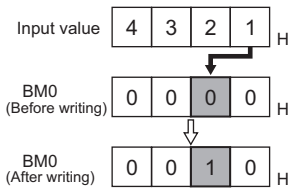
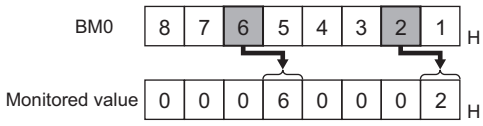
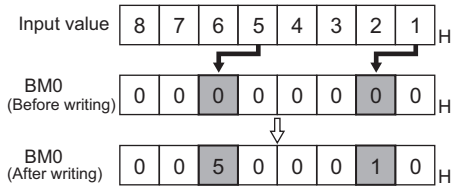
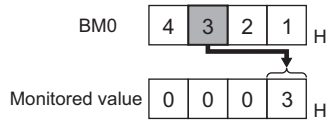
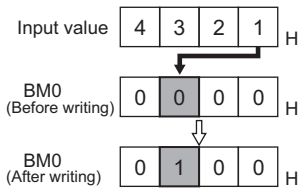
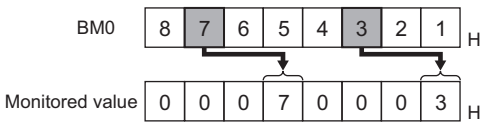
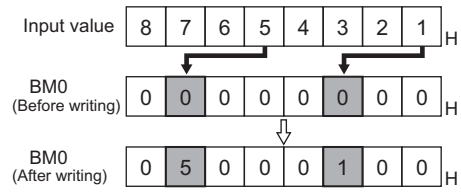
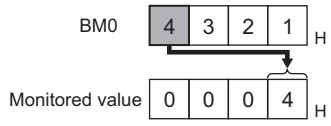
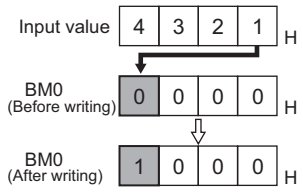
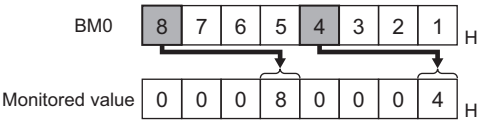
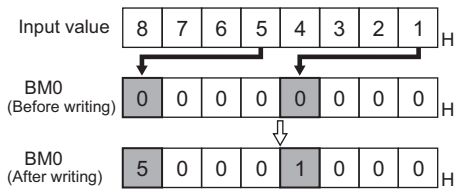
(2) MASK setting ([MELSEC-FX])

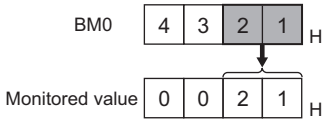
The following shows the processing corresponding to each setting value for MASK.

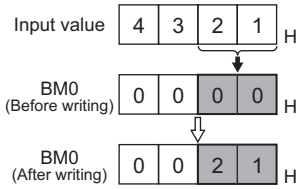
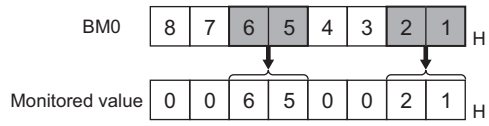
<table>
<tr><th rowspan="2">MASK</th><th colspan="2">Processing</th></tr>
<tr><th>Data type: 16-bit</th><th>Data type: 32-bit</th></tr>
<tr><td>0</td><td colspan="2">The buffer memory value is monitored or written.</td></tr>
<tr><td>1</td><td>Only b0 to b3 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 4321H with MASK 1: Monitored value = 0001H
 

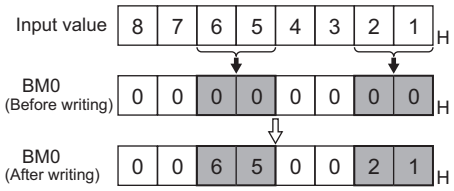
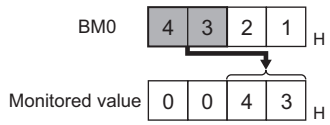
Example) Writing the input value (4321H) to BM0 = 0000H with MASK 1: BM0 = 0001H
 
</td><td>Only b0 to b3 and b16 to b19 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 87654321H with MASK 1: Monitored value = 00050001H
 

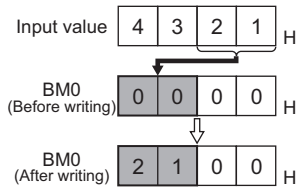
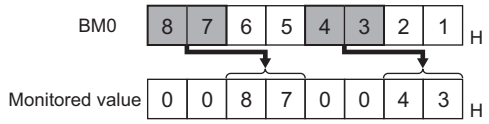
Example) Writing the input value (87654321H) to BM0 = 00000000H with MASK 1: BM0 = 00050001H
 
</td></tr>
</table>

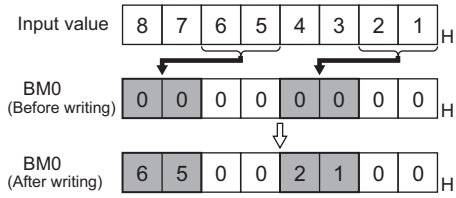
MASK	Processing	
	Data type: 16-bit	Data type: 32-bit
2	Only b4 to b7 of the buffer memory is monitored or written. Example) Monitoring BM0 = 4321H with MASK 2: Monitored value = 0002H  Example) Writing the input value (4321H) to BM0 = 0000H with MASK 2: BM0 = 0010H  	Only b4 to b7 and b20 to b23 of the buffer memory is monitored or written. Example) Monitoring BM0 = 87654321H with MASK 2: Monitored value = 00060002H  Example) Writing the input value (87654321H) to BM0 = 00000000H with MASK 2: BM0 = 00500010H 
3	Only b8 to b11 of the buffer memory is monitored or written. Example) Monitoring BM0 = 4321H with MASK 3: Monitored value = 0003H  Example) Writing the input value (4321H) to BM0 = 0000H with MASK 3: BM0 = 0100H  	Only b8 to b11 and b28 to b31 of the buffer memory is monitored or written. Example) Monitoring BM0 = 87654321H with MASK 3: Monitored value = 00070003H  Example) Writing the input value (87654321H) to BM0 = 00000000H with MASK 3: BM0 = 00050001H 
4	Only b12 to b15 of the buffer memory is monitored or written. Example) Monitoring BM0 = 4321H with MASK 4: Monitored value = 0004H  Example) Writing the input value (4321H) to BM0 = 0000H with MASK 4: BM0 = 1000H  	Only b12 to b15 and b28 to b31 of the buffer memory is monitored or written. Example) Monitoring BM0 = 87654321H with MASK 4: Monitored value = 00080004H  Example) Writing the input value (87654321H) to BM0=00000000H with MASK 4: BM0=50001000H 

<table>
<tr><th rowspan="2">MASK</th><th colspan="2">Processing</th></tr>
<tr><th>Data type: 16-bit</th><th>Data type: 32-bit</th></tr>
<tr><td>5</td><td>Only b0 to b7 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 4321H with MASK 5: Monitored value = 0021H
 

Example) Writing the input value (4321H) to BM0 = 0000H with MASK 5: BM0 = 0021H
 
</td><td>Only b0 to b7 and b16 to b13 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 87654321H with MASK 5: Monitored value = 00650021H
 

Example) Writing the input value (87654321H) to BM0=00000000H with MASK 5: BM0=00650021H
 
</td></tr>
<tr><td>6</td><td>Only b8 to b15 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 4321H with MASK 6: Monitored value = 0043H
 

Example) Writing the input value (4321H) to BM0 = 0000H with MASK 6: BM0 = 2100H
 
</td><td>Only b8 to b15 and b24 to b31 of the buffer memory is monitored or written.
Example) Monitoring BM0 = 87654321H with MASK 6: Monitored value = 00870043H
 

Example) Writing the input value (87654321H) to BM0=00000000H with MASK 6: BM0=65002100H
 
</td></tr>
</table>

(3) Indirect specification of a unit No. ([MELSEC-FX])

When you specify any of 100 to 115 for the unit No., the value of the corresponding GOT internal register (GD10 to GD25) is used as the unit number of a special block or special unit.
In the multi-drop connection, indirect specification of a unit No. not available.
The following shows the correspondence between unit Nos. and GOT data registers.

Unit No.	GOT data registers (GD)	Setting range
100	GD10	[0] to [7] Setting a value outside the above range causes a device range error. If a non-existent unit No. is set, a communication timeout error occurs.
101	GD11	
:	:	
114	GD24	
115	GD25	

(4) Precautions for using the buffer memory

- When the special block or special unit is turned off, the data in the buffer memory, except the data in some keep areas, are initialized.
- When the GOT monitors the buffer memory, the scan time of the PLC may momentarily increase.
- Specify 16-bit data for a 16-bit buffer memory, and specify 32-bit data for a 32-bit buffer memory.
  If 16-bit data is specified for a 32-bit buffer memory, monitoring/writing may not be performed properly.

• For the data size of each buffer memory, refer to the following.

➟User's Manual of the special block or special unit

• When reading/writing data from/to the special block or special unit is performed by interrupting the sequence program, monitoring the buffer memory from the GOT or writing data from the GOT to the buffer memory may not be performed properly.

■5 Availability of writing/reading data to/from word devices ([MELSEC-FX])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data*1
T	R/W	R/W	-/-	R/W
C	R/W	R/W	-/-	R/W
D	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W
Z	R/W	R/W	-/-	R/W
V	R/W	-/-	-/-	R/W
BM	R/W	R/W	-/-	R/W
TS	R/W	-/-	-/-	-/-
CS	R/W	R/W	-/-	-/-

*1 When executing the touch switch function that has been set during the bit specification of the word device, do not write any data to the word device through the sequence program.

■6 Protection using a keyword ([MELSEC-FX])

(1) How to select a protection level by using a keyword

You can set a protection level for equipment that is allowed to access the FX PLC online, and three protection levels are selectable.
When performing monitoring or changing settings with any on-line equipment is required, specify a keyword with referring to the following.

Registered keyword	Description
When registering a keyword only	Select a protection level by specifying an applicable letter for the initial letter in a keyword. All operations prohibited: Specify a keyword beginning with A, D to F, or 0 to 9. Incorrect write/read prohibited: Specify a keyword beginning with B. Incorrect write prohibited: Specify a keyword beginning with C.
When registering a keyword and the second keyword	Select a protection level in [Registration condition].

(2) Monitoring availability at each keyword protection level

The following shows the device monitoring availability at each keyword protection level.

Item		When registering a keyword only			When registering a keyword and the second keyword			Keyword not registered or protection canceled
		All operations prohibited	Incorrect write/read prohibited	Write prohibited	All online operations prohibited	Read/write prohibited	Write prohibited	
Monitoring devices		○	○	○	×	○	○	○
Changing devices	Value of T or C, and file registers (D1000 and the following)	×*1	×*1	×*1	×	○	○	○
	Other than the above	○	○	○	×	○	○	○

*1 When the value of the T or C device is set indirectly, changing the device is available.

(3) Difference between all online operations prohibition and all operations prohibition

When all online operations are prohibited, the programming tool and GOT cannot display devices and input data.
When all operations are prohibited, you cannot perform all operations with the programming tool, but the GOT can display devices and input data.

12.3.11 [MELSEC-WS]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSEC-WS])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSEC-WS])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSEC-WS])
	➟■4 Availability of writing/reading data to/from word devices ([MELSEC-WS])
Engineering software for MELSEC-WS and device representation of GT Designer3	➟■5 Engineering software for MELSEC-WS and device representation of GT Designer3 ([MELSEC-WS])
Offset specifications	➟■6 Offset specification ([MELSEC-WS])

■1 Monitoring-supported bit devices ([MELSEC-WS])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.11 ■2 Availability of writing/reading data to/from bit devices ([MELSEC-WS])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input	Decimal	I(Module No.).(Input position) Notation example: I12.8 • Module No. (decimal): 1 to 12 • Input position (decimal): 1 to 8	×	×
Q	Output	Decimal	Q(Module No.).(Output position) Notation example: Q12.8 • Module No. (decimal): 1 to 12 • Output position (decimal): 1 to 8	×	×
LI	Logic input	Decimal	LI(Byte No.).(Bit position) Notation example: LI3.7 • Byte No. (decimal): 0 to 3 • Bit position (decimal): 0 to 7	×	×
LQ	Logic result	Decimal	LQ(Byte No.).(Bit position) Notation example: LQ3.7 • Byte No. (decimal): 0 to 3 • Bit position (decimal): 0 to 7	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSEC-WS])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/-	-/-	-/-	-/-	-/-
Q	R/-	-/-	-/-	-/-	-/-
LI	R/-	-/-	-/-	-/-	-/-
LQ	R/-	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSEC-WS])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.11 ■4 Availability of writing/reading data to/from word devices ([MELSEC-WS])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
EI	EFI input (byte)	Decimal	EI(EFI No.)(Device No.)(Byte No.) Notation example: EI231 • EFI No. (decimal): 1 to 2 • Device No. (decimal): 1 to 3 • Byte No. (decimal): 0 to 3	○	○
EQ	EFI output (byte)	Decimal	EQ(EFI No.)(Device No.)(Byte No.) Notation example: EQ21 • EFI No. (decimal): 1 to 2 • Byte No. (decimal): 0 to 2	○	○
D	Data (byte)	Decimal	0 to 99	○	○
LD	Logic input (byte)	Decimal	0 to 3	○	○
W	Data (word)	Decimal	0 to 49	○	○
LW	Logic input (word)	Decimal	0 to 1	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSEC-WS])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
EI	R/-	-/-	-/-	R/-
EQ	R/-	-/-	-/-	R/-
D	R/-	-/-	-/-	R/-
LD	R/-	-/-	-/-	R/-
W	R/-	R/-	-/-	R/-
LW	R/-	R/-	-/-	R/-

■5 Engineering software for MELSEC-WS and device representation of GT Designer3 ([MELSEC-WS])

The engineering software for MELSEC-WS and the device representation of GT Designer3 are different.
Set the device by referring to the following table.

Device name	GT Designer3	Engineering software for MELSEC-WS
I*1	I□□.● □□ (1-12(Dec)): Module number ● (1-8): Input position	▲▲▲▲[□□],I● ▲▲▲▲: I/O model name (such as XTIO and XTDI) □□ (1-12(Dec)): Module number ● (1-8): Input position
Q*1	Q□□.● □□ (1-12(Dec)): Module number ●(1-8): Output position	▲▲▲▲ [□□].Q ▲▲▲▲: I/O model name (such as XTIO and XTDI) □□ (1-12(Dec)): Module number ●(1-8): Output position
LI*1	LI□.● □ (0-3): Byte number ● (0-7): Bit position	▲▲▲▲[0].□.● ▲▲▲▲: CPU type (CPU0, CPU1) □ (0-3): Byte number ● (0-7): Bit position

Device name	GT Designer3	Engineering software for MELSEC-WS
LQ*1	LQ□.● □ (0-3): Byte number ● (0-7): Bit position	▲▲□.● ▲▲: Result □ (0-3): Byte number ● (0-7): Bit position
EI*1	EI○□● ○ (1-2): EFI number □ (1-3): Device number ● (0-3): Byte number	▲▲▲▲[0].EFI○:□,Byte● ▲▲▲▲: CPU type (CPU0, CPU1) ○ (1-2): EFI number □ (1-3): Device number ● (0-3): Byte number
EQ*1	EQ○● ○ (1-2): EFI number ● (0-2): Byte number	▲▲▲▲[0].EFI○:1,Byte● ▲▲▲▲: CPU type (CPU0, CPU1) ○ (1-2): EFI number ● (0-2): Byte number
D	D● ●(0-99(Dec)): Byte number	RS232 data (Safety controller to RS232)
LD	LD● ● (0-3): Byte number	RS232 data (RS232 to safety controller)
W	W● ● (0-49(Dec)): Word number Word virtualization of D device W0 = (D1(Higher-order bits), D0(Lower-order bits))	GOT independent device (Not available)
LW	LW● ● (0-1): Word number Word virtualization of LD device LW0 = (LD1(Higher-order bits), LD0(Lower-order bits))	GOT independent device (Not available)

*1 When the mapping position is changed by the MELSEC-WS engineering software, a mismatch occurs between virtual devices on GOT and MELSEC-WS mapping devices.
When mapping is changed, use D devices or LD devices.

■6 Offset specification ([MELSEC-WS])

When devices are set with using the offset function, the device values are as follows.

(1) Input (I)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	I1.1	I1.2	I1.3	I1.4	I1.5	I1.6	I1.7	I1.8	Fixed to 0 (OFF)
+16	I2.1	I2.2	I2.3	I2.4	I2.5	I2.6	I2.7	I2.8	
+32	I3.1	I3.2	I3.3	I3.4	I3.5	I3.6	I3.7	I3.8	
+48	I4.1	I4.2	I4.3	I4.4	I4.5	I4.6	I4.7	I4.8	
+64	I5.1	I5.2	I5.3	I5.4	I5.5	I5.6	I5.7	I5.8	
+80	I6.1	I6.2	I6.3	I6.4	I6.5	I6.6	I6.7	I6.8	
+96	I7.1	I7.2	I7.3	I7.4	I7.5	I7.6	I7.7	I7.8	
+112	I8.1	I8.2	I8.3	I8.4	I8.5	I8.6	I8.7	I8.8	
+128	I9.1	I9.2	I9.3	I9.4	I9.5	I9.6	I9.7	I9.8	
+144	I10.1	I10.2	I10.3	I10.4	I10.5	I10.6	I10.7	I10.8	
+160	I11.1	I11.2	I11.3	I11.4	I11.5	I11.6	I11.7	I11.8	
+176	I12.1	I12.2	I12.3	I12.4	I12.5	I12.6	I12.7	I12.8	
+192	Device range error								

(2) Output (Q)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	Q1.1	Q1.2	Q1.3	Q1.4	Q1.5	Q1.6	Q1.7	Q1.8	Fixed to 0 (OFF)
+16	Q2.1	Q2.2	Q2.3	Q2.4	Q2.5	Q2.6	Q2.7	Q2.8	
+32	Q3.1	Q3.2	Q3.3	Q3.4	Q3.5	Q3.6	Q3.7	Q3.8	
+48	Q4.1	Q4.2	Q4.3	Q4.4	Q4.5	Q4.6	Q4.7	Q4.8	
+64	Q5.1	Q5.2	Q5.3	Q5.4	Q5.5	Q5.6	Q5.7	Q5.8	
+80	Q6.1	Q6.2	Q6.3	Q6.4	Q6.5	Q6.6	Q6.7	Q6.8	
+96	Q7.1	Q7.2	Q7.3	Q7.4	Q7.5	Q7.6	Q7.7	Q7.8	
+112	Q8.1	Q8.2	Q8.3	Q8.4	Q8.5	Q8.6	Q8.7	Q8.8	
+128	Q9.1	Q9.2	Q9.3	Q9.4	Q9.5	Q9.6	Q9.7	Q9.8	
+144	Q10.1	Q10.2	Q10.3	Q10.4	Q10.5	Q10.6	Q10.7	Q10.8	
+160	Q11.1	Q11.2	Q11.3	Q11.4	Q11.5	Q11.6	Q11.7	Q11.8	
+176	Q12.1	Q12.2	Q12.3	Q12.4	Q12.5	Q12.6	Q12.7	Q12.8	
+192	Device range error								

(3) Logic input (LI)

Offset	+0	+1	+2	+3	+4	+5	+6	+7
+0	LI0.0	LI0.1	LI0.2	LI0.3	LI0.4	LI0.5	LI0.6	LI0.7
+8	LI1.0	LI1.1	LI1.2	LI1.3	LI1.4	LI1.5	LI1.6	LI1.7
+16	LI2.0	LI2.1	LI2.2	LI2.3	LI2.4	LI2.5	LI2.6	LI2.7
+24	LI3.0	LI3.1	LI3.2	LI3.3	LI3.4	LI3.5	LI3.6	LI3.7
+32	Device range error							

(4) Logic result (LQ)

Offset	+0	+1	+2	+3	+4	+5	+6	+7
+0	LQ0.0	LQ0.1	LQ0.2	LQ0.3	LQ0.4	LQ0.5	LQ0.6	LQ0.7
+8	LQ1.0	LQ1.1	LQ1.2	LQ1.3	LQ1.4	LQ1.5	LQ1.6	LQ1.7
+16	LQ2.0	LQ2.1	LQ2.2	LQ2.3	LQ2.4	LQ2.5	LQ2.6	LQ2.7
+24	LQ3.0	LQ3.1	LQ3.2	LQ3.3	LQ3.4	LQ3.5	LQ3.6	LQ3.7
+32	Device range error							

(5) EFI input (EI)

Offset	+0	+1	+2	+3	+4 to +15
+0	EI110	EI111	EI112	EI113	Fixed to 0
+16	EI120	EI121	EI122	EI123	
+32	EI130	EI131	EI132	EI133	
+48 : +240	Fixed to 0				
+256	EI210	EI211	EI212	EI213	Fixed to 0
+272	EI220	EI221	EI222	EI223	
+288	EI230	EI231	EI232	EI233	Device range error
+302	Device range error				

(6) EFI output (EQ)

Offset	+0	+1	+2	+3 to +15
+0	EQ10	EQ11	EQ12	Fixed to 0
+16 : +240	Fixed to 0			
+256	EQ20	EQ21	EQ22	Device range error
+272	Device range error			

12.3.12 [MELIPC]

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Not available to GT2105-Q.
This section shows the device range of MELIPC (MI5122-VW).

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELIPC])
Specifications of word devices	➟■2 Monitoring-supported word devices ([MELIPC])

The settable device range is the same when [MELIPC] is selected and when [MELSEC iQ-R, RnMT/NC/RT, CR800-D] is selected.
For the device range when the GOT is connected to the MELSEC iQ-R series, refer to the following.

➟12.3.3 [MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D]

■1 Monitoring-supported bit devices ([MELIPC])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.3 ■3 Availability of writing/reading data to/from bit devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
B	Link relay	Hexadecimal	00000 to 9FFFF	○	○
M	Internal relay	Decimal	0 to 61439	○	○
SM	Special relay	Decimal	0 to 4095	○	○
JnX	Link input (link direct)	Hexadecimal	J(Network No.n)-X(Device) Notation example: J1-X0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnY	Link output (link direct)	Hexadecimal	J(Network No.n)-Y(Device) Notation example: J1-Y0000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF	○	○
JnSB	Link special relay (link direct)	Hexadecimal	J(Network No.n)-SB(Device) Notation example: J1-SB000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to 1FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Monitoring-supported word devices ([MELIPC])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.3 ■6 Availability of writing/reading data to/from word devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Data register	Decimal	0 to 4184063	○	○
SD	Special register	Decimal	0 to 4095	○	○
W	Link register	Hexadecimal	00000 to FFFFF	○	○
ZR	Extension file register	Decimal	0 to 524287	○	○
JnW	Link register (link direct)	Hexadecimal	J(Network No.n)-W(Device) Notation example: J1-W00000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 0000 to 3FFF*2	○	○
JnSW	Link special register (link direct)	Hexadecimal	J(Network No.n)-SW(Device) Notation example: J1-SW000 • Network No.n (decimal): 1 to 239 • Device (hexadecimal): 000 to 1FF	○	○
U3E0G	CPU buffer memory access device	Decimal	U3E0-G(Device) Notation example: U3E0-G100 • Device (decimal): 0 to 199999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The device range for a PLC with the CC-Link IE TSN master/local module (1000BASE-SX model) (RJ71GN11-SX) installed is 00000 to 83FFF.

12.3.13 [MELSERVO-J2M-P8A]

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Item	Reference
Specifications of bit devices	➡■1 Monitoring-supported bit devices ([MELSERVO-J2M-P8A])
	➡■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-P8A])
Specifications of word devices	➡■3 Monitoring-supported word devices ([MELSERVO-J2M-P8A])
	➡■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-P8A])
Specifications of double-word devices	➡■5 Monitoring-supported double-word devices ([MELSERVO-J2M-P8A])
	➡■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-P8A])
Specifications of virtual servo amplifier devices	➡■7 Virtual servo amplifier devices ([MELSERVO-J2M-P8A])
	➡■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

■1 Monitoring-supported bit devices ([MELSERVO-J2M-P8A])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.13 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-P8A])

For details on virtual servo amplifier devices, refer to the following.

➡12.3.13 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-P8A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	1 to 2	×	×
OM	Operation mode selection	Decimal	0, 4	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-P8A])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J2M-P8A])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.3.13 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-P8A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.13 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-P8A])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM	Parameter	Decimal	0 to 29 1000 to 1029	○	×
ST	Status display	Decimal	0 to 2	○	×
AL	Alarm (current alarm)	Decimal	0 11 to 13	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
DI	External input signal	Decimal	0 to 2	×	×
DO	External output signal	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-P8A])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRM	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
DI	R/-	R/-	-/-	-/-
DO	R/-	R/-	-/-	-/-

■5 Monitoring-supported double-word devices ([MELSERVO-J2M-P8A])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.13 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-P8A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.13 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-P8A])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-P8A])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMO	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J2M-P8A])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J2M-P8A])
OM	➟(2) Operation mode selection ([MELSERVO-J2M-P8A])
PRM	➟(3) Parameter ([MELSERVO-J2M-P8A])
ST	➟(4) Status display ([MELSERVO-J2M-P8A])
AL	➟(5) Alarm ([MELSERVO-J2M-P8A])
DI	➟(6) External input signal ([MELSERVO-J2M-P8A])
DO	➟(7) External output signal ([MELSERVO-J2M-P8A])
TMO	➟(8) Forced output of signal pin (for test operation) ([MELSERVO-J2M-P8A])

(1) Servo amplifier request ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol
SP1	Current alarm clear	-
SP2	Alarm history clear	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Parameter ([MELSERVO-J2M-P8A])

Use an appropriate device according to the write destination of the servo amplifier.

- PRM0 to PRM29: Writing data to the RAM of a servo amplifier
- PRM1000 to PRM1029: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PRM0, PRM1000	Serial communication function selection, alarm history clear	*BPS
PRM1, PRM1001	Regenerative brake option selection	*REG
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Analog monitor 1 output	MD1

Virtual device name	Name	Symbol
PRM4, PRM1004	Analog monitor 2 output	MD2
PRM5, PRM1005	Analog monitor 3 output	MD3
PRM6, PRM1006	Analog monitor 1 offset	MO1
PRM7, PRM1007	Analog monitor 2 offset	MO2
PRM8, PRM1008	Analog monitor 3 offset	MO3
PRM9, PRM1009	Function selection 2	*OP2
PRM10, PRM1010	Interface unit serial communication number selection	*ISN
PRM11, PRM1011	1slot serial communication station number selection	*DSN1
PRM12, PRM1012	2slot serial communication station number selection	*DSN2
PRM13, PRM1013	3slot serial communication station number selection	*DSN3
PRM14, PRM1014	4slot serial communication station number selection	*DSN4
PRM15, PRM1015	5slot serial communication station number selection	*DSN5
PRM16, PRM1016	6slot serial communication station number selection	*DSN6
PRM17, PRM1017	7slot serial communication station number selection	*DSN7
PRM18, PRM1018	8slot serial communication station number selection	*DSN8
PRM19, PRM1019	Parameter write inhibit	*BLK
PRM20, PRM1020	Serial communication time-out selection	SIC
PRM21 to PRM29, PRM1021 to PRM1029	For manufacturer setting	-

(4) Status display ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol
ST0	Regenerative load ratio	-
ST1	Bus voltage	-
ST2	Peak bus voltage	-

(5) Alarm ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL11	Servo status when alarm occurs, regenerative load ratio	-
AL12	Servo status when alarm occurs, bus voltage	-
AL13	Servo status when alarm occurs, peak bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-

Virtual device name	Name	Symbol
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(6) External input signal ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	External input pin status CN1A/CN1B	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➥MR-J2M-A Instruction Manual
DI1	External input pin status CN5	-	
DI2	External input pin status CN4A/CN4B	-	

(7) External output signal ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	External output pin status CN1A/CN1B	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➥MR-J2M-A Instruction Manual
DO1	External output pin status CN4A/CN4B	-	

(8) Forced output of signal pin (for test operation) ([MELSERVO-J2M-P8A])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

(1) Monitoring servo amplifier

Carefully read the manual of servo amplifier to be connected and fully understand the operating procedures before monitoring.
Before operation, check the parameter settings and adjust them as required. Improper settings may cause some machines to perform unexpected operation.
The parameter settings must not be changed excessively. Operation will be insatiable.

(2) Data length of a virtual device

Set the data length of a virtual device as shown below.

Virtual device	Data length
PRM, ST, AL, PA, PB, PC, PD, POS, SPD, ACT, DCT, DWL, AUX	16 bits or 32 bits Depending on the servo amplifier data
DI, DO, TMI, TMO, TMD	32 bits

If the above data length is not set, data will be specified incorrectly for the servo amplifier or cannot be properly monitored by the GOT.

Item	Operation	
Monitoring	Handling 16-bit data as 32-bit data	The upper 16 bits are displayed as 0.
	Handling 32-bit data as 16-bit data	The lower 16 bits only are displayed.
Writing	The GOT writes within the range of data length set. Note that the servo amplifier responds correctly while the written data is invalid in the servo amplifier side when the written data is out of the range of values which can be set by the servo amplifier.	

(3) Memory to which parameter values are written

Parameter values are written to the RAM or EEPROM of a servo amplifier.

Write destination	Precautions
RAM	Remember that the written parameter values are cleared when the servo amplifier is turned off.
EEPROM	The written parameter values are not cleared when the servo amplifier is turned off. However, there is a limit on the number of times data can be written to EEPROM. If you update the data frequently (more than once an hour), write parameter values to RAM. For the details, refer to the manual of the servo amplifier used.

(4) Data type and format settings for using virtual servo amplifier devices (direct connection between the GOT and servo amplifier)

To specify virtual servo amplifier devices in the object setting or other settings, the data type and format must be set according to the notation of the values handled by the virtual devices.
For notation of the virtual device values, refer to the following.

➟Instruction manual for the servo amplifier used
MR Configurator2 HELP

The following shows a setting example for using virtual servo amplifier devices for an object.
Example) When using a numerical display

Notation of the virtual device values	Setting
Decimal number (positive values only)	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 65536 or more) • [Format]: [Unsigned Decimal]
Decimal number (positive and negative values)	• [Data Type]: [Signed BIN16] ([Signed BIN32] for -32769 or less, and 32768 or more) • [Format]: [Signed Decimal]
Hexadecimal number	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 0x10000 or more) • [Format]: [Hexadecimal]
Decimal point notation (positive values only)	• [Data Type]: [Real] • [Format]: [Real] • [Digits (Integral)]: Set the number of digits in the integral portion. • [Digits (Fractional)]: Set the number of digits in the fractional portion.
Decimal point notation (positive and negative values)	
When the notation varies by digit	• [Data Type]: [Unsigned BIN16] ([Unsigned BIN32] for 0x10000 or more) • [Format]: [Hexadecimal] • On the [Operation/Script] tab, select [Data Operation] for [Operation Type], and set [Bit Mask] or [Bit Shift].

(5) Specifying consecutive virtual servo amplifier devices

The GOT does not support writing/reading data to/from consecutive virtual servo amplifier devices.

12.3.14 [MELSERVO-J2M-*DU]

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Item	Reference
Specifications of bit devices	➥■1 Monitoring-supported bit devices ([MELSERVO-J2M-*DU])
	➥■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-*DU])
Specifications of word devices	➥■3 Monitoring-supported word devices ([MELSERVO-J2M-*DU])
	➥■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-*DU])
Specifications of double-word devices	➥■5 Monitoring-supported double-word devices ([MELSERVO-J2M-*DU])
	➥■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-*DU])
Specifications of virtual servo amplifier devices	➥■7 Virtual servo amplifier devices ([MELSERVO-J2M-*DU])
	➥■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-*DU])

■1 Monitoring-supported bit devices ([MELSERVO-J2M-*DU])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.14 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-*DU])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.14 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-*DU])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2M-*DU])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J2M-*DU])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.14 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-*DU])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.14 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-*DU])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM	Parameter	Decimal	0 to 84 1000 to 1084	○	×
ST	Status display	Decimal	0 to 10	○	×
AL	Alarm (current alarm)	Decimal	0 11 to 21	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2M-*DU])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRM	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-

■5 Monitoring-supported double-word devices ([MELSERVO-J2M-*DU])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.14 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-*DU])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.14 ■7 Virtual servo amplifier devices ([MELSERVO-J2M-*DU])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to 2	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2M-*DU])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J2M-*DU])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J2M-*DU])
OM	➟(2) Operation mode selection ([MELSERVO-J2M-*DU])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J2M-*DU])
PRM	➟(4) Parameter ([MELSERVO-J2M-*DU])
ST	➟(5) Status display ([MELSERVO-J2M-*DU])
AL	➟(6) Alarm ([MELSERVO-J2M-*DU])
TMI	➟(7) Input signal for test operation (for test operation) ([MELSERVO-J2M-*DU])
TMO	➟(8) Forced output of signal pin (for test operation) ([MELSERVO-J2M-*DU])
TMD	➟(9) Set data (for test operation) ([MELSERVO-J2M-*DU])

(1) Servo amplifier request ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
TMB0	Clearing acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Parameter ([MELSERVO-J2M-*DU])

Use an appropriate device according to the write destination of the servo amplifier.

- PRM0 to PRM84: Writing data to the RAM of a servo amplifier
- PRM1000 to PRM1084: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PRM0, PRM1000	For manufacturer setting	-
PRM1, PRM1001	Function selection 1	*OP1
PRM2, PRM1002	Auto tuning	ATU
PRM3, PRM1003	Electronic gear numerator (Command pulse multiplying factor numerator)	CMX
PRM4, PRM1004	Electronic gear denominator (Command pulse multiplying factor denominator)	CDV
PRM5, PRM1005	In-position range	INP
PRM6, PRM1006	Position control gain 1	PG1
PRM7, PRM1007	Position command acceleration/deceleration time constant (position smoothing)	PST
PRM8 to PRM15, PRM1008 to PRM1015	For manufacturer setting	-
PRM16, PRM1016	Alarm history clear	*BPS
PRM17 to PRM18, PRM1017 to PRM1018	For manufacturer setting	-
PRM19, PRM1019	DRU parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Feed forward gain	FFC
PRM24, PRM1024	Zero speed	ZSP
PRM25 to PRM26, PRM1025 to PRM1026	For manufacturer setting	-
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29 to PRM32, PRM1029 to PRM1032	For manufacturer setting	-
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40 to PRM41, PRM1040 to PRM1041	For manufacturer setting	-
PRM42, PRM1042	Input signal selection 1	*DI1

Virtual device name	Name	Symbol
PRM43 to PRM50, PRM1043 to PRM1050	For manufacturer setting	-
PRM51, PRM1051	Function selection 6	*OP6
PRM52 to PRM53, PRM1052 to PRM1053	For manufacturer setting	-
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56 to PRM57, PRM1056 to PRM1057	For manufacturer setting	-
PRM58, PRM1058	Machine resonance suppression filter 1	NH1
PRM59, PRM1059	Machine resonance suppression filter 2	NH2
PRM60, PRM1060	Low-pass filter, adaptive vibration suppression control	LPF
PRM61, PRM1061	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM62, PRM1062	Position control gain 2 changing ratio	PG2B
PRM63, PRM1063	Speed control gain 2 changing ratio	VG2B
PRM64, PRM1064	Speed integral compensation changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66, PRM1066	Gain switching condition	CDS
PRM67, PRM1067	Gain switching time constant	CDT
PRM68, PRM1068	For manufacturer setting	-
PRM69, PRM1069	Command pulse multiplying factor numerator 2	CMX2
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3
PRM71, PRM1071	Command pulse multiplying factor numerator 4	CMX4
PRM72 to PRM75, PRM1072 to PRM1075	For manufacturer setting	-
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84, PRM1077 to PRM1084	For manufacturer setting	-

(5) Status display ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Effective load ratio	-
ST6	Peak load ratio	-
ST7	Instantaneous torque	-
ST8	Within one-revolution position	-
ST9	ABS counter	-
ST10	Load inertia moment ratio	-

(6) Alarm ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL11	Servo status when alarm occurs, cumulative feedback pulses	-
AL12	Servo status when alarm occurs, servo motor speed	-
AL13	Servo status when alarm occurs, droop pulses	-
AL14	Servo status when alarm occurs, cumulative command pulses	-

Virtual device name	Name	Symbol
AL15	Servo status when alarm occurs, command pulse frequency	-
AL16	Servo status when alarm occurs, effective load ratio	-
AL17	Servo status when alarm occurs, peak load ratio	-
AL18	Servo status when alarm occurs, instantaneous torque	-
AL19	Servo status when alarm occurs, within one-revolution position	-
AL20	Servo status when alarm occurs, ABS counter	-
AL21	Servo status when alarm occurs, load inertia moment ratio	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(7) Input signal for test operation (for test operation) ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(8) Forced output of signal pin (for test operation) ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(9) Set data (for test operation) ([MELSERVO-J2M-*DU])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-*DU])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.15 [MELSERVO-J2S-*A]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-J2S-*A])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*A])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-J2S-*A])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*A])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*A])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*A])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-J2S-*A])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*A])

■1 Monitoring-supported bit devices ([MELSERVO-J2S-*A])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.15 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.15 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*A])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J2S-*A])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.15 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.15 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM	Parameter	Decimal	0 to 84 1000 to 1084	○	×
ST	Status display	Decimal	0 to 14	○	×
AL	Alarm (current alarm)	Decimal	0 to 1 11 to 25	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
DI	External input signal	Decimal	0	×	×
DO	External output signal	Decimal	0	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*A])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRM	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
DI	R/-	R/-	-/-	-/-
DO	R/-	R/-	-/-	-/-

■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*A])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.15 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.15 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to 2	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*A])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J2S-*A])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	⇒(1) Servo amplifier request ([MELSERVO-J2S-*A])
OM	⇒(2) Operation mode selection ([MELSERVO-J2S-*A])
TMB	⇒(3) Instruction demand (for test operation) ([MELSERVO-J2S-*A])
PRM	⇒(4) Parameter ([MELSERVO-J2S-*A])
ST	⇒(5) Status display ([MELSERVO-J2S-*A])
AL	⇒(6) Alarm ([MELSERVO-J2S-*A])
DI	⇒(7) External input signal ([MELSERVO-J2S-*A])
DO	⇒(8) External output signal ([MELSERVO-J2S-*A])
TMI	⇒(9) Input signal for test operation (for test operation) ([MELSERVO-J2S-*A])
TMO	⇒(10) Forced output of signal pin (for test operation) ([MELSERVO-J2S-*A])
TMD	⇒(11) Set data (for test operation) ([MELSERVO-J2S-*A])

(1) Servo amplifier request ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
TMB0	Clearing acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Parameter ([MELSERVO-J2S-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PRM0 to PRM84: Writing data to the RAM of a servo amplifier
- PRM1000 to PRM1084: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PRM0, PRM1000	Control mode, regenerative brake option selection	*STY
PRM1, PRM1001	Function selection 1	*OP1
PRM2, PRM1002	Auto tuning	ATU
PRM3, PRM1003	Electronic gear numerator (Command pulse multiplying factor numerator)	CMX
PRM4, PRM1004	Electronic gear denominator (Command pulse multiplying factor denominator)	CDV
PRM5, PRM1005	In-position range	INP
PRM6, PRM1006	Position control gain 1	PG1
PRM7, PRM1007	Position command acceleration/deceleration time constant	PST
PRM8, PRM1008	Internal speed command1/limit1	SC1
PRM9, PRM1009	Internal speed command2/limit2	SC2
PRM10, PRM1010	Internal speed command3/limit3	SC3
PRM11, PRM1011	Acceleration time constant	STA
PRM12, PRM1012	Deceleration time constant	STB
PRM13, PRM1013	S-pattern acceleration/deceleration time constant	STC
PRM14, PRM1014	Torque command time constant	TQC
PRM15, PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3
PRM22, PRM1022	Function selection 4	*OP4

Virtual device name	Name	Symbol
PRM23, PRM1023	Feed forward gain	FFC
PRM24, PRM1024	Zero speed	ZSP
PRM25, PRM1025	Analog speed command maximum speed/limit maximum speed	VCM
PRM26, PRM1026	Analog torque command maximum output	TLC
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Analog speed command offset/limit offset	VCO
PRM30, PRM1030	Analog torque command offset/limit offset	TLO
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40, PRM1040	For manufacturer setting	-
PRM41, PRM1041	Input signal automatic ON selection	*DIA
PRM42, PRM1042	Input signal selection 1	*DI1
PRM43, PRM1043	Input signal selection 2 (CN1B-5)	*DI2
PRM44, PRM1044	Input signal selection 3 (CN1B-14)	*DI3
PRM45, PRM1045	Input signal selection 4 (CN1A-8)	*DI4
PRM46, PRM1046	Input signal selection 5 (CN1B-7)	*DI5
PRM47, PRM1047	Input signal selection 6 (CN1B-8)	*DI6
PRM48, PRM1048	Input signal selection 7 (CN1B-9)	*DI7
PRM49, PRM1049	Output signal selection 1	*DO1
PRM50, PRM1050	For manufacturer setting	-
PRM51, PRM1051	Function selection 6	*OP6
PRM52, PRM1052	For manufacturer setting	-
PRM53, PRM1053	Function selection 8	*OP8
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56, PRM1056	Serial communication time-out selection	SIC
PRM57, PRM1057	For manufacturer setting	-
PRM58, PRM1058	Machine resonance suppression filter 1	NH1
PRM59, PRM1059	Machine resonance suppression filter 2	NH2
PRM60, PRM1060	Low-pass filter, adaptive vibration suppression control	LPF
PRM61, PRM1061	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM62, PRM1062	Position control gain 2 changing ratio	PG2B
PRM63, PRM1063	Speed control gain 2 changing ratio	VG2B
PRM64, PRM1064	Speed integral compensation changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66, PRM1066	Gain switching condition	CDS
PRM67, PRM1067	Gain switching time constant	CDT
PRM68, PRM1068	For manufacturer setting	-
PRM69, PRM1069	Command pulse multiplying factor numerator 2	CMX2

Virtual device name	Name	Symbol
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3
PRM71, PRM1071	Command pulse multiplying factor numerator 4	CMX4
PRM72, PRM1072	Internal speed command4/limit4	SC4
PRM73, PRM1073	Internal speed command5/limit5	SC5
PRM74, PRM1074	Internal speed command6/limit6	SC6
PRM75, PRM1075	Internal speed command7/limit7	SC7
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84, PRM1077 to PRM1084	For manufacturer setting	-

(5) Status display ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/limit voltage	-
ST6	Analog torque command voltage/limit voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-

(6) Alarm ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, cumulative feedback pulses	-
AL12	Servo status when alarm occurs, servo motor speed	-
AL13	Servo status when alarm occurs, droop pulses	-
AL14	Servo status when alarm occurs, cumulative command pulses	-
AL15	Servo status when alarm occurs, command pulse frequency	-
AL16	Servo status when alarm occurs, analog speed command voltage/limit voltage	-
AL17	Servo status when alarm occurs, analog torque command voltage/limit voltage	-
AL18	Servo status when alarm occurs, regenerative load ratio	-
AL19	Servo status when alarm occurs, effective load ratio	-
AL20	Servo status when alarm occurs, peak load ratio	-
AL21	Servo status when alarm occurs, Instantaneous torque	-
AL22	Servo status when alarm occurs, within one-revolution position	-
AL23	Servo status when alarm occurs, ABS counter	-
AL24	Servo status when alarm occurs, load inertia moment ratio	-
AL25	Servo status when alarm occurs, Bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-

Virtual device name	Name	Symbol
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(7) External input signal ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	External input pin statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_A Instruction Manual

(8) External output signal ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	External output pin statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_A Instruction Manual

(9) Input signal for test operation (for test operation) ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(10)Forced output of signal pin (for test operation) ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(11)Set data (for test operation) ([MELSERVO-J2S-*A])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*A])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.16 [MELSERVO-J2S-*CP]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-J2S-*CP])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CP])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-J2S-*CP])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CP])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*CP])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CP])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CP])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*CP])

■1 Monitoring-supported bit devices ([MELSERVO-J2S-*CP])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.16 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CP])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.16 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CP])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CP])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J2S-*CP])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.16 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CP])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.16 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CP])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM	Parameter	Decimal	0 to 90 1000 to 1090	○	×
ST	Status display	Decimal	0 to 16	○	×
AL	Alarm (current alarm)	Decimal	0 to 1 11 to 27	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
POS	Point table (position)	Decimal	1 to 31 1001 to 1031	○	×
SPD	Point table (speed)	Decimal	1 to 31 1001 to 1031	○	×
ACT	Point table (acceleration time constant)	Decimal	1 to 31 1001 to 1031	○	×
DCT	Point table (deceleration time constant)	Decimal	1 to 31 1001 to 1031	○	×
DWL	Point table (dwell)	Decimal	1 to 31 1001 to 1031	○	×
AUX	Point table (auxiliary function)	Decimal	1 to 31 1001 to 1031	○	×
DI	External input signal	Decimal	0 to 2	×	×
DO	External output signal	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CP])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRM	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 to DI1.

■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*CP])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.16 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CP])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.16 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CP])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to 2	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CP])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CP])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J2S-*CP])
OM	➟(2) Operation mode selection ([MELSERVO-J2S-*CP])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J2S-*CP])
PRM	➟(4) Parameter ([MELSERVO-J2S-*CP])
ST	➟(5) Status display ([MELSERVO-J2S-*CP])
AL	➟(6) Alarm ([MELSERVO-J2S-*CP])
POS	➟(7) Point table (position) ([MELSERVO-J2S-*CP])
SPD	➟(8) Point table (speed) ([MELSERVO-J2S-*CP])
ACT	➟(9) Point table (acceleration time constant) ([MELSERVO-J2S-*CP])
DCT	➟(10) Point table (deceleration time constant) ([MELSERVO-J2S-*CP])
DWL	➟(11) Point table (dwell) ([MELSERVO-J2S-*CP])
AUX	➟(12) Point table (auxiliary function) ([MELSERVO-J2S-*CP])
DI	➟(13) External input signal ([MELSERVO-J2S-*CP])
DO	➟(14) External output signal ([MELSERVO-J2S-*CP])
TMI	➟(15) Input signal for test operation (for test operation) ([MELSERVO-J2S-*CP])

Virtual device name	Reference
TMO	➟(16) Forced output of signal pin (for test operation) ([MELSERVO-J2S-*CP])
TMD	➟(17) Set data (for test operation) ([MELSERVO-J2S-*CP])

(1) Servo amplifier request ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
TMB0	Clearing acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Parameter ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- PRM0 to PRM90: Writing data to the RAM of a servo amplifier
- PRM1000 to PRM1090: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PRM0, PRM1000	Command system/regenerative brake option selection	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5, PRM1005	Electronic gear denominator	*CDV

Virtual device name	Name	Symbol
PRM6, PRM1006	In-position range	INP
PRM7, PRM1007	Position control gain 1	PG1
PRM8, PRM1008	Home position return type	*ZTY
PRM9, PRM1009	Home position return speed	ZRF
PRM10, PRM1010	Creep speed	CRF
PRM11, PRM1011	Home position shift distance	ZST
PRM12, PRM1012	Rough match output range	CRP
PRM13, PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/deceleration time constant	*STC
PRM15, PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	For manufacturer setting	-
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Serial communication time-out selection	SIC
PRM24, PRM1024	Feed forward gain	FFC
PRM25, PRM1025	Override offset	VCO
PRM26, PRM1026	Torque limit offset	TLO
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Internal torque limit 2	TL2
PRM30, PRM1030	Backlash compensation	*BKC
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40 to PRM41, PRM1040 to PRM1041	For manufacturer setting	-
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Stopper type home position return stopper time	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT
PRM46, PRM1046	Software limit +	*LMP
PRM47, PRM1047		
PRM48, PRM1048	Software limit -	*LMN
PRM49, PRM1049		
PRM50, PRM1050	Position range output address +	*LPP
PRM51, PRM1051		
PRM52, PRM1052	Position range output address -	*LNP
PRM53, PRM1053		

Virtual device name	Name	Symbol
PRM54, PRM1054	For manufacturer setting	-
PRM55, PRM1055	Function selection 6	*OP6
PRM56, PRM1056	For manufacturer setting	-
PRM57, PRM1057	Function selection 8	*OP8
PRM58, PRM1058	Function selection 9	*OP9
PRM59, PRM1059	Function selection A	*OPA
PRM60, PRM1060	For manufacturer setting	-
PRM61, PRM1061	Machine resonance suppression filter 1	NH1
PRM62, PRM1062	Machine resonance suppression filter 2	NH2
PRM63, PRM1063	Low-pass filter, adaptive vibration suppression control	LPF
PRM64, PRM1064	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM65, PRM1065	Position control gain 2 changing ratio	PG2B
PRM66, PRM1066	Speed control gain 2 changing ratio	VG2B
PRM67, PRM1067	Speed integral compensation changing ratio	VICB
PRM68, PRM1068	Gain changing selection	*CDP
PRM69, PRM1069	Gain switching condition	CDS
PRM70, PRM1070	Gain switching time constant	CDT
PRM71 to PRM90, PRM1071 to PRM1090	For manufacturer setting	-

(5) Status display ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Point table No.	-
ST4	Cumulative feedback pulses	-
ST5	Servo motor speed	-
ST6	Droop pulses	-
ST7	Override	-
ST8	Torque limit voltage	-
ST9	Regenerative load ratio	-
ST10	Effective load ratio	-
ST11	Peak load ratio	-
ST12	Instantaneous torque	-
ST13	Within one-revolution position	-
ST14	ABS counter	-
ST15	Load inertia moment ratio	-
ST16	Bus voltage	-

(6) Alarm ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, current position	-
AL12	Servo status when alarm occurs, command position	-
AL13	Servo status when alarm occurs, command remaining distance	-
AL14	Servo status when alarm occurs, point table No.	-
AL15	Servo status when alarm occurs, cumulative feedback pulses	-

Virtual device name	Name	Symbol
AL16	Servo status when alarm occurs, servo motor speed	-
AL17	Servo status when alarm occurs, droop pulses	-
AL18	Servo status when alarm occurs, override	-
AL19	Servo status when alarm occurs, torque limit voltage	-
AL20	Servo status when alarm occurs, regenerative load ratio	-
AL21	Servo status when alarm occurs, effective load ratio	-
AL22	Servo status when alarm occurs, peak load ratio	-
AL23	Servo status when alarm occurs, instantaneous torque	-
AL24	Servo status when alarm occurs, within one-revolution position	-
AL25	Servo status when alarm occurs, ABS counter	-
AL26	Servo status when alarm occurs, load inertia moment ratio	-
AL27	Servo status when alarm occurs, Bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(7) Point table (position) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- POS1 to POS31: Writing data to the RAM of a servo amplifier
- POS1001 to POS1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
POS1 to POS31, POS1001 to POS1031	Point table/position data No. 1 to No. 31	-

(8) Point table (speed) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- SPD1 to SPD31: Writing data to the RAM of a servo amplifier
- SPD1001 to SPD1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
SPD1 to SPD31, SPD1001 to SPD1031	Point table/speed data No. 1 to No. 31	-

(9) Point table (acceleration time constant) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- ACT1 to ACT31: Writing data to the RAM of a servo amplifier
- ACT1001 to ACT1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
ACT1 to ACT31, ACT1001 to ACT1031	Point table/acceleration time constant No. 1 to No. 31	-

(10) Point table (deceleration time constant) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- DCT1 to DCT31: Writing data to the RAM of a servo amplifier
- DCT1001 to DCT1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DCT1 to DCT31, DCT1001 to DCT1031	Point table/deceleration time constant No. 1 to No. 31	-

(11) Point table (dwell) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- DWL1 to DWL31: Writing data to the RAM of a servo amplifier
- DWL1001 to DWL1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DWL1 to DWL31, DWL1001 to DWL1031	Point table/dwell No. 1 to No. 31	-

(12) Point table (auxiliary function) ([MELSERVO-J2S-*CP])

Use an appropriate device according to the write destination of the servo amplifier.

- AUX1 to AUX31: Writing data to the RAM of a servo amplifier
- AUX1001 to AUX1031: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
AUX1 to AUX31, AUX1001 to AUX1031	Point table/auxiliary function No. 1 to No. 31	-

(13) External input signal ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_CP Instruction Manual
DI1	External input pin statuses	-	
DI2	Statuses of input devices switched on through communication	-	

(14) External output signal ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_CP Instruction Manual
DO1	External output pin statuses	-	

(15) Input signal for test operation (for test operation) ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(16)Forced output of signal pin (for test operation) ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(17)Set data (for test operation) ([MELSERVO-J2S-*CP])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*CP])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.17 [MELSERVO-J2S-*CL]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➥■1 Monitoring-supported bit devices ([MELSERVO-J2S-*CL])
	➥■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CL])
Specifications of word devices	➥■3 Monitoring-supported word devices ([MELSERVO-J2S-*CL])
	➥■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CL])
Specifications of double-word devices	➥■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*CL])
	➥■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CL])
Specifications of virtual servo amplifier devices	➥■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CL])
	➥■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*CL])

■1 Monitoring-supported bit devices ([MELSERVO-J2S-*CL])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.17 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CL])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.17 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CL])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J2S-*CL])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J2S-*CL])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.17 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CL])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.17 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CL])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM	Parameter	Decimal	0 to 90 1000 to 1090	○	×
ST	Status display	Decimal	0 to 17	○	×
AL	Alarm (current alarm)	Decimal	0 to 1 11 to 28	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
DI	External input signal	Decimal	0 to 2	×	×
DO	External output signal	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J2S-*CL])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRM	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 to DI1.

■5 Monitoring-supported double-word devices ([MELSERVO-J2S-*CL])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.17 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CL])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.17 ■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CL])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LD	Current position latch data	Decimal	1	×	×
RR*2	Value of the general-purpose register (Rx)	Decimal	1 to 4 1001 to 1004	×	×
RD	Value of the general-purpose register (Dx)	Decimal	1 to 4	×	×
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to 2	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Use the integer number when writing parameters to Rx.

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J2S-*CL])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LD	-/-	R/-	-/-	-/-
RR	-/-	R/W	-/-	-/-
RD	-/-	R/W	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J2S-*CL])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J2S-*CL])
OM	➟(2) Operation mode selection ([MELSERVO-J2S-*CL])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J2S-*CL])
PRM	➟(4) Parameter ([MELSERVO-J2S-*CL])
ST	➟(5) Status display ([MELSERVO-J2S-*CL])
AL	➟(6) Alarm ([MELSERVO-J2S-*CL])
DI	➟(7) External input signal ([MELSERVO-J2S-*CL])
DO	➟(8) External output signal ([MELSERVO-J2S-*CL])
LD	➟(9) Current position latch data ([MELSERVO-J2S-*CL])
RR	➟(10) Value of the general-purpose register (Rx) ([MELSERVO-J2S-*CL])
RD	➟(11) Value of the general-purpose register (Dx) ([MELSERVO-J2S-*CL])
TMI	➟(12) Input signal for test operation (for test operation) ([MELSERVO-J2S-*CL])
TMO	➟(13) Forced output of signal pin (for test operation) ([MELSERVO-J2S-*CL])
TMD	➟(14) Set data (for test operation) ([MELSERVO-J2S-*CL])

(1) Servo amplifier request ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
TMB0	Clearing acceleration/deceleration time constant	-
TMB1	Temporary stop command	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Parameter ([MELSERVO-J2S-*CL])

Use an appropriate device according to the write destination of the servo amplifier.

- PRM0 to PRM90: Writing data to the RAM of a servo amplifier
- PRM1000 to PRM1090: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PRM0, PRM1000	Command system/regenerative brake option selection	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5, PRM1005	Electronic gear denominator	*CDV
PRM6, PRM1006	In-position range	INP
PRM7, PRM1007	Position control gain 1	PG1
PRM8, PRM1008	Home position return type	*ZTY
PRM9, PRM1009	Home position return speed	ZRF

Virtual device name	Name	Symbol
PRM10, PRM1010	Creep speed	CRF
PRM11, PRM1011	Home position shift distance	ZST
PRM12, PRM1012	For manufacturer setting	-
PRM13, PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/deceleration time constant	*STC
PRM15, PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	For manufacturer setting	-
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Serial communication time-out selection	SIC
PRM24, PRM1024	Feed forward gain	FFC
PRM25, PRM1025	Override offset	VCO
PRM26, PRM1026	Torque limit offset	TLO
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29, PRM1029	Internal torque limit 2	TL2
PRM30, PRM1030	Backlash compensation	*BKC
PRM31, PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
PRM34, PRM1034	Ratio of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40, PRM1040	JOG operation acceleration/deceleration time constant	JTC
PRM41, PRM1041	Home position return operation acceleration/deceleration time constant	ZTS
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Stopper type home position return stopper time	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT
PRM46, PRM1046	Software limit +	*LMP
PRM47, PRM1047		
PRM48, PRM1048	Software limit -	*LMN
PRM49, PRM1049		
PRM50, PRM1050	Position range output address +	*LPP
PRM51, PRM1051		
PRM52, PRM1052	Position range output address -	*LNP
PRM53, PRM1053		
PRM54, PRM1054	For manufacturer setting	-
PRM55, PRM1055	Function selection 6	*OP6
PRM56, PRM1056	For manufacturer setting	-

Virtual device name	Name	Symbol
PRM57, PRM1057	Function selection 8	*OP8
PRM58, PRM1058	Function selection 9	*OP9
PRM59, PRM1059	Function selection A	*OPA
PRM60, PRM1060	For manufacturer setting	-
PRM61, PRM1061	Machine resonance suppression filter 1	NH1
PRM62, PRM1062	Machine resonance suppression filter 2	NH2
PRM63, PRM1063	Low-pass filter, adaptive vibration suppression control	LPF
PRM64, PRM1064	Ratio of load inertia moment to servo motor inertia moment 2	GD2B
PRM65, PRM1065	Position control gain 2 changing ratio	PG2B
PRM66, PRM1066	Speed control gain 2 changing ratio	VG2B
PRM67, PRM1067	Speed integral compensation changing ratio	VICB
PRM68, PRM1068	Gain changing selection	*CDP
PRM69, PRM1069	Gain switching condition	CDS
PRM70, PRM1070	Gain switching time constant	CDT
PRM71 to PRM73, PRM1071 to PRM1073	For manufacturer setting	-
PRM74, PRM1074	OUT1 output time selection	OUT1
PRM75, PRM1075	OUT2 output time selection	OUT2
PRM76, PRM1076	OUT3 output time selection	OUT3
PRM77, PRM1077	Selected to program input polarity selection 1	SYC1
PRM78 to PRM90, PRM1078 to PRM1090	For manufacturer setting	-

(5) Status display ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Program Number	-
ST4	Step Number	-
ST5	Cumulative feedback pulses	-
ST6	Servo motor speed	-
ST7	Droop pulses	-
ST8	Override	-
ST9	Torque limit voltage	-
ST10	Regenerative load ratio	-
ST11	Effective load ratio	-
ST12	Peak load ratio	-
ST13	Instantaneous torque	-
ST14	Within one-revolution position	-
ST15	ABS counter	-
ST16	Load inertia moment ratio	-
ST17	Bus voltage	-

(6) Alarm ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, current position	-

Virtual device name	Name	Symbol
AL12	Servo status when alarm occurs, command position	-
AL13	Servo status when alarm occurs, command remaining distance	-
AL14	Servo status when alarm occurs, program number	-
AL15	Servo status when alarm occurs, step number	-
AL16	Servo status when alarm occurs, cumulative feedback pulses	-
AL17	Servo status when alarm occurs, servo motor speed	-
AL18	Servo status when alarm occurs, droop pulses	-
AL19	Servo status when alarm occurs, override	-
AL20	Servo status when alarm occurs, torque limit voltage	-
AL21	Servo status when alarm occurs, regenerative load ratio	-
AL22	Servo status when alarm occurs, effective load ratio	-
AL23	Servo status when alarm occurs, peak load ratio	-
AL24	Servo status when alarm occurs, instantaneous torque	-
AL25	Servo status when alarm occurs, within one-revolution position	-
AL26	Servo status when alarm occurs, ABS counter	-
AL27	Servo status when alarm occurs, load inertia moment ratio	-
AL28	Servo status when alarm occurs, Bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(7) External input signal ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_CL Instruction Manual
DI1	External input pin statuses	-	
DI2	Statuses of input devices switched on through communication	-	For the mapping of the bits corresponding to the data to be read or written, refer to the following. ➟MR-J2S-_CL Instruction Manual

(8) External output signal ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J2S-_CL Instruction Manual
DO1	External output pin statuses	-	

(9) Current position latch data ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
LD1	Current position latch data	-

(10)Value of the general-purpose register (Rx) ([MELSERVO-J2S-*CL])

Use an appropriate device according to the write destination of the servo amplifier.

- RR1 to RR4: Writing data to the RAM of a servo amplifier
- RR1001 to RR1004: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
RR1, RR1001	Value of the general-purpose register (R1)	-
RR2, RR1002	Value of the general-purpose register (R2)	-
RR3, RR1003	Value of the general-purpose register (R3)	-
RR4, RR1004	Value of the general-purpose register (R4)	-

(11)Value of the general-purpose register (Dx) ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
RD1	Value of the general-purpose register (D1)	-
RD2	Value of the general-purpose register (D2)	-
RD3	Value of the general-purpose register (D3)	-
RD4	Value of the general-purpose register (D4)	-

(12)Input signal for test operation (for test operation) ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(13)Forced output of signal pin (for test operation) ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(14)Set data (for test operation) ([MELSERVO-J2S-*CL])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	Writes the moving distance in pulses (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2S-*CL])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.18 [MELSERVO-J3-*A]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-J3-*A])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*A])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-J3-*A])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*A])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-J3-*A])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*A])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-J3-*A])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-J3-*A])

■1 Monitoring-supported bit devices ([MELSERVO-J3-*A])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.18 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.18 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	1 to 6	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*A])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J3-*A])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.18 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*A])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.18 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic parameter	Decimal	1 to 19 1001 to 1019	○	×
PB	Gain filter parameter	Decimal	1 to 45 1001 to 1045	○	×
PC	Extension setting parameter	Decimal	1 to 50 1001 to 1050	○	×
PD	I/O setting parameter	Decimal	1 to 30 1001 to 1030	○	×
ST	Status display	Decimal	0 to 14	○	×
AL	Alarm (current alarm)	Decimal	0 to 1 11 to 25	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
DI	External input signal	Decimal	0 to 2	×	×
DO	External output signal	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*A])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 to DI1.

■5 Monitoring-supported double-word devices ([MELSERVO-J3-*A])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.18 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.18 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*A])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*A])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J3-*A])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J3-*A])
OM	➟(2) Operation mode selection ([MELSERVO-J3-*A])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J3-*A])
PA	➟(4) Basic parameter ([MELSERVO-J3-*A])
PB	➟(5) Gain filter parameter ([MELSERVO-J3-*A])
PC	➟(6) Extension setting parameter ([MELSERVO-J3-*A])
PD	➟(7) I/O setting parameter ([MELSERVO-J3-*A])
ST	➟(8) Status display ([MELSERVO-J3-*A])
AL	➟(9) Alarm ([MELSERVO-J3-*A])
DI	➟(10) External input signal ([MELSERVO-J3-*A])
DO	➟(11) External output signal ([MELSERVO-J3-*A])
TMI	➟(12) Input signal for test operation (for test operation) ([MELSERVO-J3-*A])
TMO	➟(13) Forced output of signal pin (for test operation) ([MELSERVO-J3-*A])
TMD	➟(14) Set data (for test operation) ([MELSERVO-J3-*A])

(1) Servo amplifier request ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Basic parameter ([MELSERVO-J3-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA50: Writing data to the RAM of a servo amplifier
- PA1001 to PA1050: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator (command pulse multiplication numerator)	CMX

Virtual device name	Name	Symbol
PA7, PA1007	Electronic gear denominator (command pulse multiplication denominator)	CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward rotation torque limit	TLP
PA12, PA1012	Reverse rotation torque limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	-
PA19, PA1019	Parameter block	*BLK

(5) Gain filter parameter ([MELSERVO-J3-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB50: Writing data to the RAM of a servo amplifier
- PB1001 to PB1050: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control)	VRFT
PB3, PB1003	Position command acceleration/deceleration time constant (position smoothing)	PST
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position control gain	PG2
PB9, PB1009	Speed control gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	For manufacturer setting	-
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch shape selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch shape selection 2	NHQ2
PB17, PB1017	For manufacturer setting	-
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	-
PB23, PB1023	Low-pass filter setting	VFBF
PB24, PB1024	Slight vibration suppression control	*MVS
PB25, PB1025	Function selection B-1	*BOP1
PB26, PB1026	Gain changing selection	*CDP
PB27, PB1027	Gain switching condition	CDL
PB28, PB1028	Gain switching time constant	CDT
PB29, PB1029	Ratio of load inertia moment to servo motor after gain switching	GD2B

Virtual device name	Name	Symbol
PB30, PB1030	Position loop gain after gain switching	PG2B
PB31, PB1031	Speed loop gain after gain switching	VG2B
PB32, PB1032	Speed integral compensation after gain switching	VICB
PB33, PB1033	Suppression control and vibration frequency setting after gain switching	VRF1B
PB34, PB1034	Suppression control and vibration resonance setting after gain switching	VRF2B
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	-

(6) Extension setting parameter ([MELSERVO-J3-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC50: Writing data to the RAM of a servo amplifier
- PC1001 to PC1050: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PC1, PC1001	Acceleration time constant	STA
PC2, PC1002	Deceleration time constant	STB
PC3, PC1003	S-pattern acceleration/deceleration time constant	STC
PC4, PC1004	Torque command time constant	TQC
PC5, PC1005	Internal speed command1/limit1	SC1
PC6, PC1006	Internal speed command2/limit2	SC2
PC7, PC1007	Internal speed command3/limit3	SC3
PC8, PC1008	Internal speed command4/limit4	SC4
PC9, PC1009	Internal speed command5/limit5	SC5
PC10, PC1010	Internal speed command6/limit6	SC6
PC11, PC1011	Internal speed command7/limit7	SC7
PC12, PC1012	Analog speed command maximum speed/limit maximum speed	VCM
PC13, PC1013	Analog torque command maximum output	TLC
PC14, PC1014	Analog monitor 1 output	MOD1
PC15, PC1015	Analog monitor 2 output	MOD2
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number setting	*SNO
PC21, PC1021	Communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	-
PC26, PC1026	Function selection C-5	*COP5
PC27 to PC29, PC1027 to PC1029	For manufacturer setting	-
PC30, PC1030	Acceleration time constant 2	STA2
PC31, PC1031	Deceleration time constant 2	STB2
PC32, PC1032	Command input pulse multiplication numerator 2	CMX2
PC33, PC1033	Command input pulse multiplication numerator 3	CMX3
PC34, PC1034	Command input pulse multiplication numerator 4	CMX4
PC35, PC1035	Internal torque limit 2	TL2

Virtual device name	Name	Symbol
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Analog speed command offset/limit offset	VCO
PC38, PC1038	Analog torque command offset/limit offset	TPO
PC39, PC1039	Analog monitor 1 offset	MO1
PC40, PC1040	Analog monitor 2 offset	MO2
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	-

(7) I/O setting parameter ([MELSERVO-J3-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PD1 to PD50: Writing data to the RAM of a servo amplifier
- PD1001 to PD1050: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	-
PD3, PD1003	Input device selection 1 (CN1-15)	*DI1
PD4, PD1004	Input device selection 2 (CN1-16)	*DI2
PD5, PD1005	Input device selection 3 (CN1-17)	*DI3
PD6, PD1006	Input device selection 4 (CN1-18)	*DI4
PD7, PD1007	Input device selection 5 (CN1-19)	*DI5
PD8, PD1008	Input device selection 6 (CN1-41)	*DI6
PD9, PD1009	For manufacturer setting	-
PD10, PD1010	Input device selection 8 (CN1-43)	*DI8
PD11, PD1011	Input device selection 9 (CN1-44)	*DI9
PD12, PD1012	Input device selection 10 (CN1-45)	*DI10
PD13, PD1013	Output device selection 1 (CN1-22)	*DO1
PD14, PD1014	Output device selection 2 (CN1-23)	*DO2
PD15, PD1015	Output device selection 3 (CN1-24)	*DO3
PD16, PD1016	Output device selection 4 (CN1-25)	*DO4
PD17, PD1017	For manufacturer setting	-
PD18, PD1018	Output device selection 6 (CN1-49)	*DO6
PD19, PD1019	Input filter setting	*DIF
PD20, PD1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	-
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	-
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	-

(8) Status display ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/limit voltage	-

Virtual device name	Name	Symbol
ST6	Analog torque command voltage/limit voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-

(9) Alarm ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, cumulative feedback pulses	-
AL12	Servo status when alarm occurs, servo motor speed	-
AL13	Servo status when alarm occurs, droop pulses	-
AL14	Servo status when alarm occurs, cumulative command pulses	-
AL15	Servo status when alarm occurs, command pulse frequency	-
AL16	Servo status when alarm occurs, analog speed command voltage/limit voltage	-
AL17	Servo status when alarm occurs, analog torque command voltage/limit voltage	-
AL18	Servo status when alarm occurs, regenerative load ratio	-
AL19	Servo status when alarm occurs, effective load ratio	-
AL20	Servo status when alarm occurs, peak load ratio	-
AL21	Servo status when alarm occurs, Instantaneous torque	-
AL22	Servo status when alarm occurs, within one-revolution position	-
AL23	Servo status when alarm occurs, ABS counter	-
AL24	Servo status when alarm occurs, load inertia moment ratio	-
AL25	Servo status when alarm occurs, bus voltage	-
AL200	Alarm number from Alarm History most recent alarm	-
AL201	Alarm number from Alarm History first alarm in past	-
AL202	Alarm number from Alarm History second alarm in past	-
AL203	Alarm number from Alarm History third alarm in past	-
AL204	Alarm number from Alarm History fourth alarm in past	-
AL205	Alarm number from Alarm History fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from Alarm History most recent alarm	-
AL231	Detailed alarm from Alarm History first alarm in past	-
AL232	Detailed alarm from Alarm History second alarm in past	-
AL233	Detailed alarm from Alarm History third alarm in past	-
AL234	Detailed alarm from Alarm History fourth alarm in past	-
AL235	Detailed alarm from Alarm History fifth alarm in past	-

(10)External input signal ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J3-_A Instruction Manual
DI1	External input pin statuses	-	
DI2	Statuses of input devices switched on through communication	-	

(11)External output signal ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J3-_A Instruction Manual
DO1	External output pin statuses	-	

(12)Input signal for test operation (for test operation) ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(13)Forced output of signal pin (for test operation) ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(14)Set data (for test operation) ([MELSERVO-J3-*A])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD2	For manufacturer setting	-
TMD3	Writes the moving distance (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J3-*A])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.19 [MELSERVO-J3-*T]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➥■1 Monitoring-supported bit devices ([MELSERVO-J3-*T])
	➥■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*T])
Specifications of word devices	➥■3 Monitoring-supported word devices ([MELSERVO-J3-*T])
	➥■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*T])
Specifications of double-word devices	➥■5 Monitoring-supported double-word devices ([MELSERVO-J3-*T])
	➥■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*T])
Specifications of virtual servo amplifier devices	➥■7 Virtual servo amplifier devices ([MELSERVO-J3-*T])
	➥■8 Precautions for virtual servo amplifier devices ([MELSERVO-J3-*T])

■1 Monitoring-supported bit devices ([MELSERVO-J3-*T])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.19 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*T])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.19 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*T])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 5	×	×
TMB	Instruction demand (for test operation)	Decimal	1 to 6	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J3-*T])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J3-*T])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.19 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*T])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.19 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*T])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic parameter	Decimal	1 to 19 1001 to 1019	○	×
PB	Gain filter parameter	Decimal	1 to 45 1001 to 1045	○	×
PC	Extension setting parameter	Decimal	1 to 50 1001 to 1050	○	×
PD	I/O setting parameter	Decimal	1 to 30 1001 to 1030	○	×
PO	Option unit parameter (PO)*1	Decimal	1 to 35 1001 to 1035	○	×
ST	Status display	Decimal	0 to 17	○	×
AL	Alarm (current alarm)	Decimal	0 to 1 11 to 28	○	×
AL	Alarm (alarm history)	Decimal	200 to 205 210 to 215 230 to 235	○	×
POS	Point table (position)	Decimal	1 to 255 1001 to 1255	○	×
SPD	Point table (speed)	Decimal	1 to 255 1001 to 1255	○	×
ACT	Point table (acceleration time constant)	Decimal	1 to 255 1001 to 1255	○	×
DCT	Point table (deceleration time constant)	Decimal	1 to 255 1001 to 1255	○	×
DWL	Point table (dwell)	Decimal	1 to 255 1001 to 1255	○	×
AUX	Point table (auxiliary function)	Decimal	1 to 255 1001 to 1255	○	×
MCD*2	Point table (M code)	Decimal	1 to 255 1001 to 1255	○	×
DI	External input signal	Decimal	0 to 7	×	×
DO	External output signal	Decimal	0 to 4	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 MCD cannot be used as a real number.

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J3-*T])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 For DI0 to DI4, the GOT can only read data from devices.

■5 Monitoring-supported double-word devices ([MELSERVO-J3-*T])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.19 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*T])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.19 ■7 Virtual servo amplifier devices ([MELSERVO-J3-*T])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0 to 2	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0 to 1	×	×
TMD	Set data (for test operation)	Decimal	0 to1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J3-*T])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J3-*T])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J3-*T])
OM	➟(2) Operation mode selection ([MELSERVO-J3-*T])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J3-*T])
PA	➟(4) Basic parameter ([MELSERVO-J3-*T])
PB	➟(5) Gain filter parameter ([MELSERVO-J3-*T])
PC	➟(6) Extension setting parameter ([MELSERVO-J3-*T])
PD	➟(7) I/O setting parameter ([MELSERVO-J3-*T])
PO	➟(8) Option unit parameter ([MELSERVO-J3-*T])
ST	➟(9) Status display ([MELSERVO-J3-*T])
AL	➟(10) Alarm ([MELSERVO-J3-*T])
POS	➟(11) Point table (position) ([MELSERVO-J3-*T])
SPD	➟(12) Point table (speed) ([MELSERVO-J3-*T])
ACT	➟(13) Point table (acceleration time constant) ([MELSERVO-J3-*T])
DCT	➟(14) Point table (deceleration time constant) ([MELSERVO-J3-*T])
DWL	➟(15) Point table (dwell) ([MELSERVO-J3-*T])
AUX	➟(16) Point table (auxiliary function) ([MELSERVO-J3-*T])
MCD	➟(17) Point table (M code) ([MELSERVO-J3-*T])
DI	➟(18) External input signal ([MELSERVO-J3-*T])
DO	➟(19) External output signal ([MELSERVO-J3-*T])
TMI	➟(20) Input signal for test operation (for test operation) ([MELSERVO-J3-*T])
TMO	➟(21) Forced output of signal pin (for test operation) ([MELSERVO-J3-*T])
TMD	➟(22) Set data (for test operation) ([MELSERVO-J3-*T])

(1) Servo amplifier request ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	-
OM5	Single-step feed	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) Basic parameter ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA19: Writing data to the RAM of a servo amplifier
- PA1001 to PA1019: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Feeding function selection	*FTY
PA6, PA1006	Electronic gear numerator	*CMX
PA7, PA1007	Electronic gear denominator	*CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward rotation torque limit	TLP
PA12, PA1012	Reverse rotation torque limit	TLN
PA13, PA1013	For manufacturer setting	-
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	-
PA19, PA1019	Parameter block	*BLK

(5) Gain filter parameter ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB45: Writing data to the RAM of a servo amplifier
- PB1001 to PB1045: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control)	VRFT
PB3, PB1003	For manufacturer setting	-
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position control gain	PG2
PB9, PB1009	Speed control gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	For manufacturer setting	-
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch shape selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch shape selection 2	NHQ2
PB17, PB1017	For manufacturer setting	-
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	-
PB23, PB1023	Low-pass filter setting	VFBF
PB24, PB1024	Slight vibration suppression control	*MVS
PB25, PB1025	For manufacturer setting	-
PB26, PB1026	Gain changing selection	*CDP
PB27, PB1027	Gain switching condition	CDL
PB28, PB1028	Gain switching time constant	CDT
PB29, PB1029	Ratio of load inertia moment to servo motor after gain switching	GD2B
PB30, PB1030	Position loop gain after gain switching	PG2B
PB31, PB1031	Speed loop gain after gain switching	VG2B
PB32, PB1032	Speed integral compensation after gain switching	VICB
PB33, PB1033	Suppression control and vibration frequency setting after gain switching	VRF1B
PB34, PB1034	Suppression control and vibration resonance setting after gain switching	VRF2B
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	-

(6) Extension setting parameter ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC50: Writing data to the RAM of a servo amplifier

• PC1001 to PC1050: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PC1, PC1001	For manufacturer setting	-
PC2, PC1002	Home position return type	*ZTY
PC3, PC1003	Direction of home position return	*ZDIR
PC4, PC1004	Home position return speed	ZRF
PC5, PC1005	Creep speed	CRF
PC6, PC1006	Home position shift distance	ZST
PC7, PC1007	Home position return position data	*ZPS
PC8, PC1008	Moving distance after proximity dog	DCT
PC9, PC1009	Stopper type home position return stopper time	ZTM
PC10, PC1010	Stopper type home position return torque limit value	ZTT
PC11, PC1011	Rough match output range	CRP
PC12, PC1012	Jog speed	JOG
PC13, PC1013	S-pattern acceleration/deceleration time constant	*STC
PC14, PC1014	Backlash compensation	*BKC
PC15, PC1015	For manufacturer setting	-
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number setting	*SNO
PC21, PC1021	RS-422 communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	For manufacturer setting	-
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	-
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027	For manufacturer setting	-
PC28, PC1028	Function selection C-7	*COP7
PC29 to PC30, PC1029 to PC1030	For manufacturer setting	-
PC31, PC1031	Software limit + Low	LMPL
PC32, PC1032	Software limit + High	LMPH
PC33, PC1033	Software limit - Low	LMNL
PC34, PC1034	Software limit - High	LMNH
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Position range output address + Low	*LPPL
PC38, PC1038	Position range output address + High	*LPPH
PC39, PC1039	Position range output address - Low	*LNPL
PC40, PC1040	Position range output address - High	*LNPH
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	-

(7) I/O setting parameter ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

• PD1 to PD30: Writing data to the RAM of a servo amplifier

• PD1001 to PD1030: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	-
PD3, PD1003	Input signal automatic ON selection 3	*DIA3
PD4, PD1004	Input signal automatic ON selection 4	*DIA4
PD5, PD1005	For manufacturer setting	-
PD6, PD1006	Input device selection 2 (CN6-2)	*DI2
PD7, PD1007	Input device selection 3 (CN6-3)	*DI3
PD8, PD1008	Input device selection 4 (CN6-4)	*DI4
PD9, PD1009	Output signal device selection 1 (CN6-14)	*DO1
PD10, PD1010	Output signal device selection 2 (CN6-15)	*DO2
PD11, PD1011	Output signal device selection 3 (CN6-16)	*DD3
PD12 to PD15, PD1012 to PD1015	For manufacturer setting	-
PD16, PD1016	Input polarity selection	*DIAB
PD17 to PD18, PD1017 to PD1018	For manufacturer setting	-
PD19, PD1019	Input filter setting	*DIF
PD20, PD1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	-
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	-
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	-

(8) Option unit parameter ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

• PO1 to PO35: Writing data to the RAM of a servo amplifier

• PO1001 to PO1035: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
PO1, PO1001	For manufacturer setting	-
PO2, PO1002	MR-J3-D01 Input signal device selection 1 (CN10-21, 26)	*ODI1
PO3, PO1003	MR-J3-D01 Input signal device selection 2 (CN10-27, 28)	*ODI2
PO4, PO1004	MR-J3-D01 Input signal device selection 3 (CN10-29, 30)	*ODI3
PO5, PO1005	MR-J3-D01 Input signal device selection 4 (CN10-31, 32)	*ODI4
PO6, PO1006	MR-J3-D01 Input signal device selection 5 (CN10-33, 34)	*ODI5
PO7, PO1007	MR-J3-D01 Input signal device selection 6 (CN10-35, 36)	*ODI6
PO8, PO1008	MR-J3-D01 Output signal device selection 1 (CN10-46, 47)	*ODO1
PO9, PO1009	MR-J3-D01 Output signal device selection 2 (CN10-48, 49)	*ODO2
PO10, PO1010	Function selection 0-1	*OOP1
PO11, PO1011	For manufacturer setting	-
PO12, PO1012	Function selection 0-3	*OOP3
PO13, PO1013	MR-J3-D01 Analog monitor 1 output	MOD1
PO14, PO1014	MR-J3-D01 Analog monitor 2 output	MOD2
PO15, PO1015	MR-J3-D01 Analog monitor 1 offset	MO1
PO16, PO1016	MR-J3-D01 Analog monitor 2 offset	MO2

Virtual device name	Name	Symbol
PO17 to 20, PO1017 to PO1020	For manufacturer setting	-
PO21, PO1021	MR-J3-D01 Override offset	VCO
PO22, PO1022	MR-J3-D01 Analog torque limitation offset	TLO
PO23 to PO35, PO1023 to PO1035	For manufacturer setting	-

(9) Status display ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
ST0	Current position	-
ST1	Command position	-
ST2	Command remaining distance	-
ST3	Point table No.	-
ST4	Cumulative feedback pulses	-
ST5	Servo motor speed	-
ST6	Droop pulses	-
ST7	Override voltage	-
ST8	Override	-
ST9	Analog torque command voltage/limit voltage	-
ST10	Regenerative load ratio	-
ST11	Effective load ratio	-
ST12	Peak load ratio	-
ST13	Instantaneous torque	-
ST14	Within one-revolution position	-
ST15	ABS counter	-
ST16	Load inertia moment ratio	-
ST17	Bus voltage	-

(10)Alarm ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs, current position	-
AL12	Servo status when alarm occurs, command position	-
AL13	Servo status when alarm occurs, command remaining distance	-
AL14	Servo status when alarm occurs, point table No.	-
AL15	Servo status when alarm occurs, cumulative feedback pulses	-
AL16	Servo status when alarm occurs, servo motor speed	-
AL17	Servo status when alarm occurs, droop pulses	-
AL18	Servo status when alarm occurs, override voltage	-
AL19	Servo status when alarm occurs, override	-
AL20	Servo status when alarm occurs, analog torque limit voltage	-
AL21	Servo status when alarm occurs, regenerative load ratio	-
AL22	Servo status when alarm occurs, effective load ratio	-
AL23	Servo status when alarm occurs, peak load ratio	-
AL24	Servo status when alarm occurs, Instantaneous torque	-
AL25	Servo status when alarm occurs, within one-revolution position	-
AL26	Servo status when alarm occurs, ABS counter	-
AL27	Servo status when alarm occurs, load inertia moment ratio	-

Virtual device name	Name	Symbol
AL28	Servo status when alarm occurs, Bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	-
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	-
AL205	Alarm number from alarm history fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from alarm history most recent alarm	-
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	-
AL234	Detailed alarm from alarm history fourth alarm in past	-
AL235	Detailed alarm from alarm history fifth alarm in past	-

(11)Point table (position) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- POS1 to POS255: Writing data to the RAM of a servo amplifier
- POS1001 to POS1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
POS1 to POS255, POS1001 to POS1255	Point table/position data No. 1 to No. 255	-

(12)Point table (speed) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- SPD1 to SPD255: Writing data to the RAM of a servo amplifier
- SPD1001 to SPD1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
SPD1 to SPD255, SPD1001 to SPD1255	Point table/speed data No. 1 to No. 255	-

(13)Point table (acceleration time constant) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- ACT1 to ACT255: Writing data to the RAM of a servo amplifier
- ACT1001 to ACT1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
ACT1 to ACT255, ACT1001 to ACT1255	Point table/acceleration time constant No. 1 to No. 255	-

(14)Point table (deceleration time constant) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- DCT1 to DCT255: Writing data to the RAM of a servo amplifier
- DCT1001 to DCT1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DCT1 to DCT255, DCT1001 to DCT1255	Point table/deceleration time constant No. 1 to No. 255	-

(15)Point table (dwell) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- DWL1 to DWL255: Writing data to the RAM of a servo amplifier
- DWL1001 to DWL1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DWL1 to DWL255, DWL1001 to DWL1255	Point table/dwell No. 1 to No. 255	-

(16)Point table (auxiliary function) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- AUX1 to AUX255: Writing data to the RAM of a servo amplifier
- AUX1001 to AUX1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
AUX1 to AUX255, AUX1001 to AUX1255	Point table/auxiliary function No. 1 to No. 255	-

(17)Point table (M code) ([MELSERVO-J3-*T])

Use an appropriate device according to the write destination of the servo amplifier.

- MCD1 to MCD255: Writing data to the RAM of a servo amplifier
- MCD1001 to MCD1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
MCD1 to MCD255, MCD1001 to MCD1255	Point table/M code No.1 to No.255	-

(18)External input signal ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J3-_T Instruction Manual
DI1	Input device statuses	-	
DI3	External input pin statuses	-	
DI5	Statuses of input devices switched on through communication	-	For the mapping of the bits corresponding to the data to be read or written, refer to the following. ➟MR-J3-_T Instruction Manual
DI6	Statuses of input devices switched on through communication	-	

(19)External output signal ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J3-_T Instruction Manual
DO1	Output device statuses	-	
DO3	External output pin statuses	-	

(20)Input signal for test operation (for test operation) ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation 1	-
TMI1	Input signal for test operation 2	-
TMI2	Input signal for test operation 3	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(21)Forced output of signal pin (for test operation) ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
TMO0	Forced output from signal pin (CN6)	-
TMO1	Forced output from signal pin (CN10)	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(22)Set data (for test operation) ([MELSERVO-J3-*T])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD3	Writes the moving distance (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J3-*T])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.20 [MELSERVO-J4-*A, -JE-*A]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➥■1 Monitoring-supported bit devices ([MELSERVO-J4-*A, -JE-*A])
	➥■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A, -JE-*A])
Specifications of word devices	➥■3 Monitoring-supported word devices ([MELSERVO-J4-*A, -JE-*A])
	➥■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A, -JE-*A])
Specifications of double-word devices	➥■5 Monitoring-supported double-word devices ([MELSERVO-J4-*A, -JE-*A])
	➥■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A, -JE-*A])
Specifications of virtual servo amplifier devices	➥■7 Virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])
	➥■8 Precautions for virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

■1 Monitoring-supported bit devices ([MELSERVO-J4-*A, -JE-*A])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.3.20 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A, -JE-*A])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.20 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 4	×	×
TMB	Instruction demand (for test operation)	Decimal	1 to 6	×	×
OTI	One-touch tuning instruction	Decimal	0 to 5	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A, -JE-*A])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J4-*A, -JE-*A])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.20 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A, -JE-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.20 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic parameter	Decimal	1 to 32 1001 to 1032	○	×
PB	Gain filter parameter	Decimal	1 to 64 1001 to 1064	○	×
PC	Extension setting parameter	Decimal	1 to 80 1001 to 1080	○	×
PD	I/O setting parameter	Decimal	1 to 48 1001 to 1048	○	×
PL	Linear servo motor/DD motor setting parameter	Decimal	1 to 48 1001 to 1048	○	×
ST	Status display	Decimal	0 to 41	○	×
AL	Alarm (current alarm, J3A compatible)	Decimal	0 to 1 11 to 25	○	×
AL	Alarm (alarm history, J3A compatible)	Decimal	200 to 205 210 to 215 230 to 235	○	×
PE	Extension setting No.2 parameter	Decimal	1 to 64 1001 to 1064	○	×
PF	Extension setting No.3 parameter	Decimal	1 to 48 1001 to 1048	○	×
ALM	Alarm (current alarm, J4A extend)	Decimal	0 to 1 11 to 52	○	×
ALM	Alarm (alarm history, J4A extend)	Decimal	200 to 215 220 to 235 240 to 255	○	×
MD	Machine diagnosis data	Decimal	0 to 11	×	×
OTS	One-touch tuning data	Decimal	0 to 3	×	×
DI	External input signal	Decimal	0 to 2	×	×
DO	External output signal	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A, -JE-*A])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 and DI1.

■5 Monitoring-supported double-word devices ([MELSERVO-J4-*A, -JE-*A])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.20 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A, -JE-*A])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.20 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
ALD	Life diagnosis	Decimal	0 to 1	×	×
TMI	Input signal for test operation (for test operation)	Decimal	0	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A, -JE-*A])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-J4-*A, -JE-*A])
OM	➟(2) Operation mode selection ([MELSERVO-J4-*A, -JE-*A])
TMB	➟(3) Instruction demand (for test operation) ([MELSERVO-J4-*A, -JE-*A])
OTI	➟(4) One-touch tuning instruction ([MELSERVO-J4-*A, -JE-*A])

Virtual device name	Reference
PA	➟(5) Basic parameter ([MELSERVO-J4-*A, -JE-*A])
PB	➟(6) Gain filter parameter ([MELSERVO-J4-*A, -JE-*A])
PC	➟(7) Extension setting parameter ([MELSERVO-J4-*A, -JE-*A])
PD	➟(8) I/O setting parameter ([MELSERVO-J4-*A, -JE-*A])
PL	➟(9) Linear servo motor/DD motor setting parameter ([MELSERVO-J4-*A, -JE-*A])
ST	➟(10) Status display ([MELSERVO-J4-*A, -JE-*A])
AL	➟(11) Alarm (MELSERVO-J3-*A compatible) ([MELSERVO-J4-*A, -JE-*A])
PE	➟(12) Extension setting No.2 parameter ([MELSERVO-J4-*A, -JE-*A])
PF	➟(13) Extension setting No.3 parameter ([MELSERVO-J4-*A, -JE-*A])
ALM	➟(14) Alarm (MELSERVO-J4-*A extended) ([MELSERVO-J4-*A, -JE-*A])
MD	➟(15) Machine diagnosis data ([MELSERVO-J4-*A, -JE-*A])
OTS	➟(16) One-touch tuning data ([MELSERVO-J4-*A, -JE-*A])
DI	➟(17) External input signal in MR-J4-□A ([MELSERVO-J4-*A, -JE-*A])
	➟(18) External input signal in MR-JE-□A ([MELSERVO-J4-*A, -JE-*A])
DO	➟(19) External output signal in MR-J4-□A ([MELSERVO-J4-*A, -JE-*A])
	➟(20) External output signal in MR-JE-□A ([MELSERVO-J4-*A, -JE-*A])
ALD	➟(21) Life diagnosis ([MELSERVO-J4-*A, -JE-*A])
TMI	➟(22) Input signal for test operation (for test operation) ([MELSERVO-J4-*A, -JE-*A])
TMO	➟(23) Forced output of signal pin (for test operation) ([MELSERVO-J4-*A, -JE-*A])
TMD	➟(24) Set data (for test operation) ([MELSERVO-J4-*A, -JE-*A])

(1) Servo amplifier request ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
SP0	Status display data clear	-	○	○
SP1	Current alarm clear	-	○	○
SP2	Alarm history clear	-	○	○
SP3	External input signal prohibited	-	○	○
SP4	External output signal prohibited	-	○	○
SP5	External input signal resumed	-	○	○
SP6	External output signal resumed	-	○	○

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
OM0	Normal mode (not test operation mode)	-	○	○
OM1	JOG operation	-	○	○
OM2	Positioning operation	-	○	○
OM4	Output signal (DO) forced output	-	○	○

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
TMB1	Temporary stop command	-	○	○
TMB2	Test operation (positioning operation) start command	-	○	○
TMB3	Forward rotation direction	-	○	○
TMB4	Reverse rotation direction	-	○	○
TMB5	Restart for remaining distance	-	○	○
TMB6	Remaining distance clear	-	○	○

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) One-touch tuning instruction ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
OTI0	One-touch tuning start command (Basic mode)	-	○	○
OTI1	One-touch tuning start command (High mode)	-	○	○
OTI2	One-touch tuning start command (Low mode)	-	○	○
OTI3	One-touch tuning stop command	-	○	○
OTI4	Return to initial value	-	○	○
OTI5	Return to value before adjustment	-	○	○

(5) Basic parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA32: Writing data to the RAM of a servo amplifier
- PA1001 to PA1032: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PA1, PA1001	Operation mode	*STY	○	○
PA2, PA1002	Regenerative brake option	*REG	○	○
PA3, PA1003	Absolute position detection system	*ABS	○	×
PA4, PA1004	Function selection A-1	*AOP1	○	○
PA5, PA1005	Number of command input pulses per revolution	*FBP	○	○

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PA6, PA1006	Electronic gear numerator (command pulse multiplication numerator)	CMX	○	○
PA7, PA1007	Electronic gear denominator (command pulse multiplication denominator)	CDV	○	○
PA8, PA1008	Auto tuning mode	ATU	○	○
PA9, PA1009	Auto tuning response	RSP	○	○
PA10, PA1010	In-position range	INP	○	○
PA11, PA1011	Forward rotation torque limit	TLP	○	○
PA12, PA1012	Reverse rotation torque limit	TLN	○	○
PA13, PA1013	Command pulse input form	*PLSS	○	○
PA14, PA1014	Rotation direction selection	*POL	○	○
PA15, PA1015	Encoder output pulses	*ENR	○	○
PA16, PA1016	Encoder output pulses 2	*ENR2	○	○
PA17 to PA18, PA1017 to PA1018	For manufacturer setting	-	×	×
PA19, PA1019	Parameter block	*BLK	○	○
PA20, PA1020	Tough drive setting	*TDS	○	○
PA21, PA1021	Function selection A-3	*AOP3	○	○
PA22, PA1022	For manufacturer setting	-	×	×
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT	○	○
PA24, PA1024	Function selection A-4	*AOP4	○	○
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV	○	○
PA26, PA1026	Function selection A-5	*AOP5	×	○
PA27 to PA32, PA1027 to PA1032	For manufacturer setting	-	×	×

(6) Gain filter parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB64: Writing data to the RAM of a servo amplifier
- PB1001 to PB1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT	○	○
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control)	VRFT	○	○
PB3, PB1003	Position command acceleration/deceleration time constant (position smoothing)	PST	○	○
PB4, PB1004	Feed forward gain	FFC	○	○
PB5, PB1005	For manufacturer setting	-	×	×
PB6, PB1006	Load inertia moment ratio	GD2	○	○
PB7, PB1007	Model control gain	PG1	○	○
PB8, PB1008	Position control gain	PG2	○	○
PB9, PB1009	Speed control gain	VG2	○	○
PB10, PB1010	Speed integral compensation	VIC	○	○
PB11, PB1011	Speed differential compensation	VDC	○	○
PB12, PB1012	Overshoot amount compensation	OVA	○	○
PB13, PB1013	Machine resonance suppression filter 1	NH1	○	○
PB14, PB1014	Notch shape selection 1	NHQ1	○	○
PB15, PB1015	Machine resonance suppression filter 2	NH2	○	○

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PB16, PB1016	Notch shape selection 2	NHQ2	○	○
PB17, PB1017	Shaft resonance suppression filter	NHF	○	○
PB18, PB1018	Low-pass filter setting	LPF	○	○
PB19, PB1019	Vibration suppression control 1 - Vibration frequency	VRF11	○	○
PB20, PB1020	Vibration suppression control 1 - Resonance frequency	VRF12	○	○
PB21, PB1021	Vibration suppression control 1 - Vibration frequency damping	VRF13	○	○
PB22, PB1022	Vibration suppression control 1 - Resonance frequency damping	VRF14	○	○
PB23, PB1023	Low-pass filter setting	VFBF	○	○
PB24, PB1024	Slight vibration suppression control	*MVS	○	○
PB25, PB1025	Function selection B-1	*BOP1	○	○
PB26, PB1026	Gain switching function	*CDP	○	○
PB27, PB1027	Gain switching condition	CDL	○	○
PB28, PB1028	Gain switching time constant	CDT	○	○
PB29, PB1029	Load to motor inertia ratio after gain switching	GD2B	○	○
PB30, PB1030	Position loop gain after gain switching	PG2B	○	○
PB31, PB1031	Speed loop gain after gain switching	VG2B	○	○
PB32, PB1032	Speed integral compensation after gain switching	VICB	○	○
PB33, PB1033	Vibration suppression control 1 - Vibration frequency after gain switching	VRF1B	○	○
PB34, PB1034	Vibration suppression control 1 - Resonance frequency after gain switching	VRF2B	○	○
PB35, PB1035	Vibration suppression control 1 - Vibration frequency damping after gain switching	VRF3B	○	○
PB36, PB1036	Vibration suppression control 1 - Resonance frequency damping after gain switching	VRF4B	○	○
PB37 to PB44, PB1037 to PB1044	For manufacturer setting	-	×	×
PB45, PB1045	Command notch filter	CNHF	○	○
PB46, PB1046	Machine resonance suppression filter 3	NH3	○	○
PB47, PB1047	Notch shape selection 3	NHQ3	○	○
PB48, PB1048	Machine resonance suppression filter 4	NH4	○	○
PB49, PB1049	Notch shape selection 4	NHQ4	○	○
PB50, PB1050	Machine resonance suppression filter 5	NH5	○	○
PB51, PB1051	Notch shape selection 5	NHQ5	○	○
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21	○	○
PB53, PB1053	Vibration suppression control 2 - Resonance frequency	VRF22	○	○
PB54, PB1054	Vibration suppression control 2 - Vibration frequency damping	VRF23	○	○
PB55, PB1055	Vibration suppression control 2 - Resonance frequency damping	VRF24	○	○
PB56, PB1056	Vibration suppression control 2 - Vibration frequency after gain switching	VRF21B	○	○
PB57, PB1057	Vibration suppression control 2 - Resonance frequency after gain switching	VRF22B	○	○
PB58, PB1058	Vibration suppression control 2 - Vibration frequency damping after gain switching	VRF23B	○	○
PB59, PB1059	Vibration suppression control 2 - Resonance frequency damping after gain switching	VRF24B	○	○
PB60, PB1060	Model loop gain after gain switching	PG1B	○	○
PB61 to PB64, PB1061 to PB1064	For manufacturer setting	-	×	×

(7) Extension setting parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

• PC1 to PC80: Writing data to the RAM of a servo amplifier
• PC1001 to PC1080: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PC1, PC1001	Acceleration time constant	STA	○	○
PC2, PC1002	Deceleration time constant	STB	○	○
PC3, PC1003	S-pattern acceleration/deceleration time constant	STC	○	○
PC4, PC1004	Torque command time constant	TQC	○	○
PC5, PC1005	Internal speed command1/limit1	SC1	○	○
PC6, PC1006	Internal speed command2/limit2	SC2	○	○
PC7, PC1007	Internal speed command3/limit3	SC3	○	○
PC8, PC1008	Internal speed command4/limit4	SC4	○	○
PC9, PC1009	Internal speed command5/limit5	SC5	○	○
PC10, PC1010	Internal speed command6/limit6	SC6	○	○
PC11, PC1011	Internal speed command7/limit7	SC7	○	○
PC12, PC1012	Analog speed command maximum speed/limit maximum speed	VCM	○	○
PC13, PC1013	Analog torque command maximum output	TLC	○	○
PC14, PC1014	Analog monitor 1 output	MOD1	○	○
PC15, PC1015	Analog monitor 2 output	MOD2	○	○
PC16, PC1016	Electromagnetic brake sequence output	MBR	○	○
PC17, PC1017	Zero speed	ZSP	○	○
PC18, PC1018	Alarm history clear	*BPS	○	○
PC19, PC1019	Encoder output pulse selection	*ENRS	○	○
PC20, PC1020	Station number setting	*SNO	○	×
PC21, PC1021	Communication function selection	*SOP	○	×
PC22, PC1022	Function selection C-1	*COP1	○	○
PC23, PC1023	Function selection C-2	*COP2	○	○
PC24, PC1024	Function selection C-3	*COP3	○	○
PC25, PC1025	For manufacturer setting	-	×	×
PC26, PC1026	Function selection C-5	*COP5	○	○
PC27, PC1027	Function selection C-6	*COP6	○	○
PC28 to PC29, PC1028 to PC1029	For manufacturer setting	-	×	×
PC30, PC1030	Acceleration time constant 2	STA2	○	○
PC31, PC1031	Deceleration time constant 2	STB2	○	○
PC32, PC1032	Command input pulse multiplication numerator 2	CMX2	○	○
PC33, PC1033	Command input pulse multiplication numerator 3	CMX3	○	○
PC34, PC1034	Command input pulse multiplication numerator 4	CMX4	○	○
PC35, PC1035	Internal torque limit 2	TL2	○	○
PC36, PC1036	Status display selection	*DMD	○	○
PC37, PC1037	Analog speed command offset/limit offset	VCO	○	○
PC38, PC1038	Analog torque command offset/limit offset	TPO	○	○
PC39, PC1039	Analog monitor 1 offset	MO1	○	○
PC40, PC1040	Analog monitor 2 offset	MO2	○	○
PC41 to PC42, PC1041 to PC1042	For manufacturer setting	-	×	×
PC43, PC1043	Error excessive alarm detection level	ERZ	○	○

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PC44 to PC 50, PC1044 to PC1050	For manufacturer setting	-	×	×
PC51, PC1051	Forced stop deceleration time constant	RSBR	○	○
PC52 to PC53, PC1052 to PC1053	For manufacturer setting	-	×	×
PC54, PC1054	Vertical axis freefall prevention compensation amount	RSUP1	○	○
PC55 to PC59, PC1055 to PC1059	For manufacturer setting	-	×	×
PC60, PC1060	Function selection C-D	*COPD	○	○
PC61 to PC65, PC1061 to PC1065	For manufacturer setting	-	×	×
PC66, PC1066	Mark detection range+	LPSPL	×	○
PC67, PC1067	Mark detection range+	LPSPH	×	○
PC68, PC1068	Mark detection range-	LPSNL	×	○
PC69, PC1069	Mark detection range-	LPSNH	×	○
PC70, PC1070	Modbus-RTU Communication station number setting	*SNOM	×	○
PC71, PC1071	Function selection C-F	*COPF	×	○
PC72, PC1072	Function selection C-G	*COPG	×	○
PC73, PC1073	Error excessive warning level	ERW	×	○
PC74 to PC80, PC1074 to PC1080	For manufacturer setting	-	×	×

(8) I/O setting parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PD1 to PD48: Writing data to the RAM of a servo amplifier
- PD1001 to PD1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PD1, PD1001	Input signal automatic on selection 1	*DIA1	○	○
PD2, PD1002	For manufacturer setting	-	×	×
PD3, PD1003	Input device selection 1L	*DI1L	○	○
PD4, PD1004	Input device selection 1H	*DI1H	○	○
PD5, PD1005	Input device selection 2L	*DI2L	○	×
PD6, PD1006	Input device selection 2H	*DI2H	○	×
PD7, PD1007	Input device selection 3L	*DI3L	○	×
PD8, PD1008	Input device selection 3H	*DI3H	○	×
PD9, PD1009	Input device selection 4L	*DI4L	○	×
PD10, PD1010	Input device selection 4H	*DI4H	○	×
PD11, PD1011	Input device selection 5L	*DI5L	○	○
PD12, PD1012	Input device selection 5H	*DI5H	○	○
PD13, PD1013	Input device selection 6L	*DI6L	○	○
PD14, PD1014	Input device selection 6H	*DI6H	○	○
PD15 to PD16, PD1015 to PD1016	For manufacturer setting	-	×	×
PD17, PD1017	Input device selection 8L	*DI8L	○	○
PD18, PD1018	Input device selection 8H	*DI8H	○	○
PD19, PD1019	Input device selection 9L	*DI9L	○	○
PD20, PD1020	Input device selection 9H	*DI9H	○	○
PD21, PD1021	Input device selection 10L	*DI10L	○	×

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PD22, PD1022	Input device selection 10H	*DI10H	○	×
PD23, PD1023	Output device selection 1	*DO1	○	×
PD24, PD1024	Output device selection 2	*DO2	○	○
PD25, PD1025	Output device selection 3	*DO3	○	○
PD26, PD1026	Output device selection 4	*DO4	○	×
PD27, PD1027	For manufacturer setting	-	×	×
PD28, PD1028	Output device selection 6	*DO6	○	○
PD29, PD1029	Input filter setting	*DIF	○	○
PD30, PD1030	Function selection D-1	*DOP1	○	○
PD31, PD1031	For manufacturer setting	-	×	×
PD32, PD1032	Function selection D-3	*DOP3	○	○
PD33, PD1033	For manufacturer setting	-	×	×
PD34, PD1034	Function selection D-5	*DOP5	○	○
PD35 to PD40, PD1035 to PD1040	For manufacturer setting	-	×	×
PD41, PD1041	Input signal automatic on selection 3	*DIA3	×	○
PD42, PD1042	Input signal automatic on selection 4	*DIA4	×	○
PD43, PD1043	Input device selection 11L	*DI11L	×	○
PD44, PD1044	Input device selection 11H	*DI11H	×	○
PD45, PD1045	Input device selection 12L	*DI12L	×	○
PD46, PD1046	Input device selection 12H	*DI12H	×	○
PD47 to PD48, PD1047 to PD1048	For manufacturer setting	-	×	×

(9) Linear servo motor/DD motor setting parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PL1 to PL48: Writing data to the RAM of a servo amplifier
- PL1001 to PL1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PL1, PL1001	Linear servo motor/DD motor function selection 1	*LIT1	○	×
PL2, PL1002	Linear encoder resolution - Numerator	*LIM	○	×
PL3, PL1003	Linear encoder resolution - Denominator	*LID	○	×
PL4, PL1004	Linear servo motor/DD motor function selection 2	*LIT2	○	×
PL5, PL1005	Position deviation error detection level	LB1	○	×
PL6, PL1006	Speed deviation error detection level	LB2	○	×
PL7, PL1007	Torque/thrust deviation error detection level	LB3	○	×
PL8, PL1008	Linear servo motor/DD motor function selection 3	*LIT3	○	×
PL9, PL1009	Magnetic pole detection voltage level	LPWM	○	×
PL10 to PL16, PL1010 to PL1016	For manufacturer setting	-	×	×
PL17, PL1017	Magnetic pole detection - Minute position detection method - Function selection	LTSTS	○	×
PL18, PL1018	Magnetic pole detection - Minute position detection method - Identification signal amplitude	IDLV	○	×
PL19 to PL48, PL1019 to PL1048	For manufacturer setting	-	×	×

(10)Status display ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
ST0	Cumulative feedback pulses	-	○	○
ST1	Servo motor speed	-	○	○
ST2	Droop pulses	-	○	○
ST3	Cumulative command pulses	-	○	○
ST4	Command pulse frequency	-	○	○
ST5	Analog speed command voltage/limit voltage	-	○	○
ST6	Analog torque command voltage/limit voltage	-	○	○
ST7	Regenerative load ratio	-	○	○
ST8	Effective load ratio	-	○	○
ST9	Peak load ratio	-	○	○
ST10	Instantaneous torque	-	○	○
ST11	Within one-revolution position (1 pulse unit)	-	○	○
ST12	ABS counter	-	○	○
ST13	Load inertia moment ratio	-	○	○
ST14	Bus voltage	-	○	○
ST15 to ST31	For manufacturer setting	-	×	×
ST32	Internal temperature of encoder	-	○	○
ST33	Settling time	-	○	○
ST34	Oscillation detection frequency	-	○	○
ST35	Number of tough drive operations	-	○	○
ST36 to ST39	For manufacturer setting	-	×	×
ST40	Unit power consumption 1 (increment of 1 W)	-	○	○
ST41	Unit total power consumption 1 (increment of 1 Wh)	-	○	○

(11)Alarm (MELSERVO-J3-*A compatible) ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
AL0	Current alarm number	-	○	○
AL1	Detailed data of current alarms	-	○	×
AL11	Servo status when alarm occurs Cumulative feedback pulses	-	○	○
AL12	Servo status when alarm occurs Servo motor speed	-	○	○
AL13	Servo status when alarm occurs Droop pulses	-	○	○
AL14	Servo status when alarm occurs cumulative command pulses	-	○	○
AL15	Servo status when alarm occurs command pulse frequency	-	○	○
AL16	Servo status(alarm) analog speed command voltage/limit voltage	-	○	○
AL17	Servo status(alarm) analog torque command voltage/limit voltage	-	○	○
AL18	Servo status when alarm occurs regenerative load ratio	-	○	○
AL19	Servo status when alarm occurs effective load ratio	-	○	○
AL20	Servo status when alarm occurs peak load ratio	-	○	○
AL21	Servo status when alarm occurs Instantaneous torque	-	○	○
AL22	Servo status(alarm) Within one-revolution position(1 pulse unit)	-	○	○
AL23	Servo status when alarm occurs ABS counter	-	○	○
AL24	Servo status when alarm occurs load inertia moment ratio	-	○	○

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
AL25	Servo status when alarm occurs Bus voltage	-	○	○
AL200	Alarm number from alarm history most recent alarm	-	○	○
AL201	Alarm number from alarm history first alarm in past	-	○	○
AL202	Alarm number from alarm history second alarm in past	-	○	○
AL203	Alarm number from alarm history third alarm in past	-	○	○
AL204	Alarm number from alarm history fourth alarm in past	-	○	○
AL205	Alarm number from alarm history fifth alarm in past	-	○	○
AL210	Alarm occurrence time in alarm history most recent alarm	-	○	○
AL211	Alarm occurrence time in alarm history first alarm in past	-	○	○
AL212	Alarm occurrence time in alarm history second alarm in past	-	○	○
AL213	Alarm occurrence time in alarm history third alarm in past	-	○	○
AL214	Alarm occurrence time in alarm history fourth alarm in past	-	○	○
AL215	Alarm occurrence time in alarm history fifth alarm in past	-	○	○
AL230	Detailed alarm from alarm history most recent alarm	-	○	×
AL231	Detailed alarm from alarm history first alarm in past	-	○	×
AL232	Detailed alarm from alarm history second alarm in past	-	○	×
AL233	Detailed alarm from alarm history third alarm in past	-	○	×
AL234	Detailed alarm from alarm history fourth alarm in past	-	○	×
AL235	Detailed alarm from alarm history fifth alarm in past	-	○	×

(12)Extension setting No.2 parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PE1 to PE64: Writing data to the RAM of a servo amplifier
- PE1001 to PE1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PE1 to PE40, PE1001 to PE1040	For manufacturer setting	-	×	×
PE41, PE1041	Function selection E-3	EOP3	○	○
PE42 to PE43, PE1042 to PE1043	For manufacturer setting	-	×	×
PE44, PE1044	Lost motion compensation positive-side compensation value selection	LMCP	×	○
PE45, PE1045	Lost motion compensation negative-side compensation value selection	LMCN	×	○
PE46, PE1046	Lost motion filter setting	LMFLT	×	○
PE47, PE1047	Torque offset	TOF	×	○
PE48, PE1048	Lost motion compensation function selection	*LMOP	×	○
PE49, PE1049	Lost motion compensation timing	LMCD	×	○
PE50, PE1050	Lost motion compensation non-sensitive band	LMCT	×	○
PE51 to PE64, PE1051 to PE1064	For manufacturer setting	-	×	×

(13)Extension setting No.3 parameter ([MELSERVO-J4-*A, -JE-*A])

Use an appropriate device according to the write destination of the servo amplifier.

- PF1 to PF48: Writing data to the RAM of a servo amplifier

• PF1001 to PF1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
PF1 to PF8, PF1001 to PF1008	For manufacturer setting	-	×	×
PF9, PF1009	Function selection F-5	*FOP5	○	○
PF10 to PF14, PF1010 to PF1014	For manufacturer setting	-	×	×
PF15, PF1015	Electronic dynamic brake operating time	DBT	○	×
PF16 to PF20, PF1016 to PF1020	For manufacturer setting	-	×	×
PF21, PF1021	Drive recorder switching time setting	DRT	○	○
PF22, PF1022	For manufacturer setting	-	×	×
PF23, PF1023	Vibration tough drive - Oscillation detection level	OSCL1	○	○
PF24, PF1024	Vibration tough drive function selection	OSCL2	○	○
PF25, PF1025	Instantaneous power failure tough drive - Detection time	CVAT	○	○
PF26 to PF30, PF1026 to PF1030	For manufacturer setting	-	×	×
PF31, PF1031	Machine diagnosis function - Friction judgment speed	FRIC	○	○
PF32 to PF44, PF1032 to PF1044	For manufacturer setting	-	×	×
PF45, PF1045	Function selection F-12	-	×	○
PF46, PF1046	Modbus-RTU comm. - Communication time-out time	-	×	○
PF47 to PF48, PF1047 to PF1048	For manufacturer setting	-	×	×

(14)Alarm (MELSERVO-J4-*A extended) ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
ALM0	Current alarm number	-	○	○
ALM1	Detailed data of current alarms	-	○	×
ALM11	Servo status(alarm) Cumulative feedback pulses	-	○	○
ALM12	Servo status(alarm) Servo motor speed	-	○	○
ALM13	Servo status(alarm) Droop pulses	-	○	○
ALM14	Servo status(alarm) Cumulative command pulses	-	○	○
ALM15	Servo status(alarm) Command pulse frequency	-	○	○
ALM16	Servo status(alarm) analog speed command voltage/limit voltage	-	○	○
ALM17	Servo status(alarm) analog torque command voltage/limit voltage	-	○	○
ALM18	Servo status(alarm) Regenerative load ratio	-	○	○
ALM19	Servo status(alarm) Effective load ratio	-	○	○
ALM20	Servo status(alarm) Peak load ratio	-	○	○
ALM21	Servo status(alarm) Instantaneous torque	-	○	○
ALM22	Servo status(alarm) Within one-revolution position(1 pulse unit)	-	○	○
ALM23	Servo status(alarm) ABS counter	-	○	○
ALM24	Servo status(alarm) Load inertia moment ratio	-	○	○
ALM25	Servo status(alarm) Bus voltage	-	○	○
ALM26 to ALM42	For manufacturer setting	-	×	×

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
ALM43	Servo status(alarm) Internal temperature of encoder	-	○	○
ALM44	Servo status(alarm) Setting time	-	○	○
ALM45	Servo status(alarm) Oscillation detection frequency	-	○	○
ALM46	Servo status(alarm) Number of tough drives	-	○	○
ALM47 to ALM50	For manufacturer setting	-	×	×
ALM51	Servo status(alarm) Unit power consumption 1 (increment of 1 W)	-	○	○
ALM52	Servo status(alarm) Unit total power consumption 1 (increment of 1 Wh)	-	○	○
ALM200	Alarm number from Alarm History most recent alarm	-	○	○
ALM201	Alarm number from Alarm History 1st alarm in past	-	○	○
ALM202	Alarm number from Alarm History 2nd alarm in past	-	○	○
ALM203	Alarm number from Alarm History 3rd alarm in past	-	○	○
ALM204	Alarm number from Alarm History 4th alarm in past	-	○	○
ALM205	Alarm number from Alarm History 5th alarm in past	-	○	○
ALM206	Alarm number from Alarm History 6th alarm in past	-	○	○
ALM207	Alarm number from Alarm History 7th alarm in past	-	○	○
ALM208	Alarm number from Alarm History 8th alarm in past	-	○	○
ALM209	Alarm number from Alarm History 9th alarm in past	-	○	○
ALM210	Alarm number from Alarm History 10th alarm in past	-	○	○
ALM211	Alarm number from Alarm History 11th alarm in past	-	○	○
ALM212	Alarm number from Alarm History 12th alarm in past	-	○	○
ALM213	Alarm number from Alarm History 13th alarm in past	-	○	○
ALM214	Alarm number from Alarm History 14th alarm in past	-	○	○
ALM215	Alarm number from Alarm History 15th alarm in past	-	○	○
ALM220	Alarm occurrence time in alarm history most recent alarm	-	○	○
ALM221	Alarm occurrence time in alarm history 1st alarm in past	-	○	○
ALM222	Alarm occurrence time in alarm history 2nd alarm in past	-	○	○
ALM223	Alarm occurrence time in alarm history 3rd alarm in past	-	○	○
ALM224	Alarm occurrence time in alarm history 4th alarm in past	-	○	○
ALM225	Alarm occurrence time in alarm history 5th alarm in past	-	○	○
ALM226	Alarm occurrence time in alarm history 6th alarm in past	-	○	○
ALM227	Alarm occurrence time in alarm history 7th alarm in past	-	○	○
ALM228	Alarm occurrence time in alarm history 8th alarm in past	-	○	○
ALM229	Alarm occurrence time in alarm history 9th alarm in past	-	○	○
ALM230	Alarm occurrence time in alarm history 10th alarm in past	-	○	○
ALM231	Alarm occurrence time in alarm history 11th alarm in past	-	○	○
ALM232	Alarm occurrence time in alarm history 12th alarm in past	-	○	○
ALM233	Alarm occurrence time in alarm history 13th alarm in past	-	○	○
ALM234	Alarm occurrence time in alarm history 14th alarm in past	-	○	○
ALM235	Alarm occurrence time in alarm history 15th alarm in past	-	○	○
ALM240	Detailed alarm from Alarm History most recent alarm	-	○	×
ALM241	Detailed alarm from Alarm History 1st alarm in past	-	○	×
ALM242	Detailed alarm from Alarm History 2nd alarm in past	-	○	×
ALM243	Detailed alarm from Alarm History 3rd alarm in past	-	○	×
ALM244	Detailed alarm from Alarm History 4th alarm in past	-	○	×
ALM245	Detailed alarm from Alarm History 5th alarm in past	-	○	×
ALM246	Detailed alarm from Alarm History 6th alarm in past	-	○	×

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
ALM247	Detailed alarm from Alarm History 7th alarm in past	-	○	×
ALM248	Detailed alarm from Alarm History 8th alarm in past	-	○	×
ALM249	Detailed alarm from Alarm History 9th alarm in past	-	○	×
ALM250	Detailed alarm from Alarm History 10th alarm in past	-	○	×
ALM251	Detailed alarm from Alarm History 11th alarm in past	-	○	×
ALM252	Detailed alarm from Alarm History 12th alarm in past	-	○	×
ALM253	Detailed alarm from Alarm History 13th alarm in past	-	○	×
ALM254	Detailed alarm from Alarm History 14th alarm in past	-	○	×
ALM255	Detailed alarm from Alarm History 15th alarm in past	-	○	×

(15)Machine diagnosis data ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
MD0	Machine diagnosis data station number	-	○	○
MD1	Machine diagnosis data shift judgment (test mode)	-	○	○
MD2	Machine diagnosis data status	-	○	○
MD3	Machine diagnosis data coulomb friction torque in positive direction	-	○	○
MD4	Machine diagnosis data friction torque at rated speed in positive direction	-	○	○
MD5	Machine diagnosis data coulomb friction torque in negative direction	-	○	○
MD6	Machine diagnosis data friction torque at rated speed in negative direction	-	○	○
MD7	Machine diagnosis data oscillation frequency (motor is stopped)	-	○	○
MD8	Machine diagnosis data vibration level (motor is stopped)	-	○	○
MD9	Machine diagnosis data oscillation frequency (motor is operating)	-	○	○
MD10	Machine diagnosis data vibration level (motor is operating)	-	○	○
MD11	Machine diagnosis data, rated speed at forward or reverse rotation torque	-	○	○

(16)One-touch tuning data ([MELSERVO-J4-*A, -JE-*A])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
OTS0	One-touch tuning status confirmation	-	○	○
OTS1	Error code list	-	○	○
OTS2	Settling time	-	○	○
OTS3	Overshoot amount	-	○	○

(17)External input signal in MR-J4-□A ([MELSERVO-J4-*A, -JE-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL
DI1	External input pin statuses	-	
DI2	Statuses of input devices switched on through communication	-	

(18)External input signal in MR-JE-□A ([MELSERVO-J4-*A, -JE-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	System information
DI1	External input pin statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-JE-_A SERVO AMPLIFIER INSTRUCTION MANUAL
DI2	Statuses of input devices switched on through communication	-	System information

(19)External output signal in MR-J4-□A ([MELSERVO-J4-*A, -JE-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL
DO1	External output pin statuses	-	

(20)External output signal in MR-JE-□A ([MELSERVO-J4-*A, -JE-*A])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ➟MR-JE-_A SERVO AMPLIFIER INSTRUCTION MANUAL
DO1	External output pin statuses	-	System information

(21)Life diagnosis ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
ALD0	Cumulative power-on time	-	○	○
ALD1	Number of inrush current switching times	-	○	○

(22)Input signal for test operation (for test operation) ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
TMI0	Input signal for test operation	-	○	○

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(23)Forced output of signal pin (for test operation) ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
TMO0	Forced output of signal pin	-	○	○

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(24)Set data (for test operation) ([MELSERVO-J4-*A, -JE-*A])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J4-□A	MR-JE-□A
TMD0	Writes the speed (test mode)	-	○	○
TMD1	Writes the acceleration/deceleration time constant (test mode)	-	○	○
TMD3	Writes the moving distance (test mode)	-	○	○

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J4-*A, -JE-*A])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.21 [MELSERVO-J4-*A-RJ]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-J4-*A-RJ])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A-RJ])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-J4-*A-RJ])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A-RJ])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-J4-*A-RJ])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A-RJ])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

■1 Monitoring-supported bit devices ([MELSERVO-J4-*A-RJ])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.21 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A-RJ])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.21 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 2, 4 to 5	×	×
TMB	Instruction demand (for test operation)	Decimal	1 to 6	×	×
OTI	One-touch tuning instruction	Decimal	0 to 5	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J4-*A-RJ])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J4-*A-RJ])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.21 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A-RJ])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.21 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic parameter	Decimal	1 to 32 1001 to 1032	○	×
PB	Gain filter parameter	Decimal	1 to 64 1001 to 1064	○	×
PC	Extension setting parameter	Decimal	1 to 80 1001 to 1080	○	×
PD	I/O setting parameter	Decimal	1 to 48 1001 to 1048	○	×
PO	Option setting parameter	Decimal	1 to 32 1001 to 1032	○	×
PL	Linear servo motor/DD motor setting parameter	Decimal	1 to 48 1001 to 1048	○	×
PT	Positioning control parameter	Decimal	1 to 48 1001 to 1048	○	×
ST	Status display	Decimal	0 to 48	○	×
AL	Alarm (current alarm, J3A compatible)	Decimal	0 to 1 11 to 25	○	×
AL	Alarm (alarm history, J3A compatible)	Decimal	200 to 205 210 to 215 230 to 235	○	×
PE	Extension setting No.2 parameter	Decimal	1 to 64 1001 to 1064	○	×
PF	Extension setting No.3 parameter	Decimal	1 to 48 1001 to 1048	○	×
ALM	Alarm (current alarm, J4A extend)	Decimal	0 to 1 11 to 59	○	×
ALM	Alarm (alarm history, J4A extend)	Decimal	200 to 215 220 to 235 240 to 255	○	×
POS	Point table (position)	Decimal	1 to 255 1001 to 1255	○	×
SPD	Point table (speed)	Decimal	1 to 255 1001 to 1255	○	×
ACT	Point table (acceleration time constant)	Decimal	1 to 255 1001 to 1255	○	×
DCT	Point table (deceleration time constant)	Decimal	1 to 255 1001 to 1255	○	×
DWL	Point table (dwell)	Decimal	1 to 255 1001 to 1255	○	×
AUX	Point table (auxiliary function)	Decimal	1 to 255 1001 to 1255	○	×
MCD*2	Point table (M code)	Decimal	1 to 255 1001 to 1255	○	×
MD	Machine diagnosis data	Decimal	0 to 11	×	×
OTS	One-touch tuning data	Decimal	0 to 3	×	×
DI	External input signal	Decimal	0 to 6	×	×
DO	External output signal	Decimal	0 to 4	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 MCD cannot be used as a real number.

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J4-*A-RJ])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PO	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
AL	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 to DI3.

■5 Monitoring-supported double-word devices ([MELSERVO-J4-*A-RJ])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.21 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A-RJ])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.21 ■7 Virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LD	Current position latch data	Decimal	0 to 1	×	×
RR*2	Value of the general-purpose register (Rx)	Decimal	1 to 4 1001 to 1004	×	×
RD	Value of the general-purpose register (Dx)	Decimal	1 to 4	×	×
ALD	Life diagnosis	Decimal	0 to 1	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMI	Input signal for test operation (for test operation)	Decimal	0 to 2	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Use the integer number when writing parameters to Rx.

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J4-*A-RJ])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LD	-/-	R/-	-/-	-/-
RR	-/-	R/W	-/-	-/-
RD	-/-	R/W	-/-	-/-
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➥(1) Servo amplifier request ([MELSERVO-J4-*A-RJ])
OM	➥(2) Operation mode selection ([MELSERVO-J4-*A-RJ])
TMB	➥(3) Instruction demand (for test operation) ([MELSERVO-J4-*A-RJ])
OTI	➥(4) One-touch tuning instruction ([MELSERVO-J4-*A-RJ])
PA	➥(5) Basic parameter ([MELSERVO-J4-*A-RJ])
PB	➥(6) Gain filter parameter ([MELSERVO-J4-*A-RJ])
PC	➥(7) Extension setting parameter ([MELSERVO-J4-*A-RJ])
PD	➥(8) I/O setting parameter ([MELSERVO-J4-*A-RJ])
PO	➥(9) Option setting parameter ([MELSERVO-J4-*A-RJ])
PL	➥(10) Linear servo motor/DD motor setting parameter ([MELSERVO-J4-*A-RJ])
PT	➥(11) Positioning control parameter ([MELSERVO-J4-*A-RJ])
ST	➥(12) Status display ([MELSERVO-J4-*A-RJ])
AL	➥(13) Alarm (MELSERVO-J3-*A compatible) ([MELSERVO-J4-*A-RJ])
PE	➥(14) Extension setting No.2 parameter ([MELSERVO-J4-*A-RJ])
PF	➥(15) Extension setting No.3 parameter ([MELSERVO-J4-*A-RJ])
ALM	➥(16) Alarm (MELSERVO-J4-*A extended) ([MELSERVO-J4-*A-RJ])
POS	➥(17) Point table (position) ([MELSERVO-J4-*A-RJ])

Virtual device name	Reference
SPD	➟(18) Point table (speed) ([MELSERVO-J4-*A-RJ])
ACT	➟(19) Point table (acceleration time constant) ([MELSERVO-J4-*A-RJ])
DCT	➟(20) Point table (deceleration time constant) ([MELSERVO-J4-*A-RJ])
DWL	➟(21) Point table (dwell) ([MELSERVO-J4-*A-RJ])
AUX	➟(22) Point table (auxiliary function) ([MELSERVO-J4-*A-RJ])
MCD	➟(23) Point table (M code) ([MELSERVO-J4-*A-RJ])
MD	➟(24) Machine diagnosis data ([MELSERVO-J4-*A-RJ])
OTS	➟(25) One-touch tuning data ([MELSERVO-J4-*A-RJ])
DI	➟(26) External input signal ([MELSERVO-J4-*A-RJ])
DO	➟(27) External output signal ([MELSERVO-J4-*A-RJ])
LD	➟(28) Current position latch data ([MELSERVO-J4-*A-RJ])
RR	➟(29) Value of the general-purpose register (Rx) ([MELSERVO-J4-*A-RJ])
RD	➟(30) Value of the general-purpose register (Dx) ([MELSERVO-J4-*A-RJ])
ALD	➟(31) Life diagnosis ([MELSERVO-J4-*A-RJ])
TMI	➟(32) Input signal for test operation (for test operation) ([MELSERVO-J4-*A-RJ])
TMO	➟(33) Forced output of signal pin (for test operation) ([MELSERVO-J4-*A-RJ])
TMD	➟(34) Set data (for test operation) ([MELSERVO-J4-*A-RJ])

(1) Servo amplifier request ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM4	Output signal (DO) forced output	-
OM5	Single-step feed operation	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) One-touch tuning instruction ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
OTI0	One-touch tuning start command (Basic mode)	-
OTI1	One-touch tuning start command (High mode)	-
OTI2	One-touch tuning start command (Low mode)	-
OTI3	One-touch tuning stop command	-
OTI4	Return to initial value	-
OTI5	Return to value before adjustment	-

(5) Basic parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA32: Writing data to the RAM of a servo amplifier
- PA1001 to PA1032: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PA1, PA1001	Operation mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator (command pulse multiplication numerator)/number of gear teeth on machine side	*CMX
PA7, PA1007	Electronic gear denominator (command pulse multiplication denominator)/number of gear teeth on servo motor side	*CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward rotation torque limit/positive direction thrust limit	TLP
PA12, PA1012	Reverse rotation torque limit/negative direction thrust limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection/travel direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16, PA1016	Encoder output pulses 2	*ENR2
PA17, PA1017	Servo motor series setting	*MSR
PA18, PA1018	Servo motor type setting	*MTY
PA19, PA1019	Parameter block	*BLK
PA20, PA1020	Tough drive setting	*TDS

Virtual device name	Name	Symbol
PA21, PA1021	Function selection A-3	*AOP3
PA22, PA1022	Position control composition selection	*PCS
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT
PA24, PA1024	Function selection A-4	AOP4
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV
PA26, PA1026	Function selection A-5	*AOP5
PA27 to PA32, PA1027 to PA1032	For manufacturer setting	-

(6) Gain filter parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB64: Writing data to the RAM of a servo amplifier
- PB1001 to PB1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control II)	VRFT
PB3, PB1003	Position command acceleration/deceleration time constant (position smoothing)	PST
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Load to motor inertia ratio/load to motor mass ratio	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position control gain	PG2
PB9, PB1009	Speed control gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	Overshoot amount compensation	OVA
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch shape selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch shape selection 2	NHQ2
PB17, PB1017	Shaft resonance suppression filter	NHF
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control 1 - Vibration frequency	VRF11
PB20, PB1020	Vibration suppression control 1 - Resonance frequency	VRF12
PB21, PB1021	Vibration suppression control 1 - Vibration frequency damping	VRF13
PB22, PB1022	Vibration suppression control 1 - Resonance frequency damping	VRF14
PB23, PB1023	Low-pass filter setting	VFBF
PB24, PB1024	Slight vibration suppression control	*MVS
PB25, PB1025	Function selection B-1	*BOP1
PB26, PB1026	Gain switching function	*CDP
PB27, PB1027	Gain switching condition	CDL
PB28, PB1028	Gain switching time constant	CDT
PB29, PB1029	Load to motor inertia ratio/load to motor mass ratio after gain switching	GD2B
PB30, PB1030	Position loop gain after gain switching	PG2B
PB31, PB1031	Speed loop gain after gain switching	VG2B
PB32, PB1032	Speed integral compensation after gain switching	VICB
PB33, PB1033	Vibration suppression control 1 - Vibration frequency after gain switching	VRF1B

Virtual device name	Name	Symbol
PB34, PB1034	Vibration suppression control 1 - Resonance frequency after gain switching	VRF2B
PB35, PB1035	Vibration suppression control 1 - Vibration frequency damping after gain switching	VRF3B
PB36, PB1036	Vibration suppression control 1 - Resonance frequency damping after gain switching	VRF4B
PB37 to PB44, PB1037 to PB1044	For manufacturer setting	-
PB45, PB1045	Command notch filter	CNHF
PB46, PB1046	Machine resonance suppression filter 3	NH3
PB47, PB1047	Notch shape selection 3	NHQ3
PB48, PB1048	Machine resonance suppression filter 4	NH4
PB49, PB1049	Notch shape selection 4	NHQ4
PB50, PB1050	Machine resonance suppression filter 5	NH5
PB51, PB1051	Notch shape selection 5	NHQ5
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21
PB53, PB1053	Vibration suppression control 2 - Resonance frequency	VRF22
PB54, PB1054	Vibration suppression control 2 - Vibration frequency damping	VRF23
PB55, PB1055	Vibration suppression control 2 - Resonance frequency damping	VRF24
PB56, PB1056	Vibration suppression control 2 - Vibration frequency after gain switching	VRF21B
PB57, PB1057	Vibration suppression control 2 - Resonance frequency after gain switching	VRF22B
PB58, PB1058	Vibration suppression control 2 - Vibration frequency damping after gain switching	VRF23B
PB59, PB1059	Vibration suppression control 2 - Resonance frequency damping after gain switching	VRF24B
PB60, PB1060	Model loop gain after gain switching	PG1B
PB61 to PB64, PB1061 to PB1064	For manufacturer setting	-

(7) Extension setting parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC80: Writing data to the RAM of a servo amplifier
- PC1001 to PC1080: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PC1, PC1001	JOG operation acceleration time constant/acceleration time constant 1	STA
PC2, PC1002	JOG operation deceleration time constant/deceleration time constant 1	STB
PC3, PC1003	S-pattern acceleration/deceleration time constant	*STC
PC4, PC1004	Torque command time constant/thrust command time constant	TQC
PC5, PC1005	Automatic operation speed 1	SC1
PC6, PC1006	Automatic operation speed 2	SC2
PC7, PC1007	Manual operation speed 1	SC3
PC8, PC1008	Internal speed command4/limit4	SC4
PC9, PC1009	Internal speed command5/limit5	SC5
PC10, PC1010	Internal speed command6/limit6	SC6
PC11, PC1011	Internal speed command7/limit7	SC7
PC12, PC1012	Analog speed command maximum speed/limit maximum speed	VCM
PC13, PC1013	Analog torque command maximum output	TLC
PC14, PC1014	Analog monitor 1 output	MOD1
PC15, PC1015	Analog monitor 2 output	MOD2
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS

Virtual device name	Name	Symbol
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number setting	*SNO
PC21, PC1021	RS-422 communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	-
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027	Function selection C-6	*COP6
PC28, PC1028	Function selection C-7	*COP7
PC29, PC1029	For manufacturer setting	-
PC30, PC1030	Home position return acceleration time constant/acceleration time constant 2	STA2
PC31, PC1031	Home position return deceleration time constant/deceleration time constant 2	STB2
PC32, PC1032	Command input pulse multiplication numerator 2	CMX2
PC33, PC1033	Command input pulse multiplication numerator 3	CMX3
PC34, PC1034	Command input pulse multiplication numerator 4	CMX4
PC35, PC1035	Internal torque limit 2/internal thrust limit 2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Analog override offset	VCO
PC38, PC1038	Analog torque command offset/limit offset	TPO
PC39, PC1039	Analog monitor 1 offset	MO1
PC40, PC1040	Analog monitor 2 offset	MO2
PC41 to PC42, PC1041 to PC1042	For manufacturer setting	-
PC43, PC1043	Error excessive alarm detection level	ERZ
PC44, PC1044	Function selection C-9	*COP9
PC45, PC1045	Function selection C-A	*COPA
PC46 to PC50, PC1046 to PC1050	For manufacturer setting	-
PC51, PC1051	Forced stop deceleration time constant	RSBR
PC52 to PC53, PC1052 to PC1053	For manufacturer setting	-
PC54, PC1054	Vertical axis freefall prevention compensation amount	RSUP1
PC55 to PC59, PC1055 to PC1059	For manufacturer setting	-
PC60, PC1060	Function selection C-D	*COPD
PC61 to PC65, PC1061 to PC1065	For manufacturer setting	-
PC66, PC1066	Mark detection range+(Low)	LPSPL
PC67, PC1067	Mark detection range+(High)	LPSPH
PC68, PC1068	Mark detection range-(Low)	LPSNL
PC69, PC1069	Mark detection range-(High)	LPSNH
PC70, PC1070	Modbus-RTU Communication station number setting	*SNOM
PC71, PC1071	Function selection C-F	*COPF
PC72, PC1072	Function selection C-G	*COPG
PC73, PC1073	Error excessive warning level	ERW
PC74 to PC80, PC1074 to PC1080	For manufacturer setting	-

(8) I/O setting parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

• PD1 to PD48: Writing data to the RAM of a servo amplifier
• PD1001 to PD1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PD1, PD1001	Input signal automatic on selection 1	*DIA1
PD2, PD1002	For manufacturer setting	-
PD3, PD1003	Input device selection 1L	*DI1L
PD4, PD1004	Input device selection 1H	*DI1H
PD5, PD1005	Input device selection 2L	*DI2L
PD6, PD1006	Input device selection 2H	*DI2H
PD7, PD1007	Input device selection 3L	*DI3L
PD8, PD1008	Input device selection 3H	*DI3H
PD9, PD1009	Input device selection 4L	*DI4L
PD10, PD1010	Input device selection 4H	*DI4H
PD11, PD1011	Input device selection 5L	*DI5L
PD12, PD1012	Input device selection 5H	*DI5H
PD13, PD1013	Input device selection 6L	*DI6L
PD14, PD1014	Input device selection 6H	*DI6H
PD15 to PD16, PD1015 to PD1016	For manufacturer setting	-
PD17, PD1017	Input device selection 8L	*DI8L
PD18, PD1018	Input device selection 8H	*DI8H
PD19, PD1019	Input device selection 9L	*DI9L
PD20, PD1020	Input device selection 9H	*DI9H
PD21, PD1021	Input device selection 10L	*DI10L
PD22, PD1022	Input device selection 10H	*DI10H
PD23, PD1023	Output device selection 1	*DO1
PD24, PD1024	Output device selection 2	*DO2
PD25, PD1025	Output device selection 3	*DO3
PD26, PD1026	Output device selection 4	*DO4
PD27, PD1027	For manufacturer setting	-
PD28, PD1028	Output device selection 6	*DO6
PD29, PD1029	Input filter setting	*DIF
PD30, PD1030	Function selection D-1	*DOP1
PD31, PD1031	Function selection D-2	*DOP2
PD32, PD1032	Function selection D-3	*DOP3
PD33, PD1033	Function selection D-4	*DOP4
PD34, PD1034	Function selection D-5	*DOP5
PD35 to PD40, PD1035 to PD1040	For manufacturer setting	-
PD41, PD1041	Input signal automatic on selection 3	*DIA3
PD42, PD1042	Input signal automatic on selection 4	*DIA4
PD43, PD1043	Input device selection 11L	*DI11L
PD44, PD1044	Input device selection 11H	*DI11H
PD45, PD1045	Input device selection 12L	*DI12L
PD46, PD1046	Input device selection 12H	*DI12H
PD47, PD1047	Output device selection 7	*DO7
PD48, PD1048	For manufacturer setting	-

(9) Option setting parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PO1 to PO32: Writing data to the RAM of a servo amplifier
- PO1001 to PO1032: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PO1, PO1001	For manufacturer setting	-
PO2, PO1002	MR-D01 input device selection 1	*ODI1
PO3, PO1003	MR-D01 input device selection 2	*ODI2
PO4, PO1004	MR-D01 input device selection 3	*ODI3
PO5, PO1005	MR-D01 input device selection 4	*ODI4
PO6, PO1006	MR-D01 input device selection 5	*ODI5
PO7, PO1007	MR-D01 input device selection 6	*ODI6
PO8, PO1008	MR-D01 output device selection 1	*ODO1
PO9, PO1009	MR-D01 output device selection 2	*ODO2
PO10, PO1010	Function selection O-1	*OOP1
PO11, PO1011	Function selection O-2	*OOP2
PO12, PO1012	Function selection O-3	*OOP3
PO13, PO1013	MR-D01 analog monitor 1 output selection	OMOD1
PO14, PO1014	MR-D01 analog monitor 2 output selection	OMOD2
PO15, PO1015	MR-D01 analog monitor 1 offset	OMO1
PO16, PO1016	MR-D01 analog monitor 2 offset	OMO2
PO17 to PO20, PO1017 to PO1020	For manufacturer setting	-
PO21, PO1021	MR-D01 override offset	OVCO
PO22, PO1022	MR-D01 analog torque limit offset	OTLO
PO23 to PO26, PO1023 to PO1026	For manufacturer setting	-
PO27, PO1027	MR-D01 input device selection 7	*ODI7
PO28, PO1028	MR-D01 input device selection 8	*ODI8
PO29 to PO32, PO1029 to PO1032	For manufacturer setting	-

(10)Linear servo motor/DD motor setting parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PL1 to PL48: Writing data to the RAM of a servo amplifier
- PL1001 to PL1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PL1, PL1001	Linear servo motor/DD motor function selection 1	*LIT1
PL2, PL1002	Linear encoder resolution - Numerator	*LIM
PL3, PL1003	Linear encoder resolution - Denominator	*LID
PL4, PL1004	Linear servo motor/DD motor function selection 2	*LIT2
PL5, PL1005	Position deviation error detection level	LB1
PL6, PL1006	Speed deviation error detection level	LB2
PL7, PL1007	Torque/thrust deviation error detection level	LB3
PL8, PL1008	Linear servo motor/DD motor function selection 3	*LIT3
PL9, PL1009	Magnetic pole detection voltage level	LPWM
PL10 to PL16, PL1010 to PL1016	For manufacturer setting	-

Virtual device name	Name	Symbol
PL17, PL1017	Magnetic pole detection - Minute position detection method - Function selection	LTSTS
PL18, PL1018	Magnetic pole detection - Minute position detection method - Identification signal amplitude	IDLV
PL19 to PL48, PL1019 to PL1048	For manufacturer setting	-

(11)Positioning control parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PT1 to PT48: Writing data to the RAM of a servo amplifier
- PT1001 to PT1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PT1, PT1001	Command mode selection	*CTY
PT2, PT1002	Function selection T-1	*TOP1
PT3, PT1003	Feeding function selection	*FTY
PT4, PT1004	Home position return type	*ZTY
PT5, PT1005	Home position return speed	ZRF
PT6, PT1006	Creep speed	CRF
PT7, PT1007	Home position shift distance	ZST
PT8, PT1008	Home position return position data	*ZPS
PT9, PT1009	Moving distance after proximity dog	DCT
PT10, PT1010	Stopper type home position return stopper time	ZTM
PT11, PT1011	Stopper type home position return torque limit value	ZTT
PT12, PT1012	Rough match output range	CRP
PT13, PT1013	JOG operation	JOG
PT14, PT1014	Backlash compensation	*BKC
PT15, PT1015	Software limit +(Low)	LMPL
PT16, PT1016	Software limit +(High)	LMPH
PT17, PT1017	Software limit -(Low)	LMNL
PT18, PT1018	Software limit -(High)	LMNH
PT19, PT1019	Position range output address +(Low)	*LPPL
PT20, PT1020	Position range output address +(High)	*LPPH
PT21, PT1021	Position range output address -(Low)	*LNPL
PT22, PT1022	Position range output address -(High)	*LNPH
PT23, PT1023	OUT1 output setting time	OUT1
PT24, PT1024	OUT2 output setting time	OUT2
PT25, PT1025	OUT3 output setting time	OUT3
PT26, PT1026	Function selection T-2	*TOP2
PT27, PT1027	Operation mode selection	*ODM
PT28, PT1028	Number of stations per rotation	*STN
PT29, PT1029	Function selection T-3	*TOP3
PT30, PT1030	Mark sensor stop movement amount (Low)	MSTL
PT31, PT1031	Mark sensor stop movement amount (High)	MSTH
PT32 to PT33, PT1032 to PT1033	For manufacturer setting	-
PT34, PT1034	Point table/program default	*PDEF
PT35, PT1035	Function selection T-5	*TOP5
PT36 to PT37, PT1036 to PT1037	For manufacturer setting	-
PT38, PT1038	Function selection T-7	*TOP7

Virtual device name	Name	Symbol
PT39, PT1039	Torque limit delay time	INT
PT40, PT1040	Station home position shift distance	*SZS
PT41, PT1041	Home position return inhibit selection	ORP
PT42, PT1042	Digital override minimum multiplication	*OVM
PT43, PT1043	Digital override pitch width	*OVS
PT44, PT1044	For manufacturer setting	-
PT45, PT1045	Home position return type 2	*CZTY
PT46 to PT48, PT1046 to PT1048	For manufacturer setting	-

(12)Status display ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/analog speed limit voltage	-
ST6	Analog torque limit voltage/analog torque command voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-
ST15	Load-side cumulative feedback pulses	-
ST16	Load-side droop pulses	-
ST17	Load-side encoder information 1	-
ST18	Load-side encoder information 2	-
ST19 to ST21	For manufacturer setting	-
ST22	Temperature of servo motor thermistor	-
ST23	Servo motor-side cumulative feedback pulses (before gear)	-
ST24	Electrical angle	-
ST25 to ST29	For manufacturer setting	-
ST30	Servo motor-side/load-side position deviation	-
ST31	Servo motor-side/load-side speed deviation	-
ST32	Internal temperature of encoder	-
ST33	Setting time	-
ST34	Oscillation detection frequency	-
ST35	Number of tough drive operations	-
ST36 to ST39	For manufacturer setting	-
ST40	Unit power consumption	-
ST41	Unit total power consumption	-
ST42	Current position	-
ST43	Command position	-
ST44	Command remaining distance	-

Virtual device name	Name	Symbol
ST45	Point table No./program No./station position No.	-
ST46	Step No.	-
ST47	Analog override voltage	-
ST48	Override level	-

(13)Alarm (MELSERVO-J3-*A compatible) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
AL0	Current alarm number	-
AL1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs Cumulative feedback pulses	-
AL12	Servo status when alarm occurs Servo motor speed	-
AL13	Servo status when alarm occurs Droop pulses	-
AL14	Servo status when alarm occurs cumulative command pulses	-
AL15	Servo status when alarm occurs command pulse frequency	-
AL16	Servo status(alarm) analog speed command voltage/limit voltage	-
AL17	Servo status(alarm) analog torque command voltage/limit voltage	-
AL18	Servo status when alarm occurs regenerative load ratio	-
AL19	Servo status when alarm occurs effective load ratio	-
AL20	Servo status when alarm occurs peak load ratio	-
AL21	Servo status when alarm occurs Instantaneous torque	-
AL22	Servo status(alarm) Within one-revolution position(1 pulse unit)	-
AL23	Servo status when alarm occurs ABS counter	-
AL24	Servo status when alarm occurs load inertia moment ratio	-
AL25	Servo status when alarm occurs Bus voltage	-
AL200	Alarm number from Alarm History most recent alarm	-
AL201	Alarm number from Alarm History first alarm in past	-
AL202	Alarm number from Alarm History second alarm in past	-
AL203	Alarm number from Alarm History third alarm in past	-
AL204	Alarm number from Alarm History fourth alarm in past	-
AL205	Alarm number from Alarm History fifth alarm in past	-
AL210	Alarm occurrence time in alarm history most recent alarm	-
AL211	Alarm occurrence time in alarm history first alarm in past	-
AL212	Alarm occurrence time in alarm history second alarm in past	-
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	-
AL230	Detailed alarm from Alarm History most recent alarm	-
AL231	Detailed alarm from Alarm History first alarm in past	-
AL232	Detailed alarm from Alarm History second alarm in past	-
AL233	Detailed alarm from Alarm History third alarm in past	-
AL234	Detailed alarm from Alarm History fourth alarm in past	-
AL235	Detailed alarm from Alarm History fifth alarm in past	-

(14)Extension setting No.2 parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- PE1 to PE64: Writing data to the RAM of a servo amplifier

• PE1001 to PE1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PE1, PE1001	Fully closed loop function selection 1	*FCT1
PE2, PE1002	For manufacturer setting	-
PE3, PE1003	Fully closed loop function selection 2	*FCT2
PE4, PE1004	Fully closed loop control - Feedback pulse electronic gear 1 - Numerator	*FBN
PE5, PE1005	Fully closed loop control - Feedback pulse electronic gear 1 - Denominator	*FBD
PE6, PE1006	Fully closed loop control - Speed deviation error detection level	BC1
PE7, PE1007	Fully closed loop control - Position deviation error detection level	BC2
PE8, PE1008	Fully closed loop dual feedback filter	DUF
PE9, PE1009	For manufacturer setting	-
PE10, PE1010	Fully closed loop function selection 3	FCT3
PE11 to PE33, PE1011 to PE1033	For manufacturer setting	-
PE34, PE1034	Fully closed loop control - Feedback pulse electronic gear 2 - Numerator	*FBN2
PE35, PE1035	Fully closed loop control - Feedback pulse electronic gear 2 - Denominator	*FBD2
PE36 to PE40, PE1036 to PE1040	For manufacturer setting	-
PE41, PE1041	Function selection E-3	EOP3
PE42 to PE43, PE1042 to PE1043	For manufacturer setting	-
PE44, PE1044	Lost motion compensation positive-side compensation value selection	LMCP
PE45, PE1045	Lost motion compensation negative-side compensation value selection	LMCN
PE46, PE1046	Lost motion filter setting	LMFLT
PE47, PE1047	Torque offset	TOF
PE48, PE1048	Lost motion compensation function selection	*LMOP
PE49, PE1049	Lost motion compensation timing	LMCD
PE50, PE1050	Lost motion compensation non-sensitive band	LMCT
PE51 to PE64, PE1051 to PE1064	For manufacturer setting	-

(15)Extension setting No.3 parameter ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

• PF1 to PF48: Writing data to the RAM of a servo amplifier

• PF1001 to PF1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Virtual device name	Name	Symbol
PF1 to PF8, PF1001 to PF1008	For manufacturer setting	-
PF9, PF1009	Function selection F-5	*FOP5
PF10 to PF14, PF1010 to PF1014	For manufacturer setting	-
PF15, PF1015	Electronic dynamic brake operating time	DBT
PF16 to PF17, PF1016 to PF1017	For manufacturer setting	-
PF18, PF1018	STO diagnosis error detection time	*STOD
PF19 to PF20, PF1019 to PF1020	For manufacturer setting	-
PF21, PF1021	Drive recorder switching time setting	DRT
PF22, PF1022	For manufacturer setting	-
PF23, PF1023	Vibration tough drive - Oscillation detection level	OSCL1

Virtual device name	Name	Symbol
PF24, PF1024	Vibration tough drive function selection	OSCL2
PF25, PF1025	SEMI-F47 function - Instantaneous power failure detection time	CVAT
PF26 to PF30, PF1026 to PF1030	For manufacturer setting	-
PF31, PF1031	Machine diagnosis function - Friction judgment speed	FRIC
PF32 to PF33, PF1032 to PF1033	For manufacturer setting	-
PF34, PF1034	RS-422 communication function selection 3	*SOP3
PF35 to PF44, PF1035 to PF1044	For manufacturer setting	-
PF45, PF1045	Function selection F-12	*FOP12
PF46, PF1046	Modbus-RTU comm. - Communication time-out time	MIC
PF47 to PF48, PF1047 to PF1048	For manufacturer setting	-

(16)Alarm (MELSERVO-J4-*A extended) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
ALM0	Current alarm number	-
ALM1	Detailed data of current alarms	-
ALM11	Servo status(alarm) Cumulative feedback pulses	-
ALM12	Servo status(alarm) Servo motor speed	-
ALM13	Servo status(alarm) Droop pulses	-
ALM14	Servo status(alarm) cumulative command pulses	-
ALM15	Servo status(alarm) command pulse frequency	-
ALM16	Servo status(alarm) analog speed command voltage/limit voltage	-
ALM17	Servo status(alarm) analog torque command voltage/limit voltage	-
ALM18	Servo status(alarm) regenerative load ratio	-
ALM19	Servo status(alarm) effective load ratio	-
ALM20	Servo status(alarm) peak load ratio	-
ALM21	Servo status(alarm) Instantaneous torque	-
ALM22	Servo status(alarm) Within one-revolution position(1 pulse unit)	-
ALM23	Servo status(alarm) ABS counter	-
ALM24	Servo status(alarm) load inertia moment ratio	-
ALM25	Servo status(alarm) Bus voltage	-
ALM26	Servo status(alarm) Load-side cumulative feedback pulses	-
ALM27	Servo status(alarm) Load-side droop pulses	-
ALM28	Servo status(alarm) Load-side encoder information 1	-
ALM29	Servo status(alarm) Load-side encoder information 2	-
ALM30 to ALM32	For manufacturer setting	-
ALM33	Servo status(alarm) Temperature of servo motor thermistor	-
ALM34	Servo status(alarm) Servo motor-side cumulative feedback pulses (before gear)	-
ALM35	Servo status(alarm) Electrical angle	-
ALM36 to ALM40	For manufacturer setting	-
ALM41	Servo status(alarm) Servo motor-side/load-side position deviation	-
ALM42	Servo status(alarm) Servo motor-side/load-side speed deviation	-
ALM43	Servo status(alarm) Internal temperature of encoder	-
ALM44	Servo status(alarm) Setting time	-
ALM45	Servo status(alarm) Oscillation detection frequency	-
ALM46	Servo status(alarm) Number of tough drives	-
ALM47 to ALM50	For manufacturer setting	-

Virtual device name	Name	Symbol
ALM51	Servo status(alarm) Unit power consumption	-
ALM52	Servo status(alarm) Unit total power consumption	-
ALM53	Servo status(alarm) Current position	-
ALM54	Servo status(alarm) Command position	-
ALM55	Servo status(alarm) Command remaining distance	-
ALM56	Servo status(alarm) Point table No./Program No./Station position No.	-
ALM57	Servo status(alarm) Step No.	-
ALM58	Servo status(alarm) Analog override voltage	-
ALM59	Servo status(alarm) Override level	-
ALM200	Alarm number from Alarm History most recent alarm	-
ALM201	Alarm number from Alarm History 1st alarm in past	-
ALM202	Alarm number from Alarm History 2nd alarm in past	-
ALM203	Alarm number from Alarm History 3rd alarm in past	-
ALM204	Alarm number from Alarm History 4th alarm in past	-
ALM205	Alarm number from Alarm History 5th alarm in past	-
ALM206	Alarm number from Alarm History 6th alarm in past	-
ALM207	Alarm number from Alarm History 7th alarm in past	-
ALM208	Alarm number from Alarm History 8th alarm in past	-
ALM209	Alarm number from Alarm History 9th alarm in past	-
ALM210	Alarm number from Alarm History 10th alarm in past	-
ALM211	Alarm number from Alarm History 11th alarm in past	-
ALM212	Alarm number from Alarm History 12th alarm in past	-
ALM213	Alarm number from Alarm History 13th alarm in past	-
ALM214	Alarm number from Alarm History 14th alarm in past	-
ALM215	Alarm number from Alarm History 15th alarm in past	-
ALM220	Alarm occurrence time in alarm history most recent alarm	-
ALM221	Alarm occurrence time in alarm history 1st alarm in past	-
ALM222	Alarm occurrence time in alarm history 2nd alarm in past	-
ALM223	Alarm occurrence time in alarm history 3rd alarm in past	-
ALM224	Alarm occurrence time in alarm history 4th alarm in past	-
ALM225	Alarm occurrence time in alarm history 5th alarm in past	-
ALM226	Alarm occurrence time in alarm history 6th alarm in past	-
ALM227	Alarm occurrence time in alarm history 7th alarm in past	-
ALM228	Alarm occurrence time in alarm history 8th alarm in past	-
ALM229	Alarm occurrence time in alarm history 9th alarm in past	-
ALM230	Alarm occurrence time in alarm history 10th alarm in past	-
ALM231	Alarm occurrence time in alarm history 11th alarm in past	-
ALM232	Alarm occurrence time in alarm history 12th alarm in past	-
ALM233	Alarm occurrence time in alarm history 13th alarm in past	-
ALM234	Alarm occurrence time in alarm history 14th alarm in past	-
ALM235	Alarm occurrence time in alarm history 15th alarm in past	-
ALM240	Detailed alarm from Alarm History most recent alarm	-
ALM241	Detailed alarm from Alarm History 1st alarm in past	-
ALM242	Detailed alarm from Alarm History 2nd alarm in past	-
ALM243	Detailed alarm from Alarm History 3rd alarm in past	-
ALM244	Detailed alarm from Alarm History 4th alarm in past	-
ALM245	Detailed alarm from Alarm History 5th alarm in past	-

Virtual device name	Name	Symbol
ALM246	Detailed alarm from Alarm History 6th alarm in past	-
ALM247	Detailed alarm from Alarm History 7th alarm in past	-
ALM248	Detailed alarm from Alarm History 8th alarm in past	-
ALM249	Detailed alarm from Alarm History 9th alarm in past	-
ALM250	Detailed alarm from Alarm History 10th alarm in past	-
ALM251	Detailed alarm from Alarm History 11th alarm in past	-
ALM252	Detailed alarm from Alarm History 12th alarm in past	-
ALM253	Detailed alarm from Alarm History 13th alarm in past	-
ALM254	Detailed alarm from Alarm History 14th alarm in past	-
ALM255	Detailed alarm from Alarm History 15th alarm in past	-

(17)Point table (position) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- POS1 to POS255: Writing data to the RAM of a servo amplifier
- POS1001 to POS1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
POS1 to POS255, POS1001 to POS1255	Point table/position data No. 1 to No. 255	-

(18)Point table (speed) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- SPD1 to SPD255: Writing data to the RAM of a servo amplifier
- SPD1001 to SPD1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
SPD1 to SPD255, SPD1001 to SPD1255	Point table/speed data No. 1 to No. 255	-

(19)Point table (acceleration time constant) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- ACT1 to ACT255: Writing data to the RAM of a servo amplifier
- ACT1001 to ACT1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
ACT1 to ACT255, ACT1001 to ACT1255	Point table/acceleration time constant No. 1 to No. 255	-

(20)Point table (deceleration time constant) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- DCT1 to DCT255: Writing data to the RAM of a servo amplifier
- DCT1001 to DCT1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DCT1 to DCT255, DCT1001 to DCT1255	Point table/deceleration time constant No. 1 to No. 255	-

(21)Point table (dwell) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- DWL1 to DWL255: Writing data to the RAM of a servo amplifier
- DWL1001 to DWL1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
DWL1 to DWL255, DWL1001 to DWL1255	Point table/dwell No. 1 to No. 255	-

(22)Point table (auxiliary function) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- AUX1 to AUX255: Writing data to the RAM of a servo amplifier

• AUX1001 to AUX1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
AUX1 to AUX255, AUX1001 to AUX1255	Point table/auxiliary function No. 1 to No. 255	-

(23)Point table (M code) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

• MCD1 to MCD255: Writing data to the RAM of a servo amplifier

• MCD1001 to MCD1255: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
MCD1 to MCD255, MCD1001 to MCD1255	Point table/M code No.1 to No.255	-

(24)Machine diagnosis data ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
MD0	Machine diagnosis data, station number	-
MD1	Machine diagnosis data shift judgment (test mode)	-
MD2	Machine diagnosis data status	-
MD3	Machine diagnosis data coulomb friction torque in positive direction	-
MD4	Machine diagnosis data friction torque at rated speed in positive direction	-
MD5	Machine diagnosis data coulomb friction torque in negative direction	-
MD6	Machine diagnosis data friction torque at rated speed in negative direction	-
MD7	Machine diagnosis data oscillation frequency (motor is stopped)	-
MD8	Machine diagnosis data vibration level (motor is stopped)	-
MD9	Machine diagnosis data oscillation frequency (motor is operating)	-
MD10	Machine diagnosis data vibration level (motor is operating)	-
MD11	Machine diagnosis data, rated speed at forward or reverse rotation torque	-

(25)One-touch tuning data ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
OTS0	One-touch tuning status confirmation	-
OTS1	Error code list	-
OTS2	Settling time	-
OTS3	Overshoot amount	-

(26)External input signal ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ⇒MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL
DI3	External input pin statuses	-	
DI4	Statuses of input devices switched on through communication	-	For the mapping of the bits corresponding to the data to be read or written, refer to the following. ⇒MR-J4-_A_(-RJ)/MR-J4-03A6(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL

(27)External output signal ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	For the mapping of the bits corresponding to the data to be read, refer to the following. ⇒MR-J4-_A_(-RJ)/MR-J4-03sA6(-RJ) SERVO AMPLIFIER INSTRUCTION MANUAL
DO4	External output pin statuses	-	

(28)Current position latch data ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
LD0	Position data unit	-
LD1	Current position latch data	-

(29)Value of the general-purpose register (Rx) ([MELSERVO-J4-*A-RJ])

Use an appropriate device according to the write destination of the servo amplifier.

- RR1 to RR4: Writing data to the RAM of a servo amplifier
- RR1001 to RR1004: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
RR1, RR1001	Value of the general-purpose register (R1)	-
RR2, RR1002	Value of the general-purpose register (R2)	-
RR3, RR1003	Value of the general-purpose register (R3)	-
RR4, RR1004	Value of the general-purpose register (R4)	-

(30)Value of the general-purpose register (Dx) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
RD1	Value of the general-purpose register (D1)	-
RD2	Value of the general-purpose register (D2)	-
RD3	Value of the general-purpose register (D3)	-
RD4	Value of the general-purpose register (D4)	-

(31)Life diagnosis ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
ALD0	Cumulative power-on time	-
ALD1	Number of inrush current switching times	-

(32)Input signal for test operation (for test operation) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation 1	-
TMI1	Input signal for test operation 2	-
TMI2	Input signal for test operation 3	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(33)Forced output of signal pin (for test operation) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(34)Set data (for test operation) ([MELSERVO-J4-*A-RJ])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD3	Writes the moving distance (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J4-*A-RJ])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.13 ■8 Precautions for virtual servo amplifier devices ([MELSERVO-J2M-P8A])

12.3.22 [MELSERVO-JE-*C]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-JE-*C])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-JE-*C])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-JE-*C])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-JE-*C])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-JE-*C])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-JE-*C])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-JE-*C])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-JE-*C])

■1 Monitoring-supported bit devices ([MELSERVO-JE-*C])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.22 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-JE-*C])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.22 ■7 Virtual servo amplifier devices ([MELSERVO-JE-*C])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	0 to 6	×	×
OM	Operation mode selection	Decimal	0 to 2 4 to 5	×	×
TMB	Instruction demand (for test operation)	Decimal	1 to 6	×	×
OTI	One-touch tuning instruction	Decimal	0 to 5	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-JE-*C])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-JE-*C])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.22 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-JE-*C])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.22 ■7 Virtual servo amplifier devices ([MELSERVO-JE-*C])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic setting parameter	Decimal	1 to 32 1001 to 1032	○	×
PB	Gain filter parameter	Decimal	1 to 64 1001 to 1064	○	×
PC	Extension setting parameter	Decimal	1 to 80 1001 to 1080	○	×
PD	I/O setting parameter	Decimal	1 to 48 1001 to 1048	○	×
PT	Positioning control parameters	Decimal	1 to 80 1001 to 1080	○	×
PN	Network setting parameters	Decimal	1 to 48 1001 to 1048	×	×
ST	Status display	Decimal	0 to 48	○	×
PE	Extension setting No.2 parameter	Decimal	1 to 64 1001 to 1064	○	×
PF	Extension setting No.3 parameter	Decimal	1 to 48 1001 to 1048	○	×
ALM	Alarm (Current alarm)	Decimal	0 to 1 11 to 59	○	×
ALM	Alarm (Alarm history)	Decimal	200 to 215 220 to 235 240 to 255	○	×
MD	Machine diagnosis data	Decimal	0 to 11	×	×
OTS	One-touch tuning data	Decimal	0 to 3	×	×
DI	External input	Decimal	0 to 6	×	×
DO	External output	Decimal	0 to 4	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([MELSERVO-JE-*C])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
ALM	R/-	R/-	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS	R/-	R/-	-/-	-/-
DI*1	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-

*1 Only reading is available for DI0 to DI3.

■5 Monitoring-supported double-word devices ([MELSERVO-JE-*C])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.22 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-JE-*C])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.22 ■7 Virtual servo amplifier devices ([MELSERVO-JE-*C])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LD	Current position latch data	Decimal	0 to 1	×	×
RR	General-purpose register (Rx)	Decimal	1 to 4 1001 to 1004	×	×
RD	General-purpose register (Dx)	Decimal	1 to 4	×	×
ALD	Life diagnosis	Decimal	0 to 1	×	×
TMI	Input signal for test operation (for test operation)	Decimal	0 to 2	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	0	×	×
TMD	Set data (for test operation)	Decimal	0 to 1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-JE-*C])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LD	-/-	R/-	-/-	-/-
RR	-/-	R/W	-/-	-/-
RD	-/-	R/W	-/-	-/-
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-JE-*C])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➟(1) Servo amplifier request ([MELSERVO-JE-*C])

Virtual device name	Reference
OM	⇒(2) Operation mode selection ([MELSERVO-JE-*C])
TMB	⇒(3) Instruction demand (for test operation) ([MELSERVO-JE-*C])
OTI	⇒(4) One-touch tuning instruction ([MELSERVO-JE-*C])
PA	⇒(5) Basic parameter ([MELSERVO-JE-*C])
PB	⇒(6) Gain filter parameter ([MELSERVO-JE-*C])
PC	⇒(7) Extension setting parameter ([MELSERVO-JE-*C])
PD	⇒(8) I/O setting parameter ([MELSERVO-JE-*C])
PT	⇒(9) Positioning control parameter ([MELSERVO-JE-*C])
PN	⇒(10) Network setting parameter ([MELSERVO-JE-*C])
ST	⇒(11) Status display ([MELSERVO-JE-*C])
PE	⇒(12) Extension setting No.2 parameter ([MELSERVO-JE-*C])
PF	⇒(13) Extension setting No.3 parameter ([MELSERVO-JE-*C])
ALM	⇒(14) Alarm (MELSERVO-J4-*A extended) ([MELSERVO-JE-*C])
MD	⇒(15) Machine diagnosis data ([MELSERVO-JE-*C])
OTS	⇒(16) One-touch tuning data ([MELSERVO-JE-*C])
DI	⇒(17) External input signal ([MELSERVO-JE-*C])
DO	⇒(18) External output signal ([MELSERVO-JE-*C])
LD	⇒(19) Current position latch data ([MELSERVO-JE-*C])
RR	⇒(20) Value of the general-purpose register (Rx) ([MELSERVO-JE-*C])
RD	⇒(21) Value of the general-purpose register (Dx) ([MELSERVO-JE-*C])
ALD	⇒(22) Life diagnosis ([MELSERVO-JE-*C])
TMI	⇒(23) Input signal for test operation (for test operation) ([MELSERVO-JE-*C])
TMO	⇒(24) Forced output of signal pin (for test operation) ([MELSERVO-JE-*C])
TMD	⇒(25) Set data (for test operation) ([MELSERVO-JE-*C])

(1) Servo amplifier request ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	-

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	-
OM4	Output signal (DO) forced output	-
OM5	Single-step feed operation	-

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
TMB1	Temporary stop command	-
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	-
TMB4	Reverse rotation direction	-
TMB5	Restart for remaining distance	-
TMB6	Remaining distance clear	-

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) One-touch tuning instruction ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
OTI0	One-touch tuning start command (Basic mode)	-
OTI1	One-touch tuning start command (High mode)	-
OTI2	One-touch tuning start command (Low mode)	-
OTI3	One-touch tuning stop command	-
OTI4	Return to initial value	-
OTI5	Return to value before adjustment	-

(5) Basic parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA32: Writing data to the RAM of a servo amplifier
- PA1001 to PA1032: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PA1, PA1001	Operation mode	*STY
PA2, PA1002	Regenerative option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator	CMX
PA7, PA1007	Electronic gear denominator	CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP

Device name	Name	Symbol
PA11, PA1011	Forward rotation torque limit	TLP
PA12, PA1012	Reverse rotation torque limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16, PA1016	Encoder output pulses 2	*ENR2
PA17 to PA18, PA1017 to PA1018	For manufacturer setting	-
PA19, PA1019	Parameter block	*BLK
PA20, PA1020	Tough drive setting	*TDS
PA21, PA1021	Function selection A-3	*AOP3
PA22, PA1022	For manufacturer setting	-
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT
PA24, PA1024	Function selection A-4	*AOP4
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV
PA26, PA1026	Function selection A-5	*AOP5
PA27, PA1027	For manufacturer setting	-
PA28, PA1028	Function selection A-6	*AOP6
PA29 to PA32, PA1029 to PA1032	For manufacturer setting	-

(6) Gain filter parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB64: Writing data to the RAM of a servo amplifier
- PB1001 to PB1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control II)	VRFT
PB3, PB1003	Position command acceleration/deceleration time constant (position smoothing)	PST
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	-
PB6, PB1006	Load inertia moment ratio	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position control gain	PG2
PB9, PB1009	Speed control gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	Overshoot amount compensation	OVA
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch shape selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch shape selection 2	NHQ2
PB17, PB1017	Shaft resonance suppression filter	NHF
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control 1 - Vibration frequency	VRF11
PB20, PB1020	Vibration suppression control 1 - Resonance frequency	VRF12
PB21, PB1021	Vibration suppression control 1 - Vibration frequency damping	VRF13

Device name	Name	Symbol
PB22, PB1022	Vibration suppression control 1 - Resonance frequency damping	VRF14
PB23, PB1023	Low-pass filter setting	VFBF
PB24, PB1024	Slight vibration suppression control	*MVS
PB25, PB1025	Function selection B-1	*BOP1
PB26, PB1026	Gain switching function	*CDP
PB27, PB1027	Gain switching condition	CDL
PB28, PB1028	Gain switching time constant	CDT
PB29, PB1029	Load to motor inertia ratio after gain switching	GD2B
PB30, PB1030	Position loop gain after gain switching	PG2B
PB31, PB1031	Speed loop gain after gain switching	VG2B
PB32, PB1032	Speed integral compensation after gain switching	VICB
PB33, PB1033	Vibration suppression control 1 - Vibration frequency after gain switching	VRF1B
PB34, PB1034	Vibration suppression control 1 - Resonance frequency after gain switching	VRF2B
PB35, PB1035	Vibration suppression control 1 - Vibration frequency damping after gain switching	VRF3B
PB36, PB1036	Vibration suppression control 1 - Resonance frequency damping after gain switching	VRF4B
PB37 to PB44, PB1037 to PB1044	For manufacturer setting	-
PB45, PB1045	Command notch filter	CNHF
PB46, PB1046	Machine resonance suppression filter 3	NH3
PB47, PB1047	Notch shape selection 3	NHQ3
PB48, PB1048	Machine resonance suppression filter 4	NH4
PB49, PB1049	Notch shape selection 4	NHQ4
PB50, PB1050	Machine resonance suppression filter 5	NH5
PB51, PB1051	Notch shape selection 5	NHQ5
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21
PB53, PB1053	Vibration suppression control 2 - Resonance frequency	VRF22
PB54, PB1054	Vibration suppression control 2 - Vibration frequency damping	VRF23
PB55, PB1055	Vibration suppression control 2 - Resonance frequency damping	VRF24
PB56, PB1056	Vibration suppression control 2 - Vibration frequency after gain switching	VRF21B
PB57, PB1057	Vibration suppression control 2 - Resonance frequency after gain switching	VRF22B
PB58, PB1058	Vibration suppression control 2 - Vibration frequency damping after gain switching	VRF23B
PB59, PB1059	Vibration suppression control 2 - Resonance frequency damping after gain switching	VRF24B
PB60, PB1060	Model loop gain after gain switching	PG1B
PB61 to PB64, PB1061 to PB1064	For manufacturer setting	-

(7) Extension setting parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC80: Writing data to the RAM of a servo amplifier
- PC1001 to PC1080: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PC1, PC1001	Acceleration time constant	STA
PC2, PC1002	Deceleration time constant	STB
PC3, PC1003	S-pattern acceleration/deceleration time constant	STC
PC4, PC1004	Torque command time constant	TQC
PC5, PC1005	Internal speed command 1	SC1
PC6, PC1006	Internal speed command 2	SC2

Device name	Name	Symbol
PC7, PC1007	Internal speed command 3	SC3
PC8, PC1008	Internal speed command 4	SC4
PC9, PC1009	Internal speed command 5	SC5
PC10, PC1010	Internal speed command 6	SC6
PC11, PC1011	Internal speed command 7	SC7
PC12, PC1012	Analog speed command maximum speed	VCM
PC13, PC1013	Analog torque command maximum output	TLC
PC14 to PC15, PC1014 to PC1015	For manufacturer setting	-
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20 to PC21, PC1020 to PC1021	For manufacturer setting	-
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	Function selection C-4	*COP3
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027	Function selection C-6	*COP6
PC28, PC1028	For manufacturer setting	-
PC29, PC1029	Function selection C-8	*COP7
PC30, PC1030	Acceleration time constant 2	STA2
PC31, PC1031	Deceleration time constant 2	STB2
PC32, PC1032	Command input pulse multiplication numerator 2	CMX2
PC33, PC1033	Command input pulse multiplication numerator 3	CMX3
PC34, PC1034	Command input pulse multiplication numerator 4	CMX4
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	For manufacturer setting	-
PC37, PC1037	Analog speed command offset	VCO
PC38, PC1038	Analog torque command offset	TPO
PC39 to PC42, PC1039 to PC1042	For manufacturer setting	-
PC43, PC1043	Error excessive alarm detection level	ERZ
PC44 to PC50, PC1044 to PC1050	For manufacturer setting	-
PC51, PC1051	Forced stop deceleration time constant	RSBR
PC52 to PC53, PC1052 to PC1053	For manufacturer setting	-
PC54, PC1054	Vertical axis freefall prevention compensation amount	RSUP1
PC55 to PC59, PC1055 to PC1059	For manufacturer setting	-
PC60, PC1060	Function selection C-D	*COPD
PC61 to PC72, PC1061 to PC1072	For manufacturer setting	-
PC73, PC1073	Error excessive warning level	ERW
PC74, PC1074	For manufacturer setting	-
PC75, PC1075	Following error output level	FEWL
PC76, PC1076	Following error output level	FEWH
PC77, PC1077	Following error output filtering time	FEWF

Device name	Name	Symbol
PC78 to PC80, PC1078 to PC1080	For manufacturer setting	-

(8) I/O setting parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PD1 to PD48: Writing data to the RAM of a servo amplifier
- PD1001 to PD1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PD1, PD1001	Input signal automatic on selection 1	*DIA1
PD2 to PD4, PD1002 to PD1004	For manufacturer setting	-
PD5, PD1005	Input device selection 1L	*DI1L
PD6, PD1006	Input device selection 1M	*DI1M
PD7, PD1007	Input device selection 1H	*DI1H
PD8, PD1008	Input device selection 2L	*DI2L
PD9, PD1009	Input device selection 2M	*DI2M
PD10, PD1010	Input device selection 2H	*DI2H
PD11, PD1011	Input device selection 3L	*DI3L
PD12, PD1012	Input device selection 3M	*DI3M
PD13, PD1013	Input device selection 3H	*DI3H
PD14, PD1014	Input device selection 4L	*DI4L
PD15, PD1015	Input device selection 4M	*DI4M
PD16, PD1016	Input device selection 4H	*DI4H
PD17, PD1017	Input device selection 5L	*DI5L
PD18, PD1018	Input device selection 5M	*DI5M
PD19, PD1019	Input device selection 5H	*DI5H
PD20 to 22, PD1020 to PD1022	For manufacturer setting	-
PD23, PD1023	Input device selection 7L	*DI7L
PD24, PD1024	Input device selection 7M	*DI7M
PD25, PD1025	Input device selection 7H	*DI7H
PD26, PD1026	Input device selection 8L	*DI8L
PD27, PD1027	Input device selection 8M	*DI8M
PD28, PD1028	Input device selection 8H	*DI8H
PD29, PD1029	Output device selection 1	*DO1
PD30, PD1030	Output device selection 2	*DO2
PD31, PD1031	Output device selection 3	*DO3
PD32, PD1032	Output device selection 4	*DO4
PD33, PD1033	For manufacturer setting	-
PD34, PD1034	Input filter setting	*DIF
PD35, PD1035	Function selection D-1	*DOP1
PD36, PD1036	For manufacturer setting	-
PD37, PD1037	Function selection D-3	*DOP3
PD38, PD1038	Function selection D-4	*DOP4
PD39, PD1039	Function selection D-5	*DOP5
PD40 to PD48, PD1040 to PD1048	For manufacturer setting	-

(9) Positioning control parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PT1 to PT80: Writing data to the RAM of a servo amplifier
- PT1001 to PT1080: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PT1, PT1001	Command mode selection	*CTY
PT2, PT1002	For manufacturer setting	-
PT3, PT1003	Feeding function selection	*FTY
PT4, PT1004	For manufacturer setting	-
PT5, PT1005	Home position return speed	ZRF
PT6, PT1006	Creep speed	CRF
PT7, PT1007	Home position shift distance	ZST
PT8, PT1008	For manufacturer setting	-
PT9, PT1009	Moving distance after proximity dog	DCT
PT10, PT1010	Stopper type home position return stopper time	ZTM
PT11, PT1011	Stopper type home position return torque limit value	ZTT
PT12 to PT14, PT1012 to PT1014	For manufacturer setting	-
PT15, PT1015	Software limit +	LMPL
PT16, PT1016	Software limit +	LMPH
PT17, PT1017	Software limit -	LMNL
PT18, PT1018	Software limit -	LMNH
PT19 to 25, PT1019 to PT1025	For manufacturer setting	-
PT26, PT1026	Function selection T-2	*TOP2
PT27 to 28, PT1027 to PT1028	For manufacturer setting	-
PT29, PT1029	Function selection T-3	*TOP3
PT30 to PT40, PT1030 to PT1040	For manufacturer setting	-
PT41, PT1041	Home position return inhibit selection	ORP
PT42 to PT44, PT1042 to PT1044	For manufacturer setting	-
PT45, PT1045	Home position return method	HMM
PT46 to PT48, PT1046 to PT1048	For manufacturer setting	-
PT49, PT1049	Torque slope	TQS
PT50, PT1050	Profile speed command	PVC
PT51, PT1051	Maximum profile speed	MPVC
PT52, PT1052	Speed limit	VLMT
PT53 to 56, PT1053 to PT1056	For manufacturer setting	-
PT57, PT1057	Home position shift distance (extension parameter)	ZSTH
PT58, PT1058	For manufacturer setting	*ZPSH
PT59, PT1059	Travel distance after proximity dog (extension parameter)	DCTH
PT60, PT1060	Function selection T-8	*TOP8
PT61, PT1061	Home position return acceleration time constant	HMA
PT62, PT1062	Home position return deceleration time constant	HMB
PT63, PT1063	Zero speed 2 level	ZSP2L
PT64, PT1064	Zero speed 2 filter time	ZSP2F

Device name	Name	Symbol
PT65, PT1065	In-position 2 output range	INP2R
PT66, PT1066	In-position 2 output filter time	INP2F
PT67, PT1067	Speed reached 2 output range	SA2R
PT68, PT1068	Speed reached 2 output filter time	SA2F
PT69 to 80, PT1069 to PT1080	For manufacturer setting	-

(10)Network setting parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PN1 to PN48: Writing data to the RAM of a servo amplifier
- PN1001 to PN1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PN1, PN1001	For manufacturer setting	-
PN2, PN1002	Communication error detection time	CERT
PN3 to PN5, PN1003 to PN1005	For manufacturer setting	-
PN6, PN1006	Function selection N-1	NOP1
PN7, PN1007	For manufacturer setting	-
PN8, PN1008	Function selection N-2	NOP2
PN9, PN1009	For manufacturer setting	-
PN10, PN1010	Ethernet communication time-out selection	EIC
PN11, PN1011	IP address setting 1	*IPAD1
PN12, PN1012	IP address setting 2	*IPAD2
PN13, PN1013	IP address setting 3	*IPAD3
PN14, PN1014	IP address setting 4	*IPAD4
PN15, PN1015	Subnet mask setting 1	*SNMK1
PN16, PN1016	Subnet mask setting 2	*SNMK2
PN17, PN1017	Subnet mask setting 3	*SNMK3
PN18, PN1018	Subnet mask setting 4	*SNMK4
PN19, PN1019	Default gateway setting 1	*DGW1
PN20, PN1020	Default gateway setting 2	*DGW2
PN21, PN1021	Default gateway setting 3	*DGW3
PN22, PN1022	Default gateway setting 4	*DGW4
PN23, PN1023	KeepAlive time	*KAA
PN24, PN1024	IP address filter 1	*IPAF1
PN25, PN1025	IP address filter 2	*IPAF2
PN26, PN1026	IP address filter 3	*IPAF3
PN27, PN1027	IP address filter 4	*IPAF4
PN28, PN1028	IP address filter 2 range specification	*IPFR2
PN29, PN1029	IP address filter 3 range specification	*IPFR3
PN30, PN1030	IP address filter 4 range specification	*IPFR4
PN31, PN1031	Operation specification IP address 1	*IPOA1
PN32, PN1032	Operation specification IP address 2	*IPOA2
PN33, PN1033	Operation specification IP address 3	*IPOA3
PN34, PN1034	Operation specification IP address 4	*IPOA4
PN35, PN1035	Operation specification IP address 3 range spec.	*IPOR3
PN36, PN1036	Operation specification IP address 4 range spec.	*IPOR4

Device name	Name	Symbol
PN37 to PN48, PN1037 to PN1048	For manufacturer setting	-

(11)Status display ([MELSERVO-JE-*C])

Device name	Name	Symbol
ST0	Cumulative feedback pulses	-
ST1	Servo motor speed	-
ST2	Droop pulses	-
ST3	Cumulative command pulses	-
ST4	Command pulse frequency	-
ST5	Analog speed command voltage	-
ST6	Analog torque command voltage	-
ST7	Regenerative load ratio	-
ST8	Effective load ratio	-
ST9	Peak load ratio	-
ST10	Instantaneous torque	-
ST11	Within one-revolution position	-
ST12	ABS counter	-
ST13	Load inertia moment ratio	-
ST14	Bus voltage	-
ST15 to ST31	For manufacturer setting	-
ST32	Encoder inside temperature	-
ST33	Settling time	-
ST34	Oscillation detection frequency	-
ST35	Number of tough drive operations	-
ST36 to ST39	For manufacturer setting	-
ST40	Unit power consumption	-
ST41	Unit total power consumption	-
ST42	Current position	-
ST43	Command position	-
ST44	Command remaining distance	-
ST45 to ST48	For manufacturer setting	-

(12)Extension setting No.2 parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PE1 to PE64: Writing data to the RAM of a servo amplifier
- PE1001 to PE1064: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PE1 to PE40, PE1001 to PE1040	For manufacturer setting	-
PE41, PE1041	Function selection E-3	EOP3
PE42 to PE43, PE1042 to PE1043	For manufacturer setting	-
PE44, PE1044	Lost motion compensation positive-side compensation value selection	LMCP
PE45, PE1045	Lost motion compensation negative-side compensation value selection	LMCN
PE46, PE1046	Lost motion filter setting	LMFLT
PE47, PE1047	Torque offset	TOF
PE48, PE1048	Lost motion compensation function selection	*LMOP

Device name	Name	Symbol
PE49, PE1049	Lost motion compensation timing	LMCD
PE50, PE1050	Lost motion compensation non-sensitive band	LMCT
PE51 to PE64, PE1051 to PE1064	For manufacturer setting	-

(13)Extension setting No.3 parameter ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- PF1 to PF48: Writing data to the RAM of a servo amplifier
- PF1001 to PF1048: Writing data to the EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

Device name	Name	Symbol
PF1 to PF8, PF1001 to PF1008	For manufacturer setting	-
PF9, PF1009	Function selection F-5	*FOP5
PF10 to PF14, PF1010 to PF1014	For manufacturer setting	-
PF15, PF1015	Electronic dynamic brake operating time	DBT
PF16 to PF20, PF1016 to PF1020	For manufacturer setting	-
PF21, PF1021	Drive recorder switching time setting	DRT
PF22, PF1022	For manufacturer setting	-
PF23, PF1023	Vibration tough drive - Oscillation detection level	OSCL1
PF24, PF1024	Vibration tough drive function selection	OSCL2
PF25, PF1025	Instantaneous power failure tough drive - Detection time	CVAT
PF26 to PF30, PF1026 to PF1030	For manufacturer setting	-
PF31, PF1031	Machine diagnosis function - Friction judgment speed	FRIC
PF32 to PF48, PF1032 to PF1048	For manufacturer setting	-

(14)Alarm (MELSERVO-J4-*A extended) ([MELSERVO-JE-*C])

Device name	Name	Symbol
ALM0	Current alarm number	-
ALM1	Detailed data of current alarms	-
ALM11	Servo status(alarm) Cumulative feedback pulses	-
ALM12	Servo status(alarm) Servo motor speed	-
ALM13	Servo status(alarm) Droop pulses	-
ALM14	Servo status(alarm) Cumulative command pulses	-
ALM15	Servo status(alarm) Command pulse frequency	-
ALM16	Servo status(alarm) Analog speed command voltage	-
ALM17	Servo status(alarm) Analog torque command voltage	-
ALM18	Servo status(alarm) Regenerative load ratio	-
ALM19	Servo status(alarm) Effective load ratio	-
ALM20	Servo status(alarm) Peak load ratio	-
ALM21	Servo status(alarm) Instantaneous torque	-
ALM22	Servo status(alarm) Within one-revolution position	-
ALM23	Servo status(alarm) ABS counter	-
ALM24	Servo status(alarm) Load inertia moment ratio	-
ALM25	Servo status(alarm) Bus voltage	-
ALM26 to ALM42	For manufacturer setting	-
ALM43	Servo status(alarm) Internal temperature of encoder	-

Device name	Name	Symbol
ALM44	Servo status(alarm) Settling time	-
ALM45	Servo status(alarm) Oscillation detection frequency	-
ALM46	Servo status(alarm) Number of tough drives	-
ALM47 to ALM50	For manufacturer setting	-
ALM51	Servo status(alarm) Unit power consumption	-
ALM52	Servo status(alarm) Unit total power consumption	-
ALM53	Servo status(alarm) Current position	-
ALM54	Servo status(alarm) Command position	-
ALM55	Servo status(alarm) Command remaining distance	-
ALM56 to ALM59	For manufacturer setting	-
ALM200	Alarm number from Alarm History most recent alarm	-
ALM201	Alarm number from Alarm History 1st alarm in past	-
ALM202	Alarm number from Alarm History 2nd alarm in past	-
ALM203	Alarm number from Alarm History 3rd alarm in past	-
ALM204	Alarm number from Alarm History 4th alarm in past	-
ALM205	Alarm number from Alarm History 5th alarm in past	-
ALM206	Alarm number from Alarm History 6th alarm in past	-
ALM207	Alarm number from Alarm History 7th alarm in past	-
ALM208	Alarm number from Alarm History 8th alarm in past	-
ALM209	Alarm number from Alarm History 9th alarm in past	-
ALM210	Alarm number from Alarm History 10th alarm in past	-
ALM211	Alarm number from Alarm History 11th alarm in past	-
ALM212	Alarm number from Alarm History 12th alarm in past	-
ALM213	Alarm number from Alarm History 13th alarm in past	-
ALM214	Alarm number from Alarm History 14th alarm in past	-
ALM215	Alarm number from Alarm History 15th alarm in past	-
ALM220	Alarm occurrence time in alarm history most recent alarm	-
ALM221	Alarm occurrence time in alarm history 1st alarm in past	-
ALM222	Alarm occurrence time in alarm history 2nd alarm in past	-
ALM223	Alarm occurrence time in alarm history 3rd alarm in past	-
ALM224	Alarm occurrence time in alarm history 4th alarm in past	-
ALM225	Alarm occurrence time in alarm history 5th alarm in past	-
ALM226	Alarm occurrence time in alarm history 6th alarm in past	-
ALM227	Alarm occurrence time in alarm history 7th alarm in past	-
ALM228	Alarm occurrence time in alarm history 8th alarm in past	-
ALM229	Alarm occurrence time in alarm history 9th alarm in past	-
ALM230	Alarm occurrence time in alarm history 10th alarm in past	-
ALM231	Alarm occurrence time in alarm history 11th alarm in past	-
ALM232	Alarm occurrence time in alarm history 12th alarm in past	-
ALM233	Alarm occurrence time in alarm history 13th alarm in past	-
ALM234	Alarm occurrence time in alarm history 14th alarm in past	-
ALM235	Alarm occurrence time in alarm history 15th alarm in past	-
ALM240	Detailed alarm from Alarm History most recent alarm	-
ALM241	Detailed alarm from Alarm History 1st alarm in past	-
ALM242	Detailed alarm from Alarm History 2nd alarm in past	-
ALM243	Detailed alarm from Alarm History 3rd alarm in past	-
ALM244	Detailed alarm from Alarm History 4th alarm in past	-

Device name	Name	Symbol
ALM245	Detailed alarm from Alarm History 5th alarm in past	-
ALM246	Detailed alarm from Alarm History 6th alarm in past	-
ALM247	Detailed alarm from Alarm History 7th alarm in past	-
ALM248	Detailed alarm from Alarm History 8th alarm in past	-
ALM249	Detailed alarm from Alarm History 9th alarm in past	-
ALM250	Detailed alarm from Alarm History 10th alarm in past	-
ALM251	Detailed alarm from Alarm History 11th alarm in past	-
ALM252	Detailed alarm from Alarm History 12th alarm in past	-
ALM253	Detailed alarm from Alarm History 13th alarm in past	-
ALM254	Detailed alarm from Alarm History 14th alarm in past	-
ALM255	Detailed alarm from Alarm History 15th alarm in past	-

(15)Machine diagnosis data ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
MD0	Machine diagnosis data parameter number	-
MD1	Machine diagnosis data shift judgment (test mode)	-
MD2*1	Machine diagnosis data status	-
MD3*2	Machine diagnosis data coulomb friction torque in positive direction	-
MD4*2	Machine diagnosis data friction torque at rated speed in positive direction	-
MD5*2	Machine diagnosis data coulomb friction torque in negative direction	-
MD6*2	Machine diagnosis data friction torque at rated speed in negative direction	-
MD7*2	Machine diagnosis data oscillation frequency (motor is stopped)	-
MD8*2	Machine diagnosis data vibration level (motor is stopped)	-
MD9*2	Machine diagnosis data oscillation frequency (motor is operating)	-
MD10*2	Machine diagnosis data vibration level (motor is operating)	-
MD11	Machine diagnosis data, rated speed at forward or reverse rotation torque	-

*1 While the servo amplifier is estimating the corresponding machine status in the machine diagnosis, do not write data to the parameters of the servo amplifier from another GOT.
Doing so may cause the servo amplifier to malfunction.

*2 When MD2 indicates that the servo amplifier does not complete the machine diagnosis (is estimating or warning of the machine status), do not monitor MD3 to MD6 (friction states) and MD7 to MD10 (vibration/oscillation states).
To start monitoring those devices upon the estimation completion, set [Trigger] in the applicable object settings.

(16)One-touch tuning data ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
OTS0	One-touch tuning status confirmation	-
OTS1	Error code list	-
OTS2	Settling time	-
OTS3	Overshoot amount	-

(17)External input signal ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	System information
DI1	Input device statuses	-	
DI2	Input device statuses	-	
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-JE-_C SERVO AMPLIFIER INSTRUCTION MANUAL

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI4	Statuses of input devices switched on through communication	-	System information
DI5	Statuses of input devices switched on through communication	-	
DI6	Statuses of input devices switched on through communication	-	

(18)External output signal ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	System information
DO1	Output device statuses	-	
DO2	Output device statuses	-	
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-JE-_C SERVO AMPLIFIER INSTRUCTION MANUAL

(19)Current position latch data ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
LD0	Position data unit	-
LD1	Current position latch data	-

(20)Value of the general-purpose register (Rx) ([MELSERVO-JE-*C])

Use an appropriate device according to the write destination of the servo amplifier.

- RR1 to RR4: Writing data to the RAM of a servo amplifier
- RR1001 to RR1004: Writing data to the EEPROM of a servo amplifier

Virtual device name	Name	Symbol
RR1, RR1001	Value of the general-purpose register (R1)	-
RR2, RR1002	Value of the general-purpose register (R2)	-
RR3, RR1003	Value of the general-purpose register (R3)	-
RR4, RR1004	Value of the general-purpose register (R4)	-

(21)Value of the general-purpose register (Dx) ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
RD1	Value of the general-purpose register (D1)	-
RD2	Value of the general-purpose register (D2)	-
RD3	Value of the general-purpose register (D3)	-
RD4	Value of the general-purpose register (D4)	-

(22)Life diagnosis ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
ALD0	Cumulative power-on time	-
ALD1	Number of inrush current switching times	-

(23)Input signal for test operation (for test operation) ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
TMI0	Input signal for test operation 1	-
TMI1	Input signal for test operation 2	-
TMI2	Input signal for test operation 3	-

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(24)Forced output of signal pin (for test operation) ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
TMO0	Forced output of signal pin	-

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(25)Set data (for test operation) ([MELSERVO-JE-*C])

Virtual device name	Name	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	-
TMD3	Writes the moving distance (test mode)	-

When using the set data (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

■8 Precautions for virtual servo amplifier devices ([MELSERVO-JE-*C])

For the precautions for virtual servo amplifier devices, refer to the following.

➟12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.23 [MELSERVO-J5(W)-*G(-RJ), -JET-*G]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
	➟■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
Specifications of word devices	➟■3 Monitoring-supported word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
	➟■4 Availability of writing/reading data to/from word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
	➟■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
Specifications of virtual servo amplifier devices	➟■7 Virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
	➟■8 Precautions for virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

■1 Monitoring-supported bit devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following table shows monitoring-supported virtual bit devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.23 ■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.23 ■7 Virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SP	Servo amplifier request	Decimal	AA(Axis designation)-SP(Device) Notation example: AA3-SP0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	×	×
OM	Operation mode selection	Decimal	AA(Axis designation)-OM(Device) Notation example: AA3-OM0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 4 to 5	×	×
TMB	Instruction demand (for test operation)	Decimal	AA(Axis designation)-TMB(Device) Notation example: AA3-TMB1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 6	×	×
OTI	One-touch tuning instruction	Decimal	AA(Axis designation)-OTI(Device) Notation example: AA3-OTI0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	×	×
GFDI	Gear failure diagnosis instruction	Decimal	AA(Axis designation)-GFDI(Device) Notation example: AA3-GFDI0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	×	×
ECCDI	Encoder communication circuit diagnosis instruction	Decimal	AA(Axis designation)-ECCDI(Device) Notation example: AA3-ECCDI0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

For indirect specification of an axis designation, refer to the following.

➟12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■2 Availability of writing/reading data to/from bit devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SP	-/W	-/-	-/-	-/-	-/-
OM	-/W	-/-	-/-	-/-	-/-
TMB	-/W	-/-	-/-	-/-	-/-
OTI	-/W	-/-	-/-	-/-	-/-
GFDI	-/W	-/-	-/-	-/-	-/-
ECCDI	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following table shows monitoring-supported virtual word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.23 ■4 Availability of writing/reading data to/from word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

For details on virtual servo amplifier devices, refer to the following.

➟12.3.23 ■7 Virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PA	Basic setting parameter	Decimal	AA(Axis designation)-PA(Device) Notation example: AA3-PA1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	×	×
PB	Gain filter parameter	Decimal	AA(Axis designation)-PB(Device) Notation example: AA3-PB1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 92, 1001 to 1092	×	×
PC	Extension setting parameter	Decimal	AA(Axis designation)-PC(Device) Notation example: AA3-PC1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	×	×
PD	I/O setting parameter	Decimal	AA(Axis designation)-PD(Device) Notation example: AA3-PD1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	×	×
PT	Positioning control parameters	Decimal	AA(Axis designation)-PT(Device) Notation example: AA3-PT1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 90, 1001 to 1090	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PN	Network setting parameters	Decimal	AA(Axis designation)-PN(Device) Notation example: AA3-PN1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	×	×
ST	Status display	Decimal	AA(Axis designation)-ST(Device) Notation example: AA3-ST0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 48	×	×
PE	Extension setting No.2 parameter	Decimal	AA(Axis designation)-PE(Device) Notation example: AA3-PE1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 88, 1001 to 1088	×	×
PF	Extension setting No.3 parameter	Decimal	AA(Axis designation)-PF(Device) Notation example: AA3-PF1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	×	×
ALM	Alarm (Current alarm)	Decimal	AA(Axis designation)-ALM(Device) Notation example: AA3-ALM0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2, 11 to 59	×	×
ALM	Alarm (Alarm history)	Decimal	AA(Axis designation)-ALM(Device) Notation example: AA3-ALM200 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 200 to 215, 220 to 235, 240 to 255, 260 to 275, 280 to 295, 300 to 315	×	×
POS	Point table (position)	Decimal	AA(Axis designation)-POS(Device) Notation example: AA3-POS1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
SPD	Point table (speed)	Decimal	AA(Axis designation)-SPD(Device) Notation example: AA3-SPD1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
ACT	Point table (acceleration time constant)	Decimal	AA(Axis designation)-ACT(Device) Notation example: AA3-ACT1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
DCT	Point table (deceleration time constant)	Decimal	AA(Axis designation)-DCT(Device) Notation example: AA3-DCT1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
DWL	Point table (dwell)	Decimal	AA(Axis designation)-DWL(Device) Notation example: AA3-DWL1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
AUX	Point table (auxiliary function)	Decimal	AA(Axis designation)-AUX(Device) Notation example: AA3-AUX1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
MCD	Point table (M code)	Decimal	AA(Axis designation)-MCD(Device) Notation example: AA3-MCD1 • Axis designation (decimal): 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 255, 1001 to 1255	×	×
MD	Machine diagnosis data	Decimal	AA(Axis designation)-MD(Device) Notation example: AA3-MD0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 21	×	×
OTS	One-touch tuning data	Decimal	AA(Axis designation)-OTS(Device) Notation example: AA3-OTS0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5, 3000	×	×
DI	External input signal	Decimal	AA(Axis designation)-DI(Device) Notation example: AA3-DI0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 6	×	×
DO	External output signal	Decimal	AA(Axis designation)-DO(Device) Notation example: AA3-DO0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 4	×	×
PO	Option unit parameter	Decimal	AA(Axis designation)-PO(Device) Notation example: AA3-PO1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 2, 1001 to 1002	×	×
PS	Special parameter	Decimal	AA(Axis designation)-PS(Device) Notation example: AA3-PS1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 99, 1001 to 1099	×	×
PL	Linear servo motor/DD motor setting parameters	Decimal	AA(Axis designation)-PL(Device) Notation example: AA3-PL1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 72, 1001 to 1072	×	×
PU	Multi encoder parameter	Decimal	AA(Axis designation)-PU(Device) Notation example: AA3-PU1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 44, 1001 to 1044	×	×
PVS	Position extension parameter	Decimal	AA(Axis designation)-PVS(Device) Notation example: AA3-PVS1 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 1 to 32, 1001 to 1032	×	×
NPA	Network basic parameter	Decimal	1 to 12 2001 to 2032	×	×
GFDS	Gear failure diagnosis data	Decimal	AA(Axis designation)-GFDS(Device) Notation example: AA3-GFDS0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	×	×
ECCDS	Encoder communication circuit diagnosis data	Decimal	AA(Axis designation)-ECCDS(Device) Notation example: AA3-ECCDS0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 5	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

For indirect specification of an axis designation, refer to the following.

➟12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■4 Availability of writing/reading data to/from word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PA	R/W	R/W	-/-	-/-
PB	R/W	R/W	-/-	-/-
PC	R/W	R/W	-/-	-/-
PD	R/W	R/W	-/-	-/-
PT	R/W	R/W	-/-	-/-
PN	R/W	R/W	-/-	-/-
ST	R/-	R/-	-/-	-/-
PE	R/W	R/W	-/-	-/-
PF	R/W	R/W	-/-	-/-
ALM	R/-	R/-	-/-	-/-
POS	R/W	R/W	-/-	-/-
SPD	R/W	R/W	-/-	-/-
ACT	R/W	R/W	-/-	-/-
DCT	R/W	R/W	-/-	-/-
DWL	R/W	R/W	-/-	-/-
AUX	R/W	R/W	-/-	-/-
MCD	R/W	R/W	-/-	-/-
MD	R/-	R/-	-/-	-/-
OTS*1	R/W	R/W	-/-	-/-
DI*2	R/-	R/W	-/-	-/-
DO	R/-	R/-	-/-	-/-
PO	R/W	R/W	-/-	-/-
PS	R/W	R/W	-/-	-/-
PL	R/W	R/W	-/-	-/-
PU	R/W	R/W	-/-	-/-
PVS	R/W	R/W	-/-	-/-
NPA*3	R/W	R/W	-/-	-/-
GFDS	R/-	R/-	-/-	-/-
ECCDS	R/-	R/-	-/-	-/-

*1 Only reading is available for OTS0 to OTS5.
*2 Only reading is available for DI0 to DI3.
*3 Only reading is available for NPA1, NPA8, and NPA2001 to NPA2032.

■5 Monitoring-supported double-word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following table shows monitoring-supported virtual double-word devices for servo amplifiers.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.23 ■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J5(W)-*G(-RJ), -

JET-*G])

For details on virtual servo amplifier devices, refer to the following.

➥12.3.23 ■7 Virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
ALD	Life diagnosis	Decimal	AA(Axis designation)-ALD(Device) Notation example: AA3-ALD0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1	×	×
TMI	Input signal for test operation (for test operation)	Decimal	AA(Axis designation)-TMI(Device) Notation example: AA3-TMI0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 2	×	×
TMO	Forced output of signal pin (for test operation)	Decimal	AA(Axis designation)-TMO(Device) Notation example: AA3-TMO0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0	×	×
TMD	Set data (for test operation)	Decimal	AA(Axis designation)-TMD(Device) Notation example: AA3-TMD0 • Axis designation: 1 to 3 (direct), 100 to 115 (indirect) • Device (decimal): 0 to 1, 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

For indirect specification of an axis designation, refer to the following.

➥12.3.3 ■2 (2) Indirect specification of an axis number or axis designation ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

■6 Availability of writing/reading data to/from double-word devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following shows the availability of writing/reading data to/from double-word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
ALD	-/-	R/-	-/-	-/-
TMI	-/-	-/W	-/-	-/-
TMO	-/-	-/W	-/-	-/-
TMD	-/-	-/W	-/-	-/-

■7 Virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The following shows the correspondence between the virtual devices used in the GOT and the servo amplifier data.

Virtual device name	Reference
SP	➥(1) Servo amplifier request ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
OM	➥(2) Operation mode selection ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
TMB	➥(3) Instruction demand (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
OTI	➥(4) One-touch tuning instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
GFDI	➥(5) Gear failure diagnosis instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Reference
ECCDI	⇒(6) Encoder communication circuit diagnosis instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PA	⇒(7) Basic setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PB	⇒(8) Gain filter parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PC	⇒(9) Extension setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PD	⇒(10) I/O setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PT	⇒(11) Positioning control parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PN	⇒(12) Network setting parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
ST	⇒(13) Status display ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PE	⇒(14) Extension setting No.2 parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PF	⇒(15) Extension setting No.3 parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
ALM	⇒(16) Alarm ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
	⇒(17) Specifications of ALM260 to ALM275, ALM280 to ALM295, and ALM300 to ALM315 ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
POS	⇒(18) Point table (position) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
SPD	⇒(19) Point table (speed) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
ACT	⇒(20) Point table (acceleration time constant) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
DCT	⇒(21) Point table (deceleration time constant) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
DWL	⇒(22) Point table (dwell) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
AUX	⇒(23) Point table (auxiliary function) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
MCD	⇒(24) Point table (M code) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
MD	⇒(25) Machine diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
OTS	⇒(26) One-touch tuning data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
DI	⇒(27) External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G]) (28) External input signal in MR-J5D□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G]) (29) External input signal in MR-JET-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
DO	⇒(30) External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G]) (31) External output signal in MR-J5D□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G]) (32) External output signal in MR-JET-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PO	⇒(33) Option unit parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PS	⇒(34) Special parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PL	⇒(35) Linear servo motor/DD motor setting parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PU	⇒(36) Multi encoder parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
PVS	⇒(37) Position extension parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
NPA	⇒(38) Network basic parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
GFDS	⇒(39) Gear failure diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
ECCDS	⇒(40) Encoder communication circuit diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
ALD	⇒(41) Life Diagnosis ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
TMI	⇒(42) Input signal for test operation (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
TMO	⇒(43) Forced output of signal pin (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])
TMD	⇒(44) Set data (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

(1) Servo amplifier request ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
SP0	Status display data clear	-	○	○	○
SP1	Current alarm clear	-	○	○	○
SP2	Alarm history clear	-	○	○	○
SP3	External input signal prohibited	-	○	○	○
SP4	External output signal prohibited	-	○	○	○
SP5	External input signal resumed	-	○	○	○
SP6	External output signal resumed	-	○	○	○

When using the servo amplifier request, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(2) Operation mode selection ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
OM0	Cancel test operation mode	-	○	○	○
OM1	JOG operation	-	○	○	○
OM2	Positioning operation	-	○	○	○
OM4	Output signal (DO) forced output	-	○	○	○
OM5	Single-step feed operation	-	○	○	○

When using the operation mode selection, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(3) Instruction demand (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
TMB1	Pause	-	○	○	○
TMB2	Test operation (positioning operation) start command	-	○	○	○
TMB3	Forward rotation direction	-	○	○	○
TMB4	Reverse rotation direction	-	○	○	○
TMB5	Restart for remaining distance	-	○	○	○
TMB6	Remaining distance clear	-	○	○	○

When using the instruction demand (for test operation), note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(4) One-touch tuning instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
OTI0	One-touch tuning start command (Basic mode)	-	○	○	○
OTI1	One-touch tuning start command (High mode)	-	○	○	○
OTI2	One-touch tuning start command (Low mode)	-	○	○	○
OTI3	One-touch tuning stop command	-	○	○	○
OTI4	Return to initial value	-	○	○	○
OTI5	Return to value before adjustment	-	○	○	○

When using the one-touch tuning instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(5) Gear failure diagnosis instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
GFDI0	Backlash estimation start command	-	○	×	○
GFDI1	Backlash estimation stop command	-	○	×	○

When using the gear failure diagnosis instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(6) Encoder communication circuit diagnosis instruction ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ECCDI0	CN2 encoder communication circuit diagnosis start command	-	○	○	○
ECCDI1	CN2L encoder communication circuit diagnosis start command	-	○	○	○

When using the encoder communication circuit diagnosis instruction, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.

(7) Basic setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PA1 to PA44: Writing data to the RAM of a servo amplifier
- PA1001 to PA1044: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PA1, PA1001	Operation mode	**STY	○	×	○
PA2, PA1002	Regenerative option	**REG	○	○	○
PA3, PA1003	Absolute position detection system	*ABS	○	○	○
PA4, PA1004	Function selection A-1	*AOP1	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PA5, PA1005	For manufacturer setting	-	×	×	×
PA6, PA1006	Electronic gear numerator	*CMX	○	○	○
PA7, PA1007	Electronic gear denominator	*CDV	○	○	○
PA8, PA1008	Auto tuning mode	ATU	○	○	○
PA9, PA1009	Auto tuning response	RSP	○	○	○
PA10, PA1010	In-position range	INP	○	○	○
PA11, PA1011	Forward rotation torque limit	TLP	○	○	○
PA12, PA1012	Reverse rotation torque limit	TLN	○	○	○
PA13, PA1013	For manufacturer setting	-	×	×	×
PA14, PA1014	Moving direction selection	*POL	○	○	○
PA15, PA1015	Encoder output pulses	*ENR	○	×	○
PA16, PA1016	Encoder output pulses 2	*ENR2	○	×	○
PA17, PA1017	Servo motor series setting	**MSR	○	×	○
PA18, PA1018	Servo motor type setting	**MTY	○	×	○
PA19, PA1019	Parameter block	*BLK	○	○	○
PA20, PA1020	Tough drive setting	*TDS	○	○	○
PA21, PA1021	Function selection A-3	*AOP3	○	○	○
PA22, PA1022	Position control structure selection	**PCS	○	○	○
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT	○	○	○
PA24, PA1024	Function selection A-4	AOP4	○	○	○
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV	○	○	○
PA26, PA1026	Function selection A-5	*AOP5	○	○	○
PA27, PA1027	For manufacturer setting	-	×	×	×
PA28, PA1028	Function selection A-6	**AOP6	○	○	○
PA29 to PA33, PA1029 to PA1033	For manufacturer setting	-	×	×	×
PA34, PA1034	Quick tuning permissible travel distance	QDIS	○	○	○
PA35 to PA44, PA1035 to PA1044	For manufacturer setting	-	×	×	×

(8) Gain filter parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PB1 to PB92: Writing data to the RAM of a servo amplifier
- PB1001 to PB1092: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT	○	○	○
PB2, PB1002	Vib. supp. ctrl tuning mode (Adv. vib. supp. ctrl II)	VRFT	○	○	○
PB3, PB1003	Torque feedback loop gain	TFBGN	×	×	○
PB4, PB1004	Feed forward gain	FFC	○	○	○
PB5, PB1005	For manufacturer setting	-	×	×	×
PB6, PB1006	Load inertia moment ratio/Load mass ratio	GD2	○	○	○
PB7, PB1007	Model control gain	PG1	○	○	○
PB8, PB1008	Position control gain	PG2	○	○	○
PB9, PB1009	Speed control gain	VG2	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PB10, PB1010	Speed integral compensation	VIC	○	○	○
PB11, PB1011	Speed differential compensation	VDC	○	○	○
PB12, PB1012	Overshoot amount compensation	OVA	○	○	○
PB13, PB1013	Machine resonance suppression filter 1	NH1	○	○	○
PB14, PB1014	Notch shape selection 1	NHQ1	○	○	○
PB15, PB1015	Machine resonance suppression filter 2	NH2	○	○	○
PB16, PB1016	Notch shape selection 2	NHQ2	○	○	○
PB17, PB1017	Shaft resonance suppression filter	NHF	○	○	○
PB18, PB1018	Low-pass filter setting	LPF	○	○	○
PB19, PB1019	Vibration suppression control 1 - Vibration frequency	VRF11	○	○	○
PB20, PB1020	Vibration suppression control 1 - Resonance frequency	VRF12	○	○	○
PB21, PB1021	Vibration suppression control 1 - Vibration frequency damping	VRF13	○	○	○
PB22, PB1022	Vibration suppression control 1 - Resonance frequency damping	VRF14	○	○	○
PB23, PB1023	Low-pass filter setting	VFBF	○	○	○
PB24, PB1024	Slight vibration suppression control	*MVS	○	○	○
PB25, PB1025	Function selection B-1	*BOP1	○	○	○
PB26, PB1026	Gain switching function	*CDP	○	○	○
PB27, PB1027	Gain switching condition	CDL	○	○	○
PB28, PB1028	Gain switching time constant	CDT	○	○	○
PB29, PB1029	Gain changing - Load in. mom. rat./Load mass rat.	GD2B	○	○	○
PB30, PB1030	Position loop gain after gain switching	PG2B	○	○	○
PB31, PB1031	Speed loop gain after gain switching	VG2B	○	○	○
PB32, PB1032	Speed integral compensation after gain switching	VICB	○	○	○
PB33, PB1033	Vibration suppression control 1 - Vibration frequency after gain switching	VRF11B	○	○	○
PB34, PB1034	Vibration suppression control 1 - Resonance frequency after gain switching	VRF12B	○	○	○
PB35, PB1035	Vibration suppression control 1 - Vibration frequency damping after gain switching	VRF13B	○	○	○
PB36, PB1036	Vibration suppression control 1 - Resonance frequency damping after gain switching	VRF14B	○	○	○
PB37 to PB44, PB1037 to PB1044	For manufacturer setting	-	×	×	×
PB45, PB1045	Command notch filter	CNHF	○	○	○
PB46, PB1046	Machine resonance suppression filter 3	NH3	○	○	○
PB47, PB1047	Notch shape selection 3	NHQ3	○	○	○
PB48, PB1048	Machine resonance suppression filter 4	NH4	○	○	○
PB49, PB1049	Notch shape selection 4	NHQ4	○	○	○
PB50, PB1050	Machine resonance suppression filter 5	NH5	○	○	○
PB51, PB1051	Notch shape selection 5	NHQ5	○	○	○
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21	○	○	○
PB53, PB1053	Vibration suppression control 2 - Resonance frequency	VRF22	○	○	○
PB54, PB1054	Vibration suppression control 2 - Vibration frequency damping	VRF23	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PB55, PB1055	Vibration suppression control 2 - Resonance frequency damping	VRF24	○	○	○
PB56, PB1056	Vibration suppression control 2 - Vibration frequency after gain switching	VRF21B	○	○	○
PB57, PB1057	Vibration suppression control 2 - Resonance frequency after gain switching	VRF22B	○	○	○
PB58, PB1058	Vibration suppression control 2 - Vibration frequency damping after gain switching	VRF23B	○	○	○
PB59, PB1059	Vibration suppression control 2 - Resonance frequency damping after gain switching	VRF24B	○	○	○
PB60, PB1060	Model loop gain after gain switching	PG1B	○	○	○
PB61 to PB64, PB1061 to PB1064	For manufacturer setting	-	×	×	×
PB65, PB1065	Gain changing 2 condition	CDL2	○	○	○
PB66, PB1066	Gain changing 2 time constant	CDT2	○	○	○
PB67, PB1067	Gain changing 2 - Load in. mom. rat./Load mass rat.	GD2C	○	○	○
PB68, PB1068	Gain changing 2 position loop gain	PG2C	○	○	○
PB69, PB1069	Gain changing 2 speed loop gain	VG2C	○	○	○
PB70, PB1070	Gain changing 2 speed integral compensation	VICC	○	○	○
PB71, PB1071	Vib. supp. ctrl. 1 - Vib. frq. after gain changing 2	VRF11C	○	○	○
PB72, PB1072	Vib. supp. ctrl. 1 - Res. frq. after gain changing 2	VRF12C	○	○	○
PB73, PB1073	Vib. supp. ctrl. 1 - Vib. frq. damping aft. gain chng2	VRF13C	○	○	○
PB74, PB1074	Vib. supp. ctrl. 1 - Res. frq. damping aft. gain chng2	VRF14C	○	○	○
PB75, PB1075	Vib. supp. ctrl. 2 - Vib. frq. after gain changing 2	VRF21C	○	○	○
PB76, PB1076	Vib. supp. ctrl. 2 - Res. frq. after gain changing 2	VRF22C	○	○	○
PB77, PB1077	Vib. supp. ctrl. 2 - Vib. frq. damping aft. gain chng2	VRF23C	○	○	○
PB78, PB1078	Vib. supp. ctrl. 2 - Res. frq. damping aft. gain chng2	VRF24C	○	○	○
PB79, PB1079	Gain changing 2 model loop gain	PG1C	○	○	○
PB80, PB1080	For manufacturer setting	-	×	×	×
PB81, PB1081	Command filter	*CFIL	○	○	○
PB82, PB1082	Position command smoothing filter time constant	PFT	○	○	○
PB83 to PB92, PB1083 to PB1092	For manufacturer setting	-	×	×	×

(9) Extension setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PC1 to PC90: Writing data to the RAM of a servo amplifier
- PC1001 to PC1090: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PC1, PC1001	Error excessive alarm level	ERZ	○	○	○
PC2, PC1002	Electromagnetic brake sequence output	MBR	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PC3, PC1003	Encoder output pulse selection	*ENRS	○	×	○
PC4, PC1004	Function selection C-1	**COP1	○	○	○
PC5, PC1005	Function selection C-2	**COP2	○	○	○
PC6, PC1006	Function selection C-3	*COP3	○	○	○
PC7, PC1007	Zero speed	ZSP	○	○	○
PC8, PC1008	Overspeed alarm detection level	OSL	○	○	○
PC9, PC1009	Analog monitor 1 output	MOD1	○	×	○
PC10, PC1010	Analog monitor 2 output	MOD2	○	×	○
PC11, PC1011	Analog monitor 1 offset	MO1	○	×	○
PC12, PC1012	Analog monitor 2 offset	MO2	○	×	○
PC13 to PC15, PC1013 to PC1015	For manufacturer setting	-	×	×	×
PC16, PC1016	Function selection C-3A	*COP3A	○	×	○
PC17, PC1017	Function selection C-4	**COP4	○	×	○
PC18, PC1018	For manufacturer setting	-	×	×	×
PC19, PC1019	Function selection C-6	*COP6	○	○	○
PC20, PC1020	Function selection C-7	*COP7	○	○	○
PC21, PC1021	Alarm history clear	*BPS	○	○	○
PC22 and PC23, PC1022 and PC1023	For manufacturer setting	-	×	×	×
PC24, PC1024	Forced stop deceleration time constant	RSBR	○	○	○
PC25, PC1025	For manufacturer setting	-	×	×	×
PC26, PC1026	Function selection C-8	**COP8	○	×	○
PC27, PC1027	Function selection C-9	**COP9	○	○	○
PC28, PC1028	For manufacturer setting	-	×	×	×
PC29, PC1029	Function selection C-B	*COPB	○	○	○
PC30, PC1030	For manufacturer setting	-	×	×	×
PC31, PC1031	Vertical ax.freefall prevention compensation amount	RSUP1	○	○	○
PC32 to PC37, PC1032 to PC1037	For manufacturer setting	-	×	×	×
PC38, PC1038	Error excessive warning level	ERW	○	○	○
PC39 to PC40, PC1039 to PC1040	For manufacturer setting	-	×	×	×
PC41, PC1041	Function selection C-J	*COPJ	×	×	○
PC42 to PC45, PC1042 to PC1045	For manufacturer setting	-	×	×	×
PC46, PC1046	Drive unit function selection 2	*DUOP2	×	×	○
PC47 to PC64, PC1047 to PC1064	For manufacturer setting	-	×	×	×
PC65, PC1065	Zero speed 2 level	ZSP2L	○	×	○
PC66, PC1066	Zero speed 2 filter time	ZSP2F	○	×	○
PC67, PC1067	Following error output level	FEW	○	○	○
PC68, PC1068	For manufacturer setting	-	×	×	×
PC69, PC1069	Following error output filter time	FEWF	○	○	○
PC70, PC1070	In-position 2 output range	INP2R	○	×	○
PC71, PC1071	In-position 2 output filter time	INP2F	○	×	○
PC72, PC1072	Speed reached 2 output range	SA2R	○	×	○
PC73, PC1073	Speed reached 2 output filter time	SA2F	○	×	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PC74 to PC75, PC1074 to PC1075	For manufacturer setting	-	×	×	×
PC76, PC1076	Function selection C-E	*COPE	○	○	○
PC77, PC1077	For manufacturer setting	-	×	×	×
PC78, PC1078	Function selection C-F	*COPF	○	○	○
PC79, PC1079	Function selection C-G	*COPG	○	○	○
PC80, PC1080	For manufacturer setting	-	×	×	×
PC81, PC1081	Function selection C-H	**COPH	○	×	×
PC82 to PC90, PC1082 to PC1090	For manufacturer setting	-	×	×	×

(10)I/O setting parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PD1 to PD72: Writing data to the RAM of a servo amplifier
- PD1001 to PD1072: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PD1, PD1001	Input signal automatic on selection 1	*DIA1	○	○	○
PD2, PD1002	For manufacturer setting	-	×	×	×
PD3, PD1003	Input device selection 1	*DI1	○	○	○
PD4, PD1004	Input device selection 2	*DI2	○	○	○
PD5, PD1005	Input device selection 3	*DI3	○	○	○
PD6, PD1006	For manufacturer setting	-	×	×	×
PD7, PD1007	Output device selection 1	*DO1	○	○	○
PD8, PD1008	Output device selection 2	*DO2	○	○	○
PD9, PD1009	Output device selection 3	*DO3	○	○	○
PD10, PD1010	For manufacturer setting	-	×	×	×
PD11, PD1011	Input filter setting	*DIF	○	○	○
PD12, PD1012	Function selection D-1	*DOP1	○	○	○
PD13, PD1013	Function selection D-2	*DOP2	○	○	○
PD14, PD1014	Function selection D-3	*DOP3	○	○	○
PD15 to PD37, PD1015 to PD1037	For manufacturer setting	-	×	×	×
PD38, PD1038	Input device selection 4	*DI4	○	×	○
PD39, PD1039	Input device selection 5	*DI5	○	×	○
PD40, PD1040	For manufacturer setting	-	×	×	×
PD41, PD1041	Function selection D-4	*DOP4	○	○	○
PD42 to PD50, PD1042 to PD1050	For manufacturer setting	-	×	×	×
PD51, PD1051	Input device selection 3-2	*DI3W2	○	×	○
PD52 to PD59, PD1052 to PD1059	For manufacturer setting	-	×	×	×
PD60, PD1060	DI pin polarity selection	*DIP	○	○	○
PD61 to PD72, PD1061 to PD1072	For manufacturer setting	-	×	×	×

(11)Positioning control parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PT1 to PT90: Writing data to the RAM of a servo amplifier

• PT1001 to PT1090: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PT1, PT1001	Command mode selection	**CTY	○	○	○
PT2, PT1002	Function selection T-1	*TOP1	○	×	○
PT3 to PT4, PT1003 to PT1004	For manufacturer setting	-	×	×	×
PT5, PT1005	Home position return speed	ZRF	○	○	○
PT6, PT1006	Creep speed	CRF	○	○	○
PT7, PT1007	Home position shift distance	ZST	○	○	○
PT8, PT1008	Home position return position data	ZPS	○	○	○
PT9, PT1009	Moving distance after proximity dog	DCT	○	○	○
PT10, PT1010	Stopper type home position return stopper time	ZTM	○	○	○
PT11, PT1011	Stopper type home position return torque limit value	ZTT	○	○	○
PT12, PT1012	Rough match output range	CRP	○	×	○
PT13 to PT14, PT1013 to PT1014	For manufacturer setting	-	×	×	×
PT15, PT1015	Software position limit+	LMP	○	○	○
PT16, PT1016	For manufacturer setting	-	×	×	×
PT17, PT1017	Software position limit-	LMN	○	○	○
PT18, PT1018	For manufacturer setting	-	×	×	×
PT19, PT1019	Position range output 1 address+	*LPP1	○	×	○
PT20, PT1020	For manufacturer setting	-	×	×	×
PT21, PT1021	Position range output 1 address-	*LNP1	○	×	○
PT22 to PT28, PT1022 to PT1028	For manufacturer setting	-	×	×	×
PT29, PT1029	Function selection T-3	*TOP3	○	○	○
PT30 to PT33, PT1030 to PT1033	For manufacturer setting	-	×	×	×
PT34, PT1034	Positioning operation data default	**PDEF	×	×	○
PT35 to PT37, PT1035 to PT1037	For manufacturer setting	-	×	×	×
PT38, PT1038	Function selection T-7	**TOP7	×	×	○
PT39 to PT40, PT1039 to PT1040	For manufacturer setting	-	×	×	×
PT41, PT1041	Function selection T-8	TOP8	○	○	○
PT42 to PT44, PT1042 to PT1044	For manufacturer setting	-	×	×	×
PT45, PT1045	Home position return method	HMM	○	○	○
PT46 to PT48, PT1046 to PT1048	For manufacturer setting	-	×	×	×
PT49, PT1049	Acceleration time constant	STA	○	×	○
PT50, PT1050	Deceleration time constant	STB	○	×	○
PT51, PT1051	S-pattern acceleration/deceleration time constant	STC	○	×	○
PT52, PT1052	For manufacturer setting	-	×	×	×
PT53, PT1053	Torque slope	TQS	○	×	○
PT54, PT1054	For manufacturer setting	-	×	×	×

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PT55, PT1055	Function selection T-10	*TOP10	○	○	○
PT56, PT1056	Home position return acceleration time constant	HMA	○	○	○
PT57, PT1057	Home position return deceleration time constant	HMB	○	○	○
PT58 to PT64, PT1058 to PT1064	For manufacturer setting	-	×	×	×
PT65, PT1065	Profile speed command	PVC	○	×	○
PT66, PT1066	Maximum profile speed	MPVC	○	×	○
PT67, PT1067	Speed limit	VLMT	○	○	○
PT68, PT1068	Function selection T-11	TOP11	○	○	○
PT69 to PT90, PT1069 to PT1090	For manufacturer setting	-	×	×	×

(12)Network setting parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PN1 to PN32: Writing data to the RAM of a servo amplifier
- PN1001 to PN1032: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PN1, PN1001	For manufacturer setting	-	×	×	×
PN2, PN1002	Communication error detection time	CERT	○	○	○
PN3 to PN4, PN1003 to PN1004	For manufacturer setting	-	×	×	×
PN5, PN1005	Communication error detection frequency setting	CERI	○	○	○
PN6 to PN12, PN1006 to PN1012	For manufacturer setting	-	×	×	×
PN13, PN1013	Network protocol setup	**NPS	×	×	○
PN14 to PN19, PN1014 to PN1019	For manufacturer setting	-	×	×	×
PN20, PN1020	Automatic parameter backup update interval	**PABI	○	○	○
PN21, PN1021	For manufacturer setting	-	×	×	×
PN22 , PN1022	Function selection N-5	**NOP5	×	×	○
PN23 to PN32, PN1023 to PN1032	For manufacturer setting	-	×	×	×

(13)Status display ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ST0	Cumulative feedback pulses	-	○	○	○
ST1	Servo motor speed	-	○	○	○
ST2	Droop pulses	-	○	○	○
ST3	Cumulative command pulses	-	○	○	○
ST4	Command pulse frequency	-	○	○	○
ST5 to ST6	For manufacturer setting	-	×	×	×
ST7	Regenerative load ratio	-	○	○	○
ST8	Effective load ratio	-	○	○	○
ST9	Peak load ratio	-	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ST10	Torque/Instantaneous torque	-	○	○	○
ST11	Within one-revolution position	-	○	○	○
ST12	ABS counter	-	○	○	○
ST13	Load inertia moment ratio	-	○	○	○
ST14	Bus voltage	-	○	○	○
ST15	Load-side cumulative feedback pulses	-	○	×	○
ST16	Load side encoder droop pulses	-	○	×	○
ST17	Load-side encoder information 1	-	○	×	○
ST18	Load-side encoder information 2	-	○	×	○
ST19 to ST21	For manufacturer setting	-	×	×	×
ST22	Temperature of servo motor thermistor	-	○	○	○
ST23	Cumulative feedback pulses (Motor unit)	-	○	○	○
ST24	Electrical angle	-	○	×	○
ST25 to ST29	For manufacturer setting	-	×	×	×
ST30	Motor/load side position difference	-	○	×	○
ST31	Motor/load side speed difference	-	○	×	○
ST32	Encoder inside temperature	-	○	○	○
ST33	Settling time	-	○	○	○
ST34	Oscillation detection frequency	-	○	○	○
ST35	Number of tough drive operations	-	○	○	○
ST36 to ST39	For manufacturer setting	-	×	×	×
ST40	Unit power consumption	-	○	○	○
ST41	Unit total power consumption	-	○	○	○
ST42 to ST48	For manufacturer setting	-	×	×	×

(14)Extension setting No.2 parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PE1 to PE88: Writing data to the RAM of a servo amplifier
- PE1001 to PE1088: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PE1, PE1001	Fully closed loop function selection 1	**FCT1	○	×	○
PE2, PE1002	For manufacturer setting	-	×	×	×
PE3, PE1003	Fully closed loop function selection 2	*FCT2	○	×	○
PE4, PE1004	Fully closed loop ctrl. - F/B pls. elec. gear 1 nmrtr.	**FBN	○	×	○
PE5, PE1005	Fully closed loop ctrl. - F/B pls. elec. gear 1 dnmntr.	**FBD	○	×	○
PE6, PE1006	Fully closed loop ctrl. - Spd. dev. err. detection level	BC1	○	×	○
PE7, PE1007	Fully closed loop ctrl. - Pos. dev. err. detection level	BC2	○	×	○
PE8, PE1008	Fully closed dual feedback filter	DUF	○	×	○
PE9, PE1009	For manufacturer setting	-	×	×	×
PE10, PE1010	Fully closed loop function selection 3	FCT3	○	×	○
PE11 to PE40, PE1011 to PE1040	For manufacturer setting	-	×	×	×
PE41, PE1041	Function selection E-3	EOP3	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PE42 to PE43, PE1042 to PE1043	For manufacturer setting	-	×	×	×
PE44, PE1044	Lost motion compensation positive-side compensation value selection	LMCP	○	○	○
PE45, PE1045	Lost motion compensation negative-side compensation value selection	LMCN	○	○	○
PE46, PE1046	Lost motion filter setting	LMFLT	○	○	○
PE47, PE1047	Unbalanced torque offset	TOF	○	○	○
PE48, PE1048	Lost motion compensation function selection	*LMOP	○	○	○
PE49, PE1049	Lost motion compensation timing	LMCD	○	○	○
PE50, PE1050	Lost motion compensation non-sensitive band	LMCT	○	○	○
PE51, PE1051	Load-side encoder resolution setting	**EDV2	×	×	○
PE52, PE1052	For manufacturer setting	-	×	×	×
PE53, PE1053	Maximum torque limit 1	TLMX1	○	○	○
PE54 to PE88, PE1054 to PE1088	For manufacturer setting	-	×	×	×

(15)Extension setting No.3 parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PF1 to PF99: Writing data to the RAM of a servo amplifier
- PF1001 to PF1099: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PF1, PF1001	For manufacturer setting	-	×	×	×
PF2, PF1002	Function selection F-2	*FOP2	○	○	○
PF3 to PF5, PF1003 to PF1005	For manufacturer setting	-	×	×	×
PF6, PF1006	Function selection F-5	*FOP5	○	○	○
PF7 to PF11, PF1007 to PF1011	For manufacturer setting	-	×	×	×
PF12, PF1012	Electronic dynamic brake operating time	DBT	○	○	○
PF13 to PF17, PF1013 to PF1017	For manufacturer setting	-	×	×	×
PF18, PF1018	STO diagnostic error detection time	**STOD	○	×	○
PF19, PF1019	Friction failure prediction compen. coefficient 1	TSL	○	×	○
PF20, PF1020	Friction failure prediction compen. coefficient 2	TIC	○	×	○
PF21, PF1021	Drive recorder switching time setting	DRT	○	○	○
PF22, PF1022	For manufacturer setting	-	×	×	×
PF23, PF1023	Vibration tough drive - Oscillation detection level	OSCL1	○	○	○
PF24, PF1024	Function selection F-9	*FOP9	○	○	○
PF25, PF1025	SEMI-F47 Inst pwr.fail.det.t. (Inst pwr.fail.tuf.drv.)	CVAT	○	×	○
	Instantaneous power failure tough drive - Detection time	CVAT	×	○	×
PF26 to PF28, PF1026 to PF1028	For manufacturer setting	-	×	×	×
PF29, PF1029	Function selection F-10	*FOP10	×	×	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PF30, PF1030	For manufacturer setting	-	×	×	×
PF31, PF1031	Machine diagnosis function - Friction judgment speed	FRIC	○	○	○
PF32, PF1032	Oscillation detection alarm time	*VIBT	○	○	○
PF33, PF1033	For manufacturer setting	-	×	×	×
PF34, PF1034	Machine diagnosis function selection	*MFP	○	○	○
PF35 to PF39, PF1035 to PF1039	For manufacturer setting	-	×	×	×
PF40, PF1040	Machine failure prediction parameter	MFPP	○	×	○
PF41, PF1041	Failure prediction - Servo motor total move distance	FPMT	○	×	○
PF42, PF1042	Friction failure prediction average characteristic	PAV	○	×	○
PF43, PF1043	Friction failure prediction standard deviation	PSD	○	×	○
PF44, PF1044	For manufacturer setting	-	×	×	×
PF45, PF1045	Vibration failure prediction average characteristic	VAV	○	×	○
PF46, PF1046	Vibration failure prediction standard deviation	VSC	○	×	○
PF47, PF1047	Servo motor total move distance offset	TMO	○	×	○
PF48 to PF65, PF1048 to PF1065	For manufacturer setting	-	×	×	×
PF66, PF1066	Gear ratio setting for backlash estimation	BLG	○	×	○
PF67, PF1067	Backlash nominal value	BLN	○	×	○
PF68, PF1068	Backlash threshold magnification	BLTT	○	×	○
PF69, PF1069	Static friction failure prediction avg. characteristic	SPAV2	○	×	○
PF70, PF1070	Static friction failure prediction standard deviation	SPSD2	○	×	○
PF71, PF1071	Belt failure prediction function selection	BFP	○	×	○
PF72, PF1072	Belt tension at installation	SBT	○	×	○
PF73, PF1073	Belt tension at extension	ABT	○	×	○
PF74, PF1074	Static friction at installation	SSF	○	×	○
PF75, PF1075	Static friction at extension	ASF	○	×	○
PF76, PF1076	Belt tension error threshold	BTS	○	×	○
PF77 to PF79, PF1077 to PF1079	For manufacturer setting	-	×	×	×
PF80, PF1080	Drive recorder Operation condition selection	DRMC	○	○	○
PF81, PF1081	Drive recorder Sampling operation selection	DRMS	○	○	○
PF82, PF1082	Drive recorder Trigger operation selection	DRTM	○	○	○
PF83, PF1083	Drive recorder Trigger operation axis common sel.	**DRTAX	○	×	○
PF84, PF1084	Drive recorder Trigger channel selection	DRTC	○	○	○
PF85, PF1085	Drive recorder Trigger level setting 1	DRTL1	○	○	○
PF86, PF1086	Drive recorder Trigger level setting 2	DRTL2	○	○	○
PF87, PF1087	Drive recorder Analog channel setting 1	DRAC1	○	○	○
PF88, PF1088	Drive recorder Analog channel setting 2	DRAC2	○	○	○
PF89, PF1089	Drive recorder Analog channel setting 3	DRAC3	○	○	○
PF90, PF1090	Drive recorder Analog channel setting 4	DRAC4	○	○	○
PF91, PF1091	Drive recorder Digital channel setting 1	DRDC1	○	○	○
PF92, PF1092	Drive recorder Digital channel setting 2	DRDC2	○	○	○
PF93, PF1093	Drive recorder Digital channel setting 3	DRDC3	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PF94, PF1094	Drive recorder Digital channel setting 4	DRDC4	○	○	○
PF95, PF1095	Drive recorder History clear	**DRCLR	○	○	○
PF96 to PF99, PF1096 to PF1099	For manufacturer setting	-	×	×	×

(16)Alarm ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALM0	Current alarm number	-	○	○	○
ALM1	Detailed data of current alarms	-	○	○	○
ALM2[*1]	Currently occurring alarm number and detail number	-	○	○	○
ALM11	Servo status(alarm) Cumulative feedback pulses	-	○	○	○
ALM12	Servo status(alarm) Servo motor speed	-	○	○	○
ALM13	Servo status(alarm) Droop pulses	-	○	○	○
ALM14	Servo status(alarm) Cumulative command pulses	-	○	○	○
ALM15	Servo status(alarm) Command pulse frequency	-	○	○	○
ALM16 to ALM17	For manufacturer setting	-	×	×	×
ALM18	Servo status(alarm) Regenerative load ratio	-	○	○	○
ALM19	Servo status(alarm) Effective load ratio	-	○	○	○
ALM20	Servo status(alarm) Peak load ratio	-	○	○	○
ALM21	Servo status(alarm) Torque/Instantaneous torque	-	○	○	○
ALM22	Servo status(alarm) Within one-revolution position	-	○	○	○
ALM23	Servo status(alarm) ABS counter	-	○	○	○
ALM24	Servo status(alarm) Load inertia moment ratio	-	○	○	○
ALM25	Servo status(alarm) Bus voltage	-	○	○	○
ALM26	Servo status(alarm) Load-side cumulative feedback pulses	-	○	×	○
ALM27	Servo status(alarm) Load side encoder droop pulses	-	○	×	○
ALM28	Servo status(alarm) Load-side encoder information 1	-	○	×	○
ALM29	Servo status(alarm) Load-side encoder information 2	-	○	×	○
ALM30 to ALM32	For manufacturer setting	-	×	×	×
ALM33	Servo status(alarm) Temperature of servo motor thermistor	-	○	○	○
ALM34	Servo status(alarm) Cumulative feedback pulses (Motor unit)	-	○	○	○
ALM35	Servo status(alarm) Electrical angle	-	○	×	○
ALM36 to ALM40	For manufacturer setting	-	×	×	×
ALM41	Servo status(alarm) Motor/load side position difference	-	○	×	○
ALM42	Servo status(alarm) Motor/load side speed difference	-	○	×	○
ALM43	Servo status(alarm) Encoder inside temperature	-	○	○	○
ALM44	Servo status(alarm) Settling time	-	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALM45	Servo status(alarm) Oscillation detection frequency	-	○	○	○
ALM46	Servo status(alarm) Number of tough drive operations	-	○	○	○
ALM47 to ALM50	For manufacturer setting	-	×	×	×
ALM51	Servo status(alarm) Unit power consumption	-	○	○	○
ALM52	Servo status(alarm) Unit power consumption	-	○	○	○
ALM53 to ALM59	For manufacturer setting	-	×	×	×
ALM200	Alarm number in alarm history: most recent alarm	-	○	○	○
ALM201	Alarm number in alarm history: 1st alarm in past	-	○	○	○
ALM202	Alarm number in alarm history: 2nd alarm in past	-	○	○	○
ALM203	Alarm number in alarm history: 3rd alarm in past	-	○	○	○
ALM204	Alarm number in alarm history: 4th alarm in past	-	○	○	○
ALM205	Alarm number in alarm history: 5th alarm in past	-	○	○	○
ALM206	Alarm number in alarm history: 6th alarm in past	-	○	○	○
ALM207	Alarm number in alarm history: 7th alarm in past	-	○	○	○
ALM208	Alarm number in alarm history: 8th alarm in past	-	○	○	○
ALM209	Alarm number in alarm history: 9th alarm in past	-	○	○	○
ALM210	Alarm number in alarm history: 10th alarm in past	-	○	○	○
ALM211	Alarm number in alarm history: 11th alarm in past	-	○	○	○
ALM212	Alarm number in alarm history: 12th alarm in past	-	○	○	○
ALM213	Alarm number in alarm history: 13th alarm in past	-	○	○	○
ALM214	Alarm number in alarm history: 14th alarm in past	-	○	○	○
ALM215	Alarm number in alarm history: 15th alarm in past	-	○	○	○
ALM220	Alarm occurrence time (cumulative power-on time) in alarm history: most recent alarm	-	○	○	○
ALM221	Alarm occurrence time (cumulative power-on time) in alarm history: 1st alarm in past	-	○	○	○
ALM222	Alarm occurrence time (cumulative power-on time) in alarm history: 2nd alarm in past	-	○	○	○
ALM223	Alarm occurrence time (cumulative power-on time) in alarm history: 3rd alarm in past	-	○	○	○
ALM224	Alarm occurrence time (cumulative power-on time) in alarm history: 4th alarm in past	-	○	○	○
ALM225	Alarm occurrence time (cumulative power-on time) in alarm history: 5th alarm in past	-	○	○	○
ALM226	Alarm occurrence time (cumulative power-on time) in alarm history: 6th alarm in past	-	○	○	○
ALM227	Alarm occurrence time (cumulative power-on time) in alarm history: 7th alarm in past	-	○	○	○
ALM228	Alarm occurrence time (cumulative power-on time) in alarm history: 8th alarm in past	-	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALM229	Alarm occurrence time (cumulative power-on time) in alarm history: 9th alarm in past	-	○	○	○
ALM230	Alarm occurrence time (cumulative power-on time) in alarm history: 10th alarm in past	-	○	○	○
ALM231	Alarm occurrence time (cumulative power-on time) in alarm history: 11th alarm in past	-	○	○	○
ALM232	Alarm occurrence time (cumulative power-on time) in alarm history: 12th alarm in past	-	○	○	○
ALM233	Alarm occurrence time (cumulative power-on time) in alarm history: 13th alarm in past	-	○	○	○
ALM234	Alarm occurrence time (cumulative power-on time) in alarm history: 14th alarm in past	-	○	○	○
ALM235	Alarm occurrence time (cumulative power-on time) in alarm history: 15th alarm in past	-	○	○	○
ALM240	Alarm detail number in alarm history: most recent alarm	-	○	○	○
ALM241	Alarm detail number in alarm history: 1st alarm in past	-	○	○	○
ALM242	Alarm detail number in alarm history: 2nd alarm in past	-	○	○	○
ALM243	Alarm detail number in alarm history: 3rd alarm in past	-	○	○	○
ALM244	Alarm detail number in alarm history: 4th alarm in past	-	○	○	○
ALM245	Alarm detail number in alarm history: 5th alarm in past	-	○	○	○
ALM246	Alarm detail number in alarm history: 6th alarm in past	-	○	○	○
ALM247	Alarm detail number in alarm history: 7th alarm in past	-	○	○	○
ALM248	Alarm detail number in alarm history: 8th alarm in past	-	○	○	○
ALM249	Alarm detail number in alarm history: 9th alarm in past	-	○	○	○
ALM250	Alarm detail number in alarm history: 10th alarm in past	-	○	○	○
ALM251	Alarm detail number in alarm history: 11th alarm in past	-	○	○	○
ALM252	Alarm detail number in alarm history: 12th alarm in past	-	○	○	○
ALM253	Alarm detail number in alarm history: 13th alarm in past	-	○	○	○
ALM254	Alarm detail number in alarm history: 14th alarm in past	-	○	○	○
ALM255	Alarm detail number in alarm history: 15th alarm in past	-	○	○	○
ALM260	Alarm occurrence time (year, month) in alarm history: most recent alarm	-	○	○	○
ALM261	Alarm occurrence time (year, month) in alarm history: 1st alarm in past	-	○	○	○
ALM262	Alarm occurrence time (year, month) in alarm history: 2nd alarm in past	-	○	○	○
ALM263	Alarm occurrence time (year, month) in alarm history: 3rd alarm in past	-	○	○	○
ALM264	Alarm occurrence time (year, month) in alarm history: 4th alarm in past	-	○	○	○
ALM265	Alarm occurrence time (year, month) in alarm history: 5th alarm in past	-	○	○	○

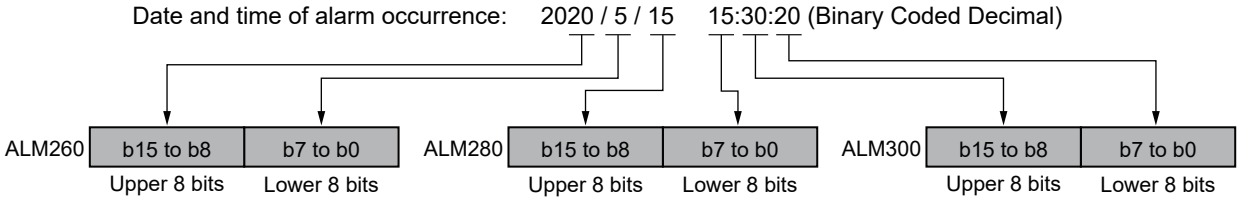
Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALM266	Alarm occurrence time (year, month) in alarm history: 6th alarm in past	-	○	○	○
ALM267	Alarm occurrence time (year, month) in alarm history: 7th alarm in past	-	○	○	○
ALM268	Alarm occurrence time (year, month) in alarm history: 8th alarm in past	-	○	○	○
ALM269	Alarm occurrence time (year, month) in alarm history: 9th alarm in past	-	○	○	○
ALM270	Alarm occurrence time (year, month) in alarm history: 10th alarm in past	-	○	○	○
ALM271	Alarm occurrence time (year, month) in alarm history: 11th alarm in past	-	○	○	○
ALM272	Alarm occurrence time (year, month) in alarm history: 12th alarm in past	-	○	○	○
ALM273	Alarm occurrence time (year, month) in alarm history: 13th alarm in past	-	○	○	○
ALM274	Alarm occurrence time (year, month) in alarm history: 14th alarm in past	-	○	○	○
ALM275	Alarm occurrence time (year, month) in alarm history: 15th alarm in past	-	○	○	○
ALM280	Alarm occurrence time (date, hour) in alarm history: most recent alarm	-	○	○	○
ALM281	Alarm occurrence time (date, hour) in alarm history: 1st alarm in past	-	○	○	○
ALM282	Alarm occurrence time (date, hour) in alarm history: 2nd alarm in past	-	○	○	○
ALM283	Alarm occurrence time (date, hour) in alarm history: 3rd alarm in past	-	○	○	○
ALM284	Alarm occurrence time (date, hour) in alarm history: 4th alarm in past	-	○	○	○
ALM285	Alarm occurrence time (date, hour) in alarm history: 5th alarm in past	-	○	○	○
ALM286	Alarm occurrence time (date, hour) in alarm history: 6th alarm in past	-	○	○	○
ALM287	Alarm occurrence time (date, hour) in alarm history: 7th alarm in past	-	○	○	○
ALM288	Alarm occurrence time (date, hour) in alarm history: 8th alarm in past	-	○	○	○
ALM289	Alarm occurrence time (date, hour) in alarm history: 9th alarm in past	-	○	○	○
ALM290	Alarm occurrence time (date, hour) in alarm history: 10th alarm in past	-	○	○	○
ALM291	Alarm occurrence time (date, hour) in alarm history: 11th alarm in past	-	○	○	○
ALM292	Alarm occurrence time (date, hour) in alarm history: 12th alarm in past	-	○	○	○
ALM293	Alarm occurrence time (date, hour) in alarm history: 13th alarm in past	-	○	○	○
ALM294	Alarm occurrence time (date, hour) in alarm history: 14th alarm in past	-	○	○	○
ALM295	Alarm occurrence time (date, hour) in alarm history: 15th alarm in past	-	○	○	○
ALM300	Alarm occurrence time (minute, second) in alarm history: most recent alarm	-	○	○	○
ALM301	Alarm occurrence time (minute, second) in alarm history: 1st alarm in past	-	○	○	○
ALM302	Alarm occurrence time (minute, second) in alarm history: 2nd alarm in past	-	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALM303	Alarm occurrence time (minute, second) in alarm history: 3rd alarm in past	-	○	○	○
ALM304	Alarm occurrence time (minute, second) in alarm history: 4th alarm in past	-	○	○	○
ALM305	Alarm occurrence time (minute, second) in alarm history: 5th alarm in past	-	○	○	○
ALM306	Alarm occurrence time (minute, second) in alarm history: 6th alarm in past	-	○	○	○
ALM307	Alarm occurrence time (minute, second) in alarm history: 7th alarm in past	-	○	○	○
ALM308	Alarm occurrence time (minute, second) in alarm history: 8th alarm in past	-	○	○	○
ALM309	Alarm occurrence time (minute, second) in alarm history: 9th alarm in past	-	○	○	○
ALM310	Alarm occurrence time (minute, second) in alarm history: 10th alarm in past	-	○	○	○
ALM311	Alarm occurrence time (minute, second) in alarm history: 11th alarm in past	-	○	○	○
ALM312	Alarm occurrence time (minute, second) in alarm history: 12th alarm in past	-	○	○	○
ALM313	Alarm occurrence time (minute, second) in alarm history: 13th alarm in past	-	○	○	○
ALM314	Alarm occurrence time (minute, second) in alarm history: 14th alarm in past	-	○	○	○
ALM315	Alarm occurrence time (minute, second) in alarm history: 15th alarm in past	-	○	○	○

*1 Set [Data Type] and [Format] as shown below for the objects for which this device is set.
- [Data Type]: [Unsigned BIN32]
- [Format]: [Hexadecimal]

(17)Specifications of ALM260 to ALM275, ALM280 to ALM295, and ALM300 to ALM315 ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

The date and time of alarm occurrence are stored in BCD code in the upper eight bits and lower eight bits of each device.
The time zone setting of the controller is applied to the date and time to be acquired.
Example) When the date and time of the most recent alarm occurrence is 15:30:20 May 15, 2020



When the date and time of alarm occurrence are those of 1999 or earlier, 0 is displayed.

(18)Point table (position) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.
- POS1 to POS255: Writing data to the RAM of a servo amplifier
- POS1001 to POS1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
POS1 to POS255, POS1001 to POS1255	Point table/position data No. 1 to No. 255	-	○	○	○

(19)Point table (speed) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.
- SPD1 to SPD255: Writing data to the RAM of a servo amplifier

• SPD1001 to SPD1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
SPD1 to SPD255, SPD1001 to SPD1255	Point table/speed data No. 1 to No. 255	-	○	○	○

(20)Point table (acceleration time constant) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

• ACT1 to ACT255: Writing data to the RAM of a servo amplifier

• ACT1001 to ACT1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ACT1 to ACT255, ACT1001 to ACT1255	Point table/acceleration time constant No. 1 to No. 255	-	○	○	○

(21)Point table (deceleration time constant) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

• DCT1 to DCT255: Writing data to the RAM of a servo amplifier

• DCT1001 to DCT1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
DCT1 to DCT255, DCT1001 to DCT1255	Point table/deceleration time constant No. 1 to No. 255	-	○	○	○

(22)Point table (dwell) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

• DWL1 to DWL255: Writing data to the RAM of a servo amplifier

• DWL1001 to DWL1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
DWL1 to DWL255, DWL1001 to DWL1255	Point table/dwell No. 1 to No. 255	-	○	○	○

(23)Point table (auxiliary function) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

• AUX1 to AUX255: Writing data to the RAM of a servo amplifier

• AUX1001 to AUX1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
AUX1 to AUX255, AUX1001 to AUX1255	Point table/auxiliary function No. 1 to No. 255	-	○	○	○

(24)Point table (M code) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

• MCD1 to MCD255: Writing data to the RAM of a servo amplifier

• MCD1001 to MCD1255: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
MCD1 to MCD255, MCD1001 to MCD1255	Point table/M code No. 1 to No. 255	-	○	○	○

(25)Machine diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
MD0	Machine diagnosis data: Station number	-	○	○	○
MD1	Machine diagnosis data shift judgment(test mode)	-	○	○	○
MD2*1	Machine diagnosis data status	-	○	○	○
MD3*2	Machine diagnosis data coulomb friction torque in positive direction	-	○	○	○
MD4*2	Machine diagnosis data friction torque at rated speed in positive direction	-	○	○	○
MD5*2	Machine diagnosis data coulomb friction torque in negative direction	-	○	○	○
MD6*2	Machine diagnosis data friction torque at rated speed in negative direction	-	○	○	○
MD7*2	Machine diagnosis data oscillation frequency(motor is stopped)	-	○	○	○
MD8*2	Machine diagnosis data vibration level(motor is stopped)	-	○	○	○
MD9*2	Machine diagnosis data oscillation frequency(motor is operating)	-	○	○	○
MD10*2	Machine diagnosis data vibration level(motor is operating)	-	○	○	○
MD11	Machine diagnosis data, rated speed at forward or reverse rotation torque	-	○	○	○
MD12	Machine diagnosis data: friction failure prediction - threshold creation progress	-	○	○*3	○
MD13	Machine diagnosis data: vibration failure prediction - threshold creation progress	-	○	○*3	○
MD14	Machine diagnosis data motor total move distance	-	○	○*3	○
MD15	Machine diagnosis data, friction failure prediction, upper threshold at forward rotation torque, lower threshold at reverse rotation torque	-	○	○*3	○
MD16	Machine diagnosis data, friction failure prediction, lower threshold at forward rotation torque, upper threshold at reverse rotation torque	-	○	○*3	○
MD17	Machine diagnosis data: vibration failure prediction - threshold acquisition	-	○	○*3	○
MD18	Machine diagnosis data trouble prediction status	-	○	○*3	○
MD19	Machine diagnosis data: Belt tension estimation value	-	○	○*3	○
MD20	Machine diagnosis data: static friction used in failure prediction	-	○	○*3	○
MD21	Machine diagnosis data: Belt tension threshold estimation	-	○	○*3	○

*1 While the servo amplifier is estimating the corresponding machine status in the machine diagnosis, do not write data to the parameters of the servo amplifier from another GOT.

Doing so may cause the servo amplifier to malfunction.

*2 When MD2 indicates that the servo amplifier does not complete the machine diagnosis (is estimating or warning of the machine status), do not monitor MD3 to MD6 (friction states) and MD7 to MD10 (vibration/oscillation states).
To start monitoring those devices upon the estimation completion, set [Trigger] in the applicable object settings.

*3 The commands assigned to MD12 to MD21 are not supported by MR-JET-G.
When the commands are used, the read values will be indefinite.

(26)One-touch tuning data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
OTS0	One-touch tuning status confirmation	-	○	○	○
OTS1	Error code list	-	○	○	○
OTS2	Setting time	-	○	○	○
OTS3	Overshoot amount	-	○	○	○
OTS4	One-touch tuning command mode	-	○	○	○
OTS5	Load inertia moment ratio	-	○	○	○
OTS3000*1	Read/write permissible move distance	-	○	○	○

*1 Writing is not available when a negative value is set for the device value.

(27)External input signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	The input device statuses corresponding to the setting values 0000 to 001F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI1	Input device statuses	-	The input device statuses corresponding to the setting values 0020 to 003F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI2	Input device statuses	-	The input device statuses corresponding to the setting values 0040 to 005F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J5 User's Manual (Hardware)
DI4	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0000 to 001F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI5	Statuses of input devices switched on through communication	-	The statuses of input devices switched on through communication (input device statuses corresponding to the setting values 0020 to 003F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI6	Statuses of input devices switched on through communication	-	The input device statuses switched on through communications (input device statuses corresponding to the setting values 0040 to 005F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)

(28)External input signal in MR-J5D□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI0	Input device statuses	-	The input device statuses corresponding to the setting values 0000 to 001F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI1	Input device statuses	-	The input device statuses corresponding to the setting values 0020 to 003F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI2	Input device statuses	-	The input device statuses corresponding to the setting values 0040 to 005F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DI3	External input pin statuses	-	The statuses of the listed input devices are assigned to the bits in order from bit 0 and read. For details on the input devices, refer to the following. ➟MR-J5 User's Manual (Hardware)
DI4	Statuses of input devices switched on through communication	-	The statuses of the input devices switched on through communication (input device statuses corresponding to the setting values 0000 to 001F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI5	Statuses of input devices switched on through communication	-	The statuses of input devices switched on through communication (input device statuses corresponding to the setting values 0020 to 003F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DI6	Statuses of input devices switched on through communication	-	The input device statuses switched on through communications (input device statuses corresponding to the setting values 0040 to 005F of the following) are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)

(29)External input signal in MR-JET-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol
DI0	Input device statuses	-
DI1	Input device statuses	-
DI2	Input device statuses	-
DI3	External input pin statuses	-
DI4	Statuses of input devices switched on through communication	-
DI5	Statuses of input devices switched on through communication	-
DI6	Statuses of input devices switched on through communication	-

(30)External output signal in MR-J5-G(-RJ) and MR-J5W□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	The output device statuses corresponding to the setting values 8000 to 801F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DO1	Output device statuses	-	The output device statuses corresponding to the setting values 8020 to 803F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DO2	Output device statuses	-	The output device statuses corresponding to the setting values 8040 to 805F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-J5 User's Manual (Hardware)

(31)External output signal in MR-J5D□-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO0	Output device statuses	-	The output device statuses corresponding to the setting values 8000 to 801F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DO1	Output device statuses	-	The output device statuses corresponding to the setting values 8020 to 803F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)
DO2	Output device statuses	-	The output device statuses corresponding to the setting values 8040 to 805F of the following are read. Pr. PF91_Drive recorder Digital channel setting 1 (DRDC1)

Virtual device name	Name	Symbol	Data to be read from the servo amplifier
DO4	External output pin statuses	-	The statuses of the listed output devices are assigned to the bits in order from bit 0 and read. For details on the output devices, refer to the following. ➟MR-J5 User's Manual (Hardware)

(32)External output signal in MR-JET-G ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Virtual device name	Name	Symbol
DO0	Output device statuses	-
DO1	Output device statuses	-
DO2	Output device statuses	-
DO4	External output pin statuses	-

(33)Option unit parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PO1 to PO2: Writing data to the RAM of a servo amplifier
- PO1001 to PO1002: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PO1 to PO2, PO1001 to P1002	For manufacturer setting	-	×	×	×

(34)Special parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PS1 to PS99: Writing data to the RAM of a servo amplifier
- PS1001 to PS1099: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PS1 to PS99, PS1001 to PS1099	For manufacturer setting	-	×	×	×

(35)Linear servo motor/DD motor setting parameters ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PL1 to PL72: Writing data to the RAM of a servo amplifier
- PL1001 to PL1072: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PL1, PL1001	Function selection L-1	**LIT1	○	×	○
PL2, PL1002	Linear encoder resolution setting Numerator	**LIM	○	×	○
PL3, PL1003	Linear encoder resolution setting Denominator	**LID	○	×	○
PL4, PL1004	Function selection L-2	*LIT2	○	×	○
PL5, PL1005	Position deviation error detection level	LB1	○	×	○
PL6, PL1006	Speed deviation error detection level	LB2	○	×	○
PL7, PL1007	Torque deviation error detection level	LB3	○	×	○
PL8, PL1008	Function selection L-3	*LIT3	○	×	○
PL9, PL1009	Magnetic pole detection voltage level	LPWM	○	×	○
PL10 to PL16, PL1010 to PL1016	For manufacturer setting	-	×	×	×

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PL17, PL1017	Mag. pole detn. - Min. pos. detn. meth. - Func. sel.	LTSTS	○	×	○
PL18, PL1018	Mag.pole detn.-Min.pos.detn.meth.-Ident.sig.amp.	IDLV	○	×	○
PL19 to PL72, PL1019 to PL1072	For manufacturer setting	-	×	×	×

(36)Multi encoder parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PU1 to PU44: Writing data to the RAM of a servo amplifier
- PU1001 to PU1044: Writing data to the FlashROM or EEPROM of a servo amplifier

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PU1 to PU44, PU1001 to PU1044	For manufacturer setting	-	×	×	×

(37)Position extension parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Use an appropriate device according to the write destination of the servo amplifier.

- PVS1 to PVS32: Writing data to the RAM of a servo amplifier
- PVS1001 to PVS1032: Writing data to the FlashROM or EEPROM of a servo amplifier

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data.

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PVS1, PVS1001	Profile speed command extension setting	PVC2	○	×	○
PVS2, PVS1002	For manufacturer setting	-	×	×	×
PVS3, PVS1003	Maximum profile speed extension setting	MPVCE	○	×	○
PVS4, PVS1004	For manufacturer setting	-	×	×	×
PVS5, PVS1005	Profile acceleration	PACC	○	×	○
PVS6, PVS1006	For manufacturer setting	-	×	×	×
PVS7, PVS1007	Profile deceleration	PDEC	○	×	○
PVS8, PVS1008	For manufacturer setting	-	×	×	×
PVS9, PVS1009	Forced stop deceleration	RSBDEC	○	○	○
PVS10, PVS1010	For manufacturer setting	-	×	×	×
PVS11, PVS1011	Home position return speed extension setting	ZRFE	○	○	○
PVS12, PVS1012	For manufacturer setting	-	×	×	×
PVS13, PVS1013	Creep speed extension setting	CRFE	○	○	○
PVS14, PVS1014	For manufacturer setting	-	×	×	×
PVS15, PVS1015	Home position return acceleration	HMACC	○	○	○
PVS16, PVS1016	For manufacturer setting	-	×	×	×
PVS17, PVS1017	Home position return deceleration	HMDEC	○	○	○
PVS18, PVS1018	For manufacturer setting	-	×	×	×
PVS19, PVS1019	Speed reached 2 output range extension setting	SA2RE	○	×	○
PVS20, PVS1020	Zero speed 2 level extension setting	ZSP2LE	○	×	○
PVS21, PVS1021	Speed limit extension setting	VLMTE	○	○	○
PVS22, PVS1022	For manufacturer setting	-	×	×	×
PVS23, PVS1023	Speed unit conversion electronic gear numerator	*VCMX	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
PVS24, PVS1024	Speed unit conversion electronic gear denominator	*VCDV	○	○	○
PVS25, PVS1025	Acceleration unit conversion electronic gear nmrtr.	*ACMX	○	○	○
PVS26, PVS1026	Acceleration unit conversion electronic gear dnmntr.	*ACDV	○	○	○
PVS27 to PVS28, PVS1027 to PVS1028	For manufacturer setting	-	×	×	×
PVS29, PVS1029	Acceleration limit	ACCLMT	×	×	○
PVS30, PVS1030	For manufacturer setting	-	×	×	×
PVS31, PVS1031	Deceleration limit	DECLMT	×	×	○
PVS32, PVS1032	For manufacturer setting	-	×	×	×

(38)Network basic parameter ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

Set [Data Type] and [Format] as shown below for the objects for which this device is set.

- [Data Type]: [Unsigned BIN32]
- [Format]: [Hexadecimal]

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
NPA1	IP address setting	-	○	○	○
NPA2	IP address	-	○	○	○
NPA3	For manufacturer setting	-	×	×	×
NPA4	Subnet mask	-	○	○	○
NPA5 to NPA7	For manufacturer setting	-	×	×	×
NPA8	Host name	-	○	○	○
NPA9 to NPA11	For manufacturer setting	-	×	×	×
NPA12	Communication speed	-	×	×	○
NPA2001 to NPA2032	Host name expansion area	-	○	○	○

(39)Gear failure diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
GFDS0	Backlash estimation (threshold)	-	○	×	○
GFDS1	Backlash estimation (estimation value)	-	○	×	○
GFDS2	Backlash estimation (estimation progress)	-	○	×	○
GFDS3	Backlash estimation (status)	-	○	×	○
GFDS4	Backlash error number	-	○	×	○
GFDS5	Backlash estimation move distance	-	○	×	○

(40)Encoder communication circuit diagnosis data ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available

×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ECCDS0	CN2 encoder communication circuit diagnosis possibility	-	○	○	○
ECCDS1	CN2L encoder communication circuit diagnosis possibility	-	○	○	○
ECCDS2	CN2 encoder communication circuit diagnosis status	-	○	○	○

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ECCDS3	CN2L encoder communication circuit diagnosis status	-	○	○	○
ECCDS4	CN2 encoder communication circuit diagnosis result	-	○	○	○
ECCDS5	CN2L encoder communication circuit diagnosis result	-	○	○	○

(41)Life Diagnosis ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
ALD0	Cumulative power-on time	-	○	○	○
ALD1	Number of inrush current switching times	-	○	○	○

(42)Input signal for test operation (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
TMI0	Input signal for test operation	-	○	○	○
TMI1	Input signal for test operation	-	○	○	○
TMI2	For manufacturer setting	-	×	×	×

When using the input signal for test operation (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(43)Forced output of signal pin (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
TMO0	Forced output of signal pin	-	○	○	○

When using the forced output of signal pin (for test operation), note the following.

Precautions	Description
Writing a value to a virtual device using an object	Numerical input cannot be used. Use a word switch for writing.

(44)Set data (for test operation) ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

○: Available
×: Not available

Virtual device name	Name	Symbol	MR-J5-G(-RJ), MR-J5W□-G	MR-JET-G	MR-J5D□-G
TMD0	Motor speed	-	○	○	○
TMD1	Write acceleration/deceleration time constant	-	○	○	○
TMD3	Move distance	-	○	○	○

■8 Precautions for virtual servo amplifier devices ([MELSERVO-J5(W)-*G(-RJ), -JET-*G])

For the precautions for virtual servo amplifier devices, refer to the following.

➥12.3.3 ■11 Precautions for virtual servo amplifier devices ([MELSEC iQ-R, RnMT/NC/RT, CR800-D], [MELSEC iQ-R, RnMT/RT, CR800-D])

12.3.24 [FREQROL 500/700/800, SENSORLESS SERVO]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([FREQROL 500/700/800, SENSORLESS SERVO])
	➟■2 Availability of writing/reading data to/from bit devices ([FREQROL 500/700/800, SENSORLESS SERVO])
Specifications of word devices	➟■3 Monitoring-supported word devices ([FREQROL 500/700/800, SENSORLESS SERVO])
	➟■4 Availability of writing/reading data to/from word devices ([FREQROL 500/700/800, SENSORLESS SERVO])
Specifications of virtual inverter devices	➟■5 Virtual inverter devices ([FREQROL 500/700/800, SENSORLESS SERVO])

■1 Monitoring-supported bit devices ([FREQROL 500/700/800, SENSORLESS SERVO])

The following table shows monitoring-supported virtual bit devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.24 ■2 Availability of writing/reading data to/from bit devices ([FREQROL 500/700/800, SENSORLESS SERVO])

For details on virtual inverter devices, refer to the following.

➟12.3.24 ■5 Virtual inverter devices ([FREQROL 500/700/800, SENSORLESS SERVO])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RS	Inverter status monitor	Decimal	0 to 15	×	×
WS	Operation command	Decimal	0 to 15	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([FREQROL 500/700/800, SENSORLESS SERVO])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
RS	R/-	-/-	-/-	-/-	-/-
WS	-/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([FREQROL 500/700/800, SENSORLESS SERVO])

The following table shows monitoring-supported virtual word devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.24 ■4 Availability of writing/reading data to/from word devices ([FREQROL 500/700/800, SENSORLESS SERVO])

For details on virtual inverter devices, refer to the following.

➟12.3.24 ■5 Virtual inverter devices ([FREQROL 500/700/800, SENSORLESS SERVO])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
A	Alarm definition	Decimal	0 to 7	○	×
Pr	Parameter	Decimal	0 to 1500	○	×
PG	Program operation	Decimal	0 to 89	○	×
SP	Special parameter	Decimal	108 to 127	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([FREQROL 500/700/800, SENSORLESS SERVO])

The following shows the availability of writing/reading data to/from word devices by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
A	R/-	-/-	-/-	-/-
Pr	R/W	-/-	-/-	-/-
PG	R/W	-/-	-/-	-/-
SP*1	R/W	-/-	-/-	-/-

*1 Only reading is available for SP111 to SP114.
Only writing is available for SP124 and SP125.

■5 Virtual inverter devices ([FREQROL 500/700/800, SENSORLESS SERVO])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.

For details on the inverter parameters, refer to the following.

➟Manual of the inverter used

Virtual device name	Reference
RS	➟(1) Inverter status monitor ([FREQROL 500/700/800, SENSORLESS SERVO])
WS	➟(2) Operation command ([FREQROL 500/700/800, SENSORLESS SERVO])
	➟(3) Activating WS devices ([FREQROL 500/700/800, SENSORLESS SERVO])
A	➟(4) Alarm definition ([FREQROL 500/700/800, SENSORLESS SERVO])
Pr	➟(5) Parameter ([FREQROL 500/700/800, SENSORLESS SERVO])
PG	➟(6) Programmed operation ([FREQROL 500/700/800, SENSORLESS SERVO])
SP	➟(7) Special parameter ([FREQROL 500/700/800, SENSORLESS SERVO])
	➟(8) Specifications of SP122 and SP121([FREQROL 500/700/800, SENSORLESS SERVO])

(1) Inverter status monitor ([FREQROL 500/700/800, SENSORLESS SERVO])

The settable devices vary by inverter model.

For the settable devices of each inverter, refer to the following.

➟Manual of the inverter used

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

Example) When using the FR-A700 series

Virtual device name	Name
RS0	Inverter running (RUN)
RS1	Forward rotation (STF)
RS2	Reverse rotation (STR)
RS3	Up to frequency (SU)
RS4	Overload (OL)
RS5	Instantaneous power failure (IPF)
RS6	Frequency detection (FU)
RS7	Fault occurrence (ABC1)
RS8	ABC2
RS15	Fault occurrence

(2) Operation command ([FREQROL 500/700/800, SENSORLESS SERVO])

The settable devices vary by inverter model.
For the settable devices of each inverter, refer to the following.

➟Manual of the inverter used

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

Example) When using the FR-A700 series

Virtual device name	Name
WS0	Current input selection (AU)
WS1	Forward rotation (STF)
WS2	Reverse rotation (STR)
WS3*1	Low speed operation (RL)
WS4*1	Middle speed operation (RM)
WS5*1	High speed operation (RH)
WS6*1	Second function selection (RT)
WS7*1	Output stop (MRS)
WS8*2	JOG operation (JOG)
WS9*2	Selection of automatic restart after instantaneous power failure (CS)
WS10*2	Start self-holding selection (STOP)
WS11*2	Reset (RES)

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multispeed operation (WS3 to WS7, SP121, SP122) cannot be used.
For using the multi-speed operation, follow either of the operations below.
- Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
- Change the motor speed with the set frequency (SP109, SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

*2 The initial status is invalid.
The virtual device becomes operable by writing a value in the corresponding parameter shown below to change the signal.
- WS8: Pr.185
- WS9: Pr.186
- WS10: Pr.188
- WS11: Pr.189

For the relationship between the parameter values and signals, refer to the following.

➟Manual of the inverter used

When using the operation command, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.
When activating WS devices	➟12.3.24 ■5 (3) Activating WS devices ([FREQROL 500/700/800, SENSORLESS SERVO])

(3) Activating WS devices ([FREQROL 500/700/800, SENSORLESS SERVO])

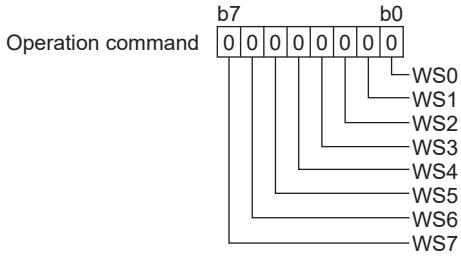
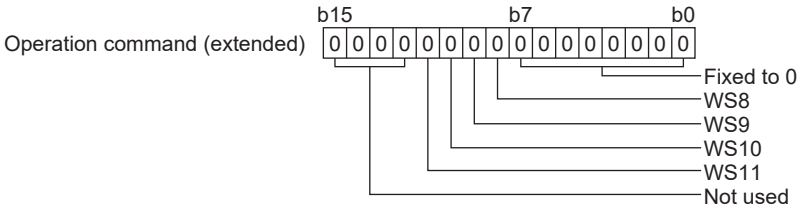
More than one WS device cannot turn on at once.

Turning on one WS device turns off the other WS devices.

Use SP122 or SP121 to turn on multiple WS devices simultaneously.

➟12.3.24 ■5 (8) Specifications of SP122 and SP121([FREQROL 500/700/800, SENSORLESS SERVO])

The following shows the specifications of WS devices.

WS device	Specifications
WS0 to WS7	GOT's virtual devices corresponding to the inverter's operation commands (instruction code: HFA, bit length: 8 bits)  The function of each bit differs depending on the inverter. Example) A800 series inverter • WS0: AU (Terminal 4 input selection) • WS1: Forward rotation command • WS2: Reverse rotation command • WS3: RL (Low-speed operation command) • WS4: RM (Middle-speed operation command) • WS5: RH (High-speed operation command) • WS6: RT (Second function selection) • WS7: MRS (Output stop) When you turn on one of the WS0 to WS7 devices, the rest of these devices are turned off. Example) When you turn on WS1 WS0 and WS2 to WS7 are turned off.
WS8 to WS15	WS8 to WS11 are GOT's virtual devices corresponding to the inverter's operation commands (extended) (instruction code: HF9, bit length: 16 bits).  The function of each bit differs depending on the inverter. Example) A800 series inverter • WS8: JOG (Jog operation selection) • WS9: CS (Selection of automatic restart after instantaneous power failure, flying start) • WS10: STOP (Start self-holding selection) • WS11: RES (Inverter reset) Turning on a device out of WS8 to WS11 turns off WS0 to WS15 except the one that is turned on. Example) When you turn on WS9 WS0 to WS8 and WS10 to WS15 are turned off.

(4) Alarm definition ([FREQROL 500/700/800, SENSORLESS SERVO])

The settable devices vary by inverter model.
For the settable devices of each inverter, refer to the following.

➟Manual of the inverter used

Virtual device name	Name
A0	Second fault in past
A1	Latest fault
A2	Fourth fault in past
A3	Third fault in past
A4	Sixth fault in past
A5	Fifth fault in past
A6	Eighth fault in past
A7	Seventh fault in past

(5) Parameter ([FREQROL 500/700/800, SENSORLESS SERVO])

The virtual device numbers (Pr) used in the GOT correspond to the inverter parameter numbers.
For the inverter parameters, refer to the following.

➟Manual of the inverter used

When using a parameter, note the following.

Precautions	Description
When creating a screen using a parameter (Pr)	Specify a PG device (Programmed operation) or Pr device (Parameter). Do not specify PG devices (PG0 to PG89) and Pr devices (Pr900 to Pr905) together on one screen.
When setting 8888 or 9999 to a parameter (Pr) of an inverter	Values 8888 and 9999 are used for particular purposes. To set these values to inverter parameters, write the following values to the GOT virtual device. • To set 8888: 65520 • To set 9999: 65535
When specifying Pr900 to Pr933 (Calibration parameter) or Pr934 and Pr935 (PID display)	If you specify Pr900 to Pr933 (Calibration parameter), or Pr934 and Pr935 (PID display), whether the value below must be written to SP108 (Second parameter changing) depends on the specified device number and inverter model. • H00: Offset/gain • H01: Analog • H02: Analog value at terminal
Parameters that cannot be monitored	The GOT cannot monitor the parameter (Pr.37) of FR-E500, FR-S500(E), FR-F500J, FR-D700, FR-F700PJ, and FR-E700 series.

(6) Programmed operation ([FREQROL 500/700/800, SENSORLESS SERVO])

The virtual devices below correspond to the parameters (Pr.201 to Pr.230) of the FR-A500 series.

Virtual device name	Name
PG0 to PG9	Program set 1 (running frequency)
PG10 to PG19*1	Program set 1 (time)
PG20 to PG29	Program set 1 (rotation direction)
PG30 to PG39	Program set 2 (running frequency)
PG40 to PG49*1	Program set 2 (time)
PG50 to PG59	Program set 2 (rotation direction)
PG60 to PG69	Program set 3 (running frequency)
PG70 to PG79*1	Program set 3 (time)
PG80 to PG89	Program set 3 (rotation direction)

*1 To set the start time (PG10 to PG19, PG40 to PG49, PG70 to PG79), set hour or minute in the upper 8 bits, and minute or second in the lower 8 bits.
Example) To set 12 minutes 35 seconds
• Value written to the upper 8 bits: H0C (hexadecimal value of 12)
• Value written to the lower 8 bits: H23 (hexadecimal value of 35)

Write H0C23 (decimal value: 3107) to the device.

When using the programmed operation, note the following.

Precautions	Description
When creating a screen using the programmed operation (PG)	Specify a PG device (Programmed operation) or Pr device (Parameter). Do not specify PG devices (PG0 to PG89) and Pr devices (Pr900 to Pr905) together on one screen.

(7) Special parameter ([FREQROL 500/700/800, SENSORLESS SERVO])

If the GOT reads or writes data from or to a virtual device (SP), the inverter's instruction code corresponding to the SP device is used for communication.

For instruction details, and values to be read and written, refer to the following.

➥Manual of the inverter used

Virtual device name	Name	Instruction code	
		Read	Writing
SP108	Second parameter changing	6CH	ECH
SP109*1	Set frequency (RAM)	6DH	EDH
SP110*1	Set frequency (RAM, EEPROM)	6EH	EEH
SP111*1	Output frequency	6FH	-
SP112	Output current	70H	-
SP113	Output voltage	71H	-
SP114	Special monitor	72H	-
SP115	Special monitor selection No.	73H	F3H
SP116	Faults history batch clear	-	F4H
	Latest fault, Second fault in past	74H	-
SP117	Third fault in past, Fourth fault in past	75H	-
SP118	Fifth fault in past, Sixth fault in past	76H	-
SP119	Seventh fault in past, Eighth fault in past	77H	-
SP121*2*3	Inverter status monitor (extended)	79H	F9H
	Operation command (extended)		
SP122*2*3	Inverter status monitor	7AH	-
	Operation command	-	FAH
SP123*4	Operation mode	7BH	FBH
SP124	All parameter clear	-	FCH
SP125	Inverter reset	-	FDH
SP127	Link parameter extended setting	7FH	FFH

*1 GOT cannot monitor SP109 to SP111 if the conditions below are satisfied at the same time.
(Only FR-E500/S500(E)/F500J/D700/F700PJ/E700 series)
- Pr37 ≠ 0
- SP127 = 1

*2 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multispeed operation (WS3 to WS7, SP121, SP122) cannot be used.
For using the multi-speed operation, follow either of the operations below.
- Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
- Change the motor speed with the set frequency (SP109, SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

*3 For the specifications of SP122 and SP121, refer to the following.
➥12.3.24 ■5 (8) Specifications of SP122 and SP121([FREQROL 500/700/800, SENSORLESS SERVO])

*4 If the GOT is connected to the PU port of the FR-A500/E500/F500 (excluding the FR-F500J), the connected inverter is in the external operation mode at power-on.
To change parameters from the GOT, change the value of SP123 to 2 (PU operation mode) in advance.

(8) Specifications of SP122 and SP121([FREQROL 500/700/800, SENSORLESS SERVO])

SP122 and SP121 are the GOT's virtual devices corresponding to the inverter's ordinary and extended operation commands.

The following shows the specifications of SP122 and SP121.

SP device	Specifications
SP122	GOT's virtual device corresponding to the inverter's operation command (instruction code: HFA, bit length: 8 bits) The function of each bit differs depending on the inverter. Example) A800 series inverter • SP122.b0: AU (Terminal 4 input selection) • SP122.b1: Forward rotation command • SP122.b2: Reverse rotation command • SP122.b3: RL (Low-speed operation command) • SP122.b4: RM (Middle-speed operation command) • SP122.b5: RH (High-speed operation command) • SP122.b6: RT (Second function selection) • SP122.b7: MRS (Output stop) To send more than one command simultaneously, convert the binary value of the bits to be turned on to a decimal value, and write the decimal value to SP122. Example) Sending forward rotation command and RL (Low-speed operation command) simultaneously Binary: 00001010 Decimal: 10 Write 10 to SP122.
SP121	GOT's virtual device corresponding to the inverter's operation commands (instruction code: HF9, bit length: 16 bits) The function of each bit differs depending on the inverter. Example) A800 series inverter • SP121.b0: AU (Terminal 4 input selection) • SP121.b1: Forward rotation command • SP121.b2: Reverse rotation command • SP121.b3: RL (Low-speed operation command) • SP121.b4: RM (Middle-speed operation command) • SP121.b5: RH (High-speed operation command) • SP121.b6: RT (Second function selection) • SP121.b7: MRS (Output stop) • SP121.b8: JOG (Jog operation selection) • SP121.b9: CS (Selection of automatic restart after instantaneous power failure, flying start) • SP121.b10: STOP (Start self-holding selection) • SP121.b11: RES (Inverter reset) • SP121.b12 to SP122.b15: Not used To send more than one command simultaneously, convert the binary value of the device (with applicable bits on) to a decimal value, and write the decimal value to SP121. Example) Sending forward rotation command, RL (Low-speed operation command), and JOG (Jog operation selection) simultaneously Binary: 0000000100001010 Decimal: 266 Write 266 to SP121.

12.3.25 [FREQROL 800]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([FREQROL 800])
	➟■2 Availability of writing/reading data to/from bit devices ([FREQROL 800])
Specifications of word devices	➟■3 Monitoring-supported word devices ([FREQROL 800])
	➟■4 Availability of writing/reading data to/from word devices ([FREQROL 800])
Specifications of virtual inverter devices	➟■5 Virtual inverter devices ([FREQROL 800])

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured within the user-specified negotiation time.
If the automatic connection fails, set the longer negotiation time with GT Designer3 or the utility.

■1 Monitoring-supported bit devices ([FREQROL 800])

The following table shows monitoring-supported virtual bit devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.25 ■2 Availability of writing/reading data to/from bit devices ([FREQROL 800])

For details on virtual inverter devices, refer to the following.

➟12.3.25 ■5 Virtual inverter devices ([FREQROL 800])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RS	Inverter status monitor	Decimal	0 to 15	×	×
WS	Operation command	Decimal	0 to 15	×	×
X	Input	Hexadecimal	00 to 7F	○	○
Y	Output	Hexadecimal	00 to 7F	○	○
M	Internal relay	Decimal	0 to 127	○	○
TC	Timer coil	Decimal	0 to 15	○	○ (Not usable as word data)
TT	Timer contact	Decimal	0 to 15	○	○ (Not usable as word data)
CC	Counter coil	Decimal	0 to 15	○	○ (Not usable as word data)
CT	Counter contact	Decimal	0 to 15	○	○ (Not usable as word data)
SC	Retentive timer coil	Decimal	0 to 15	○	○ (Not usable as word data)
SS	Retentive timer contact	Decimal	0 to 15	○	○ (Not usable as word data)
SM*2	Special relay	Decimal	0 to 2047	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Functions are assigned to the SM devices by using the PLC function.

Do not write data from the GOT.

■2 Availability of writing/reading data to/from bit devices ([FREQROL 800])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
RS	R/-	-/-	-/-	-/-	-/-
WS	-/W	-/-	-/-	-/-	-/-
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SM	R/W	-/-	R/W	R/W	-/-

■3 Monitoring-supported word devices ([FREQROL 800])

The following table shows monitoring-supported virtual word devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.25 ■4 Availability of writing/reading data to/from word devices ([FREQROL 800])

For details on virtual inverter devices, refer to the following.

➟12.3.25 ■5 Virtual inverter devices ([FREQROL 800])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
A	Alarm definition	Decimal	0 to 7	○	○
Pr	Parameter	Decimal	0 to 1500	○	○
SP	Special parameter	Decimal	108 to 127	○	○
TN	Timer current value	Decimal	0 to 15	○	○
CN	Counter current value	Decimal	0 to 15	○	○
SN	Retentive timer current value	Decimal	0 to 15	○	○
D	Data register	Decimal	0 to 255	○	○
SD	Special register	Decimal	0 to 2047	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([FREQROL 800])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
A	R/-	-/-	-/-	-/-
Pr	R/W	-/-	-/-	-/-
SP*1	R/W	-/-	-/-	-/-
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	R/W
SD	R/W	R/W	-/-	R/W

*1 Only reading is available for SP111 to SP114 and SP117 to SP119.
Only writing is available for SP124 and SP125.

■5 Virtual inverter devices ([FREQROL 800])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.
For details on the inverter parameters, refer to the following.

➟Manual of the inverter used

Virtual device name	Reference
RS	➟(1) Inverter status monitor ([FREQROL 800])
WS	➟(2) Operation command ([FREQROL 800])
	➟(3) Activating WS devices ([FREQROL 800])
A	➟(4) Alarm definition ([FREQROL 800])
Pr	➟(5) Parameter ([FREQROL 800])
SP	➟(6) Special parameter ([FREQROL 800])
	➟(7) Specifications of SP122 and SP121 ([FREQROL 800])

(1) Inverter status monitor ([FREQROL 800])

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

➟Manual of the inverter used

Virtual device name	Name
RS0	RUN (Inverter running)
RS1	During forward rotation
RS2	During reverse rotation
RS3	SU (Up to frequency)
RS4	OL (Overload warning)
RS5	IPF (Instantaneous power failure/undervoltage)
RS6	FU (Output frequency detection)
RS7	ABC1 (Fault)
RS8	ABC2
RS9	Safety monitor output
RS15	Fault occurrence

(2) Operation command ([FREQROL 800])

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

➟Manual of the inverter used

Virtual device name	Name
WS0*1*2	AU (Terminal 4 input selection)
WS1	Forward rotation command
WS2	Reverse rotation command
WS3*1*2	RL (Low-speed operation command)
WS4*1*2	RM (Middle-speed operation command)
WS5*1*2	RH (High-speed operation command)
WS6*1*2	RT (Second function selection)
WS7*1*2	MRS (Output stop)
WS8*1*2*3	JOG (Jog operation selection)
WS9*1*2*3	CS (Selection of automatic restart after instantaneous power failure, flying start)
WS10*1*2*3	STOP (Start self-holding selection)
WS11*1*2*3	RES (Inverter reset)

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.180 to Pr.189 (input terminal function selection).
For the relationship between the parameters and terminals, refer to the following.

➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.
Change the relevant setting in Pr.180 to Pr.189 (input terminal function selection).

When using the operation command, note the following.

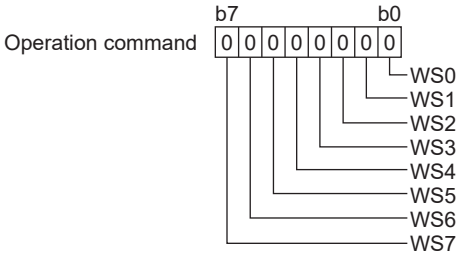
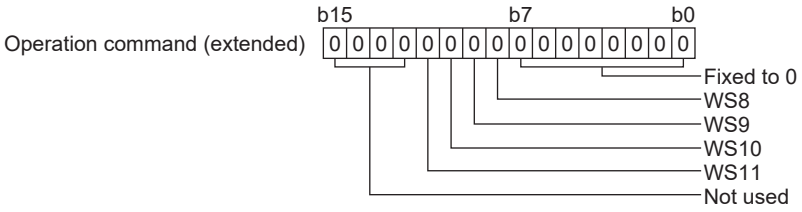
Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.
When activating WS devices	➟12.3.25 ■5 (3) Activating WS devices ([FREQROL 800])

(3) Activating WS devices ([FREQROL 800])

More than one WS device cannot turn on at once.
Turning on one WS device turns off the other WS devices.
Use SP122 or SP121 to turn on multiple WS devices simultaneously.

➟12.3.25 ■5 (7) Specifications of SP122 and SP121 ([FREQROL 800])

The following shows the specifications of WS devices.

WS device	Specifications
WS0 to WS7	GOT's virtual devices corresponding to the inverter's operation commands (instruction code: HFA, bit length: 8 bits)  The function of each bit differs depending on the inverter. Example) A800 series inverter • WS0: AU (Terminal 4 input selection) • WS1: Forward rotation command • WS2: Reverse rotation command • WS3: RL (Low-speed operation command) • WS4: RM (Middle-speed operation command) • WS5: RH (High-speed operation command) • WS6: RT (Second function selection) • WS7: MRS (Output stop) When you turn on one of the WS0 to WS7 devices, the rest of these devices are turned off. Example) When you turn on WS1 WS0 and WS2 to WS7 are turned off.
WS8 to WS15	WS8 to WS11 are GOT's virtual devices corresponding to the inverter's operation commands (extended) (instruction code: HF9, bit length: 16 bits).  The function of each bit differs depending on the inverter. Example) A800 series inverter • WS8: JOG (Jog operation selection) • WS9: CS (Selection of automatic restart after instantaneous power failure, flying start) • WS10: STOP (Start self-holding selection) • WS11: RES (Inverter reset) Turning on a device out of WS8 to WS11 turns off WS0 to WS15 except the one that is turned on. Example) When you turn on WS9 WS0 to WS8 and WS10 to WS15 are turned off.

(4) Alarm definition ([FREQROL 800])

Virtual device name	Name
A0	Second fault in past
A1	Latest fault
A2	Fourth fault in past
A3	Third fault in past
A4	Sixth fault in past
A5	Fifth fault in past
A6	Eighth fault in past
A7	Seventh fault in past

(5) Parameter ([FREQROL 800])

The virtual device numbers (Pr) used in the GOT correspond to the inverter parameter numbers.
For the inverter parameters, refer to the following.

➟Manual of the inverter used

When using a parameter, note the following.

Precautions	Description
When setting 8888 or 9999 to a parameter (Pr) of an inverter	Values 8888 and 9999 are used for particular purposes. To set these values to inverter parameters, write the following values to the GOT virtual device. • To set 8888: 65520 • To set 9999: 65535
When specifying Pr900 to Pr933 (Calibration parameter) or Pr934 and Pr935 (PID display)	If you specify Pr900 to Pr933 (Calibration parameter), or Pr934 and Pr935 (PID display), whether the value below must be written to SP108 (Second parameter changing) depends on the specified device number and inverter model. • H00: Offset/gain • H01: Analog • H02: Analog value at terminal

(6) Special parameter ([FREQROL 800])

If the GOT reads or writes data from or to a virtual device (SP), the inverter's instruction code corresponding to the SP device is used for communication.
For instruction details, and values to be read and written, refer to the following.

➟Manual of the inverter used

Virtual device name	Name	Instruction code	
		Read	Writing
SP108	Second parameter changing	6CH	ECH
SP109	Set frequency (RAM)	6DH	EDH
SP110	Set frequency (RAM, EEPROM)	6EH	EEH
SP111	Output frequency/speed	6FH	-
SP112	Output current	70H	-
SP113	Output voltage	71H	-
SP114	Special monitor	72H	-
SP115	Special monitor selection No.	73H	F3H
SP116	Faults history batch clear	-	F4H
	Latest fault, Second fault in past	74H	-
SP117	Third fault in past, Fourth fault in past	75H	-
SP118	Fifth fault in past, Sixth fault in past	76H	-
SP119	Seventh fault in past, Eighth fault in past	77H	-
SP121*1*2	Inverter status monitor (extended)	79H	F9H
	Operation command (extended)		
SP122*1*2	Inverter status monitor	7AH	-
	Operation command	-	FAH
SP123	Operation mode	7BH	FBH
SP124	All parameter clear	-	FCH
SP125	Inverter reset	-	FDH
SP127	Link parameter extended setting	7FH	FFH

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multispeed operation (WS3 to WS7, SP121, SP122) cannot be used.
For using the multi-speed operation, follow either of the operations below.
- Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
- Change the motor speed with the set frequency (SP109, SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

*2 For the specifications of SP122 and SP121, refer to the following.

➟12.3.25 ■5 (7) Specifications of SP122 and SP121 ([FREQROL 800])

(7) Specifications of SP122 and SP121 ([FREQROL 800])

SP122 and SP121 are the GOT's virtual devices corresponding to the inverter's ordinary and extended operation commands.

The following shows the specifications of SP122 and SP121.

SP device	Specifications
SP122	GOT's virtual device corresponding to the inverter's operation command (instruction code: HFA, bit length: 8 bits) The function of each bit differs depending on the inverter. Example) A800 series inverter • SP122.b0: AU (Terminal 4 input selection) • SP122.b1: Forward rotation command • SP122.b2: Reverse rotation command • SP122.b3: RL (Low-speed operation command) • SP122.b4: RM (Middle-speed operation command) • SP122.b5: RH (High-speed operation command) • SP122.b6: RT (Second function selection) • SP122.b7: MRS (Output stop) To send more than one command simultaneously, convert the binary value of the bits to be turned on to a decimal value, and write the decimal value to SP122. Example) Sending forward rotation command and RL (Low-speed operation command) simultaneously Binary: 00001010 Decimal: 10 Write 10 to SP122.
SP121	GOT's virtual device corresponding to the inverter's operation commands (instruction code: HF9, bit length: 16 bits) The function of each bit differs depending on the inverter. Example) A800 series inverter • SP121.b0: AU (Terminal 4 input selection) • SP121.b1: Forward rotation command • SP121.b2: Reverse rotation command • SP121.b3: RL (Low-speed operation command) • SP121.b4: RM (Middle-speed operation command) • SP121.b5: RH (High-speed operation command) • SP121.b6: RT (Second function selection) • SP121.b7: MRS (Output stop) • SP121.b8: JOG (Jog operation selection) • SP121.b9: CS (Selection of automatic restart after instantaneous power failure, flying start) • SP121.b10: STOP (Start self-holding selection) • SP121.b11: RES (Inverter reset) • SP121.b12 to SP122.b15: Not used To send more than one command simultaneously, convert the binary value of the device (with applicable bits on) to a decimal value, and write the decimal value to SP121. Example) Sending forward rotation command, RL (Low-speed operation command), and JOG (Jog operation selection) simultaneously Binary: 0000000100001010 Decimal: 266 Write 266 to SP121.

12.3.26 [FREQROL 800/E700NE(Batch monitor)]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([FREQROL 800/E700NE(Batch monitor)])
	➟■2 Availability of writing/reading data to/from bit devices ([FREQROL 800/E700NE(Batch monitor)])
Specifications of word devices	➟■3 Monitoring-supported word devices ([FREQROL 800/E700NE(Batch monitor)])
	➟■4 Availability of writing/reading data to/from word devices ([FREQROL 800/E700NE(Batch monitor)])
Specifications of double-word devices	➟■5 Monitoring-supported double-word devices ([FREQROL 800/E700NE(Batch monitor)])
	➟■6 Availability of writing/reading data to/from double-word devices ([FREQROL 800/E700NE(Batch monitor)])
Specifications of virtual inverter devices	➟■7 Virtual inverter devices ([FREQROL 800/E700NE(Batch monitor)])

■1 Monitoring-supported bit devices ([FREQROL 800/E700NE(Batch monitor)])

The following table shows monitoring-supported virtual bit devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.26 ■2 Availability of writing/reading data to/from bit devices ([FREQROL 800/E700NE(Batch monitor)])

For details on virtual inverter devices, refer to the following.

➟12.3.26 ■7 Virtual inverter devices ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RS	Inverter status monitor	Decimal	0 to 15	×	×
WS	Operation command	Decimal	0 to 15	×	×
IOST	I/O terminal monitor	Decimal	0 to 127	×	×
CMD	Operation command	Decimal	0 to 63	×	×
X*2	Input	Hexadecimal	00 to 7F	○	○
Y*2	Output	Hexadecimal	00 to 7F	○	○
M*2	Internal relay	Decimal	0 to 127	○	○
TC*2	Timer coil	Decimal	0 to 15	○	○ (Not usable as word data)
TT*2	Timer contact	Decimal	0 to 15	○	○ (Not usable as word data)
CC*2	Counter coil	Decimal	0 to 15	○	○ (Not usable as word data)
CT*2	Counter contact	Decimal	0 to 15	○	○ (Not usable as word data)
SC*2	Retentive timer coil	Decimal	0 to 15	○	○ (Not usable as word data)
SS*2	Retentive timer contact	Decimal	0 to 15	○	○ (Not usable as word data)
SM*2*3	Special relay	Decimal	0 to 2047	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Not available to FR-E7□0-NE.

*3 Functions are assigned to the SM devices by using the PLC function.
Do not write data from the GOT.

■2 Availability of writing/reading data to/from bit devices ([FREQROL 800/E700NE(Batch monitor)])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
RS	R/-	-/-	-/-	-/-	-/-
WS	-/W	-/-	-/-	-/-	-/-
IOST	R/-	-/-	-/-	-/-	-/-
CMD	-/W	-/-	-/-	-/-	-/-
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TT	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
SC	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
SM	R/W	-/-	R/W	R/W	-/-

■3 Monitoring-supported word devices ([FREQROL 800/E700NE(Batch monitor)])

The following table shows monitoring-supported virtual word devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.26 ■4 Availability of writing/reading data to/from word devices ([FREQROL 800/E700NE(Batch monitor)])

For details on virtual inverter devices, refer to the following.

➟12.3.26 ■7 Virtual inverter devices ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
A	Alarm definition	Decimal	0 to 7	○	○
Pr	Parameter	Decimal	0 to 1500	○	○
SP	Special parameter	Decimal	108 to 127	○	○
TN*2	Timer current value	Decimal	0 to 15	○	○
CN*2	Counter current value	Decimal	0 to 15	○	○
SN*2	Retentive timer current value	Decimal	0 to 15	○	○
D*2	Data register	Decimal	0 to 255	○	○
SD*2	Special register	Decimal	0 to 2047	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Not available to FR-E7□0-NE.

■4 Availability of writing/reading data to/from word devices ([FREQROL 800/E700NE(Batch monitor)])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
A	R/-	-/-	-/-	-/-
Pr	R/W	-/-	-/-	-/-
SP*1	R/W	-/-	-/-	-/-
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
SN	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	R/W
SD	R/W	R/W	-/-	R/W

*1 Only reading is available for SP111 to SP114 and SP117 to SP119.
Only writing is available for SP124 and SP125.

■5 Monitoring-supported double-word devices ([FREQROL 800/E700NE(Batch monitor)])

The following table shows monitoring-supported virtual double-word devices for inverters.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.26 ■6 Availability of writing/reading data to/from double-word devices ([FREQROL 800/E700NE(Batch monitor)])

For details on virtual inverter devices, refer to the following.

➟12.3.26 ■7 Virtual inverter devices ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
AL	Faults history	Decimal	0 to 899	×	×
LPr*2	Parameter (32-bit)	Decimal	0 to 1500	×	×
OP	Operation parameters	Decimal	0 to 5	×	×
PV	Current value monitor	Decimal	1 to 143	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 If you specify LPr900 to LPr935, the following item is displayed in the device setting dialog.

• [Setting items (for calibration parameters)]: [Bias/gain value], [Analog input value]

Enclose the device number in parentheses when selecting [Analog input value].
Example 1) Notation when [Bias/gain value] is selected: LPr900
Example 2) Notation when [Analog input value] is selected: LPr(900)
When LPr900 or LPr901 (Calibration parameter) is specified, selecting [Bias/gain value] or [Analog input value] does not affect the monitoring target.

■6 Availability of writing/reading data to/from double-word devices ([FREQROL 800/E700NE(Batch monitor)])

The following shows the availability of writing/reading data to/from double-word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
AL	-/-	R/-	-/-	-/-
LPr	-/-	R/W	-/-	-/-
OP*1	-/-	R/W	-/-	-/-
PV	-/-	R/-	-/-	-/-

*1 Only reading is available for OP3.
Only writing is available for OP4 and OP5.

■7 Virtual inverter devices ([FREQROL 800/E700NE(Batch monitor)])

The following shows the correspondence between the virtual devices used in the GOT and the inverter data.
For details on the inverter parameters, refer to the following.

➟Manual of the inverter used

Virtual device name	Reference
RS*1	➟(1) Inverter status monitor ([FREQROL 800/E700NE(Batch monitor)])
WS*1	➟(2) Operation command ([FREQROL 800/E700NE(Batch monitor)])
	➟(3) Operation when turning on/off the WS devices ([FREQROL 800/E700NE(Batch monitor)])
IOST	➟(4) I/O terminal monitor ([FREQROL 800/E700NE(Batch monitor)])
CMD	➟(5) Operation command ([FREQROL 800/E700NE(Batch monitor)])
	➟(6) Operation when turning on/off one of the CMD3 to CMD12 devices ([FREQROL 800/E700NE(Batch monitor)])
	➟(7) Operation when turning on/off one of the CMD48 to CMD52 devices ([FREQROL 800/E700NE(Batch monitor)])
A*1	➟(8) Alarm definition ([FREQROL 800/E700NE(Batch monitor)])
Pr*1	➟(9) Parameter, parameter (32-bit) ([FREQROL 800/E700NE(Batch monitor)])
SP*1	➟(10) Special parameter ([FREQROL 800/E700NE(Batch monitor)])
	➟(11) Specifications of SP122 and SP121 ([FREQROL 800/E700NE(Batch monitor)])
AL	➟(12) Alarm history ([FREQROL 800/E700NE(Batch monitor)])
LPr	➟(9) Parameter, parameter (32-bit) ([FREQROL 800/E700NE(Batch monitor)])
OP	➟(13) Operation parameter ([FREQROL 800/E700NE(Batch monitor)])
PV	➟(14) Current value monitor ([FREQROL 800/E700NE(Batch monitor)])

*1 The virtual device is also usable for the controller whose type is [FREQROL 500/700/800, SENSORLESS SERVO] or [FREQROL 800].
Use the device to maintain compatibility when you change the controller type in a project from any of the above ones to [FREQROL 800(Batch monitor)].

When you create a project, use a different device.

The lists of virtual devices shown in this section explain the FR-A800 Plus series, FR-E800 series and FR-D800 series models using the following abbreviations.

Series	Abbreviation	Model
FR-A800 Plus series	CRN	FR-A8□0-CRN FR-A8□2-CRN FR-A8□0-E-CRN FR-A8□2-E-CRN
	R2R	FR-A8□0-R2R FR-A8□2-R2R FR-A8□0-E-R2R FR-A8□2-E-R2R
	AWH	FR-A8□0-AWH FR-A8□0-E-AWH
	LC	FR-A8□0-LC FR-A8□0-E-LC
FR-E800 series	E800	FR-E8□0
	E	FR-E8□0-E
FR-D800 series	D800	FR-D8□0
	E	FR-D8□0-E

(1) Inverter status monitor ([FREQROL 800/E700NE(Batch monitor)])

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

➟Manual of the inverter used

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
RS0	RUN (Inverter running)	○*1	○*1	○*1	○*1
RS1	During forward rotation	○	○	○	○
RS2	During reverse rotation	○	○	○	○
RS3	SU (Up to frequency)	○*1	○	○	○
RS4	OL (Overload warning)	○*1	○	○	○
RS5	IPF (Instantaneous power failure/undervoltage)	○*1	×	×	×
RS6	FU (Output frequency detection)	○*1	○*1	○*1	○*1
RS7	ABC1 (Fault)	○*1	○*1	○*1	○*1
RS8	ABC2	○*1	×	×	×
RS9	Safety monitor output	○	○	○	×
RS15	Fault occurrence	○	○	×	○

*1 The monitor data can be changed by the settings of Pr.190 to Pr.196 (output terminal function selection).
For the relationship between the parameters and terminals, refer to the following.

➟Manual of the inverter used

(2) Operation command ([FREQROL 800/E700NE(Batch monitor)])

Parameter settings may have been changed in the inverter.
To use the devices, check the parameters and set the parameters as required.

➟Manual of the inverter used

○: Available

×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
WS0*1	AU (Terminal 4 input selection)	○*2	○	○	○
WS1	Forward rotation command	○	○	○	○
WS2	Reverse rotation command	○	○	○	○
WS3*1	RL (Low-speed operation command)	○*2	○*2	○*2	○*2
WS4*1	RM (Middle-speed operation command)	○*2	○*2	○*2	○*2
WS5*1	RH (High-speed operation command)	○*2	○*2	○*2	○*2
WS6*1	RT (Second function selection)	○*2	○	○	○
WS7*1	MRS (Output stop)	○*2	○*2	○	○*2
WS8*1	JOG (Jog operation selection)	○ *2*3	○	○	×
WS9*1	CS (Selection of automatic restart after instantaneous power failure, flying start)	○ *2*3	×	×	×
WS10*1	STOP (Start self-holding selection)	○ *2*3	×	×	×
WS11*1	RES (Inverter reset)	○ *2*3	○ *2*3	×	○*2

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.
Change the relevant setting in Pr.178 to Pr.189 (input terminal function selection).

When using the operation command, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.
When activating WS devices	➟(3) Operation when turning on/off the WS devices ([FREQROL 800/E700NE(Batch monitor)])

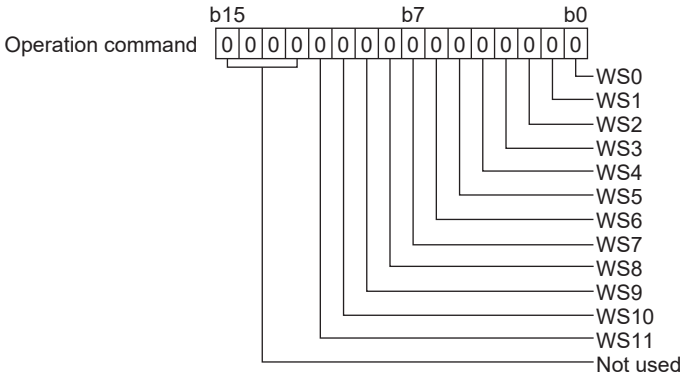
(3) Operation when turning on/off the WS devices ([FREQROL 800/E700NE(Batch monitor)])

When you turn on/off one of the WS0 to WS15 devices, the rest of these devices are turned off.

Example) When you turn on WS9

WS0 to WS8 and WS10 to WS15 are turned off.

The following shows the relationship between the inverter's operation commands and WS devices.



The function of each bit differs depending on the inverter.
Example) A800 series inverter

- WS0: AU (Terminal 4 input selection)
- WS1: Forward rotation command
- WS2: Reverse rotation command
- WS3: RL (Low-speed operation command)
- WS4: RM (Middle-speed operation command)
- WS5: RH (High-speed operation command)
- WS6: RT (Second function selection)
- WS7: MRS (Output stop)
- WS8: JOG (Jog operation selection)
- WS9: CS (Selection of automatic restart after instantaneous power failure, flying start)
- WS10: STOP (Start self-holding selection)
- WS11: RES (Inverter reset)

Use SP122 or SP121 to control multiple WS devices simultaneously.

➟(11) Specifications of SP122 and SP121 ([FREQROL 800/E700NE(Batch monitor)])

(4) I/O terminal monitor ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series		FR-D800 series		FR-E700 series
			E800	E	D800	E	FR-E7□0-NE
IOST1	Input terminal STF/DI0	○*1	○*1	○*1	○*1	○*1	○*1
IOST2	Input terminal STR/DI1	○*1	○*1	○*1	○*1	○*1	○*1
IOST3	Input terminal RL	○*1	○*1	×	○*1	○*1	○*1
IOST4	Input terminal RM	○*1	○*1	×	○*1	○*1	○*1
IOST5	Input terminal RH	○*1	○*1	×	○*1	○*1	○*1
IOST6	Input terminal RT	○*1	×	×	×	×	×
IOST7	Input terminal AU	○*1	×	×	×	×	×
IOST8	Input terminal JOG	○*1	×	×	×	×	×
IOST9	Input terminal CS	○*1	×	×	×	×	×
IOST10	Input terminal MRS	○*1	○*1	×	×	×	○*1
IOST11	Input terminal STOP	○*1	×	×	×	×	×
IOST12	Input terminal RES	○*1	○*1	×	×	×	○*1
IOST32	Output terminal RUN	○*1	○*1	×	○*1	○*1	○*1
IOST33	Output terminal SU	○*1	×	×	×	×	×
IOST34	Output terminal IPF	○*1	×	×	×	×	×

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series		FR-D800 series		FR-E700 series
			E800	E	D800	E	FR-E7□0-NE
IOST35	Output terminal OL	○*1	×	×	×	×	×
IOST36	Output terminal FU	○*1	○*1	×	○*1	×	○*1
IOST37	Output terminal ABC1	○*1	○*1	○*1	○*1	○*1	○*1
IOST38	Output terminal ABC2	○*1	×	×	×	×	×
IOST39	Output terminal SO	○	×	×	×	×	×
IOST48	NET Y1 output	×	○ *1*2	○ *1*2	○*1	○*1	×
IOST49	NET Y2 output	×	○ *1*2	○ *1*2	○*1	○*1	×
IOST50	NET Y3 output	×	○ *1*2	○ *1*2	○*1	○*1	×
IOST51	NET Y4 output	×	○ *1*2	○ *1*2	○*1	○*1	×
IOST64	Option input terminal X0	○	○	○	×	×	×
IOST65	Option input terminal X1	○	○	○	×	×	×
IOST66	Option input terminal X2	○	○	○	×	×	×
IOST67	Option input terminal X3	○	○	○	×	×	×
IOST68	Option input terminal X4	○	○	○	×	×	×
IOST69	Option input terminal X5	○	○	○	×	×	×
IOST70	Option input terminal X6	○	○	○	×	×	×
IOST71	Option input terminal X7	○	○	○	×	×	×
IOST72	Option input terminal X8	○	○	○	×	×	×
IOST73	Option input terminal X9	○	○	○	×	×	×
IOST74	Option input terminal X10	○	○	○	×	×	×
IOST75	Option input terminal X11	○	○	○	×	×	×
IOST76	Option input terminal X12	○	○	○	×	×	×
IOST77	Option input terminal X13	○	○	○	×	×	×
IOST78	Option input terminal X14	○	○	○	×	×	×
IOST79	Option input terminal X15	○	○	○	×	×	×
IOST80	Option input terminal DY	○	○	○	×	×	×
IOST96	Option output terminal Y0/DO0	○*1	○*1	○*1	×	×	×
IOST97	Option output terminal Y1/DO1	○*1	○*1	○*1	×	×	×
IOST98	Option output terminal Y2/DO2	○*1	○*1	○*1	×	×	×
IOST99	Option output terminal Y3/DO3	○*1	○*1	○*1	×	×	×
IOST100	Option output terminal Y4/DO4	○*1	○*1	○*1	×	×	×
IOST101	Option output terminal Y5/DO5	○*1	○*1	○*1	×	×	×
IOST102	Option output terminal Y6/DO6	○*1	○*1	○*1	×	×	×
IOST103	Option output terminal RA1	○*1	○*1	○*1	×	×	×
IOST104	Option output terminal RA2	○*1	○*1	○*1	×	×	×
IOST105	Option output terminal RA3	○*1	○*1	○*1	×	×	×

*1 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection) or Pr.190 to Pr.196 or Pr.313 to Pr.322 (output terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➡Manual of the inverter used

*2 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.
SERIAL (serial No.) is provided on the rating plate of the inverter.

(5) Operation command ([FREQROL 800/E700NE(Batch monitor)])

○: Available

×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series
					FR-E7□0-NE
CMD0	Stop command	○	○	○	○
CMD1	Forward rotation command	○	○	○	○
CMD2	Reverse rotation command	○	○	○	○
CMD3*1	RL terminal	○*2	○*2	○*2	○*2
CMD4*1	RM terminal	○*2	○*2	○*2	○*2
CMD5*1	RH terminal	○*2	○*2	○*2	○*2
CMD6*1	RT terminal	○*2	○	×	○
CMD7*1	AU terminal	○*2	○	×	○
CMD8*1	JOG terminal	○*2*3	○	×	×
CMD9*1	CS terminal	○*2*3	×	×	×
CMD10*1	MRS terminal	○*2	○*2	×	○*2
CMD11*1	STOP terminal	○*2*3	×	×	×
CMD12*1	RES terminal	○*2*3	○*2*3	×	○*2
CMD16	Alarm history clear	○	○	○	○
CMD24	Inverter reset	○	○	○	○
CMD32	Parameter clear	○	○	○	○
CMD33	Parameter clear (communication parameters are not cleared)	○	○	○	○
CMD34	All parameter clear	○	○	○	○
CMD35	All parameter clear (communication parameters are not cleared)	○	○	○	○
CMD48	NET X1 input	×	○*2*3*4	○*2*3	×
CMD49	NET X2 input	×	○*2*3*4	○*2*3	×
CMD50	NET X3 input	×	○*2*3*4	○*2*3	×
CMD51	NET X4 input	×	○*2*3*4	○*2*3	×
CMD52	NET X5 input	×	○*2*3*4	○*2*3	×

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection).
For the relationship between the parameters and terminals, refer to the following.
➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.
Change the relevant setting in Pr.178 to Pr.189 (input terminal function selection).

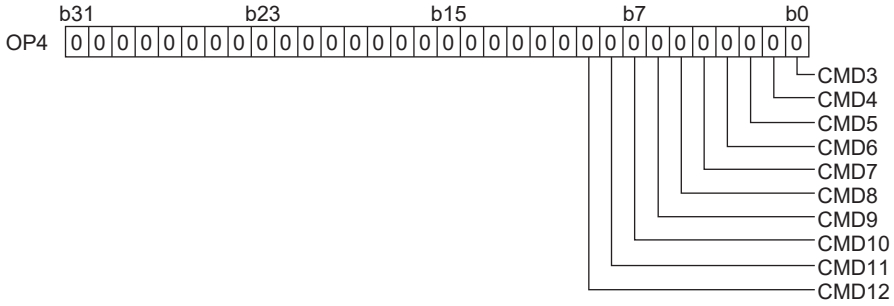
*4 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.
SERIAL (serial No.) is provided on the rating plate of the inverter.

When using the operation command, note the following.

Precautions	Description
When setting a device for a bit switch	Do not select [Alternate] for [Switch Action] of the bit switch.
Operation when a CMD device is turned on	➟(6) Operation when turning on/off one of the CMD3 to CMD12 devices ([FREQROL 800/ E700NE(Batch monitor)]) (7) Operation when turning on/off one of the CMD48 to CMD52 devices ([FREQROL 800/ E700NE(Batch monitor)])

(6) Operation when turning on/off one of the CMD3 to CMD12 devices ([FREQROL 800/E700NE(Batch monitor)])

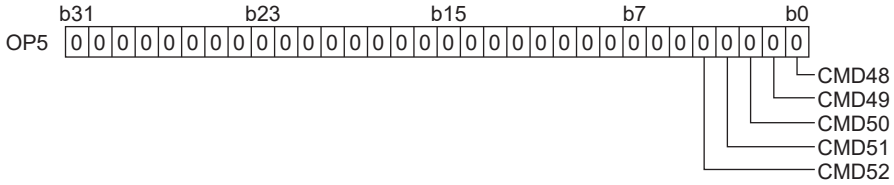
The CMD3 to CMD12 devices cannot be controlled simultaneously.
When you turn on/off one of the CMD3 to CMD12 devices, the rest of these devices are turned off.
Use OP4 to control multiple devices from CMD3 to CMD12 simultaneously.
The following shows the relationship between CMD3 to CMD12 and OP4.



Example) Turning on the CMD3 (RL terminal) and CMD12 (RES terminal) devices
For a hexadecimal value, write 0201.
For a decimal value, write 513.

(7) Operation when turning on/off one of the CMD48 to CMD52 devices ([FREQROL 800/E700NE(Batch monitor)])

The CMD48 to CMD52 devices cannot be controlled simultaneously.
When you turn on/off one of the CMD48 to CMD52 devices, the rest of these devices are turned off.
Use OP5 to control multiple devices from CMD48 to CMD52 simultaneously.
The following shows the relationship between CMD48 to CMD52 and OP5.



Example) Turning on the CMD48 (NET X1 input) and CMD52 (NET X5 input) devices
For a hexadecimal value, write 0011.
For a decimal value, write 17.

(8) Alarm definition ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
A0	Second alarm in past	○	○	○	○
A1	Latest fault	○	○	○	○
A2	Fourth fault in past	○	○	○	○
A3	Third fault in past	○	○	○	○
A4	Sixth fault in past	○	○	○	○
A5	Fifth fault in past	○	○	○	○
A6	Eighth fault in past	○	○	○	○
A7	Seventh fault in past	○	○	○	○

(9) Parameter, parameter (32-bit) ([FREQROL 800/E700NE(Batch monitor)])

The virtual device numbers (Pr and LPr) used in the GOT correspond to the inverter parameter numbers.
For the inverter parameters, refer to the following.

➟Manual of the inverter used

When using a parameter, note the following.

Precautions	Description
When setting 8888 or 9999 to a parameter (Pr) of an inverter	Values 8888 and 9999 are used for particular purposes. To set these values to inverter parameters using the virtual devices, write the following values from the GOT. • To set 8888: 65520 • To set 9999: 65535
When setting 8888 or 9999 to a 32-bit parameter (Lpr) of an inverter	Values 8888 and 9999 are used for particular purposes. To set these values to inverter parameters, write the following values to the GOT virtual device. • To set 8888: 8888 • To set 9999: 9999 You are recommended to set the data type to [Real] for a parameter that can accept a value with a fractional part.
When specifying a calibration parameter or PID display	If you specify Pr900 to Pr933 (Calibration parameter), or Pr934 and Pr935 (PID display), whether the value below must be written to SP108 (Second parameter changing) depends on the specified device number and inverter model. • H00: Offset/gain • H01: Analog • H02: Analog value at terminal

(10)Special parameter ([FREQROL 800/E700NE(Batch monitor)])

○: Available

×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
SP108	Second parameter changing	○	○	○	○
SP109	Set frequency (RAM)	○	○	○	○
SP110	Set frequency (RAM, EEPROM)	○	○	○	○
SP111	Output frequency/speed	○	○	○	○
SP112	Output current	○	○	○	○
SP113	Output voltage	○	○	○	○
SP114	Special monitor	○	○	○	○
SP115	Special monitor selection No.	○	○	○	○
SP116	Latest fault, Second fault in past/Faults history batch clear	○	○	○	○
SP117	Third fault in past, fourth fault in past	○	○	○	○
SP118	Fifth fault in past, sixth fault in past	○	○	○	○
SP119	Seventh fault in past, Eighth fault in past	○	○	○	○
SP121*1	Inverter status monitor (extended) / Operation command (extended)	○	○	○	○
SP122*1	Inverter status monitor / Operation command	○	○	○	○
SP123	Operation mode	○	○	○	○
SP124	All parameter clear	○	○	○	○
SP125	Inverter reset	○	○	○	○
SP127	Link parameter extended setting	○	○	○	○

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, SP121.b1, SP121.b2, SP122.b1, and SP122.b2 can be used.

For the specifications of SP122 and SP121, refer to the following.

➟(11) Specifications of SP122 and SP121 ([FREQROL 800/E700NE(Batch monitor)])

(11)Specifications of SP122 and SP121 ([FREQROL 800/E700NE(Batch monitor)])

SP122 and SP121 are the GOT's virtual devices corresponding to the inverter's operation commands.
The following shows the specifications of SP122 and SP121.

SP device	Specifications
SP122	The function of each bit differs depending on the inverter. Example) A800 series inverter • SP122.b0: AU (Terminal 4 input selection) • SP122.b1: Forward rotation command • SP122.b2: Reverse rotation command • SP122.b3: RL (Low-speed operation command) • SP122.b4: RM (Middle-speed operation command) • SP122.b5: RH (High-speed operation command) • SP122.b6: RT (Second function selection) • SP122.b7: MRS (Output stop) • SP122.b8 to b15: Fixed to 0 SP122 (virtual device) is used to maintain compatibility when you change the controller type from [FREQROL 500/700/800, SENSORLESS SERVO] or [FREQROL 800] to [FREQROL 800/E700NE(Batch monitor)]. When [FREQROL 800/E700NE(Batch monitor)] is set, writing a value to SP122 clears each bit of SP122.b8 to SP122.b15. To send more than one command simultaneously, convert the binary value of the bits to be turned on to a decimal value, and write the decimal value to SP122. Example) Sending forward rotation command and RL (Low-speed operation command) simultaneously Binary: 0000000000001010 Decimal: 10 Write 10 to SP122.
SP121	The function of each bit differs depending on the inverter. Example) A800 series inverter • SP121.b0: AU (Terminal 4 input selection) • SP121.b1: Forward rotation command • SP121.b2: Reverse rotation command • SP121.b3: RL (Low-speed operation command) • SP121.b4: RM (Middle-speed operation command) • SP121.b5: RH (High-speed operation command) • SP121.b6: RT (Second function selection) • SP121.b7: MRS (Output stop) • SP121.b8: JOG (Jog operation selection) • SP121.b9: CS (Selection of automatic restart after instantaneous power failure, flying start) • SP121.b10: STOP (Start self-holding selection) • SP121.b11: RES (Inverter reset) To send more than one command simultaneously, convert the binary value of the device (with applicable bits on) to a decimal value, and write the decimal value to SP121. Example) Sending forward rotation command, RL (Low-speed operation command), and JOG (Jog operation selection) simultaneously Binary: 0000000100001010 Decimal: 266 Write 266 to SP121.

(12)Alarm history ([FREQROL 800/E700NE(Batch monitor)])

○: Available
×: Not available

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series
					FR-E7□0-NE
AL0	Current fault	○	○	○	○
AL1	Current warning 1	×	○	○	×
AL2	Current warning 2	×	○	○	×
AL100	Faults history 1 (symbol)	○	○	○	○
AL101	Faults history 1 (output frequency)	○	○	○	○
AL102	Faults history 1 (output current)	○	○	○	○
AL103	Faults history 1 (output voltage)	○	○	○	○

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
AL104	Faults history 1 (energization time)	○	○	○	○
AL105	Faults history 1 (year)	○	○	○	×
AL106	Faults history 1 (month)	○	○	○	×
AL107	Faults history 1 (day)	○	○	○	×
AL108	Faults history 1 (hour)	○	○	○	×
AL109	Faults history 1 (minute)	○	○	○	×
AL200	Faults history 2 (symbol)	○	○	○	○
AL201	Faults history 2 (output frequency)	○	○	○	○
AL202	Faults history 2 (output current)	○	○	○	○
AL203	Faults history 2 (output voltage)	○	○	○	○
AL204	Faults history 2 (energization time)	○	○	○	○
AL205	Faults history 2 (year)	○	○	○	×
AL206	Faults history 2 (month)	○	○	○	×
AL207	Faults history 2 (day)	○	○	○	×
AL208	Faults history 2 (hour)	○	○	○	×
AL209	Faults history 2 (minute)	○	○	○	×
AL300	Faults history 3 (symbol)	○	○	○	○
AL301	Faults history 3 (output frequency)	○	○	○	○
AL302	Faults history 3 (output current)	○	○	○	○
AL303	Faults history 3 (output voltage)	○	○	○	○
AL304	Faults history 3 (energization time)	○	○	○	○
AL305	Faults history 3 (year)	○	○	○	×
AL306	Faults history 3 (month)	○	○	○	×
AL307	Faults history 3 (day)	○	○	○	×
AL308	Faults history 3 (hour)	○	○	○	×
AL309	Faults history 3 (minute)	○	○	○	×
AL400	Faults history 4 (symbol)	○	○	○	○
AL401	Faults history 4 (output frequency)	○	○	○	○
AL402	Faults history 4 (output current)	○	○	○	○
AL403	Faults history 4 (output voltage)	○	○	○	○
AL404	Faults history 4 (energization time)	○	○	○	○
AL405	Faults history 4 (year)	○	○	○	×
AL406	Faults history 4 (month)	○	○	○	×
AL407	Faults history 4 (day)	○	○	○	×
AL408	Faults history 4 (hour)	○	○	○	×
AL409	Faults history 4 (minute)	○	○	○	×
AL500	Faults history 5 (symbol)	○	○	○	○
AL501	Faults history 5 (output frequency)	○	○	○	○

Virtual device name	Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series FR-E7□0-NE
AL502	Faults history 5 (output current)	○	○	○	○
AL503	Faults history 5 (output voltage)	○	○	○	○
AL504	Faults history 5 (energization time)	○	○	○	○
AL505	Faults history 5 (year)	○	○	○	×
AL506	Faults history 5 (month)	○	○	○	×
AL507	Faults history 5 (day)	○	○	○	×
AL508	Faults history 5 (hour)	○	○	○	×
AL509	Faults history 5 (minute)	○	○	○	×
AL600	Faults history 6 (symbol)	○	○	○	○
AL601	Faults history 6 (output frequency)	○	○	○	○
AL602	Faults history 6 (output current)	○	○	○	○
AL603	Faults history 6 (output voltage)	○	○	○	○
AL604	Faults history 6 (energization time)	○	○	○	○
AL605	Faults history 6 (year)	○	○	○	×
AL606	Faults history 6 (month)	○	○	○	×
AL607	Faults history 6 (day)	○	○	○	×
AL608	Faults history 6 (hour)	○	○	○	×
AL609	Faults history 6 (minute)	○	○	○	×
AL700	Faults history 7 (symbol)	○	○	○	○
AL701	Faults history 7 (output frequency)	○	○	○	○
AL702	Faults history 7 (output current)	○	○	○	○
AL703	Faults history 7 (output voltage)	○	○	○	○
AL704	Faults history 7 (energization time)	○	○	○	○
AL705	Faults history 7 (year)	○	○	○	×
AL706	Faults history 7 (month)	○	○	○	×
AL707	Faults history 7 (day)	○	○	○	×
AL708	Faults history 7 (hour)	○	○	○	×
AL709	Faults history 7 (minute)	○	○	○	×
AL800	Faults history 8 (symbol)	○	○	○	○
AL801	Faults history 8 (output frequency)	○	○	○	○
AL802	Faults history 8 (output current)	○	○	○	○
AL803	Faults history 8 (output voltage)	○	○	○	○
AL804	Faults history 8 (energization time)	○	○	○	○
AL805	Faults history 8 (year)	○	○	○	×
AL806	Faults history 8 (month)	○	○	○	×
AL807	Faults history 8 (day)	○	○	○	×
AL808	Faults history 8 (hour)	○	○	○	×
AL809	Faults history 8 (minute)	○	○	○	×

(13)Operation parameter ([FREQROL 800/E700NE(Batch monitor)])

○: Available

×: Not available

Virtual device name		Name	FR-A800 series FR-A800 Plus series FR-F800 series	FR-E800 series	FR-D800 series	FR-E700 series
						FR-E7□0-NE
OP0		Operation frequency(RAM)	○	○	○	○
OP1		Operation frequency (EEPROM)	○	○	○	○
OP2		Operation mode	○	○	○	○
OP3		Operating status	○	○	○	○
OP4*1*2*3	-	Input terminal command	○	○	○	○
	b0	CMD3: RL terminal				
	b1	CMD4: RM terminal				
	b2	CMD5: RH terminal				
	b3	CMD6: RT terminal				
	b4	CMD7: AU terminal				
	b5	CMD8: JOG terminal				
	b6	CMD9: CS terminal				
	b7	CMD10: MRS terminal				
	b8	CMD11: STOP terminal				
	b9	CMD12: RES terminal				
OP5*2	-	Input terminal command (Extend)	×	○*4	○*3	×
	b0	CMD48: NET X1 input				
	b1	CMD49: NET X2 input				
	b2	CMD50: NET X3 input				
	b3	CMD51: NET X4 input				
	b4	CMD52: NET X5 input				

*1 When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the device cannot be used.

*2 The monitor data can be changed by the settings of Pr.178 to Pr.189 (input terminal function selection). For the relationship between the parameters and terminals, refer to the following.

➟Manual of the inverter used

*3 The device is invalid for the initial state of the inverter in which a function that cannot be controlled by the GOT is set or no function is set.

Change the relevant setting in Pr.178 to Pr.189 (input terminal function selection).

*4 Use an inverter having SERIAL (serial No.) "□□211○○○○○○" or later.

SERIAL (serial No.) is provided on the rating plate of the inverter.

(14)Current value monitor ([FREQROL 800/E700NE(Batch monitor)])

○: Available

×: Not available

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV1	Output frequency/speed	×	×	×	○	×	×	×	×	×	○
	Output frequency	○	○	○	×	○	○	○	○	○	×
PV2	Output current	○	○	○	○	○	○	○	○	○	○
PV3	Output voltage	○	○	○	○	○	○	○	○	○	○
PV5	Frequency setting value/ speed setting	×	×	×	○	×	×	×	×	×	○
	Frequency setting value	○	○	○	×	○	○	○	○	○	×
PV6	Speed/machine speed	○	○	○	○	×	○	○	○	○	×
	Operation speed	×	×	×	×	○	×	×	×	×	×

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV7	Motor torque	○	○	○	○	○	○	○	○	○	○
PV8	Converter output voltage	○	○	○	○	○	○	○	○	○	○
PV9	Regenerative brake duty	○	○	○	○	○	×	○	○	○	○
PV10	Electronic thermal O/L relay load factor	○	○	○	○	○	○	○	○	○	○
PV11	Output current peak value	○	○	○	○	○	○	○	○	○	○
PV12	Converter output voltage peak value	○	○	○	○	○	○	○	○	○	○
PV13	Input power	○	○	○	○	○	○	○	○	○	×
PV14	Output power	○	○	○	○	○	○	○	○	○	○
PV17	Load meter	○	○	○	○	○	○	○	○	○	×
PV18	Motor excitation current	○	○	○	○	○	○	○	○	○	×
PV19	Position pulse	○	○	×	×	○	×	○	○	×	×
	Analog output signal for dancer tension control	×	×	○	○	×	×	×	×	×	×
PV20	Cumulative energization time	○	○	○	○	○	○	○	○	○	○
PV22	Orientation status	○	○	×	×	○	×	○	○	×	×
	Winding diameter	×	×	○	○	×	×	×	×	×	×
PV23	Actual operation time	○	○	○	○	○	○	○	○	○	○
PV24	Motor load factor	○	○	○	○	○	○	○	○	○	○
PV25	Cumulative power	○	○	○	○	○	○	○	○	○	○
PV26	Position command (lower digits)	×	○	×	×	×	×	○	○	×	×
	Line speed command	×	×	○	○	×	×	×	×	×	×
PV27	Position command (upper digits)	×	○	×	×	×	×	○	○	×	×
	Actual line speed	×	×	○	○	×	×	×	×	×	×
PV28	Current position (lower digits)	×	○	×	×	×	×	○	○	×	×
	Dancer compensation speed	×	×	○	○	×	×	×	×	×	×
PV29	Current position (upper digits)	×	○	×	×	×	×	○	○	×	×
	Winding length (upper + lower)	×	×	○	○	×	×	×	×	×	×
PV30	Droop pulse (lower digits)	×	○	×	×	×	×	○	○	×	×
	Analog output signal 2 for dancer tension control	×	×	○	○	×	×	×	×	×	×
PV31	Droop pulse (upper digits)	×	○	×	×	×	×	○	○	×	×
	Line speed pulse monitor	×	×	○	○	×	×	×	×	×	×
PV32	Torque command	○	○	○	○	○	×	○	○	○	×
PV33	Torque current command	○	○	○	○	○	×	○	○	○	×
PV34	Motor output	○	○	○	○	○	○	×	×	×	×
PV35	Feedback pulse	○	○	○	○	○	×	○	○	×	×
PV36	Torque (positive polarity for driving torque/ negative polarity for regenerative braking torque)	○	○	○	○	○	×	×	×	×	×
PV37	Heat sink temperature	×	×	×	×	×	×	×	×	○	×

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV38	Trace status	×	○	○	○	×	×	×	×	×	×
PV39	SSCNET III(/H) communication status	○	○	×	×	○	×	×	×	×	×
PV40	PLC function user monitor 1	○	○	○	○	○	○	○	○	×	×
PV41	PLC function user monitor 2	○	○	○	○	○	○	○	○	×	×
PV42	PLC function user monitor 3	○	○	○	○	○	○	○	○	×	×
PV43	Station number (RS-485 terminals)	×	○	○	○	×	×	×	×	×	×
PV44	Station number (PU)	×	○	○	○	×	×	×	×	×	×
PV45	Station number (CC-Link)	×	○	○	○	×	×	×	×	×	×
PV46	Motor temperature	○	○	○	○	○	×	×	×	×	×
PV50	Energy saving effect	○	○	○	○	○	○	○	○	×	×
	Power saving effect / Energy saving effect	×	×	×	×	×	×	×	×	○	×
PV51	Cumulative energy saving	○	○	○	○	○	○	○	○	×	×
	Cumulative saved energy / Cumulative energy saving	×	×	×	×	×	×	×	×	○	×
PV52	PID set point	○	○	○	○	○	○	○	○	○	○
PV53	PID measured value	○	○	○	○	○	○	○	○	○	○
PV54	PID deviation	○	○	○	○	○	○	○	○	○	○
PV61	Motor thermal load factor	○	○	○	○	○	○	○	○	○	○
PV62	Inverter thermal load factor	○	○	○	○	○	○	○	○	○	○
PV63	Cumulative power 2	×	×	×	×	×	×	×	×	×	○
	Winding length (upper)	×	×	○	○	×	×	×	×	×	×
PV64	PTC thermistor resistance	○	○	○	○	○	○	○	○	○	×
PV65	Ideal speed command	×	×	×	×	×	×	○	○	×	×
PV67	PID measured value 2	○	○	○	○	○	○	○	○	○	×
PV68	Emergency drive status	×	×	×	×	×	×	○	○	○	×
PV69	PID input pressure value	×	×	×	×	×	○	×	×	×	×
PV71	Cumulative pulse	○	○	○	○	○	×	○	○	×	×
PV72	Cumulative pulse overflow times	○	○	○	○	○	×	○	○	×	×
PV73	Cumulative pulse (control terminal option)	○	○	○	○	○	×	×	×	×	×
PV74	Cumulative pulse overflow times (control terminal option)	○	○	○	○	○	×	×	×	×	×
PV75	Multi-revolution counter	○	○	×	×	○	×	×	×	×	×
PV77	32-bit cumulative energy (lower 16 bits)	×	×	×	○	×	×	×	×	×	×
PV78	32-bit cumulative energy (upper 16 bits)	×	×	×	○	×	×	×	×	×	×
PV79	32-bit cumulative energy (lower 16 bits)	×	×	×	○	×	×	×	×	×	×
PV80	32-bit cumulative energy (upper 16 bits)	×	×	×	○	×	×	×	×	×	×

Virtual device name	Name	FR-A800 series	FR-A800 Plus series				FR-F800 series	FR-E800 series		FR-D800 series	FR-E700 series
			CRN	R2R	AWH	LC		E800	E		FR-E7□0-NE
PV81	BACnet reception status	×	×	×	×	×	○	○	○	×	×
	Tension command after taper compensation	×	×	○	○	×	×	×	×	×	×
PV82	BACnet token pass counter	×	×	×	×	×	○	○	○	×	×
	Winding diameter compensation torque command	×	×	○	○	×	×	×	×	×	×
PV83	BACnet valid APDU counter	×	×	×	×	×	○	○	○	×	×
	Inertia compensation	×	×	○	○	×	×	×	×	×	×
PV84	BACnet communication error counter	×	×	×	×	×	○	○	○	×	×
	Mechanical loss compensation	×	×	○	○	×	×	×	×	×	×
PV85	BACnet terminal FM/CA output level	×	×	×	×	×	○	○	○	×	×
	Terminal 1 input voltage	×	×	○	○	×	×	×	×	×	×
PV86	BACnet terminal AM output level	×	×	×	×	×	○	○	○	×	×
	Terminal 1 input after calibration (%)	×	×	○	○	×	×	×	×	×	×
PV87	Remote output value 1	○	○	○	○	○	○	×	×	×	×
PV88	Remote output value 2	○	○	○	○	○	○	×	×	×	×
PV89	Remote output value 3	○	○	○	○	○	○	×	×	×	×
PV90	Remote output value 4	○	○	○	○	○	○	×	×	×	×
PV91	PID manipulated variable	○	○	○	○	○	○	○	○	○	×
PV92	Second PID set point	○	○	×	×	○	○	×	×	×	×
	PID torque control actual tension	×	×	○	×	×	×	×	×	×	×
PV93	Second PID measured value	○	○	×	×	○	○	×	×	×	×
	PID torque control manipulated tension	×	×	○	×	×	×	×	×	×	×
PV94	Second PID deviation	○	○	×	×	○	○	×	×	×	×
PV95	Second PID measured value 2	○	○	×	×	○	○	×	×	×	×
PV96	Second PID manipulated variable	○	○	×	×	○	○	×	×	×	×
PV97	Dancer main set speed (For FR-E800 and FR-E800-E, dancer main speed setting)	○	○	×	×	○	×	○	○	○	×
	Winding diameter compensation speed	×	×	○	○	×	×	×	×	×	×
PV98	Control circuit temperature	○	○	○	○	○	○	×	×	○	×

12.3.27 [Laser Displacement Sensor MH11]

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Only available to GT2104-PMBDS2.

Item	Reference
Specifications of bit devices	➟■1 Monitoring-supported bit devices ([Laser Displacement Sensor MH11])
	➟■2 Availability of writing/reading data to/from bit devices ([Laser Displacement Sensor MH11])
Specifications of word devices	➟■3 Monitoring-supported word devices ([Laser Displacement Sensor MH11])
	➟■4 Availability of writing/reading data to/from word devices ([Laser Displacement Sensor MH11])

■1 Monitoring-supported bit devices ([Laser Displacement Sensor MH11])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.27 ■2 Availability of writing/reading data to/from bit devices ([Laser Displacement Sensor MH11])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
R	Internal relay	Decimal + hexadecimal	R(Word address)(Bit address) Notation example: R100F • Word address (DEC): 000 to 999 • Bit address (HEX): 0 to F	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■2 Availability of writing/reading data to/from bit devices ([Laser Displacement Sensor MH11])

The following shows the availability of writing/reading data to/from bit devices by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
R	R/W	-/-	-/-	-/-	-/-

■3 Monitoring-supported word devices ([Laser Displacement Sensor MH11])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.3.27 ■4 Availability of writing/reading data to/from word devices ([Laser Displacement Sensor MH11])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DT	Data register	Decimal	0 to 99999	○	○
WR	Internal relay	Decimal	000 to 999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■4 Availability of writing/reading data to/from word devices ([Laser Displacement Sensor MH11])

The following shows the availability of writing/reading data to/from word devices by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DT	R/W	R/W	-/-	R/W
WR	R/W	R/W	-/-	-/-

12.4 Device Range and Settings of Each Controller

This section describes the range of devices settable in GT Designer3 for each of non-Mitsubishi Electric products connected to the GOT.
The settable range varies with the selection for [Controller Type] in the [Controller Setting] window.
Configure the device setting according to the specifications of the controller to be used.
Device specifications differ depending on the controller model even among the controllers of the same series.
If a non-existent device or a device number out of the range is set for an object, other objects for which correct devices are set may not be monitored.

➟12.4.1 IAI equipment ([IAI X-SEL Controller])
12.4.2 IAI equipment ([IAI ROBO CYLINDER])
12.4.3 AZBIL equipment ([Azbil SDC/DMC])
12.4.4 AZBIL equipment ([Azbil DMC50])
12.4.5 OMRON equipment ([OMRON SYSMAC])
12.4.6 OMRON equipment ([OMRON NJ/NX])
12.4.7 OMRON equipment ([OMRON THERMAC/INPANEL NEO])
12.4.8 OMRON equipment ([OMRON Digital Temperature Controller])
12.4.9 KEYENCE equipment ([KEYENCE KV-700/1000/3000/5000/7000/8000])
12.4.10 KOYO EI equipment ([KOYO KOSTAC/DL])
12.4.11 JTEKT equipment ([JTEKT TOYOPUC-PC])
12.4.12 SHARP equipment ([SHARP JW])
12.4.13 SHINKO equipment ([Shinko Technos Controller])
12.4.14 CHINO equipment ([CHINO MODBUS device])
12.4.15 TOSHIBA equipment ([TOSHIBA PROSEC T/V])
12.4.16 TOSHIBA equipment ([TOSHIBA Unified Controller nv])
12.4.17 SHIBAURA MACHINE equipment ([SHIBAURA MACHINE TCmini])
12.4.18 PANASONIC equipment ([Panasonic MINAS A4])
12.4.19 PANASONIC equipment ([Panasonic MINAS A5])
12.4.20 PANASONIC IDS equipment ([Panasonic MEWNET-FP])
12.4.21 PANASONIC IDS equipment ([Panasonic FP7])
12.4.22 HITACHI IES equipment ([HITACHI IES EHV])
12.4.23 HITACHI IES equipment ([HITACHI IES HIDIC H])
12.4.24 HITACHI equipment ([HITACHI S10VE])
12.4.25 HITACHI equipment ([HITACHI S10mini/S10V])
12.4.26 HIRATA equipment ([Hirata HNC])
12.4.27 FUJI equipment ([FUJI Temperature Controller/Digital Controller])
12.4.28 FUJI equipment ([FUJI MICREX-F])
12.4.29 FUJI equipment ([FUJI MICREX-SX SPH])
12.4.30 MURATEC equipment ([Muratec MPC/MCR])
12.4.31 YASKAWA equipment ([YASKAWA GL/PROGIC8])
12.4.32 YASKAWA equipment ([YASKAWA CP9200(H)])
12.4.33 YASKAWA equipment ([YASKAWA CP9300MS(MC compatible)])
12.4.34 YASKAWA equipment ([YASKAWA MP2000/MP900/CP9200SH])
12.4.35 YASKAWA equipment ([YASKAWA MP3000])
12.4.36 YASKAWA equipment ([YASKAWA Robot Controller])
12.4.37 YOKOGAWA equipment ([YOKOGAWA STARDOM/FA500/FA-M3])
12.4.38 YOKOGAWA equipment ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])
12.4.39 RKC equipment ([RKC SR Mini HG])
12.4.40 ALLEN-BRADLEY equipment ([AB SLC500])
12.4.41 ALLEN-BRADLEY equipment ([AB MicroLogix])
12.4.42 ALLEN-BRADLEY equipment ([AB MicroLogix (Extended)])
12.4.43 ALLEN-BRADLEY equipment ([AB Control/CompactLogix])
12.4.44 ALLEN-BRADLEY equipment ([AB Control/CompactLogix(Tag)])
12.4.45 GE equipment ([GE Series 90])
12.4.46 LS IS equipment ([LS Industrial Systems XGK])
12.4.47 LS IS equipment ([LS Industrial Systems MASTER-K])
12.4.48 MITSUBISHI INDIA equipment ([MEI Nexgenie])
12.4.49 SICK equipment ([SICK Flexi Soft])
12.4.50 SIEMENS equipment ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

12.4.51 SIEMENS equipment ([SIEMENS S7-300/400])
12.4.52 SIEMENS equipment ([SIEMENS S7(Ethernet)])
12.4.53 SIEMENS equipment ([SIEMENS OP(Ethernet)])
12.4.54 CLPA ([CC-Link IE Field Network Basic])
12.4.55 CLPA ([SLMP])
12.4.56 MODBUS ([MODBUS Slave(GOT:Master)])
12.4.57 MODBUS ([MODBUS Master(GOT:Slave)])
12.4.58 ODVA ([DeviceNet])
12.4.59 OPC ([OPC UA])
12.4.60 PROFIBUS ([PROFIBUS DP])
12.4.61 Microcomputer ([Computer])

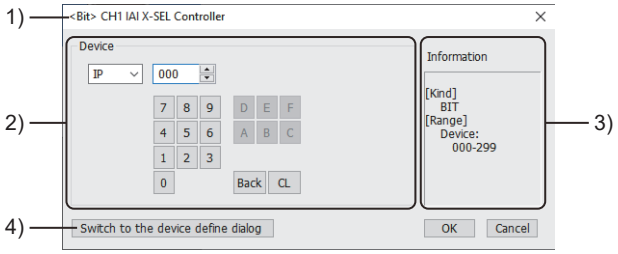
12.4.1 IAI equipment ([IAI X-SEL Controller])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([IAI X-SEL Controller])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([IAI X-SEL Controller])
	➟■3 Availability of writing/reading data to/from bit devices ([IAI X-SEL Controller])
Specifications of word devices	➟■4 Monitoring-supported word devices ([IAI X-SEL Controller])
	➟■5 Axis Status device details ([IAI X-SEL Controller])
	➟■6 Scara Axis Status device details ([IAI X-SEL Controller])
	➟■7 Version device details ([IAI X-SEL Controller])
	➟■8 Program Status device details ([IAI X-SEL Controller])
	➟■9 System Status device details ([IAI X-SEL Controller])
	➟■10 Servo device details ([IAI X-SEL Controller])
	➟■11 Write to Flash ROM device details ([IAI X-SEL Controller])
	➟■12 Return to Origin device details ([IAI X-SEL Controller])
	➟■13 Point Number Movement device details ([IAI X-SEL Controller])
	➟■14 Operation Stop/Cancel device details ([IAI X-SEL Controller])
	➟■15 Availability of writing/reading data to/from word devices ([IAI X-SEL Controller])
Specifications of double-word devices	➟■16 Monitoring-supported double-word devices ([IAI X-SEL Controller])
	➟■17 Coordinate Affiliate Data device details ([IAI X-SEL Controller])
	➟■18 Error Detail device details ([IAI X-SEL Controller])
	➟■19 Point Data device details ([IAI X-SEL Controller])
	➟■20 Simple Interference Check Zone Data device details ([IAI X-SEL Controller])
	➟■21 Jogging/Inching Movement device details ([IAI X-SEL Controller])
	➟■22 Availability of writing/reading data to/from double-word devices ([IAI X-SEL Controller])

■1 Device setting dialog ([IAI X-SEL Controller])

Set a device to be monitored.



1) Title

Data type and channel number of the device to be set

2) [Device]

Set the device name and device number.

If a bit number needs to be specified, the setting item is displayed.

Example) Setting of IP000

3) [Information]

Displays the setting range of each setting item according to the selected device.

4) [Switch to the device define dialog] button

You can open the device definition setting dialog to check the definition of the device.

➟6.1.6 ■6 Device definition setting dialog

■2 Monitoring-supported bit devices ([IAI X-SEL Controller])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.1 ■3 Availability of writing/reading data to/from bit devices ([IAI X-SEL Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
					Assignment to EG devices	Access using a client
IP	Input Port	Decimal	000 to 299		○	×
OP	Output Port	Decimal	300 to 599		○	×
FG	Flag	Decimal	FG(Program No.):(Flag No.) Notation example: FG000:899		○	×
			Global area	• Program No. (decimal): 000 • Flag No. (decimal): 600 to 899		
			Local area	• Program No. (decimal): 001 to 128 • Flag No. (decimal): 900 to 999		
PCLR	Point Data Clear	Hexadecimal	0001 to 4E20		○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([IAI X-SEL Controller])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IP	R/-	-/-	R/-	-/-	-/-
OP	R/W	-/-	R/W	-/-	-/-
FG	R/W	-/-	R/W	-/-	-/-
PCLR*1	-/W	-/-	-/W	-/-	-/-

*1 When a word device is specified, only 1 can be set for the rightmost digit of the device number.

■4 Monitoring-supported word devices ([IAI X-SEL Controller])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.1 ■15 Availability of writing/reading data to/from word devices ([IAI X-SEL Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
					Assignment to EG devices	Access using a client
PDT	Point Data Total Count	Decimal	0		×	×
STR	String	Decimal	STR(Program No.):(Variable No.) Notation example: STR000:998		○	×
			Global area	• Program No. (decimal): 000 • Variable No. (decimal): 300 to 998 (even numbers only)		
			Local area	• Program No. (decimal): 001 to 128 • Variable No. (decimal): 001 to 299 (odd numbers only)		
AXST	Axis Status	Hexadecimal	➟12.4.1 ■5 Axis Status device details ([IAI X-SEL Controller])		○	×
SAXS0	Scara Axis Status 0 (Base coordinate system)	Hexadecimal	➟12.4.1 ■6 Scara Axis Status device details ([IAI X-SEL Controller])		○	×
SAXS1	Scara Axis Status 1 (Selected work coordinate system)	Hexadecimal	➟12.4.1 ■6 Scara Axis Status device details ([IAI X-SEL Controller])		○	×
SAXS2	Scara Axis Status 2 (Reserved for system use)	Hexadecimal	➟12.4.1 ■6 Scara Axis Status device details ([IAI X-SEL Controller])		○	×
SAXS3	Scara Axis Status 3 (Each axis system)	Hexadecimal	➟12.4.1 ■6 Scara Axis Status device details ([IAI X-SEL Controller])		○	×
VR0	Version 0 (Main CPU application)	Hexadecimal	➟12.4.1 ■7 Version device details ([IAI X-SEL Controller])		○	×
VR1	Version 1 (Main CPU core)	Hexadecimal	➟12.4.1 ■7 Version device details ([IAI X-SEL Controller])		○	×
VR2	Version 2 (Driver CPU)	Hexadecimal	➟12.4.1 ■7 Version device details ([IAI X-SEL Controller])		○	×
VR3	Version 3 (Mount SIO)	Hexadecimal	➟12.4.1 ■7 Version device details ([IAI X-SEL Controller])		○	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PGST	Program Status	Decimal	➟12.4.1 ■8 Program Status device details ([IAI X-SEL Controller])	○	×
SYST	System Status	Decimal	➟12.4.1 ■9 System Status device details ([IAI X-SEL Controller])	○	×
PRG*2	Program Control	Decimal	000 to 128	○	×
AR	Alarm Reset	Decimal	0	×	×
SR*3	Software Reset	Decimal	0	×	×
DSR	Drive-Source Recovery	Decimal	0	×	×
OPR	Operation-Pause Reset	Decimal	0	×	×
SV*4	Servo	Decimal	➟12.4.1 ■10 Servo device details ([IAI X-SEL Controller])	○	×
FRW*4	Write to Flash ROM	Decimal	➟12.4.1 ■11 Write to Flash ROM device details ([IAI X-SEL Controller])	○	×
RO*4	Return to Origin	Decimal	➟12.4.1 ■12 Return to Origin device details ([IAI X-SEL Controller])	○	×
PNM*4	Point Number Movement	Decimal	➟12.4.1 ■13 Point Number Movement device details ([IAI X-SEL Controller])	○	×
OSC*4	Operation Stop/Cancel	Decimal	➟12.4.1 ■14 Operation Stop/Cancel device details ([IAI X-SEL Controller])	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 For the program control device, the command to be sent differs depending on the write data.
Write data other than the followings are processed as an internal error of the GOT.

- Write data 0: Program Exit Command (0x254)
- Write data 1: Program Execution Command (0x253)
- Write data 2: Program Pause Command (0x255)
- Write data 3: Program 1 Step Execution Command (0x256)
- Write data 4: Program Restart Command (0x257)

*3 When software reset is performed, a no response error is displayed after a non-communicating period of ten and several seconds, and then the communication is resumed.

*4 For the device whose obtained data No.0 is a command trigger, a request is sent to the controller when the Write or Read is input to the command trigger.
It is not sent when the Clear is input.

■5 Axis Status device details ([IAI X-SEL Controller])

(1) Axis Status device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Axis Status	AXST(Obtained data) Notation example: AXST00

The axis status device format includes the following elements.

Item	Description	
Obtained data	Setting range	00 to 2F
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■5 (2) Axis Status device definition ([IAI X-SEL Controller])

(2) Axis Status device definition ([IAI X-SEL Controller])

Obtained data		Device definition
00	-	Single-axis: Axis Status
	b0	Servo axis in use • 0: Not in use • 1: In use (moving or others) "Servo axis in use" indicates that a given task has the right to use the applicable axis. Therefore, this bit will turn on in the following conditions. • When an operation command involving axis movement is in progress (including when an axis is moving) • Servo is starting up from an OFF state • Servo is shutting down from an ON state (excluding emergency stop) • Operation axis is paused
	b1 to b2	Return to Origin • 0: Not yet performed • 1: Returning to origin • 2. Completed
	b3	Servo • 0: OFF • 1: ON
	b4	Operation command successful completion • 0: Not yet complete • 1: Completed successfully This can be used only to check the completion of the operation command.
	b5	Push error detection • 0: Not detected • 1: Detected
	b6 to b7	Reserved for system use
01	-	Single-axis: Axis sensor input status
	b0	Creep sensor • 0: OFF • 1: ON
	b1	Overrun sensor • 0: OFF • 1: ON
	b2	Origin sensor • 0: OFF • 1: ON
	b3	Reserved for system use
02		Single-axis: Axis error code
03	-	Single-axis: Encoder status
	b0	Overspeed (OS)
	b1	Full absolute status (FS)
	b2	Count error (CE)
	b3	Counter overflow (OF)
	b4	Reserved for system use
	b5	Multi-rotation error (ME)
	b6	Battery error (BE)
	b7	Battery alarm (BA)
04		Single-axis: Current position (lower 16 bits) unit (0.001 mm) Indicates the lower 16 bits of the current position in hexadecimal.
05		Single-axis Current position (upper 16 bits) unit (0.001 mm) Indicates the upper 16 bits of the current position in hexadecimal.
06 to 0B		Double axes data For the device definitions, refer to the definitions of the single-axis status (00 to 05).
:		:
2A to 2F		Eight axes status For the device definitions, refer to the definitions of the single-axis status (00 to 05).

■6 Scara Axis Status device details ([IAI X-SEL Controller])

(1) Scara Axis Status device format ([IAI X-SEL Controller])

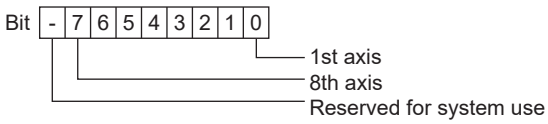
The following shows the format in the setting dialog of an object or others.

Device name	Format
Scara Axis Status 0 (Base coordinate system)	SAXS0(Obtained data) Notation example: SAXS004
Scara Axis Status 1 (Selected work coordinate system)	SAXS1(Obtained data) Notation example: SAXS104
Scara Axis Status 2 (Reserved for system use)	SAXS2(Obtained data) Notation example: SAXS204
Scara Axis Status 3 (Each axis system)	SAXS3(Obtained data) Notation example: SAXS304

The SCARA axis status device formats include the following elements.

Item		Description
Obtained data	Setting range	00 to FF
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■6 (2) Scara Axis Status device definition ([IAI X-SEL Controller])

(2) Scara Axis Status device definition ([IAI X-SEL Controller])

Obtained data		Device definition
00		Work coordinate system selection number
01		Tool coordinate system selection number
02	-	Common axis status
	b0 to b1	Scara axis current arm system • 0: Base coordinate system • 1: Selected work coordinate system • 2: Reserved for system use • 3: Each axis system
	b2 to b3	Scara axis current position coordinate system type • 0: Right arm system • 1: Left arm system • 2: Indeterminable • 3: Reserved for system use
	b4 to b7	Reserved for system use
03		Axis pattern 

Obtained data		Device definition
04	-	Single-axis: Axis Status
	b0	Servo axis in use • 0: Not in use • 1: In use (moving or others) "Servo axis in use" indicates that a given task has the right to use the applicable axis. Therefore, this bit will turn on in the following conditions. • When an operation command involving axis movement is in progress (including when an axis is moving) • Servo is starting up from an OFF state • Servo is shutting down from an ON state (excluding emergency stop) • Operation axis is paused
	b1 to b2	Return to Origin • 0: Not yet performed • 1: Returning to origin • 2. Completed
	b3	Servo • 0: OFF • 1: ON
	b4	Operation command successful completion • 0: Not yet complete • 1: Completed successfully This can be used only to check the completion of the operation command. For positioning that includes any of the X, Y and R axes, make sure to check completion for all of the X, Y and R axes.
	b5	Push error detection • 0: Not detected • 1: Detected
	b6 to b7	Reserved for system use
05	-	Single-axis: Axis sensor input status
	b0	Creep sensor • 0: OFF • 1: ON
	b1	Overrun sensor • 0: OFF • 1: ON
	b2	Origin sensor • 0: OFF • 1: ON
	b3	Reserved for system use
06		Single-axis: Axis error code
07	-	Single-axis: Encoder status
	b0	Overspeed (OS)
	b1	Full absolute status (FS)
	b2	Count error (CE)
	b3	Counter overflow (OF)
	b4	Reserved for system use
	b5	Multi-rotation error (ME)
	b6	Battery error (BE)
	b7	Battery alarm (BA)
08		Single-axis: Current position (lower 16 bits) unit (0.001 mm or 0.001 deg) Indicates the lower 16 bits of the current position in hexadecimal.
09		Single-axis: Current position (upper 16 bits) unit (0.001 mm or 0.001 deg) Indicates the upper 16 bits of the current position in hexadecimal.
0A to 0F		Double axes data For the device definitions, refer to the definitions of the single-axis status (04 to 09).
:		:
2E to 33		Eight axes data For the device definitions, refer to the definitions of the single-axis status (04 to 09).
34 to FF		Reserved for system use

■7 Version device details ([IAI X-SEL Controller])

(1) Version device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Version 0 (Main CPU application)	VR0(Device No.):(Obtained data) Notation example: VR0F:0
Version 1 (Main CPU core)	VR1(Device No.):(Obtained data) Notation example: VR1F:0
Version 2 (Driver CPU)	VR2(Device No.):(Obtained data) Notation example: VR2F:0
Version 3 (Mount SIO)	VR3(Device No.):(Obtained data) Notation example: VR3F:0

The version device formats include the following elements.

Item	Description	
Device No.	Setting range	0 to F
	Device No. representation	Hexadecimal
Obtained data	Setting range	0 to F
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■7 (2) Version device definition ([IAI X-SEL Controller])

(2) Version device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	Model code
1	Unit code
2	Version number
3	Time (year)
4	Time (month)
5	Time (day)
6	Time (hour)
7	Time (min)
8	Time (sec)
9 to F	Reserved for system use

■8 Program Status device details ([IAI X-SEL Controller])

(1) Program Status device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Program Status	PGST (Obtained data) Notation example: PGST000

The program status format includes the following elements.

Item	Description	
Obtained data	Setting range	000 to 511
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■8 (2) Program Status device definition ([IAI X-SEL Controller])

(2) Program Status device definition ([IAI X-SEL Controller])

Obtained data		Device definition
000	-	Program number 1: Status
	b0	Startup • 0: Not started • 1: Started
	b1 to b3	Reserved for system use
001		Program number 1: Execution program step number
002		Program number 1: Program-dependent error code
003		Program number 1: Error occurrence step number
004 to 007		Data of program number 2 For the device definitions, refer to the definitions of Program number 1 (000 to 003).
:		:
508 to 511		Data of program number 128 For the device definitions, refer to the definitions of Program number 1 (000 to 003).

■9 System Status device details ([IAI X-SEL Controller])

(1) System Status device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
System Status	SYST(Obtained data) Notation example: SYST0

The system status device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 6
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■9 (2) System Status device definition ([IAI X-SEL Controller])

(2) System Status device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	System mode • 0: Indeterminable • 1: AUTO mode • 2: MANUAL mode • 3: Slave update mode • 4: Core update mode
1	Critical level system error number
2	Latest system error number

Obtained data		Device definition
3	-	System status byte 1
	b0	Operation mode switch status • 0: AUTO • 1: MANUAL
	b1	TP enable switch status • 0: ON • 1: OFF X-SEL (P/Q series) (Multi axes/Scara) / SSEL / ASEL / PSEL / RSEL: This bit is disabled (fixed to 0).
	b2	Safety gate status • 0: CLOSE • 1: OPEN X-SEL (P/Q series) (Multi axes/Scara) / SSEL/ ASEL / PSEL / RSEL: This bit indicates the status of the enable switch or deadman switch.
	b3	Emergency stop switch status • 0: No emergency stop • 1: Emergency stop
	b4	Power error status • 0: Normal • 1: Error
	b5	Battery voltage low warning status • 0: Not low • 1: Low
	b6	Battery voltage error status • 0: No error • 1: Error
	b7	Reserved for system use
4	-	System status byte 2
	b0	Application data flash ROM write status • 0: Not writing/erasing • 1: Writing/erasing When the core program is in operation (Application update mode), only Bit 0 is enabled. Data for System mode, Critical level system error number, Latest system error number, System status byte 1, System status byte 3 and System status byte 4 is disabled.
	b1	Slave parameter writing status • 0: Not writing • 1: Writing
	b2	Servo interlock status • 0: No interlock • 1: Interlock
	b3	I/O interlock status • 0: No interlock • 1: Interlock
	b4	Restart wait status • 0: Not waiting • 1: Waiting
	b5	Program run status • 0: Not run • 1: Running
	b6 to b7	Reserved for system use

Obtained data		Device definition
5	-	System status byte 3
	b0	Drive-source cutoff status • 0: Not cut off • 1: Cut off
	b1	System operation status • 0: Not operating in AUTO mode • 1: Operating in AUTO mode
	b2	System ready status • 0: Not ready • 1: Ready
	b3	Reserved for system use
	b4	Operation mode • 0: Program mode • 1: Position mode
	b5 to b7	Reserved for system use
6		System status byte 4 Reserved for system use

■10 Servo device details ([IAI X-SEL Controller])

(1) Servo device format ([IAI X-SEL Controller])

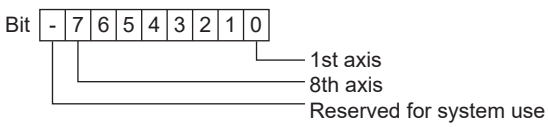
The following shows the format in the setting dialog of an object or others.

Device name	Format
Servo	SV(Obtained data) Notation example: SV0

The servo device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 2
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■10 (2) Servo device definition ([IAI X-SEL Controller])

(2) Servo device definition ([IAI X-SEL Controller])

Obtained data		Device definition
0		Servo: Command trigger • 1: Write • 4: Clear
1		Servo: Axis pattern 
2	-	Servo: Operation type
	b0	Servo ON/OFF • 0: OFF • 1: ON
	b1 to b3	Reserved for system use Fixed to 0

■11 Write to Flash ROM device details ([IAI X-SEL Controller])

(1) Write to Flash ROM device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Write to Flash ROM	FRW(Obtained data) Notation example: FRW0

The write to flash ROM device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 1
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■11 (2) Write to Flash ROM device definition ([IAI X-SEL Controller])

(2) Write to Flash ROM device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	Write to Flash ROM: Command trigger • 1: Write
1	Reserved for system use

■12 Return to Origin device details ([IAI X-SEL Controller])

(1) Return to Origin device format ([IAI X-SEL Controller])

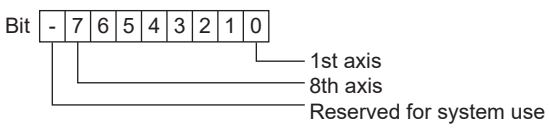
The following shows the format in the setting dialog of an object or others.

Device name	Format
Return to Origin	RO(Obtained data) Notation example: RO0

The return to origin device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 3
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■12 (2) Return to Origin device definition ([IAI X-SEL Controller])

(2) Return to Origin device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	Return to Origin: Command trigger • 1: Write • 4: Clear
1	Return to Origin: Axis pattern For the XSEL-JX/KX/KTX/PX/QX series controller, specify a linear drive axis only. 
2	Return to Origin: End search speed unit (mm/sec) When it is zero, the parameter value is enabled.
3	Return to Origin: Creep speed unit (mm/sec) When it is zero, the parameter value is enabled.

■13 Point Number Movement device details ([IAI X-SEL Controller])

(1) Point Number Movement device format ([IAI X-SEL Controller])

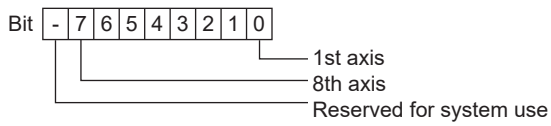
The following shows the format in the setting dialog of an object or others.

Device name	Format
Point Number Movement	PNM(Obtained data) Notation example: PNM0

The point number movement device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 5
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. "➡12.4.1 ■13 (2) Point Number Movement device definition ([IAI X-SEL Controller])"

(2) Point Number Movement device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	Point Number Movement: Command trigger • 1: Write • 4: Clear
1	Point Number Movement: Axis pattern 
2	Point Number Movement: Acceleration unit (0.01 G) When the setting value of the acceleration is zero, the relevant setting value of the position data is effective. When the setting value of the acceleration and the relevant setting value are both zero, the parameter value is effective.
3	Point Number Movement: Deceleration unit (0.01 G) When the setting value of the deceleration is zero, the relevant setting value of the position data is effective. When the setting value of the deceleration and the relevant setting value are both zero, the parameter value is effective.
4	Point Number Movement: Speed unit (mm/sec) When the setting value of the speed is zero, the relevant setting value of the position data is effective. When the setting value of the speed and the relevant setting value are both zero, the parameter value is effective. The safety limit value is applied depending on the mode.
5	Point Number Movement: Point number

■14 Operation Stop/Cancel device details ([IAI X-SEL Controller])

(1) Operation Stop/Cancel device format ([IAI X-SEL Controller])

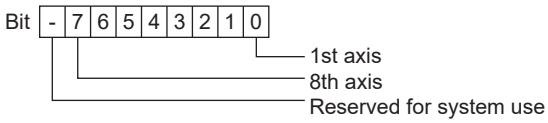
The following shows the format in the setting dialog of an object or others.

Device name	Format
Operation Stop/Cancel	OSC(Obtained data) Notation example: OSC0

The operation stop/cancel device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 2
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. "➡12.4.1 ■14 (2) Operation Stop/Cancel device definition ([IAI X-SEL Controller])"

(2) Operation Stop/Cancel device definition ([IAI X-SEL Controller])

Obtained data		Device definition
0		Operation Stop/Cancel: Command trigger • 1: Write • 4: Clear
1		Operation Stop/Cancel: Stop axis pattern Including during-interlock-pending servo command cancelation 
2	-	Operation Stop/Cancel: Additional command
	b0	During-interlock-pending output (out port) (during all operation pause) cancellation instruction • 0: Non-cancellation • 1: Temporary cancellation
	b1 to b7	Reserved for system use Fixed to 0

■15 Availability of writing/reading data to/from word devices ([IAI X-SEL Controller])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PDT	R/-	-/-	-/-	-/-
STR	R/W	-/-	-/-	-/-
AXST	R/-	-/-	-/-	-/-
SAXS0	R/-	-/-	-/-	-/-
SAXS1	R/-	-/-	-/-	-/-
SAXS2	R/-	-/-	-/-	-/-
SAXS3	R/-	-/-	-/-	-/-
VR0	R/-	-/-	-/-	-/-
VR1	R/-	-/-	-/-	-/-
VR2	R/-	-/-	-/-	-/-
VR3	R/-	-/-	-/-	-/-
PGST	R/-	-/-	-/-	-/-
SYST	R/-	-/-	-/-	-/-
PRG	-/W	-/-	-/-	-/-
AR	-/W	-/-	-/-	-/-
SR	-/W	-/-	-/-	-/-
DSR	-/W	-/-	-/-	-/-
OPR	-/W	-/-	-/-	-/-
SV	R/W	-/-	-/-	-/-
FRW	-/W	-/-	-/-	-/-
RO	R/W	-/-	-/-	-/-
PNM	R/W	-/-	-/-	-/-
OSC	R/W	-/-	-/-	-/-

■16 Monitoring-supported double-word devices ([IAI X-SEL Controller])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.1 ■22 Availability of writing/reading data to/from double-word devices ([IAI X-SEL Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
					Assignment to EG devices	Access using a client
CD0	Coordinate Affiliate Data 0 (Work coordinate system definition data)	Hexadecimal	➟12.4.1 ■17 Coordinate Affiliate Data device details ([IAI X-SEL Controller])		×	×
CD1	Coordinate Affiliate Data 1 (Tool coordinate system definition data)	Hexadecimal	➟12.4.1 ■17 Coordinate Affiliate Data device details ([IAI X-SEL Controller])		×	×
INT	Integer	Decimal	INT(Program No.):(Variable No.) Notation example: INT128:0200		×	×
			Global area	• Program No. (decimal): 000 • Variable No. (decimal): 0200 to 0299, 1200 to 1299		
			Local area	• Program No. (decimal): 001 to 128 • Variable No. (decimal): 0001 to 0099, 1001 to 1099		
RL	Real	Decimal	RL(Program No.):(Variable No.) Notation example: RL000:1399		×	×
			Global area	• Program No. (decimal): 000 • Variable No. (decimal): 0300 to 0399, 1300 to 1399		
			Local area	• Program No. (decimal): 001 to 128 • Variable No. (decimal): 0100 to 0199, 1100 to 1199		
ER0	Error Detail 0 (System error)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER1	Error Detail 1 (Axis-specific error)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER2	Error Detail 2 (Program-specific error)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER3	Error Detail 3 (Error in error list record)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER4	Error Detail 4 (Reserved for system use)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER5	Error Detail 5 (Reserved for system use)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER6	Error Detail 6 (Reserved for system use)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
ER7	Error Detail 7 (Reserved for system use)	Hexadecimal	➟12.4.1 ■18 Error Detail device details ([IAI X-SEL Controller])		×	×
PD	Point Data	Hexadecimal	➟12.4.1 ■19 Point Data device details ([IAI X-SEL Controller])		×	×
SD	Simple Interference Check Zone Data	Hexadecimal	➟12.4.1 ■20 Simple Interference Check Zone Data device details ([IAI X-SEL Controller])		×	×
JIM	Jogging/Inching Movement	Decimal	➟12.4.1 ■21 Jogging/Inching Movement device details ([IAI X-SEL Controller])		×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 For the device whose obtained data No.0 is a command trigger, a request is sent to the controller when the Write or Read is input to the command trigger.
It is not sent when the Clear is input.

■17 Coordinate Affiliate Data device details ([IAI X-SEL Controller])

(1) Coordinate Affiliate Data device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Coordinate Affiliate Data 0 (Work coordinate system definition data)	CD0(Definition data No.):(Obtained data) Notation example: CD0FF:0
Coordinate Affiliate Data 1 (Tool coordinate system definition data)	CD1(Definition data No.):(Obtained data) Notation example: CD1FF:0

The Coordinate Affiliate Data device formats include the following elements.

Item		Description
Definition data number	Setting range	00 to FF
	Device No. representation	Hexadecimal
Obtained data	Setting range	0 to F
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■17 (2) Coordinate Affiliate Data device definition ([IAI X-SEL Controller])

(2) Coordinate Affiliate Data device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	X axis coordinate offset
1	Y axis coordinate offset
2	Z axis coordinate offset
3	R axis coordinate offset
4 to F	Reserved for system use

■18 Error Detail device details ([IAI X-SEL Controller])

(1) Error Detail device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Error Detail 0 (System error)	ER0(Type2):(Reserved for system use):(Obtained data) Notation example: ER0FF:000:00
Error Detail 1 (Axis-specific error)	ER1(Type2):(Reserved for system use):(Obtained data) Notation example: ER1FF:000:00
Error Detail 2 (Program-specific error)	ER2(Type2):(Reserved for system use):(Obtained data) Notation example: ER2FF:000:00
Error Detail 3 (Error in error list record)	ER3(Type2):(Reserved for system use):(Obtained data) Notation example: ER3FF:000:00
Error Detail 4 (Reserved for system use)	ER4(Type2):(Reserved for system use):(Obtained data) Notation example: ER4FF:000:00
Error Detail 5 (Reserved for system use)	ER5(Type2):(Reserved for system use):(Obtained data) Notation example: ER5FF:000:00
Error Detail 6 (Reserved for system use)	ER6(Type2):(Reserved for system use):(Obtained data) Notation example: ER6FF:000:00
Error Detail 7 (Reserved for system use)	ER7(Type2):(Reserved for system use):(Obtained data) Notation example: ER7FF:000:00

The Error Detail device formats include the following elements.

Item	Description	
Type 2	Setting range	00 to FF
	Device No. representation	Hexadecimal
	Explanation	System error • 0: Critical level error • 1: Latest error
		Axis-specific error: Axis number
		Program-specific error: Program number
		Error in error list record: Record number (1 or later)
Reserved for system use	Setting range	000
	Device No. representation	Hexadecimal
Obtained data	Setting range	00 to FF
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. "➡12.4.1 ■18 (2) Error Detail device definition ([IAI X-SEL Controller])

(2) Error Detail device definition ([IAI X-SEL Controller])

Obtained data	Device definition
00	Error No.
01	Detail information 1 Other than system-down level error: Program number (Error source is indicated if the step number is not 0.) System-down level error: System down type
02	Detail information 2 Other than system-down level error: Step number (Error source) System-down level error: System down error code
03	Detail information 3 Other than system-down level error: Axis number System-down level error: System down information 1
04	Detail information 4 Other than system-down level error: Point number (Negative value at interpolation point) System-down level error: System down information 2
05	Detail information 5
06	Detail information 6
07	Detail information 7
08	Detail information 8
09	Message bytes
0A	Message 1
0B	Message 2
:	:
49	Message 64
50 to FF	Reserved for system use

■19 Point Data device details ([IAI X-SEL Controller])

(1) Point Data device format ([IAI X-SEL Controller])

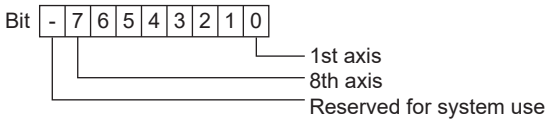
The following shows the format in the setting dialog of an object or others.

Device name	Format
Point Data	PD(Obtained data) Notation example: PD00

The Point Data device format includes the following elements.

Item	Description	
Obtained data	Setting range	00 to 9E
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➡12.4.1 ■19 (2) Point Data device definition ([IAI X-SEL Controller])

(2) Point Data device definition ([IAI X-SEL Controller])

Obtained data	Device definition
00	Point Data: Command trigger • 1: Write • 2: Read • 4: Clear
01	Point Data: Starting point number
02	Point Data: Number of point data
03	Point Data 1: Point number
04	Point Data 1: Axis pattern 
05	Point Data 1: Acceleration unit (0.01 G)
06	Point Data 1: Deceleration unit (0.01 G)
07	Point Data 1: Speed unit (mm/sec)
08	Point Data 1: 1st axis position data unit (0.001 mm)
09	Point Data 1: 2nd axis position data unit (0.001 mm)
0A	Point Data 1: 3rd axis position data unit (0.001 mm)
0B	Point Data 1: 4th axis position data unit (0.001 mm)
0C	Point Data 1: 5th axis position data unit (0.001 mm)
0D	Point Data 1: 6th axis position data unit (0.001 mm)
0E	Point Data 1: 7th axis position data unit (0.001 mm)
0F	Point Data 1: 8th axis position data unit (0.001 mm)
10 to 1C	Data of Point Data 2 For the device definition, refer to the definition of Point Data 1 (03 to 0F).
:	:
92 to 9E	Data of Point Data 12 For the device definition, refer to the definition of Point Data 1 (03 to 0F).

■20 Simple Interference Check Zone Data device details ([IAI X-SEL Controller])

(1) Simple Interference Check Zone Data device format ([IAI X-SEL Controller])

The following shows the format in the setting dialog of an object or others.

Device name	Format
Simple Interference Check Zone Data	SD(Definition data No.):(Obtained data) Notation example: SDFF:0

The Simple Interference Check Zone Data device format includes the following elements.

Item	Description	
Definition data number	Setting range	01 to FF
	Device No. representation	Hexadecimal
Obtained data	Setting range	0 to F
	Device No. representation	Hexadecimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■20 (2) Simple Interference Check Zone Data device definition ([IAI X-SEL Controller])

(2) Simple Interference Check Zone Data device definition ([IAI X-SEL Controller])

Obtained data	Device definition
0	Effective axis pattern
1	Simple interference check zone definition coordinate 1 X axis unit (0.001 mm (R axis: 0.001 deg))
2	Simple interference check zone definition coordinate 1 Y axis unit (0.001 mm (R axis: 0.002 deg))
3	Simple interference check zone definition coordinate 1 Z axis unit (0.001 mm (R axis: 0.003 deg))
4	Simple interference check zone definition coordinate 1 R axis unit (0.001 mm (R axis: 0.004 deg))
5	Simple interference check zone definition coordinate 2 X axis unit (0.001 mm (R axis: 0.001 deg))
6	Simple interference check zone definition coordinate 2 Y axis unit (0.001 mm (R axis: 0.002 deg))
7	Simple interference check zone definition coordinate 2 Z axis unit (0.001 mm (R axis: 0.003 deg))
8	Simple interference check zone definition coordinate 2 R axis unit (0.001 mm (R axis: 0.004 deg))
9	Physical output port number or global flag number for output upon entry
A	Entry error type specification • 0: No error handling • 1: Message-level error • 2: Operation-cancellation level error
B to F	Reserved for system use

■21 Jogging/Inching Movement device details ([IAI X-SEL Controller])

(1) Jogging/Inching Movement device format ([IAI X-SEL Controller])

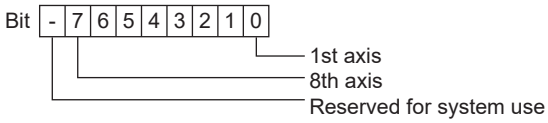
The following shows the format in the setting dialog of an object or others.

Device name	Format
Jogging/Inching Movement	JIM(Obtained data) Notation example: JIM0

The Jogging/Inching Movement device format includes the following elements.

Item	Description	
Obtained data	Setting range	0 to 6
	Device No. representation	Decimal
	Explanation	For the device definitions, refer to the following. ➟12.4.1 ■21 (2) Jogging/Inching Movement device definition ([IAI X-SEL Controller])

(2) Jogging/Inching Movement device definition ([IAI X-SEL Controller])

Obtained data		Device definition
0		Jogging/Inching Movement: Command trigger • 1: Write • 4: Clear
1		Jogging/Inching Movement: Axis pattern For SCARA controllers, only one SCARA axis can be specified. (Multiple axes cannot be specified.) For SCARA controllers, jog/inch commands are available only when all SCARA servo axes are in non-operating state. For X-SEL-PX/QX/RX/SX controllers, simultaneous specification of SCARA and linear drive axes is prohibited. 
2		Jogging/Inching Movement: Acceleration unit (0.01 G (% for each axis)) When it is zero, the parameter value is enabled.
3		Jogging/Inching Movement: Deceleration unit (0.01 G (% for each axis)) When it is zero, the parameter value is enabled.
4		Jogging/Inching Movement: Speed unit (mm/sec (% for each axis)) When it is zero, the parameter value is enabled. (The safety limit value is applied depending on the mode.)
5		Jogging/Inching Movement: Inch distance unit (0.001 mm (0.001 deg for each axis)) An absolute value is specified. When it is zero, no distance is specified (= Jog).
6	-	Jogging/Inching Movement: Operation type
	b0	Jog/inch direction • 0: Coordinate - Direction • 1: Coordinate + Direction
	b1 to b2	Jog/inch movement coordinate system (dedicated to SCARA) • 0: Base coordinate system • 1: Selected work coordinate system • 2: Selected work coordinate system • 3: Each axis system
	b3	Reserved for system use Fixed to 0

■22 Availability of writing/reading data to/from double-word devices ([IAI X-SEL Controller])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
CD0	-/-	R/-	-/-	-/-
CD1	-/-	R/-	-/-	-/-
INT	-/-	R/W	-/-	-/-
RL	-/-	R/W	-/-	-/-
ER0	-/-	R/-	-/-	-/-
ER1	-/-	R/-	-/-	-/-
ER2	-/-	R/-	-/-	-/-
ER3	-/-	R/-	-/-	-/-
ER4	-/-	R/-	-/-	-/-
ER5	-/-	R/-	-/-	-/-
ER6	-/-	R/-	-/-	-/-
ER7	-/-	R/-	-/-	-/-
PD	-/-	R/W	-/-	-/-
SD	-/-	R/-	-/-	-/-
JIM	-/-	R/W	-/-	-/-

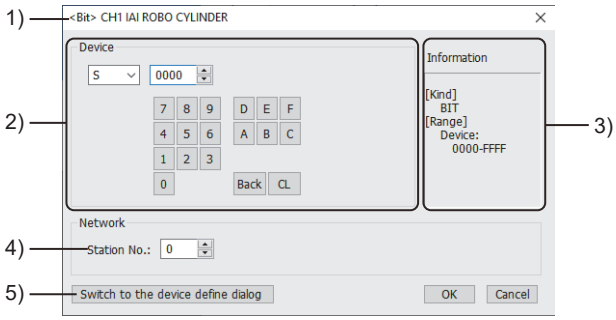
12.4.2 IAI equipment ([IAI ROBO CYLINDER])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([IAI ROBO CYLINDER])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([IAI ROBO CYLINDER])
	➟■3 Status device definition ([IAI ROBO CYLINDER])
	➟■4 Availability of writing/reading data to/from bit devices ([IAI ROBO CYLINDER])
Specifications of word devices	➟■5 Monitoring-supported word devices ([IAI ROBO CYLINDER])
	➟■6 Registers device definition ([IAI ROBO CYLINDER])
	➟■7 Availability of writing/reading data to/from word devices ([IAI ROBO CYLINDER])

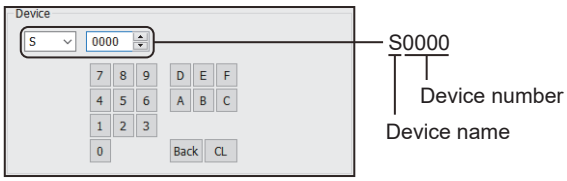
■1 Device setting dialog ([IAI ROBO CYLINDER])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of S0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [0] to [15] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([IAI ROBO CYLINDER])

5) [Switch to the device define dialog]
You can open the device definition setting dialog to check the definition of the device.

➟6.1.6 ■6 Device definition setting dialog

(1) Indirect specification of a station number ([IAI ROBO CYLINDER])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [15] Setting a value outside the above range causes a timeout error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([IAI ROBO CYLINDER])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.2 ■4 Availability of writing/reading data to/from bit devices ([IAI ROBO CYLINDER])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
S	Status	Hexadecimal	0000 to FFFF For the device definitions, refer to the following. ➟12.4.2 ■3 Status device definition ([IAI ROBO CYLINDER])	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Status device definition ([IAI ROBO CYLINDER])

Not available to the RCON series.

Status	Device definition	Symbol
0000 to 00FF	- (Reserved for system use)	-
0100	EMG status	EMGS
0101	Safety speed enabled status	SFTY
0102	Controller ready status	PWR
0103	Servo ON status	SV
0104	Missed work in push-motion operation	PSFL
0105	Major failure status	ALMH
0106	Minor failure status	ALML
0107	Absolute error status	ABER
0108	Brake forced-release status	BKRL
0109	Use prohibited	-
010A	Pause status	STP
010B	Home return status	HEND
010C	Position complete status	PEND
010D	Load cell calibration complete	CEND
010E	Load cell calibration status	CLBS
010F to 0111	Use prohibited	-
0112	Load output judgment status	LOAD
0113	Torque level status	TRQS

Status	Device definition	Symbol
0114	Teaching mode status	MODS
0115	Position-data load command status	TEAC
0116	Jog + status	JOG+
0117	Jog - status	JOG-
0118	Position complete 7	PE7
0119	Position complete 6	PE6
011A	Position complete 5	PE5
011B	Position complete 4	PE4
011C	Position complete 3	PE3
011D	Position complete 2	PE2
011E	Position complete 1	PE1
011F	Position complete 0	PE0
0120	Emergency stop status	EMGP
0121	Motor voltage low status	MPUV
0122	Operation mode status	RMDS
0123	Use prohibited	-
0124	Home returning status	GHMS
0125	Push-motion operation in progress	PUSH
0126	Excitation detection status	PSNS
0127	PIO/Modbus switching status	PMSS
0128 to 0129	Use prohibited	-
012A	Moving signal	MOVE
012B to 0135	Use prohibited	-
0136	Position complete number status bit 512	PM512
0137	Completed position number status bit 256	PM256
0138	Position complete number status bit 128	PM128
0139	Position complete number status bit 64	PM64
013A	Position complete number status bit 32/Executed program number status bit 32	PM32
013B	Position complete number status bit 16/Executed program number status bit 16	PM16
013C	Position complete number status bit 8/Executed program number status bit 8	PM8
013D	Position complete number status bit 4/Executed program number status bit 4	PM4
013E	Position complete number status bit 2/Executed program number status bit 2	PM2
013F	Position complete number status bit 1/Executed program number status bit 1	PM1
0140	Use prohibited	-
0141	Limit sensor output monitor 2	LS2
0142	Limit sensor output monitor 1	LS1
0143	Limit sensor output monitor 0	LS0
0144 to 0146	Use prohibited	-
0147	Position zone output monitor	ZP
0148 to 014D	Use prohibited	-
014E	Zone output monitor 2	Z2
014F	Zone output monitor 1	Z1
0150 to 015F	PIO connector pin number 20A(IN15) to PIO connector pin number 5A(IN0)	-
0160 to 016F	PIO connector pin number 16B(OUT15) to PIO connector pin number 1B(OUT0)	-
0170	Use prohibited	
0171	Command pulse NP signal status	NP
0172	Use prohibited	-

Status	Device definition	Symbol
0173	Command pulse PP signal status	PP
0174 to 0176	Use prohibited	-
0177	Mode switch status	MDSW
0178 to 017A	Use prohibited	-
017B	Belt breakage sensor monitor	BLCT
017C	Home-check sensor monitor	HMCK
017D	Overtravel sensor	OT
017E	Creep sensor	CREP
017F	Limit sensor	LS
0180 to 0183	Use prohibited	-
0184	Cold start level alarm	ALMC
0185 to 0186	Use prohibited	-
0187	RTC in use (ERC3, ACON-CA/CB and PCON-CA/CFA/CB/CFB only)	RTC
0188 to 0190	Use prohibited	-
0191	Waiting	WAIT
0192	While in returning operation	RTRN
0193	While in depression operation	DCMP
0194	Pressurize during the stop	PSTP
0195	While in pressurizing operation	PRSS
0196	While in probing operation	SERC
0197	While in approaching the operation	APRC
0198 to 019A	Use prohibited	-
019B	Program home return during the movement	MPHM
019C	Program alarm	PALM
019D	Program finished in normal condition	PCMP
019E	While in executing program	PRUN
019F	Program home position	PORG
01A0 to 01A9	Use prohibited	-
01AA	Load judgment NG	LJNG
01AB	Load judgment OK	LJOK
01AC	Position (distance) judgment NG	PJNG
01AD	Position (distance) judgment OK	PJOK
01AE	Total judgment NG	JDNG
01AF	Total judgment OK	JDOK
01B0 to 03FF	- (Reserved for system use)	-
0400	EMG operation specification	EMG
0401	Safety speed command	SFTY
0402	Use prohibited	-
0403	Servo ON command	SON
0404 to 0406	Use prohibited	-
0407	Alarm reset command	ALRS
0408	Brake forced-release command	BKRL
0409	Use prohibited	-
040A	Temporary stop command	STP
040B	Home return command	HOME
040C	Positioning start command	CSTR
040D to 0410	Use prohibited	-

Status	Device definition	Symbol
0411	Jog/inch switching	JISL
0412 to 0413	Use prohibited	-
0414	Teaching mode command	MOD
0415	Position data load command	TEAC
0416	Jog + command	JOG+
0417	Jog command	JOG-
0418	Start position 7	ST7
0419	Start position 6	ST6
041A	Start position 5	ST5
041B	Start position 4	ST4
041C	Start position 3	ST3
041D	Start position 2	ST2
041E	Start position 1	ST1
041F	Start position 0	ST0
0420 to 0425	Use prohibited	-
0426	Load cell calibration command	CLBR
0427	PIO/Modbus switching specification	PMSL
0428 to 042B	Use prohibited	-
042C	Deceleration stop	STOP
042D to 0435	Use prohibited	-
0436	Position command bit 512	PC512
0437	Position command bit 256	PC256
0438	Position command bit 128	PC128
0439	Position command bit 64	PC64
043A	Position command bit 32/Program number command bit 32	PC32
043B	Position command bit 16/Program number command bit 16	PC16
043C	Position command bit 8/Program number command bit 8	PC8
043D	Position command bit 4/Program number command bit 4	PC4
043E	Position command bit 2/Program number command bit 2	PC2
043F	Position command bit 1/Program number command bit 1	PC1
0440 to 048F	- (Reserved for system use)	-
0490 to 049A	Use prohibited	-
049B	Axis operation permission	ENMV
049C	Program home return movement	PHOM
049D	Search stop	SSTP
049E	Program compulsory finish	FPST
049F	Program start	PSTR
04A0 to FFFF	- (Reserved for system use)	-

■4 Availability of writing/reading data to/from bit devices ([IAI ROBO CYLINDER])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
S	R/W	-/-	-/-	-/-	-/-

■5 Monitoring-supported word devices ([IAI ROBO CYLINDER])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.2 ■7 Availability of writing/reading data to/from word devices ([IAI ROBO CYLINDER])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
R	Register	Hexadecimal	0000 to FFFF For the device definitions, refer to the following. ➟12.4.2 ■6 Registers device definition ([IAI ROBO CYLINDER])	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Registers device definition ([IAI ROBO CYLINDER])

(1) When using PCON, ACON, SCON, or ERC2

Register	Definition		Symbol
0000 to 04FF	- (Reserved for system use)		-
0500	Alarm detail code		ALA0
0501	Alarm address		ALA0
0502	Always 0		-
0503	Alarm code		ALC0
0504	Alarm occurrence time		ALT0
0506 to 0CFF	- (Reserved for system use)		-
0D00	Device control register 1		DRG1
0D01	Device control register 2		DRG2
0D03	Position number specification register/Program number specification register		POSR
0D04 to 0FFF	- (Reserved for system use)		-
1000 to 3FFE	For each position No., 15 points of word device are assigned. ***: 0 to 767 • Position No. 0: 1000 to 100E • Position No. 1: 1010 to 101E : • Position No. 767: 3FF0 to 3FFE	Position No.***: Target position (upper 16 bits)	PCMD
		Position No.***: Target position (lower 16 bits)	PCMD
		Position No.***: Positioning band (upper 16 bits)	INP
		Position No.***: Positioning band (lower 16 bits)	INP
		Position No.***: Speed command (upper 16 bits)	VCMD
		Position No.***: Speed command (lower 16 bits)	VCMD
		Position No.***: Individual zone boundary + (upper 16 bits)	ZNMP
		Position No.***: Individual zone boundary + (lower 16 bits)	ZNMP
		Position No.***: Individual zone boundary - (upper 16 bits)	ZNLP
		Position No.***: Individual zone boundary - (lower 16 bits)	ZNLP
		Position No.***: Acceleration command	ACMD
		Position No.***: Deceleration command	DCMD
		Position No.***: Push-current limiting value	PPOW
		Position No.***: Load current threshold	LPOW
		Position No.***: Control flag specification	CTLF
4000 to 83FF	- (Reserved for system use)		-

Register	Definition	Symbol
8400	Total moving count (upper 16 bits)	TLMC
8401	Total moving count (lower 16 bits)	TLMC
8402	Total moving distance (upper 16 bits)	ODOM
8403	Total moving distance (lower 16 bits)	ODOM
841E	Current time (SCON-CA/CAL/CB only) (upper 16 bits)	TIMN
841F	Current time (SCON-CA/CAL/CB only) (lower 16 bits)	TIMN
8420	Current time (PCON-CA/CFA/CB/CFB only) (upper 16 bits)	TIMN
8421	Current time (PCON-CA/CFA/CB/CFB only) (lower 16 bits)	TIMN
8422	Current time (ACON-CA/CB only) (upper 16 bits)	TIMN
8423	Current time (ACON-CA/CB only) (lower 16 bits)	TIMN
842A	Total FAN driving time (SCON-CAL, SCON-CB [400W or more] only) (upper 16 bits)	TFAN
842B	Total FAN driving time (SCON-CAL, SCON-CB [400W or more] only) (lower 16 bits)	TFAN
842E	Total FAN driving time (PCON-CFA/CFB only) (upper 16 bits)	TFAN
842F	Total FAN driving time (PCON-CFA/CFB only) (lower 16 bits)	TFAN
8430 to 8FFF	- (Reserved for system use)	-
9000	Current position register (upper 16 bits)	PNOW
9001	Current position register (lower 16 bits)	PNOW
9002	Present alarm code register	ALMC
9003	Input port register	DIPM
9004	Output port register	DOPM
9005	Device status 1 register	DSS1
9006	Device status 2 register	DSS2
9007	Expansion device status register	DSSE
9008	System status register (upper 16 bits)	STAT
9009	System status register (lower 16 bits)	STAT
900A	Current speed monitor register (upper 16 bits)	VNOW
900B	Current speed monitor register (lower 16 bits)	VNOW
900C	Current ampere monitor register (upper 16 bits)	CNOW
900D	Current ampere monitor register (lower 16 bits)	CNOW
900E	Deviation monitor register (upper 16 bits)	DEVI
900F	Deviation monitor register (lower 16 bits)	DEVI
9010	System timer register (upper 16 bits)	STIM
9011	System timer register (lower 16 bits)	STIM
9012	Special input port register	SIPM
9013	Zone status register	ZONS
9014	Positioning complete position No. register/Executed program No. register	POSS
9015	Expansion System status register	SSSE
9016 to 901D	- (Reserved for system use)	-
901E	Current load (SCON-CA/CB only) (upper 16 bits)	FBFC
901F	Current load (SCON-CA/CB only) (lower 16 bits)	FBFC
9020	Overload level monitor (upper 16 bits)	OLLV
9021	Overload level monitor (lower 16 bits)	OLLV
9022	Press program alarm code	ALMP
9023	Press program alarm generated program No.	ALMP
9024	Press program status register	PPST
9025	Press program judgment status register	PPJD
9026 to 97FF	- (Reserved for system use)	-

Register	Definition	Symbol
9800	Position movement command register	POSR
9801 to 98FF	- (Reserved for system use)	-
9900	Target position coordinate specification register (upper 16 bits)	PCMD
9901	Target position coordinate specification register (lower 16 bits)	PCMD
9902	Positioning band specification register (upper 16 bits)	INP
9903	Positioning band specification register (lower 16 bits)	INP
9904	Speed specification register (upper 16 bits)	VCMD
9905	Speed specification register (lower 16 bits)	VCMD
9906	Acceleration speed specification register	ACMD
9907	Push-current limiting value	PPOW
9908	Control flag specification register	CTLF
9909 to FFFF	- (Reserved for system use)	-

(2) When using RCON

Register	Definition	Symbol
0000 to 0CFF	- (Reserved for system use)	-
0D00	Device control register 1	DRG1
0D01	Device control register 2	DRG2
0D02 to 8FFF	- (Reserved for system use)	-
9000	Absolute Position Counter Current Position(Higher 16bit)	PNOW
9001	Absolute Position Counter Current Position(Lower 16bit)	PNOW
9002	Currently Occurred Alarm Code	ALMC
9005	Device Status Register 1	DSS1
9006	Device Status Register 2	DSS2
9007	Extension Device Status Register	DSSE
9008	System status(Higher 16bit)	STAT
9009	System status(Lower 16bit)	STAT
900A	Current Velocity Monitor(Higher 16bit)	VNOW
900B	Current Velocity Monitor(Lower 16bit)	VNOW
900C	Current (Torque Current)(Higher 16bit)	CNOW
900D	Current (Torque Current)(Lower 16bit)	CNOW
900E	Deviation Monitor(Higher 16bit)	DEVI
900F	Deviation Monitor(Lower 16bit)	DEVI
9010	System Timer(Higher 16bit)	STIM
9011	System Timer(Lower 16bit)	STIM
9012	Special Input Port Monitoring Register	SIPM
9013	Zone status register	ZONS
9014	Position Number Status Register	POSS
9015	Expansion System status register	SSSE
901A	Feedback urgent (Torque Current)(Higher 16bit)	CNWF
901B	Feedback urgent (Torque Current)(Lower 16bit)	CNWF
901C to 901F	- (Reserved for system use)	-
9020	Overload level monitor (upper 16 bits)	OLLV
9021	Overload level monitor (lower 16 bits)	OLLV
9030 to 92FF	- (Reserved for system use)	-
9300	Total moving count(Higher 16bit)	TTIM
9301	Total moving count(Lower 16bit)	TTIM
9302	Total drive distance(Higher 16bit)	ODOM
9303	Total drive distance(Lower 16bit)	ODOM
9304	Max. Drive Supply Voltage	FMAX
9305	Max. Control Voltage	VMAX
9306	Max. Motor Current(Higher 16bit)	CMAX
9307	Max. Motor Current(Lower 16bit)	CMAX
9308	Total conducting time(Higher 16bit)	TTIM
9309	Total conducting time(Lower 16bit)	TTIM
930A	Emergency Stop Input Count(Higher 16bit)	EMGC
930B	Emergency Stop Input Count(Lower 16bit)	EMGC
930C	Average PCB Temperature	TEMP
930D	Max. PCB Temperature	TEMP
930E	Max. PCB Temperature Detected Time(Higher 16bit)	TTPM
930F	Max. PCB Temperature Detected Time(Lower 16bit)	TTPM

Register	Definition	Symbol
9311	Max. Motor Overload Ratio	OLMX
9312	Max. Motor Overload Ratio Detected Time(Higher 16bit)	TOLM
9313	Max. Motor Overload Ratio Detected Time(Lower 16bit)	TOLM
9014 to 93FF	- (Reserved for system use)	-
9400	Serial code 1(Higher 16bit)	CTS1
9401	Serial code 1(Lower 16bit)	CTS1
9402	Serial code 2(Higher 16bit)	CTS2
9403	Serial code 2(Lower 16bit)	CTS2
9404	Serial code 3(Higher 16bit)	CTS3
9405	Serial code 3(Lower 16bit)	CTS3
9406	Serial code 4(Higher 16bit)	CTS4
9407	Serial code 4(Lower 16bit)	CTS4
9800	Position Number Indication Register	POSR
9801 to 98FF	- (Reserved for system use)	-
9900	Target position coordinate specification register (upper 16 bits)	PCMD
9901	Target position coordinate specification register (lower 16 bits)	PCMD
9902	Positioning band specification register (upper 16 bits)	INP
9903	Positioning band specification register (lower 16 bits)	INP
9904	Speed specification register (upper 16 bits)	VCMD
9905	Speed specification register (lower 16 bits)	VCMD
9906	Acceleration speed specification register	ACMD
9907	Push-current limiting value	PPOW
9908	Control flag specification register	CTLF
9909 to 99FF	- (Reserved for system use)	-
9A00	Target Position Indication Register(Higher 16bit)	PCMD
9A01	Target Position Indication Register(Lower 16bit)	PCMD
9A02	Position Number Indication Register (except for target position)	PPOS
9A03 to FFFF	- (Reserved for system use)	-

■7 Availability of writing/reading data to/from word devices ([IAI ROBO CYLINDER])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
R	R/W	R/W	-/-	R/W

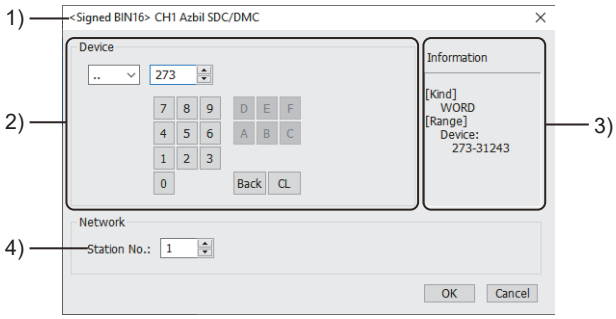
12.4.3 AZBIL equipment ([Azbil SDC/DMC])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Azbil SDC/DMC])
Specifications of word devices	➟■2 Monitoring-supported word devices ([Azbil SDC/DMC])
	➟■3 Availability of writing/reading data to/from word devices ([Azbil SDC/DMC])

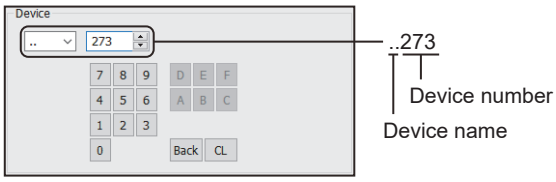
■1 Device setting dialog ([Azbil SDC/DMC])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..273



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [0] to [127] (direct) or [200] to [215] (indirect).
For indirect specification of a station number, refer to the following.
➟(1) Indirect specification of a station number ([Azbil SDC/DMC])

(1) Indirect specification of a station number ([Azbil SDC/DMC])

When you specify any of 200 to 215 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.
The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
200	GD10	[0] to [127] Setting a value outside the above range causes a device range error.
201	GD11	
:	:	
214	GD24	
215	GD25	

■2 Monitoring-supported word devices ([Azbil SDC/DMC])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.3 ■3 Availability of writing/reading data to/from word devices ([Azbil SDC/DMC])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..	Data	Decimal	273 to 31243	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

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■3 Availability of writing/reading data to/from word devices ([Azbil SDC/DMC])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
..	R/W	-/-	-/-	R/W

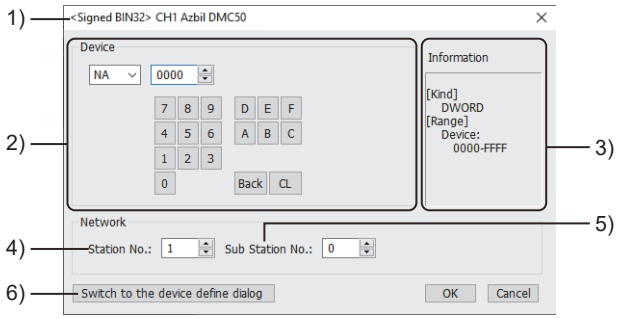
12.4.4 AZBIL equipment ([Azbil DMC50])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Azbil DMC50])
Specifications of double-word devices	➟■2 Monitoring-supported double-word devices ([Azbil DMC50])
	➟■3 Network Addresses device definition ([Azbil DMC50])
	➟■4 Parameter Addresses device definition ([Azbil DMC50])
	➟■5 Availability of writing/reading data to/from double-word devices ([Azbil DMC50])
Precautions	➟■6 Precautions ([Azbil DMC50])

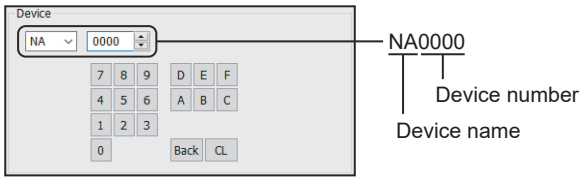
■1 Device setting dialog ([Azbil DMC50])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of NA0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify the station number of a COM module or control equipment.
The setting range is [1] to [15] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.
➟(1) Indirect specification of a station number ([Azbil DMC50])

5) [Sub Station No.]
Specify the sub station number of the control equipment that is connected to the COM module specified with [Station].
The setting range is [0] to [15].
If [Sub Station No.] is set to 0, the GOT monitors the COM module or the control equipment specified with [Station].
For AHC2001, [Sub Station No.] is ignored.

6) [Switch to the device define dialog]
You can open the device definition setting dialog to check the definition of the device.

➟6.1.6 ■6 Device definition setting dialog

(1) Indirect specification of a station number ([Azbil DMC50])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.
The upper 8 bits of the value in the GOT data register are regarded as the station number, and the lower 8 bits are regarded as the sub station number.
When a GD device is used as the station number, the setting of [Sub Station No.] becomes invalid.
The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	0x0000 to 0xFFFF
101	GD11	
:	:	
114	GD24	
115	GD25	

Example) When [Station] is set to 100
The value of GD10 determines the control equipment to be monitored.
GD10 = 0 × 010A
(Upper 8 bits) 0 × 01 → Station No.: 1
(Lower 8 bits) 0 × 0A → Sub station No.: 10

■2 Monitoring-supported double-word devices ([Azbil DMC50])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.4 ■5 Availability of writing/reading data to/from double-word devices ([Azbil DMC50])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
NA	Network Addresses	Hexadecimal	0000 to FFFF For the device definitions, refer to the following. ➟12.4.4 ■3 Network Addresses device definition ([Azbil DMC50])	×	×
PA	Parameter Addresses	Hexadecimal	(Parameter type ID)(Device) • Parameter type ID: 001 to 9FF • Device: 00000 to FFFFF For the definitions of the parameter type IDs, refer to the following. ➟12.4.4 ■4 Parameter Addresses device definition ([Azbil DMC50])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Network Addresses device definition ([Azbil DMC50])

Network Addresses	Definition
0000	Network Addresses

■4 Parameter Addresses device definition ([Azbil DMC50])

Parameter type ID	Definition
001	H/W Information
002	Date and Time Setup
021	AI Setup (High resolution type: standard inputs)

Parameter type ID	Definition
022	AI Setup (Special type)
023	AI Setup (High resolution type: option inputs)
041	AUX-IN Setup
045	AO Setup
061	DO Setup
071	TP Setup
074	Zener Barrier Adjustment Values
0A1	ME20X Communication Setup
0A2	MR20X Communication Setup
0A3	Front Port Communication Setup
0C1	System Status
0C3	Date and Time Display
0C4	System Alarm Log
0C5	AI Alarm Log
0C6	AUX-IN Alarm Log
0E1	AI Status
0E2	AUX-IN Status
0E3	AO Status
0E5	DI Status
0E6	DO Status
0E7	TP Status
0E8	Zener Barrier Adjustment Counts
0F1	Present ME20X Communication Setup
0F2	Present MR20X Communication Setup
0F3	Front Port Active Communication Setup
103	Memory Usage Monitor
201	PID_A Options
202	PID_A Constants
203	PID_A Monitor
211	PID_CAS Options
212	PID_CAS Constants (master)
213	PID_CAS Constants (slave)
214	PID_CAS Monitor
234	Ra_PID Options
235	Ra_PID Constants
236	Ra_PID Monitor
241	UP_PID Options
242	UP_PID Constants
243	UP_PID Monitor
301	TBL/TBR Setup
C00	Pattern Setup
C01 to C63	Segment Setup
CF1	Pattern FB Monitor
801 to 9FF	Type label defined by the user

■5 Availability of writing/reading data to/from double-word devices ([Azbil DMC50])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
NA	-/-	R/W	-/-	-/-
PA	-/-	R/-	-/-	-/-

■6 Precautions ([Azbil DMC50])

(1) Station No. and sub station No. of AZBIL DMC50

The station number and the sub station number set for the AZBIL DMC50 are equivalent to the network number and the station number set for the MITSUBISHI ELECTRIC PLC, respectively.
To set the control equipment to be monitored, set both the station number and the sub station number.

(2) Restrictions for the faulty station information, the control equipment, and servo amplifier monitor station disconnection

When the DMC50 is used, the GOT only monitors some stations.
For the details of the station numbers of the DMC50 to be monitored, refer to the following.

➟12.1.3 ■4 Read device list

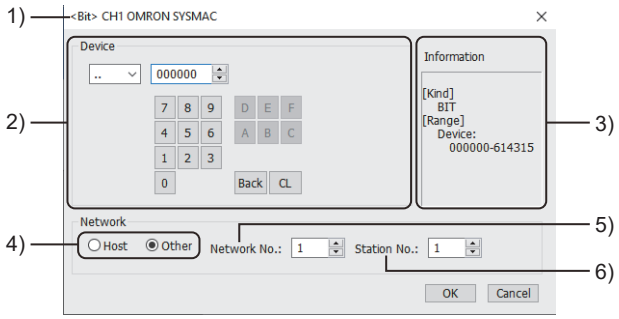
12.4.5 OMRON equipment ([OMRON SYSMAC])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([OMRON SYSMAC])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([OMRON SYSMAC])
	➟■3 Availability of writing/reading data to/from bit devices ([OMRON SYSMAC])
Specifications of word devices	➟■4 Monitoring-supported word devices ([OMRON SYSMAC])
	➟■5 Availability of writing/reading data to/from word devices ([OMRON SYSMAC])

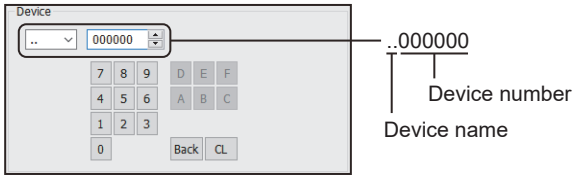
■1 Device setting dialog ([OMRON SYSMAC])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([OMRON SYSMAC])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.5 ■3 Availability of writing/reading data to/from bit devices ([OMRON SYSMAC])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..	I/O relay, Internal auxiliary relay	Decimal	..(Channel No.)(Bit No.) Notation example: ..614300 The two rightmost digits represent a bit number. • Channel No. (decimal): 0000 to 6143 • Bit No.: 00 to 15	○	○
LR	Data link relay	Decimal	LR(Channel No.)(Bit No.) Notation example: LR19900 The two rightmost digits represent a bit number. • Channel No. (decimal): 000 to 199 • Bit No.: 00 to 15	○	○
HR	Holding relay	Decimal	HR(Channel No.)(Bit No.) Notation example: HR51100 The two rightmost digits represent a bit number. • Channel No. (decimal): 000 to 511 • Bit No.: 00 to 15	○	○
WR	Internal auxiliary relay, Work relay	Decimal	WR(Channel No.)(Bit No.) Notation example: WR51100 The two rightmost digits represent a bit number. • Channel No. (decimal): 000 to 511 • Bit No.: 00 to 15	○	○
TIM	Timer contact	Decimal	0 to 4095	○	○
CNT	Counter contact	Decimal	0 to 4095	○	○
AR	Auxiliary memory relay	Decimal	AR(Channel No.)(Bit No.) Notation example: AR1153500 The two rightmost digits represent a bit number. • Channel No. (decimal): 00000 to 11535 • Bit No.: 00 to 15	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([OMRON SYSMAC])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
..	R/W	-/-	R/W	R/W	-/-
LR	R/W	-/-	R/W	R/W	-/-
HR	R/W	-/-	R/W	R/W	-/-
WR	R/W	-/-	R/W	R/W	-/-
TIM	R/-	-/-	R/-	R/-	-/-
CNT	R/-	-/-	R/-	R/-	-/-
AR	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([OMRON SYSMAC])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.5 ■5 Availability of writing/reading data to/from word devices ([OMRON SYSMAC])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TIM	Timer (current value)*3*4	Decimal	0 to 4095	○	○
CNT	Counter (current value)*3*4	Decimal	0 to 4095	○	○
DM	Data memory	Decimal	0 to 32767	○	○
EM*2	Extension data memory, EM current bank	Decimal	0 to 32767	○	○
E*2	Extension data memory	Hexadecimal + decimal	E(Bank No.)-(Device) Notation example: E18-100 • Bank No. (hexadecimal): 0 to 18 • Device (decimal): 0 to 32767	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Writing or reading data extending across banks is not possible.
*3 A valid value ranges from 0 to 9999.
(This applies to the 16 bit/32 bit device data.)
*4 This is handled as a BCD value in the PLC. When serial connection is used between the PLC and the GOT, this is handled as an unsigned 16-bit binary data in the GOT.
For the object for monitoring on the GOT, select [Unsigned BIN16] for [Data Type].

■5 Availability of writing/reading data to/from word devices ([OMRON SYSMAC])

The following shows whether writing/reading data to/from word devices is available by device type.
When executing the touch switch function that has been set during the bit specification of the word device, do not write any data to the word device through the sequence program.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TIM	R/W	R/W	-/-	R/W
CNT	R/W	R/W	-/-	R/W
DM	R/W	R/W	-/-	R/W
EM	R/W	R/W	-/-	R/W
E	R/W	R/W	-/-	R/W

12.4.6 OMRON equipment ([OMRON NJ/NX])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

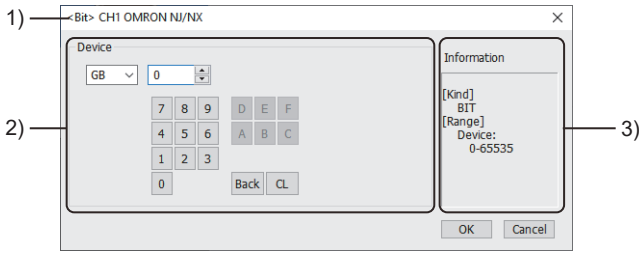
Not available to GT2105-Q.

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([OMRON NJ/NX])
Device specifications	➟■2 Monitoring-supported devices ([OMRON NJ/NX])

■1 Device setting dialog ([OMRON NJ/NX])

Set a device to be monitored.
In the device setting dialog, only GOT internal devices are settable.
For setting the OMRON NJ/NX tags, refer to the following.

➟6.1.7 How to set OMRON NJ/NX tags



1) Title
   Data type and channel number of the device to be set
2) [Device]
   Set the device name and device number.
   If a bit number needs to be specified, the setting item is displayed.
3) [Information]
   Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported devices ([OMRON NJ/NX])

To monitor the OMRON NJ or NX series, use OMRON NJ/NX tags.
For the usable OMRON NJ/NX tags, refer to the following.

➟6.1.7 ■1 Usable OMRON NJ/NX tags

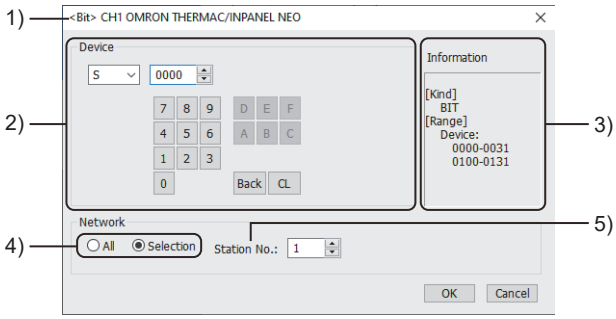
12.4.7 OMRON equipment ([OMRON THERMAC/INPANEL NEO])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([OMRON THERMAC/INPANEL NEO])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([OMRON THERMAC/INPANEL NEO])
	➟■3 Availability of writing/reading data to/from bit devices ([OMRON THERMAC/INPANEL NEO])
Specifications of word devices	➟■4 Monitoring-supported word devices ([OMRON THERMAC/INPANEL NEO])
	➟■5 Availability of writing/reading data to/from word devices ([OMRON THERMAC/INPANEL NEO])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([OMRON THERMAC/INPANEL NEO])
	➟■7 Availability of writing/reading data to/from double-word devices ([OMRON THERMAC/INPANEL NEO])

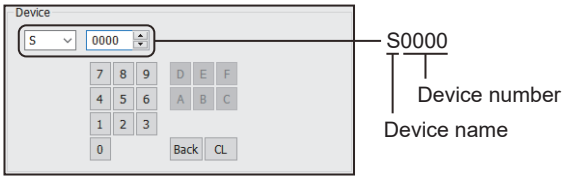
■1 Device setting dialog ([OMRON THERMAC/INPANEL NEO])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of S0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Monitor target specification
Set the monitoring target of the set device.

Item	Description
[All]	Select this when writing data to all temperature controllers. During monitoring, the temperature controller of station No. 1 is monitored. When writing the data in numerical input, data is written to all connected temperature controllers during input, and the temperature controller of station No. 1 is monitored during other than input (displaying).
[Selection]	Select this item when monitoring the indicating controller that has the specified station number.

5) [Station No.]

This item appears when [Selection] is selected for the monitor target specification.

The setting range is [0] to [99] (direct) or [100] to [115] (indirect).

For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([OMRON THERMAC/INPANEL NEO])

(1) Indirect specification of a station number ([OMRON THERMAC/INPANEL NEO])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [99] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([OMRON THERMAC/INPANEL NEO])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.7 ■3 Availability of writing/reading data to/from bit devices ([OMRON THERMAC/INPANEL NEO])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
S	Status	Decimal	S(Channel No.)(Bit No.) Notation example: S0100 • Channel No. (decimal): 00 to 01 • Bit No. (decimal): 00 to 31	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([OMRON THERMAC/INPANEL NEO])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
S	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([OMRON THERMAC/INPANEL NEO])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.7 ■5 Availability of writing/reading data to/from word devices ([OMRON THERMAC/INPANEL NEO])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
A*2	Operation command	Hexadecimal	0000 to 0011	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Numerical input cannot be used.
Use a word switch for writing.

■5 Availability of writing/reading data to/from word devices ([OMRON THERMAC/INPANEL NEO])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
A	-/W	-/-	-/-	-/-

■6 Monitoring-supported double-word devices ([OMRON THERMAC/INPANEL NEO])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.7 ■7 Availability of writing/reading data to/from double-word devices ([OMRON THERMAC/INPANEL NEO])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
C0	Variable area 0	Decimal + hexadecimal	C0(Channel No.)(Address) Notation example: C00100 • Channel No. (decimal): 00 to 01 • Address (hexadecimal): 00 to 13	×	×
C1	Variable area 1	Decimal + hexadecimal	C1(Channel No.)(Address) Notation example: C10100 • Channel No. (decimal): 00 to 01 • Address (hexadecimal): 00 to 31	×	×
C3	Variable area 3	Decimal + hexadecimal	C3(Channel No.)(Address) Notation example: C30100 • Channel No. (decimal): 00 to 01 • Address (hexadecimal): 00 to 83	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([OMRON THERMAC/ INPANEL NEO])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
C0	-/-	R/-	-/-	-/-
C1	-/-	R/W	-/-	-/-
C3	-/-	R/W	-/-	-/-

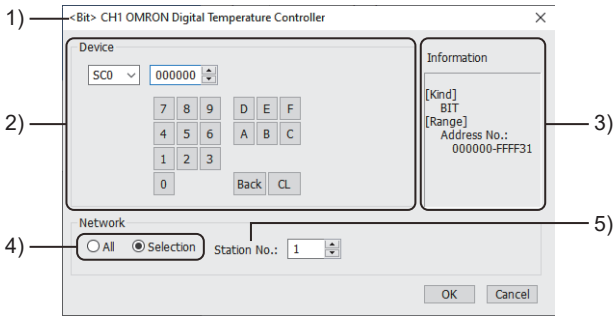
12.4.8 OMRON equipment ([OMRON Digital Temperature Controller])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([OMRON Digital Temperature Controller])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([OMRON Digital Temperature Controller])
	➟■3 Availability of writing/reading data to/from bit devices ([OMRON Digital Temperature Controller])
Specifications of word devices	➟■4 Monitoring-supported word devices ([OMRON Digital Temperature Controller])
	➟■5 Availability of writing/reading data to/from word devices ([OMRON Digital Temperature Controller])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([OMRON Digital Temperature Controller])
	➟■7 Availability of writing/reading data to/from double-word devices ([OMRON Digital Temperature Controller])

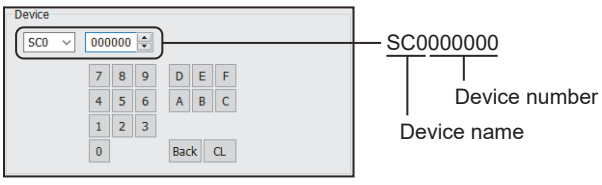
■1 Device setting dialog ([OMRON Digital Temperature Controller])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of SC0000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Monitor target specification
Set the monitoring target of the set device.

Item	Description
[All]	Select this when writing data to all temperature controllers. During monitoring, the temperature controller of station No. 1 is monitored. When writing the data in numerical input, data is written to all connected temperature controllers during input, and the temperature controller of station No. 1 is monitored during other than input (displaying).
[Selection]	Select this item when monitoring the indicating controller that has the specified station number.

5) [Station No.]

This item appears when [Selection] is selected for the monitor target specification.

The setting range is [0] to [99] (direct) or [100] to [115] (indirect).

For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([OMRON Digital Temperature Controller])

(1) Indirect specification of a station number ([OMRON Digital Temperature Controller])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [99] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([OMRON Digital Temperature Controller])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.8 ■3 Availability of writing/reading data to/from bit devices ([OMRON Digital Temperature Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
SC0	Status(Variable type C0)	Hexadecimal + decimal	SC0(Address No.)(Bit No.) Notation example: SC0FFFF00 • Address number (hexadecimal): 0000 to FFFF • Bit No. (decimal): 00 to 31	○	○ (Not usable as word data)
SC4	Status(Variable type C4)	Hexadecimal + decimal	SC4(Address No.)(Bit No.) Notation example: SC4FFFF00 • Address number (hexadecimal): 0000 to FFFF • Bit No. (decimal): 00 to 31	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([OMRON Digital Temperature Controller])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SC0	R/-	-/-	-/-	-/-	-/-
SC4	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([OMRON Digital Temperature Controller])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.8 ■5 Availability of writing/reading data to/from word devices ([OMRON Digital Temperature Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
A*2	Operation command	Hexadecimal	0000 to 00FF	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Numerical input cannot be used.
Use a word switch for writing.

■5 Availability of writing/reading data to/from word devices ([OMRON Digital Temperature Controller])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
A	-/W	-/-	-/-	-/-

■6 Monitoring-supported double-word devices ([OMRON Digital Temperature Controller])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.8 ■7 Availability of writing/reading data to/from double-word devices ([OMRON Digital Temperature Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
C0	Variable area C0	Hexadecimal	0000 to FFFF	×	×
C1	Variable area C1	Hexadecimal	0000 to FFFF	×	×
C3	Variable area C3	Hexadecimal	0000 to FFFF	×	×
C4	Variable area C4	Hexadecimal	0000 to FFFF	×	×
C5	Variable area C5	Hexadecimal	0000 to FFFF	×	×
C6	Variable area C6	Hexadecimal	0000 to FFFF	×	×
C7	Variable area C7	Hexadecimal	0000 to FFFF	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
C8	Variable area C8	Hexadecimal	0000 to FFFF	×	×
C9	Variable area C9	Hexadecimal	0000 to FFFF	×	×
CA	Variable area CA	Hexadecimal	0000 to FFFF	×	×
CB	Variable area CB	Hexadecimal	0000 to FFFF	×	×
CC	Variable area CC	Hexadecimal	0000 to FFFF	×	×
CD	Variable area CD	Hexadecimal	0000 to FFFF	×	×
CE	Variable area CE	Hexadecimal	0000 to FFFF	×	×
CF	Variable area CF	Hexadecimal	0000 to FFFF	×	×
D0	Variable area D0	Hexadecimal	0000 to FFFF	×	×
D1	Variable area D1	Hexadecimal	0000 to FFFF	×	×
D2	Variable area D2	Hexadecimal	0000 to FFFF	×	×
D3	Variable area D3	Hexadecimal	0000 to FFFF	×	×
D8	Variable area D8	Hexadecimal	0000 to FFFF	×	×
D9	Variable area D9	Hexadecimal	0000 to FFFF	×	×
DA	Variable area DA	Hexadecimal	0000 to FFFF	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([OMRON Digital Temperature Controller])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
C0	-/-	R/-	-/-	-/-
C1	-/-	R/W	-/-	-/-
C3	-/-	R/W	-/-	-/-
C4	-/-	R/W	-/-	-/-
C5	-/-	R/W	-/-	-/-
C6	-/-	R/W	-/-	-/-
C7	-/-	R/W	-/-	-/-
C8	-/-	R/W	-/-	-/-
C9	-/-	R/W	-/-	-/-
CA	-/-	R/W	-/-	-/-
CB	-/-	R/W	-/-	-/-
CC	-/-	R/W	-/-	-/-
CD	-/-	R/W	-/-	-/-
CE	-/-	R/W	-/-	-/-
CF	-/-	R/W	-/-	-/-
D0	-/-	R/W	-/-	-/-
D1	-/-	R/W	-/-	-/-
D2	-/-	R/W	-/-	-/-
D3	-/-	R/W	-/-	-/-
D8	-/-	R/W	-/-	-/-
D9	-/-	R/W	-/-	-/-
DA	-/-	R/W	-/-	-/-

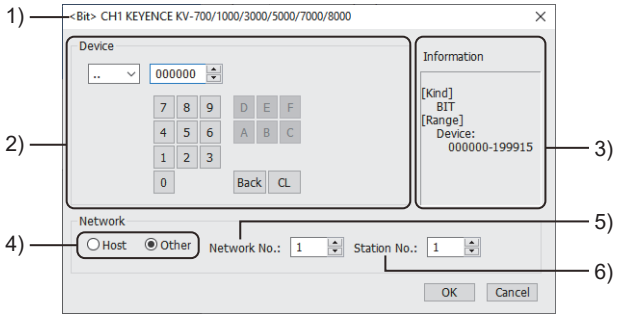
12.4.9 KEYENCE equipment ([KEYENCE KV-700/1000/3000/5000/7000/8000])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([KEYENCE KV-700/1000/3000/5000/7000/8000])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
	➡■3 Availability of writing/reading data to/from bit devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
Specifications of word devices	➡■4 Monitoring-supported word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
	➡■5 Availability of writing/reading data to/from word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
Specifications of double-word devices	➡■6 Monitoring-supported double-word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
	➡■7 Availability of writing/reading data to/from double-word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])
Precautions	➡■8 Precautions ([KEYENCE KV-700/1000/3000/5000/7000/8000])

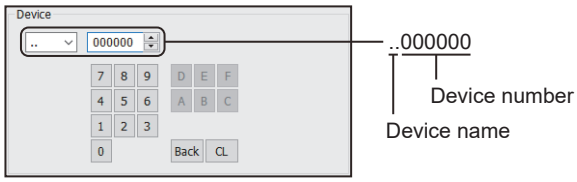
■1 Device setting dialog ([KEYENCE KV-700/1000/3000/5000/7000/8000])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]

This item appears when [Other] is selected for the station type.

Specify a station number.

■2 Monitoring-supported bit devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.9 ■3 Availability of writing/reading data to/from bit devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..*2	Relay	Decimal	..(Channel No.)(Bit No.) Notation example: ..199900 • Channel No. (decimal): 0000 to 1999 • Bit No. (decimal): 00 to 15	○	×
B*3	Link relay	Hexadecimal	0000 to 7FFF	○	×
MR*2	Internal auxiliary relay	Decimal	MR(Channel No.)(Bit No.) Notation example: MR399900 • Channel No. (decimal): 0000 to 3999 • Bit No. (decimal): 00 to 15	○	×
LR	Latch relay	Decimal	LR(Channel No.)(Bit No.) Notation example: LR99900 • Channel No. (decimal): 000 to 999 • Bit No. (decimal): 00 to 15	○	×
T*3	Timer (contact)	Decimal	0000 to 3999	○	×
C*3	Counter (contact)	Decimal	0000 to 3999	○	×
CR	Control relay	Decimal	CR(Channel No.)(Bit No.) Notation example: CR8900 • Channel No. (decimal): 00 to 89 • Bit No. (decimal): 00 to 15	○	×
CTC*3*4	High-speed counter comparators (contact)	Decimal	0 to 7	×	×
VB*3	Work relay	Hexadecimal	0000 to F9FF	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When communication is performed through the following extension unit, the readable/writable device range is 00000 to 99915.

- KV-L2□V
- KV-LE2□V
- KV-EP21V

*3 Monitoring by GOT is possible only when a device is used in the sequence program.

*4 In writing, only resetting of a contact is possible.

■3 Availability of writing/reading data to/from bit devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
..	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
MR	R/W	-/-	R/W	R/W	-/-
LR	R/W	-/-	R/W	R/W	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
CR	R/W	-/-	R/W	R/W	-/-
CTC	R/W	-/-	-/-	-/-	-/-
VB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.9 ■5 Availability of writing/reading data to/from word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
DM	Data memory	Decimal	00000 to 65534	○	○
CM	Control memory	Decimal	00000 to 11998	○	○ (Not usable as bit data)
W	Link register	Hexadecimal	0000 to 7FFF	○	○
EM	Extension data memory	Decimal	00000 to 65534	○	○
Z	Index register	Decimal	01 to 12	○	○ (Not usable as bit data)
FM	Extension data memory 2	Decimal	00000 to 32767	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
ZF*2	File register	Decimal	000000 to 032767 032768 to 065535 065536 to 098303 098304 to 131071 131072 to 163839 163840 to 196607 196608 to 229375 229376 to 262143 262144 to 294911 294912 to 327679 327680 to 360447 360448 to 393215 393216 to 425983 425984 to 458751 458752 to 491519 491520 to 524287	○	○
TM	Temporary data memory	Decimal	000 to 511	○	○ (Not usable as bit data)
VM	Work memory	Decimal	00000 to 63999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The restrictions differ depending on GT Designer3 version.

- 1.250L or earlier: Continuous access across banks is not available.
- 1.255R or later: Access across banks is available only for the Ethernet connection.

■5 Availability of writing/reading data to/from word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DM	R/W	R/W	-/-	R/W
CM	R/W	R/W	-/-	-/-
W	R/W	R/W	-/-	R/W
EM	R/W	R/W	-/-	R/W
Z*1	R/W	R/W	-/-	-/-
FM	R/W	R/W	-/-	R/W
ZF	R/W	R/W	-/-	R/W
TM	R/W	R/W	-/-	-/-
VM	R/W	R/W	-/-	-/-

*1 With KV-3000 and KV-5000, Z devices cannot be specified as double-word (32-bit) data. Use DZ devices.

■6 Monitoring-supported double-word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following table shows monitoring-supported double-word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.9 ■7 Availability of writing/reading data to/from double-word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC*2	Timer (current value)	Decimal	0000 to 3999	×	×
CC*2	Counter (current value)	Decimal	0000 to 3999	×	×
TS*2	Timer (set value)	Decimal	0000 to 3999	×	×
CS*2	Counter (set value)	Decimal	0000 to 3999	×	×
CTH*2	High-speed counter (current value)	Decimal	0 to 3	×	×
CTC*2	High-speed counter comparators (set value)	Decimal	0 to 7	×	×
DZ	Index register	Decimal	01 to 12	×	×
TRM	Digital trimmer	Decimal	0 to 7	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.
➡10.13 Monitoring a Controller through a GOT (Server/Client Function)
*2 Monitoring by GOT is possible only when a device is used in the sequence program.

■7 Availability of writing/reading data to/from double-word devices ([KEYENCE KV-700/1000/3000/5000/7000/8000])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TC	-/-	R/W	-/-	-/-
CC	-/-	R/W	-/-	-/-
TS*1	-/-	R/W	-/-	-/-
CS*1	-/-	R/W	-/-	-/-
CTH	-/-	R/W	-/-	-/-
CTC	-/-	R/W	-/-	-/-
DZ	-/-	R/W	-/-	-/-
TRM	-/-	R/-	-/-	-/-

*1 Only reading is available for the KV-X series.

■8 Precautions ([KEYENCE KV-700/1000/3000/5000/7000/8000])

(1) Notation of KEYENCE equipment devices

The KEYENCE notation and XYM notation are available for the devices of KEYENCE PLCs.
The KEYENCE notation is used in GT Designer3.

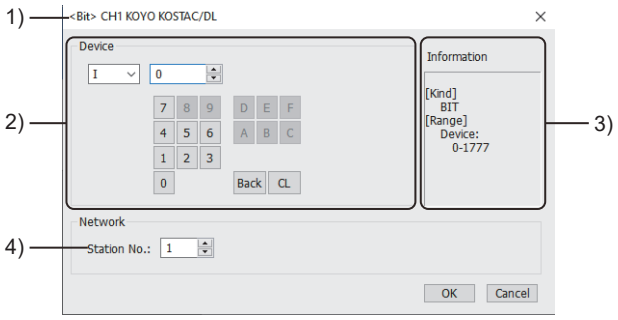
12.4.10 KOYO EI equipment ([KOYO KOSTAC/DL])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([KOYO KOSTAC/DL])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([KOYO KOSTAC/DL])
	➟■3 Availability of writing/reading data to/from bit devices ([KOYO KOSTAC/DL])
Specifications of word devices	➟■4 Monitoring-supported word devices ([KOYO KOSTAC/DL])
	➟■5 Device R definitions ([KOYO KOSTAC/DL])
	➟■6 Availability of writing/reading data to/from word devices ([KOYO KOSTAC/DL])

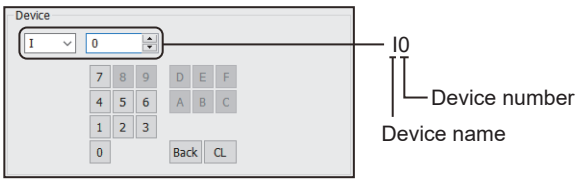
■1 Device setting dialog ([KOYO KOSTAC/DL])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [1] to [90].

■2 Monitoring-supported bit devices ([KOYO KOSTAC/DL])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.10 ■3 Availability of writing/reading data to/from bit devices ([KOYO KOSTAC/DL])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input	Octal	0 to 1777	○	○ (Not usable as word data)
Q	Output	Octal	0 to 1777	○	○ (Not usable as word data)
GI	Link relay	Octal	0 to 3777	○	○ (Not usable as word data)
M	Internal relay	Octal	0 to 3777	○	○ (Not usable as word data)
S	Stage	Octal	0 to 1777	○	○ (Not usable as word data)
T	Timer	Octal	0 to 377	○	○ (Not usable as word data)
C	Counter	Octal	0 to 377	○	○ (Not usable as word data)
GQ	Link output	Octal	0 to 3777	○	○ (Not usable as word data)
SP	Special relay	Octal	0 to 777	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([KOYO KOSTAC/DL])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-
GI	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
S	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
GQ	R/W	-/-	-/-	-/-	-/-
SP*1	R/W	-/-	-/-	-/-	-/-

*1 Read-only device for KOSTAC SU series

■4 Monitoring-supported word devices ([KOYO KOSTAC/DL])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.10 ■6 Availability of writing/reading data to/from word devices ([KOYO KOSTAC/DL])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
R	Data area	Octal	0 to 41237 For the data area definitions, refer to the following. ➟12.4.10 ■5 Device R definitions ([KOYO KOSTAC/DL])	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Device R definitions ([KOYO KOSTAC/DL])

➟(1) KOSTAC SU, PZ
(2) DirectLOGIC 05, DirectLOGIC 06
(3) DirectLOGIC 205 series

(1) KOSTAC SU, PZ

Definition	Device range			
	SU-5E	SU-6B	SU-5M/6M	PZ3
Timer (current value)	0 to 177	0 to 377	0 to 377	0 to 377
Preparatory register	-	-	400 to 677	-
Special register 1	-	700 to 737	700 to 777	-
Counter (current value)	1000 to 1177	1000 to 1177	1000 to 1377	1000 to 1177
Data register	1400 to 7377	1400 to 7377	1400 to 7377	1400 to 7377
Special register	7400 to 7777	7400 to 7777	7400 to 7777	7400 to 7777
Data register	-	10000 to 17777	10000 to 36777	10000 to 17777
Special register	-	-	37000 to 37777	37000 to 37777
Link relay	40000 to 40037	40000 to 40077	40000 to 40177	-
Link output	-	-	40200 to 40377	-
Input	40400 to 40423	40400 to 40423	40400 to 40477	40400 to 40437
Output	40500 to 40523	40500 to 40523	40500 to 40577	40500 to 40537
Internal relay	40600 to 40677	40600 to 40677	40600 to 40777	40600 to 40677
Stage	41000 to 41077	41000 to 41077	41000 to 41077	41000 to 41037
Timer	41100 to 41117	41100 to 41117	41100 to 41117	41100 to 41117
Counter	41140 to 41147	41140 to 41147	41140 to 41157	41140 to 41147
Special relay	41200 to 41205	41200 to 41205	41200 to 41237	41200 to 41237
Special relay	41215 to 41234	41215 to 41234	-	-

(2) DirectLOGIC 05, DirectLOGIC 06

Definition	Device range	
	DirectLOGIC 05	DirectLOGIC 06
Timer (current value)	0 to 177	0 to 377
V-memory	-	400 to 677

Definition	Device range	
	DirectLOGIC 05	DirectLOGIC 06
System parameter	-	700 to 777
Counter (current value)	1000 to 1177	1000 to 1177
V-memory	1200 to 7377	1200 to 7377
V-Memory (non-volatile)	7400 to 7577	7400 to 7577
System parameter	7600 to 7777	7600 to 7777
V-memory	-	10000 to 17777
System parameter	-	36000 to 37777
Link relay	-	40000 to 40177
Link output	-	40200 to 40377
Input relay	40400 to 40417	40400 to 40437
Output relay	40500 to 40517	40500 to 40537
Internal relay	40600 to 40637	40600 to 40677
Stage	41000 to 41017	41000 to 41017
Timer	41100 to 41107	41100 to 41117
Counter	41140 to 41147	41140 to 41147
Special relay	41200 to 41237	41200 to 41237

(3) DirectLOGIC 205 series

Definition	Device range		
	D2-240	D2-250-1	D2-260
Timer (current value)	0 to 177	0 to 377	0 to 377
Data word	-	-	400 to 777
Counter (current value)	1000 to 1177	1000 to 1177	1000 to 1377
Data word	2000 to 3777	1400 to 7377	1400 to 7377
Data Words (non-volatile)	4000 to 4377	-	-
System parameter	7620 to 7637	7400 to 7777	7600 to 7777
System parameter	7746 to 7777	-	-
Data word	-	10000 to 17777	10000 to 35777
System parameter	-	36000 to 37777	36000 to 37777
Link relay	-	-	40000 to 40077
Link output	-	-	40200 to 40377
Input	40400 to 40423	40400 to 40437	40400 to 40477
Output	40500 to 40523	40500 to 40537	40500 to 40577
Internal relay	40600 to 40617	40600 to 40677	40600 to 40777
Stage	41000 to 41037	41000 to 41077	41000 to 41077
Timer	41100 to 41107	41100 to 41117	41100 to 41117
Counter	41140 to 41147	41140 to 41147	41140 to 41157
Special relay	41200 to 41205	41200 to 41237	41200 to 41237
Special relay	41226 to 41230	-	-

■6 Availability of writing/reading data to/from word devices ([KOYO KOSTAC/DL])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
R*1*2	R/W	R/W	-/-	-/-

*1 The GOT cannot write data to R7377 when SU-5M or SU-6M is used.
*2 The GOT cannot write data to devices from R7766 to R7774 (calendar area).

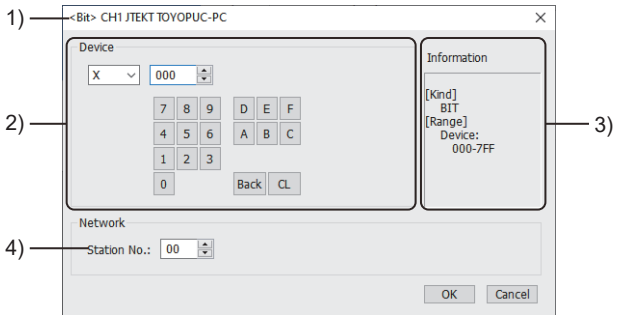
12.4.11 JTEKT equipment ([JTEKT TOYOPUC-PC])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

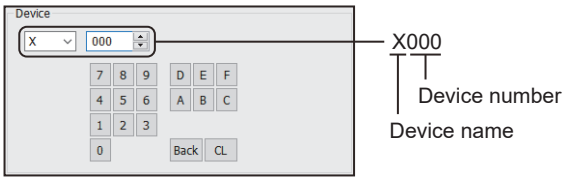
Item	Reference
Device setting dialog	➟■1 Device setting dialog ([JTEKT TOYOPUC-PC])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([JTEKT TOYOPUC-PC])
	➟■3 Availability of writing/reading data to/from bit devices ([JTEKT TOYOPUC-PC])
Specifications of word devices	➟■4 Monitoring-supported word devices ([JTEKT TOYOPUC-PC])
	➟■5 Availability of writing/reading data to/from word devices ([JTEKT TOYOPUC-PC])

■1 Device setting dialog ([JTEKT TOYOPUC-PC])

Set a device to be monitored.



1) Title
   Data type and channel number of the device to be set
2) [Device]
   Set the device name and device number.
   If a bit number needs to be specified, the setting item is displayed.
   Example) Setting of X000



3) [Information]
   Displays the setting range of each setting item according to the selected device.
4) [Station No.]
   Specify a station number.
   The setting range is [00] to [37] (octal number).

■2 Monitoring-supported bit devices ([JTEKT TOYOPUC-PC])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.11 ■3 Availability of writing/reading data to/from bit devices ([JTEKT TOYOPUC-PC])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
X[*2]	Input relay	Hexadecimal	000 to 7FF	○	×
Y[*2]	Output relay	Hexadecimal	000 to 7FF	○	×
L	Link relay	Hexadecimal	P(Program No.)-L(Device) Notation example: P1-L7FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 7FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
M	Internal relay	Hexadecimal	P(Program No.)-M(Device) Notation example: P1-M7FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 7FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
K	Keep relay	Hexadecimal	P(Program No.)-K(Device) Notation example: P1-K2FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 2FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
P	Edge detection	Hexadecimal	P(Program No.)-P(Device) Notation example: P1-P1FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 1FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
T[*2]	Timer	Hexadecimal	P(Program No.)-T(Device) Notation example: P1-T1FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 1FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
C[*2]	Counter	Hexadecimal	P(Program No.)-C(Device) Notation example: P1-C1FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 1FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
V	Special relay	Hexadecimal	P(Program No.)-V(Device) Notation example: P1-V0FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 000 to 0FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
EX[*2]	Extended input	Hexadecimal	000 to 7FF	○	×
EY[*2]	Extended output	Hexadecimal	000 to 7FF	○	×
EM	Extended internal relay	Hexadecimal	0000 to 1FFF	○	×
EK	Extended keep-relay	Hexadecimal	000 to FFF	○	×
EV	Extended special relay	Hexadecimal	000 to FFF	○	×
ET[*2]	Extended timer	Hexadecimal	000 to 7FF	○	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
EC*2	Extended counter	Hexadecimal	000 to 7FF	○	×
EL	Extended link relay	Hexadecimal	0000 to 1FFF	○	×
EP	Extended edge detection	Hexadecimal	000 to FFF	○	×
GX*2*3	Extended input 2	Hexadecimal	0000 to FFFF	○	×
GY*2*3	Extended output 2	Hexadecimal	0000 to FFFF	○	×
GM*3	Extended internal relay 2	Hexadecimal	0000 to FFFF	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Overlapped device specification of an input (X, EX, GX) and an output (Y, EY, GY), or a timer (T, ET) and a counter (C, EC) is not allowed.
Example) X0000 and Y0000, EX0000 and EY0000

*3 The device can be used only in the PC3JG separate mode.
Access to the device through a link module is not possible.

■3 Availability of writing/reading data to/from bit devices ([JTEKT TOYOPUC-PC])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
K	R/W	-/-	R/W	R/W	-/-
P	R/W	-/-	R/W	R/W	-/-
T	R/W	-/-	R/W	R/W	-/-
C	R/W	-/-	R/W	R/W	-/-
V	R/W	-/-	R/W	R/W	-/-
EX	R/W	-/-	R/W	R/W	-/-
EY	R/W	-/-	R/W	R/W	-/-
EM	R/W	-/-	R/W	R/W	-/-
EK	R/W	-/-	R/W	R/W	-/-
EV	R/W	-/-	R/W	R/W	-/-
ET	R/W	-/-	R/W	R/W	-/-
EC	R/W	-/-	R/W	R/W	-/-
EL	R/W	-/-	R/W	R/W	-/-
EP	R/W	-/-	R/W	R/W	-/-
GX	R/W	-/-	R/W	R/W	-/-
GY	R/W	-/-	R/W	R/W	-/-
GM	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([JTEKT TOYOPUC-PC])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.11 ■5 Availability of writing/reading data to/from word devices ([JTEKT TOYOPUC-PC])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
B	File register	Hexadecimal	0000 to 1FFF	○	×
D	Data register	Hexadecimal	P(Program No.)-D(Device) Notation example: P1-D2FFF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 0000 to 2FFF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
R	Link register	Hexadecimal	P(Program No.)-R(Device) Notation example: P1-R07FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 0000 to 07FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
N	Current value register	Hexadecimal	P(Program No.)-N(Device) Notation example: P1-N01FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 0000 to 01FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
S	Special register	Hexadecimal	P(Program No.)-S(Device) Notation example: P1-S03FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 0000 to 03FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×
EN	Extended present value register	Hexadecimal	0000 to 07FF	○	×
H	Extended setup value register	Hexadecimal	0000 to 07FF	○	×
ES	Extended special register	Hexadecimal	0000 to 07FF	○	×
U	Extended data register	Hexadecimal	0000 to 7FFF	○	×
EB*2	Extended buffer register	Hexadecimal	00000 to 1FFFF	○	×
TCS*3	Setup value register	Hexadecimal	P(Program No.)-TCS(Device) Notation example: P1-TCS01FF • Program No. (decimal): None, 1 to 3 • Device (hexadecimal): 0000 to 01FF When "NONE" is shown for [Program No.], it is not necessary to set "P(Program No.)-".	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The device can be used only in the PC3JG separate mode.
Access to the device through a link module is not possible.

*3 To store a setting value of T or C, use TCS.
The setting value of T or C is stored in TCS.
TCS cannot be used if T or C is not in a program.

■5 Availability of writing/reading data to/from word devices ([JTEKT TOYOPUC-PC])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
B	R/W	R/W	-/-	R/W
D	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W
N	R/W	R/W	-/-	R/W
S	R/W	R/W	-/-	R/W
EN	R/W	R/W	-/-	R/W
H	R/W	R/W	-/-	R/W
ES	R/W	R/W	-/-	R/W
U	R/W	R/W	-/-	R/W
EB	R/W	R/W	-/-	-/-
TCS	R/W	-/-	-/-	-/-

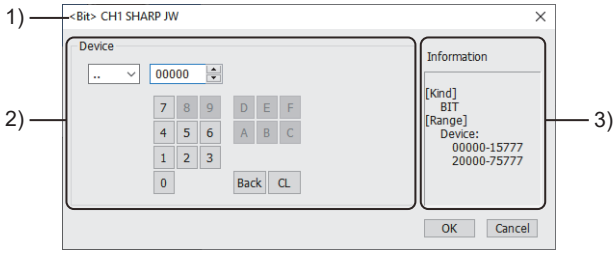
12.4.12 SHARP equipment ([SHARP JW])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([SHARP JW])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([SHARP JW])
	➟■3 Availability of writing/reading data to/from bit devices ([SHARP JW])
Specifications of word devices	➟■4 Monitoring-supported word devices ([SHARP JW])
	➟■5 Availability of writing/reading data to/from word devices ([SHARP JW])

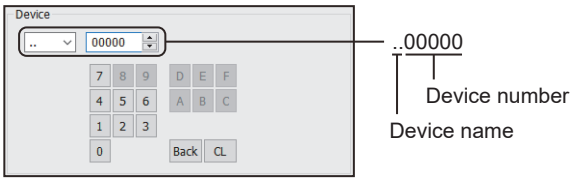
■1 Device setting dialog ([SHARP JW])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..00000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([SHARP JW])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.12 ■3 Availability of writing/reading data to/from bit devices ([SHARP JW])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..*2	Relay	Octal	..(Device address)(Bit address) Notation example: ..15770 The rightmost digit is a bit address. • Device (octal): 0000 to 1577, 2000 to 7577 • Bit address (octal): 0 to 7	○	○
T*3*4	Timer (contact)	Octal	0000 to 1777	○	○ (Not usable as word data)
C*3*4	Counter (contact)	Octal	0000 to 1777	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 To use the device as word data, set an even number for the device address and set 0 (fixed) for the bit address.

*3 Device settings for T and C must not overlap one another in the same address range.

Even if the address ranges overlap one another, the GOT displays no error.

The GOT monitors the timer and counter devices according to their address range instead of their device name.

Accordingly, if a device invalid as a SHARP PLC parameter is specified on GT Designer3, the GOT monitors a different device that covers the address range of the specified device.

Example) Parameter settings on the SHARP PLC side: T0000 to T1000, C1001 to C1777

When "C0000" is set in GT Designer3, GOT will monitor "T0000".

*4 Writing is possible only while the CPU is running (while the timer and counter is in operation).

■3 Availability of writing/reading data to/from bit devices ([SHARP JW])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
..	R/W	-/-	R/W	R/W	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([SHARP JW])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.12 ■5 Availability of writing/reading data to/from word devices ([SHARP JW])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T*2	Timer (Current value)	Octal	0000 to 1777	○	○
C*2	Counter (Current value)	Octal	0000 to 1777	○	○
1*3	File register	Octal	000000 to 177776	○	○
2*3	File register	Octal	000000 to 177776	○	○

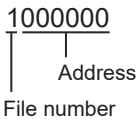
Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
3*3	File register	Octal	000000 to 177776	○	○
4*3	File register	Octal	000000 to 177776	○	○
5*3	File register	Octal	000000 to 177776	○	○
6*3	File register	Octal	000000 to 177776	○	○
7*3	File register	Octal	000000 to 177776	○	○
09*4	Register	Octal	000 to 776	○	○
19*4	Register	Octal	000 to 776	○	○
29*4	Register	Octal	000 to 776	○	○
39*4	Register	Octal	000 to 776	○	○
49*4	Register	Octal	000 to 776	○	○
59*4	Register	Octal	000 to 776	○	○
69*4	Register	Octal	000 to 776	○	○
79*4	Register	Octal	000 to 776	○	○
89*4	Register	Octal	000 to 776	○	○
99*4	Register	Octal	000 to 776	○	○
E0*4	Register	Octal	000 to 776	○	○
E1*4	Register	Octal	000 to 776	○	○
E2*4	Register	Octal	000 to 776	○	○
E3*4	Register	Octal	000 to 776	○	○
E4*4	Register	Octal	000 to 776	○	○
E5*4	Register	Octal	000 to 776	○	○
E6*4	Register	Octal	000 to 776	○	○
E7*4	Register	Octal	000 to 776	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

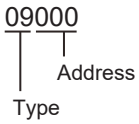
➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Device settings for T and C must not overlap one another in the same address range.
Even if the address ranges overlap one another, the GOT displays no error.
The GOT monitors the timer and counter devices according to their address range instead of their device name.
Accordingly, if a device invalid as a SHARP PLC parameter is specified on GT Designer3, the GOT monitors a different device that covers the address range of the specified device.
Example) Parameter settings on the SHARP PLC side: T0000 to T1000, C1001 to C1777
When "C0000" is set in GT Designer3, GOT will monitor "T0000".

*3 The file register format includes the file number and the address.
Set the address with an even number.



*4 The register format includes the type and the address.
Set the address with an even number.



■5 Availability of writing/reading data to/from word devices ([SHARP JW])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
T	R/W	R/W	-/-	R/W
C	R/W	R/W	-/-	R/W
1	R/W	R/W	-/-	R/W
2	R/W	R/W	-/-	R/W
3	R/W	R/W	-/-	R/W
4	R/W	R/W	-/-	R/W
5	R/W	R/W	-/-	R/W
6	R/W	R/W	-/-	R/W
7	R/W	R/W	-/-	R/W
09	R/W	R/W	-/-	R/W
19	R/W	R/W	-/-	R/W
29	R/W	R/W	-/-	R/W
39	R/W	R/W	-/-	R/W
49	R/W	R/W	-/-	R/W
59	R/W	R/W	-/-	R/W
69	R/W	R/W	-/-	R/W
79	R/W	R/W	-/-	R/W
89	R/W	R/W	-/-	R/W
99	R/W	R/W	-/-	R/W
E0	R/W	R/W	-/-	R/W
E1	R/W	R/W	-/-	R/W
E2	R/W	R/W	-/-	R/W
E3	R/W	R/W	-/-	R/W
E4	R/W	R/W	-/-	R/W
E5	R/W	R/W	-/-	R/W
E6	R/W	R/W	-/-	R/W
E7	R/W	R/W	-/-	R/W

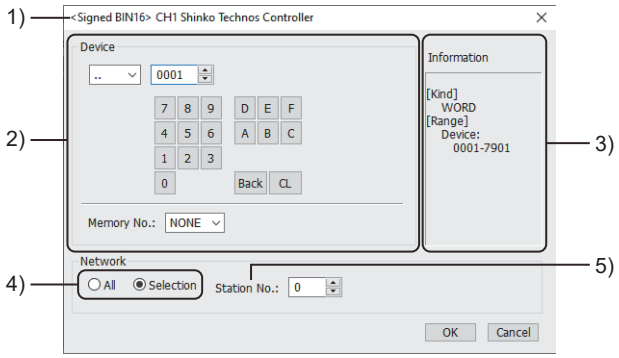
12.4.13 SHINKO equipment ([Shinko Technos Controller])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Shinko Technos Controller])
Specifications of word devices	➟■2 Monitoring-supported word devices ([Shinko Technos Controller])
	➟■3 Availability of writing/reading data to/from word devices ([Shinko Technos Controller])

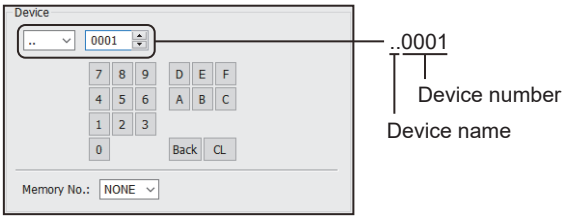
■1 Device setting dialog ([Shinko Technos Controller])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..0001



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Monitor target specification
Set the monitoring target of the set device.

Item	Description
[All]	Select this item when writing data to all the connected indicating controllers. During monitoring, the indicating controller set for [Host Address] of the [Controller Setting] window is monitored. When data is input from a numerical input object, the data is written to all the connected indicating controllers. When no data is input, the controller set for [Host Address] is monitored.
[Selection]	Select this item when monitoring the indicating controller that has the specified station number.

5) [Station No.]
This item appears when [Selection] is selected for the monitor target specification.
The setting range is [0] to [95] (direct) or [100] to [115] (indirect).
For the monitor target specified when [95] is selected, refer to the description for [All].

For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([Shinko Technos Controller])

(1) Indirect specification of a station number ([Shinko Technos Controller])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [94] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported word devices ([Shinko Technos Controller])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.13 ■3 Availability of writing/reading data to/from word devices ([Shinko Technos Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..	Data	Hexadecimal	M(Memory No.)/..(Device) Notation example: M7/..0001 • Memory No.: None, 0 to 7 • Device: 0001 to 7901 When "NONE" is shown for [Memory No.], it is not necessary to set "M(Memory No.)/".	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from word devices ([Shinko Technos Controller])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
..	R/W	-/-	-/-	R/W

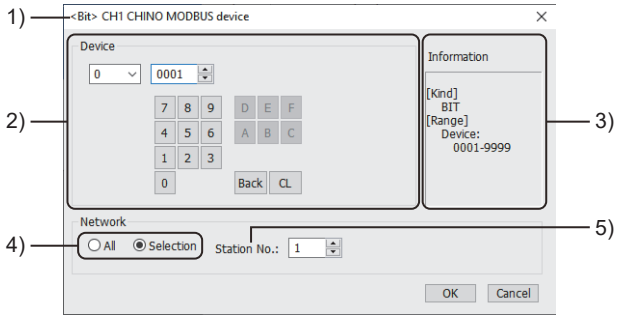
12.4.14 CHINO equipment ([CHINO MODBUS device])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([CHINO MODBUS device])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([CHINO MODBUS device])
	➟■3 Availability of writing/reading data to/from bit devices ([CHINO MODBUS device])
Specifications of word devices	➟■4 Monitoring-supported word devices ([CHINO MODBUS device])
	➟■5 Availability of writing/reading data to/from word devices ([CHINO MODBUS device])

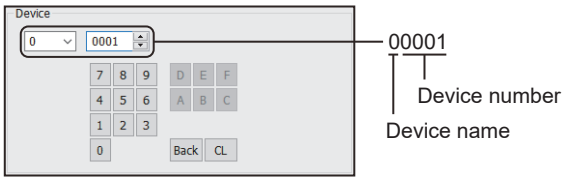
■1 Device setting dialog ([CHINO MODBUS device])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of 00001



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Monitor target specification
Set the monitoring target of the set device.

Item	Description
[All]	Select this item when writing data to all the connected controllers. During monitoring, the controller set for [Host Address] of the [Controller Setting] window is monitored. When data is input from a numerical input object, the data is written to all the connected controllers. When no data is input, the controller set for [Host Address] is monitored.
[Selection]	Select this item when monitoring the controller that has the specified station number.

5) [Station No.]
This item appears when [Selection] is selected for the monitor target specification.
The setting range is [0] to [99] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.
➟(1) Indirect specification of a station number ([CHINO MODBUS device])

(1) Indirect specification of a station number ([CHINO MODBUS device])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [99] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([CHINO MODBUS device])

The following table shows monitoring-supported bit devices.

Devices are set with reference numbers.

For parameters corresponding to each reference number, refer to the following.

➟Manual of the controller used

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.14 ■3 Availability of writing/reading data to/from bit devices ([CHINO MODBUS device])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
0	Digital parameter	Decimal	0001 to 9999	○	○
1	Digital input data	Decimal	0001 to 9999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([CHINO MODBUS device])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
0	R/W	-/-	-/-	-/-	-/-
1	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([CHINO MODBUS device])

The following table shows monitoring-supported word devices.

Devices are set with reference numbers.

For parameters corresponding to each reference number, refer to the following.

➟Manual of the controller used

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.14 ■5 Availability of writing/reading data to/from word devices ([CHINO MODBUS device])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
3	Analog input data	Decimal	0001 to 9999	○	○
4	Analog parameter	Decimal	0001 to 9999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([CHINO MODBUS device])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
3	R/-	R/-	-/-	R/-
4	R/W	R/W	-/-	R/W

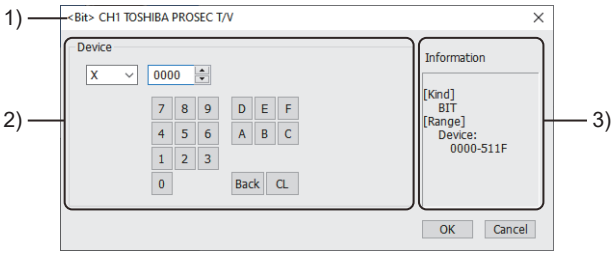
12.4.15 TOSHIBA equipment ([TOSHIBA PROSEC T/V])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

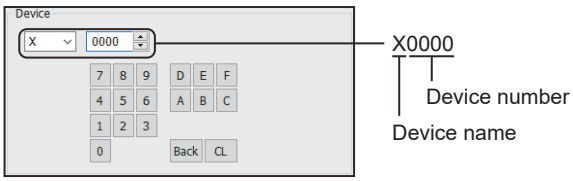
Item	Reference
Device setting dialog	➟■1 Device setting dialog ([TOSHIBA PROSEC T/V])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([TOSHIBA PROSEC T/V])
	➟■3 Availability of writing/reading data to/from bit devices ([TOSHIBA PROSEC T/V])
Specifications of word devices	➟■4 Monitoring-supported word devices ([TOSHIBA PROSEC T/V])
	➟■5 Availability of writing/reading data to/from word devices ([TOSHIBA PROSEC T/V])
Notation of devices	➟■6 Notation of devices ([TOSHIBA PROSEC T/V])

■1 Device setting dialog ([TOSHIBA PROSEC T/V])

Set a device to be monitored.



1) Title
   Data type and channel number of the device to be set
2) [Device]
   Set the device name and device number.
   If a bit number needs to be specified, the setting item is displayed.
   Example) Setting of X0000



3) [Information]
   Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([TOSHIBA PROSEC T/V])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.15 ■3 Availability of writing/reading data to/from bit devices ([TOSHIBA PROSEC T/V])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The notation of device setting is different between the TOSHIBA PLC peripheral software and GOT.
For the notation of devices, refer to the following.

➟12.4.15 ■6 Notation of devices ([TOSHIBA PROSEC T/V])

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	External input	Decimal + hexadecimal	X(Word address)(Bit address) Notation example: X5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	○	○
Y	External output	Decimal + hexadecimal	Y(Word address)(Bit address) Notation example: Y5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	○	○
Z	Link register relay	Decimal + hexadecimal	Z(Word address)(Bit address) Notation example: Z9990 The rightmost digit is a bit address. • Word address (decimal): 000 to 999F • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
R*2	Internal relay	Decimal + hexadecimal	R(Word address)(Bit address) Notation example: R40950 The rightmost digit is a bit address. • Word address (decimal): 0000 to 4095 • Bit address (hexadecimal): 0 to F	○	○
T*3	Timer (Contact)	Decimal	0 to 999	○	○ (Not usable as word data)
C*3	Counter (Contact)	Decimal	0 to 511	○	○ (Not usable as word data)
L	Link relay	Decimal + hexadecimal	L(Word address)(Bit address) Notation example: L2550 The rightmost digit is a bit address. • Word address (decimal): 000 to 255 • Bit address (hexadecimal): 0 to F	○	○
S	Special relay	Decimal + hexadecimal	S(Word address)(Bit address) Notation example: S5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Although the device is defined as D in the manual of TOSHIBA PLC, R is used for setting as it is used for computer link connection.

*3 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

■3 Availability of writing/reading data to/from bit devices ([TOSHIBA PROSEC T/V])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X*1	R/W	-/-	-/-	-/-	-/-
Y*1	R/W	-/-	-/-	-/-	-/-
Z	R/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
R*1	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
L*1	R/W	-/-	-/-	-/-	-/-
S*1	R/W	-/-	-/-	-/-	-/-

*1 To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use XW for X.

■4 Monitoring-supported word devices ([TOSHIBA PROSEC T/V])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.15 ■5 Availability of writing/reading data to/from word devices ([TOSHIBA PROSEC T/V])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The notation of device setting is different between the TOSHIBA PLC peripheral software and GOT.
For the notation of devices, refer to the following.

➟12.4.15 ■6 Notation of devices ([TOSHIBA PROSEC T/V])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T*2	Timer (Current value)	Decimal	0 to 999	○	○
C*2	Counter (Current value)	Decimal	0 to 511	○	○
D*3	Data register	Decimal	0 to 8191	○	○
W	Link register	Decimal	0 to 2047	○	○
F*4	File register	Decimal	0 to 32767	○	○
XW	External input	Decimal	0 to 511	○	○
YW	External output	Decimal	0 to 511	○	○
RW*3	Internal relay	Decimal	0 to 4095	○	○
LW	Link relay	Decimal	0 to 255	○	○
SW	Special relay	Decimal	0 to 511	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.
➟10.13 Monitoring a Controller through a GOT (Server/Client Function)
*2 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.
*3 Although the device is defined as DW in the manual of TOSHIBA PLC, D or RW is used for setting as they are used for computer link connection.
D and RW are different names, but practically represent the same device.
*4 Extension file register is not supported.

■5 Availability of writing/reading data to/from word devices ([TOSHIBA PROSEC T/V])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data*1
T	R/W	R/W	-/-	-/-
C	R/W	R/W	-/-	-/-
D*2	R/W	R/W	-/-	R/W
W	R/W	R/W	-/-	R/W
F	R/W	R/W	-/-	R/W
XW*3	R/W	R/W	-/-	-/-
YW*3	R/W	R/W	-/-	-/-
RW*3	R/W	R/W	-/-	-/-
LW*3	R/W	R/W	-/-	-/-
SW*3	R/W	R/W	-/-	-/-

*1 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.
*2 When the mode switch on the CPU module has been set to P-RUN, writing to D0000 through D4095 is disabled.
*3 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use X for XW.

■6 Notation of devices ([TOSHIBA PROSEC T/V])

The notation of device setting is different between the TOSHIBA PLC peripheral software and GOT.

(1) Notation of bit devices ([TOSHIBA PROSEC T/V])

The conversion from the notation for the TOSHIBA PLC to that for the GOT is shown as follows.
Address notation for TOSHIBA PLC ÷ 16 = Word address (Quotient)...Bit address (Remainder)

Example of address notation for TOSHIBA PLC	Conversion	Example of address notation for GOT
S8191	8191 ÷ 16 = 511...15 • Word address (decimal): 511 • Bit address (hexadecimal): F	S511 F
R65535	65535 ÷ 16 = 4095...15 • Word address (decimal): 4095 • Bit address (hexadecimal): F	R4095 F

(2) Notation of word devices ([TOSHIBA PROSEC T/V])

Data type		Example of address notation for TOSHIBA PLC	Example of address notation for GOT
16 bits		DW10	D10
32 bits	Integer	DD10 (Calculate the device No. in 32-bit unit)	D20
	Real number	DF10 (Calculate the device No. in 32-bit unit)	D20

12.4.16 TOSHIBA equipment ([TOSHIBA Unified Controller nv])

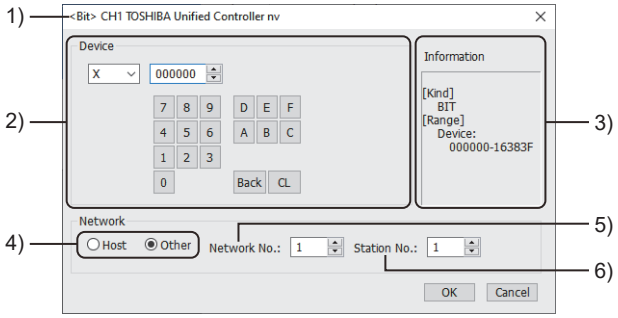
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT25-W, GT2505-V, and GT25HS-V.

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([TOSHIBA Unified Controller nv])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([TOSHIBA Unified Controller nv])
	➡■3 Availability of writing/reading data to/from bit devices ([TOSHIBA Unified Controller nv])
Specifications of word devices	➡■4 Monitoring-supported word devices ([TOSHIBA Unified Controller nv])
	➡■5 Availability of writing/reading data to/from word devices ([TOSHIBA Unified Controller nv])

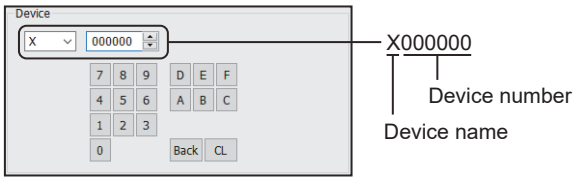
■1 Device setting dialog ([TOSHIBA Unified Controller nv])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([TOSHIBA Unified Controller nv])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.16 ■3 Availability of writing/reading data to/from bit devices ([TOSHIBA Unified Controller nv])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	External output	Decimal + hexadecimal	X(Word address)(Bit address) Notation example: X163830 The rightmost digit is a bit address. • Word address (decimal): 00000 to 16383 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
Y	External input	Decimal + hexadecimal	Y(Word address)(Bit address) Notation example: Y163830 The rightmost digit is a bit address. • Word address (decimal): 00000 to 16383 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
R	Internal relay	Decimal + hexadecimal	R(Word address)(Bit address) Notation example: R81910 The rightmost digit is a bit address. • Word address (decimal): 0000 to 8191 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
I	Input variable	Decimal + hexadecimal	I(Word address)(Bit address) Notation example: I163830 The rightmost digit is a bit address. • Word address (decimal): 00000 to 16383 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
Q	Output variable	Decimal + hexadecimal	Q(Word address)(Bit address) Notation example: Q163830 The rightmost digit is a bit address. • Word address (decimal): 00000 to 16383 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)
S	Special relay	Decimal + hexadecimal	S(Word address)(Bit address) Notation example: S10230 The rightmost digit is a bit address. • Word address (decimal): 0000 to 1023 • Bit address (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([TOSHIBA Unified Controller nv])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X*1	R/W	-/-	-/-	-/-	-/-
Y*1	R/W	-/-	-/-	-/-	-/-
R*1	R/W	-/-	-/-	-/-	-/-
I*1	R/W	-/-	-/-	-/-	-/-
Q*1	R/W	-/-	-/-	-/-	-/-
S*1	R/W	-/-	-/-	-/-	-/-

*1 To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use XW for X.

■4 Monitoring-supported word devices ([TOSHIBA Unified Controller nv])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.16 ■5 Availability of writing/reading data to/from word devices ([TOSHIBA Unified Controller nv])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
XW	External input	Decimal	0 to 16383	○	○ (Not usable as bit data)
YW	External output	Decimal	0 to 16383	○	○ (Not usable as bit data)
RW	Internal relay	Decimal	0 to 8191	○	○ (Not usable as bit data)
SW	Special relay	Decimal	0 to 1023	○	○ (Not usable as bit data)
D	Data register	Decimal	0 to 8191	○	○
F	File register	Decimal	0 to 32767	○	○
IW	Input variable	Decimal	0 to 16383	○	○ (Not usable as bit data)
QW	Output variable	Decimal	0 to 16383	○	○ (Not usable as bit data)
UG	User global	Decimal	0 to 262143	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([TOSHIBA Unified Controller nv])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
XW*1	R/W	R/W	-/-	-/-
YW*1	R/W	R/W	-/-	-/-
RW*1	R/W	R/W	-/-	-/-
SW*1	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	R/W
F	R/W	R/W	-/-	R/W
IW*1	R/W	R/W	-/-	-/-
QW*1	R/W	R/W	-/-	-/-
UG	R/W	R/W	-/-	R/W

*1 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use X for XW.

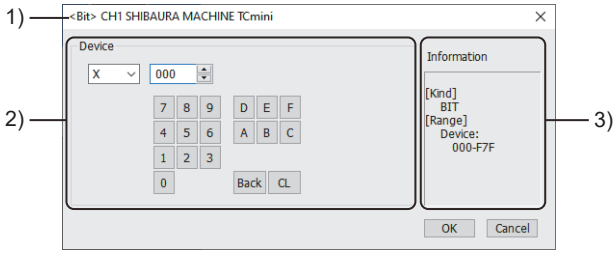
12.4.17 SHIBAURA MACHINE equipment ([SHIBAURA MACHINE TCmini])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([SHIBAURA MACHINE TCmini])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([SHIBAURA MACHINE TCmini])
	➟■3 Availability of writing/reading data to/from bit devices ([SHIBAURA MACHINE TCmini])
Specifications of word devices	➟■4 Monitoring-supported word devices ([SHIBAURA MACHINE TCmini])
	➟■5 Availability of writing/reading data to/from word devices ([SHIBAURA MACHINE TCmini])

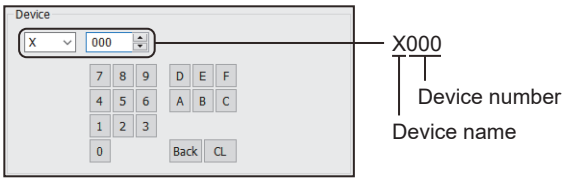
■1 Device setting dialog ([SHIBAURA MACHINE TCmini])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([SHIBAURA MACHINE TCmini])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.17 ■3 Availability of writing/reading data to/from bit devices ([SHIBAURA MACHINE TCmini])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay 1	Hexadecimal + octal + hexadecimal	X(Rack No.)(Module position)(Terminal No.) Notation example: XF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
Y	Output relay 1	Hexadecimal + octal + hexadecimal	Y(Rack No.)(Module position)(Terminal No.) Notation example: YF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
R	Internal relay	Hexadecimal + octal + hexadecimal	R(Rack No.)(Module position)(Terminal No.) Notation example: R77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
L	Latch relay	Hexadecimal + octal + hexadecimal	L(Rack No.)(Module position)(Terminal No.) Notation example: L07F • Rack No. (hexadecimal): 0 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
S	Shift relay	Hexadecimal + octal + hexadecimal	S(Rack No.)(Module position)(Terminal No.) Notation example: S07F • Rack No. (hexadecimal): 0 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
E	Edge relay	Hexadecimal + octal + hexadecimal	E(Rack No.)(Module position)(Terminal No.) Notation example: E77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
T	Timer contact	Hexadecimal + octal + hexadecimal	T(Rack No.)(Module position)(Terminal No.) Notation example: T77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
C	Counter contact	Hexadecimal + octal + hexadecimal	C(Rack No.)(Module position)(Terminal No.) Notation example: C77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
I	Input relay 2	Hexadecimal + octal + hexadecimal	I(Rack No.)(Module position)(Terminal No.) Notation example: IF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
O	Output relay 2	Hexadecimal + octal + hexadecimal	O(Rack No.)(Module position)(Terminal No.) Notation example: OF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
GR	Extended internal relay 1	Hexadecimal + octal + hexadecimal	GR(Rack No.)(Module position)(Terminal No.) Notation example: GRF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
H	Extended internal relay 2	Hexadecimal + octal + hexadecimal	H(Rack No.)(Module position)(Terminal No.) Notation example: HF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
J	Extended internal relay 3	Hexadecimal + octal + hexadecimal	J(Rack No.)(Module position)(Terminal No.) Notation example: JF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
K	Extended internal relay 4	Hexadecimal + octal + hexadecimal	K(Rack No.)(Module position)(Terminal No.) Notation example: KF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
A	Special aux relay	Hexadecimal + octal + hexadecimal	A(Rack No.)(Module position)(Terminal No.) Notation example: A16F • Rack No. (hexadecimal): 0 to 1 • Module position (octal): 0 to 7 (0 to 6 when the rack No. is 1.) • Terminal No. (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([SHIBAURA MACHINE TCmini])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use XW for X.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
S	R/W	-/-	-/-	-/-	-/-
E	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
I	R/W	-/-	-/-	-/-	-/-
O	R/W	-/-	-/-	-/-	-/-
GR	R/W	-/-	-/-	-/-	-/-
H	R/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
J	R/W	-/-	-/-	-/-	-/-
K	R/W	-/-	-/-	-/-	-/-
A	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([SHIBAURA MACHINE TCmini])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.17 ■5 Availability of writing/reading data to/from word devices ([SHIBAURA MACHINE TCmini])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
P	Timer/Counter current value	Hexadecimal + octal + hexadecimal	P(Rack No.)(Module position)(Register No.) Notation example: P77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
XW	Input register 1	Hexadecimal + octal	XW(Rack No.)(Module position) Notation example: XWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
IW	Input register 2	Hexadecimal + octal	IW(Rack No.)(Module position) Notation example: IWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
YW	Output register 1	Hexadecimal + octal	YW(Rack No.)(Module position) Notation example: YWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
OW	Output register 2	Hexadecimal + octal	OW(Rack No.)(Module position) Notation example: OWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
RW	Internal register	Hexadecimal + octal	RW(Rack No.)(Module position) Notation example: RW77 • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
GW	Extended internal register 1	Hexadecimal + octal	GW(Rack No.)(Module position) Notation example: GWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
HW	Extended internal register 2	Hexadecimal + octal	HW(Rack No.)(Module position) Notation example: HWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
JW	Extended internal register 3	Hexadecimal + octal	JW(Rack No.)(Module position) Notation example: JWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
KW	Extended internal register 4	Hexadecimal + octal	KW(Rack No.)(Module position) Notation example: KWF7 • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
TW	Timer contact register	Hexadecimal + octal	TW(Rack No.)(Module position) Notation example: TW77 • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
CW	Counter contact register	Hexadecimal + octal	CW(Rack No.)(Module position) Notation example: CW77 • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
SW	Shift register	Hexadecimal + octal	SW(Rack No.)(Module position) Notation example: SW07 • Rack No. (hexadecimal): 0 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
LW	Latch register	Hexadecimal + octal	LW(Rack No.)(Module position) Notation example: LW07 • Rack No. (hexadecimal): 0 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
EW	Edge register	Hexadecimal + octal	EW(Rack No.)(Module position) Notation example: EW77 • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7	○	○ (Not usable as bit data)
AW	Special aux register	Hexadecimal + octal	AW(Rack No.)(Module position) Notation example: AW17 • Rack No. (hexadecimal): 0 to 1 • Module position (octal): 0 to 7 (0 to 6 when the rack No. is 1.)	○	○ (Not usable as bit data)
D	Generic register 1	Hexadecimal + octal + hexadecimal	D(Rack No.)(Module position)(Register No.) Notation example: DF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
B	Generic register 2	Hexadecimal + octal + hexadecimal	B(Rack No.)(Module position)(Register No.) Notation example: BF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
U	Generic register 3	Hexadecimal + octal + hexadecimal	U(Rack No.)(Module position)(Register No.) Notation example: UF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
M	Generic register 4	Hexadecimal + octal + hexadecimal	M(Rack No.)(Module position)(Register No.) Notation example: MF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
Q	Generic register 5	Hexadecimal + octal + hexadecimal	Q(Rack No.)(Module position)(Register No.) Notation example: QF7F • Rack No. (hexadecimal): 0 to F • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)
V	Timer/Counter set value	Hexadecimal + octal + hexadecimal	V(Rack No.)(Module position)(Register No.) Notation example: V77F • Rack No. (hexadecimal): 0 to 7 • Module position (octal): 0 to 7 • Register No. (hexadecimal): 0 to F	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([SHIBAURA MACHINE TCmini])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
P	R/W	-/-	-/-	-/-
XW*1	R/W	R/-	-/-	-/-
IW*1	R/W	R/-	-/-	-/-
YW*1	R/W	R/W	-/-	-/-
OW*1	R/W	R/W	-/-	-/-
RW*1	R/W	R/W	-/-	-/-
GW*1	R/W	R/W	-/-	-/-
HW*1	R/W	R/W	-/-	-/-
JW*1	R/W	R/W	-/-	-/-
KW*1	R/W	R/W	-/-	-/-
TW*1	R/W	R/W	-/-	-/-
CW*1	R/W	R/W	-/-	-/-
SW*1	R/W	R/W	-/-	-/-
LW*1	R/W	R/W	-/-	-/-
EW*1	R/W	R/W	-/-	-/-
AW*1	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	-/-
B	R/W	R/W	-/-	-/-
U	R/W	R/W	-/-	-/-
M	R/W	R/W	-/-	-/-
Q	R/W	R/W	-/-	-/-
V	R/W	-/-	-/-	-/-

*1 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use X for XW.

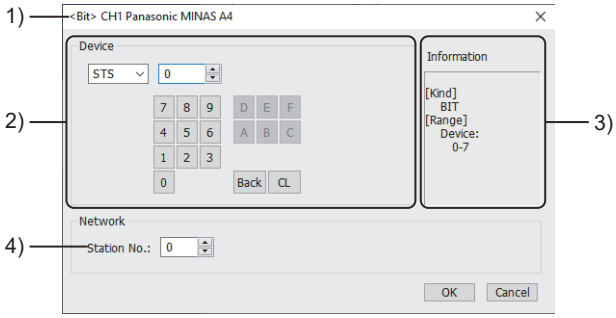
12.4.18 PANASONIC equipment ([Panasonic MINAS A4])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Panasonic MINAS A4])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([Panasonic MINAS A4])
	➟■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A4])
Specifications of word devices	➟■4 Monitoring-supported word devices ([Panasonic MINAS A4])
	➟■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A4])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([Panasonic MINAS A4])
	➟■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A4])

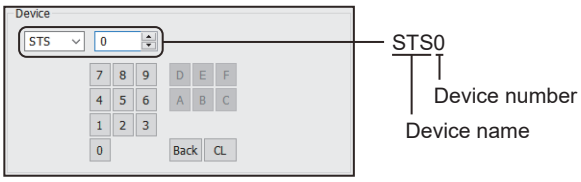
■1 Device setting dialog ([Panasonic MINAS A4])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of STS0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [0] to [15] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([Panasonic MINAS A4])

(1) Indirect specification of a station number ([Panasonic MINAS A4])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [15] Setting a value outside the above range causes a timeout error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([Panasonic MINAS A4])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.18 ■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A4])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
STS	Status	Decimal	0 to 7	×	×
INP	Input signal	Decimal	0 to 31	○	×
OTP	Output signal	Decimal	0 to 47	○	×
AEST	Absolute encoder (Status)	Decimal	0 to 15	×	×
EPRW	Writing of parameter to EEPROM	Decimal	0	×	×
ALHC	Clear of user alarm history (in EEPROM as well)	Decimal	0	×	×
ALMC	Alarm clear	Decimal	0	×	×
ABSC	Absolute clear	Decimal	0	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A4])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
STS	R/-	-/-	-/-	-/-	-/-
INP	R/-	-/-	-/-	-/-	-/-
OTP	R/-	-/-	-/-	-/-	-/-
AEST	R/-	-/-	-/-	-/-	-/-
EPRW	-/W	-/-	-/-	-/-	-/-
ALHC	-/W	-/-	-/-	-/-	-/-
ALMC	-/W	-/-	-/-	-/-	-/-
ABSC	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([Panasonic MINAS A4])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.18 ■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A4])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
STCM	Status (Control modes)	Decimal	0	×	×
SPD	Present speed	Decimal	0	×	×
TRQ	Present torque output	Decimal	0	×	×
AEID	Absolute encoder (Encoder ID)	Decimal	0	×	×
AEMD	Absolute encoder (Multi-turn data)	Decimal	0	×	×
PRM	Parameter	Hexadecimal	0000 to 007F	○	×
ALM	Present alarm data	Decimal	0	×	×
ALHI	User alarm history	Decimal	1 to 14	○	×
PRMN	User parameter (MIN. value)	Hexadecimal	0000 to 007F	○	×
PRMX	User parameter (MAX. value)	Hexadecimal	0000 to 007F	○	×
PRPR	Attribute	Hexadecimal	0000 to 007F	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A4])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
STCM	R/-	-/-	-/-	-/-
SPD	R/-	-/-	-/-	-/-
TRQ	R/-	-/-	-/-	-/-
AEID	R/-	-/-	-/-	-/-
AEMD	R/-	-/-	-/-	-/-
PRM	R/W	-/-	-/-	-/-
ALM	R/-	-/-	-/-	-/-
ALHI	R/-	-/-	-/-	-/-
PRMN	R/-	-/-	-/-	-/-
PRMX	R/-	-/-	-/-	-/-
PRPR	R/-	-/-	-/-	-/-

■6 Monitoring-supported double-word devices ([Panasonic MINAS A4])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.18 ■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A4])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
FBPC	Feedback pulse counter	Decimal	0	×	×
DVC	Present deviation counter	Decimal	0	×	×
AESD	Absolute encoder (Single turn data)	Decimal	0	×	×
ESA	External scale deviation and sum of pulses	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A4])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
FBPC	-/-	R/-	-/-	-/-
DVC	-/-	R/-	-/-	-/-
AESD	-/-	R/-	-/-	-/-
ESA	-/-	R/-	-/-	-/-

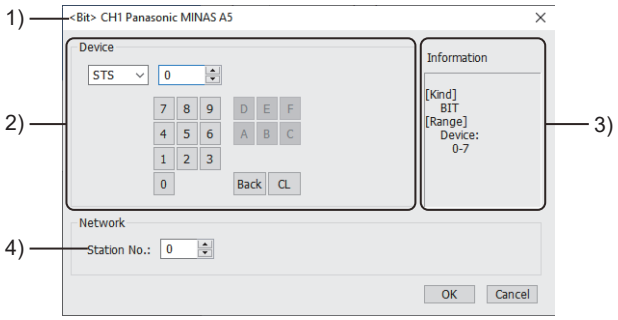
12.4.19 PANASONIC equipment ([Panasonic MINAS A5])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Panasonic MINAS A5])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([Panasonic MINAS A5])
	➟■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A5])
Specifications of word devices	➟■4 Monitoring-supported word devices ([Panasonic MINAS A5])
	➟■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A5])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([Panasonic MINAS A5])
	➟■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A5])

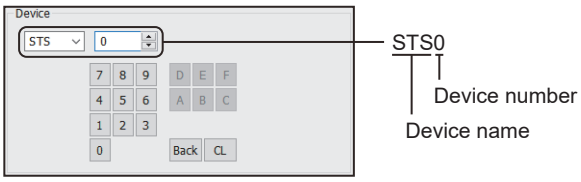
■1 Device setting dialog ([Panasonic MINAS A5])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of STS0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [0] to [31] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([Panasonic MINAS A5])

(1) Indirect specification of a station number ([Panasonic MINAS A5])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the relationship between the specified station number and the GOT data register (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [31] Setting a value outside the above range causes a timeout error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([Panasonic MINAS A5])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.19 ■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A5])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
STS	Status	Decimal	0 to 7	×	×
INP	Input signal	Decimal	0 to 31	○	×
OTP	Output signal	Decimal	0 to 47	○	×
AEST	Absolute encoder (Status)	Decimal	0 to 15	×	×
EPRW	Writing of parameter to EEPROM	Decimal	0	×	×
ALHC	Clear of user alarm history (in EEPROM as well)	Decimal	0	×	×
ALMC	Alarm clear	Decimal	0	×	×
ABSC	Absolute clear	Decimal	0	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([Panasonic MINAS A5])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
STS	R/-	-/-	-/-	-/-	-/-
INP	R/-	-/-	-/-	-/-	-/-
OTP	R/-	-/-	-/-	-/-	-/-
AEST	R/-	-/-	-/-	-/-	-/-
EPRW	-/W	-/-	-/-	-/-	-/-
ALHC	-/W	-/-	-/-	-/-	-/-
ALMC	-/W	-/-	-/-	-/-	-/-
ABSC	-/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([Panasonic MINAS A5])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.19 ■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A5])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
STCM	Status (Control modes)	Decimal	0	×	×
SPD	Present speed	Decimal	0	×	×
TRQ	Present torque output	Decimal	0	×	×
AEID	Absolute encoder (Encoder ID)	Decimal	0	×	×
AEMD	Absolute encoder (Multi-turn data)	Decimal	0	×	×
ALM	Present alarm data	Decimal	0	×	×
ALMS	Present alarm data (Sub number)	Decimal	0	×	×
ALHI	User alarm history	Decimal	1 to 14	○	×
ALHS	User alarm history (Sub number)	Decimal	1 to 14	○	×
PRPR0	User parameter (Class.0, Property)	Decimal	0 to 17	○	×
PRPR1	User parameter (Class.1, Property)	Decimal	0 to 27	○	×
PRPR2	User parameter (Class.2, Property)	Decimal	0 to 23	○	×
PRPR3	User parameter (Class.3, Property)	Decimal	0 to 29	○	×
PRPR4	User parameter (Class.4, Property)	Decimal	0 to 42	○	×
PRPR5	User parameter (Class.5, Property)	Decimal	0 to 35	○	×
PRPR6	User parameter (Class.6, Property)	Decimal	0 to 39	○	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([Panasonic MINAS A5])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
STCM	R/-	-/-	-/-	-/-
SPD	R/-	-/-	-/-	-/-
TRQ	R/-	-/-	-/-	-/-
AEID	R/-	-/-	-/-	-/-
AEMD	R/-	-/-	-/-	-/-
ALM	R/-	-/-	-/-	-/-
ALMS	R/-	-/-	-/-	-/-
ALHI	R/-	-/-	-/-	-/-
ALHS	R/-	-/-	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PRPR0	R/-	-/-	-/-	-/-
PRPR1	R/-	-/-	-/-	-/-
PRPR2	R/-	-/-	-/-	-/-
PRPR3	R/-	-/-	-/-	-/-
PRPR4	R/-	-/-	-/-	-/-
PRPR5	R/-	-/-	-/-	-/-
PRPR6	R/-	-/-	-/-	-/-

■6 Monitoring-supported double-word devices ([Panasonic MINAS A5])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.19 ■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A5])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PRM0	Parameter (Class.0)	Decimal	0 to 17	×	×
PRM1	Parameter (Class.1)	Decimal	0 to 27	×	×
PRM2	Parameter (Class.2)	Decimal	0 to 23	×	×
PRM3	Parameter (Class.3)	Decimal	0 to 29	×	×
PRM4	Parameter (Class.4)	Decimal	0 to 42	×	×
PRM5	Parameter (Class.5)	Decimal	0 to 35	×	×
PRM6	Parameter (Class.6)	Decimal	0 to 39	×	×
PRMN0	User parameter (Class.0, MIN.value)	Decimal	0 to 17	×	×
PRMN1	User parameter (Class.1, MIN.value)	Decimal	0 to 27	×	×
PRMN2	User parameter (Class.2, MIN.value)	Decimal	0 to 23	×	×
PRMN3	User parameter (Class.3, MIN.value)	Decimal	0 to 29	×	×
PRMN4	User parameter (Class.4, MIN.value)	Decimal	0 to 42	×	×
PRMN5	User parameter (Class.5, MIN.value)	Decimal	0 to 35	×	×
PRMN6	User parameter (Class.6, MIN.value)	Decimal	0 to 39	×	×
PRMX0	User parameter (Class.0, MAX.value)	Decimal	0 to 17	×	×
PRMX1	User parameter (Class.1, MAX.value)	Decimal	0 to 27	×	×
PRMX2	User parameter (Class.2, MAX.value)	Decimal	0 to 23	×	×
PRMX3	User parameter (Class.3, MAX.value)	Decimal	0 to 29	×	×
PRMX4	User parameter (Class.4, MAX.value)	Decimal	0 to 42	×	×
PRMX5	User parameter (Class.5, MAX.value)	Decimal	0 to 35	×	×
PRMX6	User parameter (Class.6, MAX.value)	Decimal	0 to 39	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
FBPC	Feedback pulse counter	Decimal	0	×	×
DVC	Present deviation counter	Decimal	0	×	×
AESD	Absolute encoder (Single turn data)	Decimal	0	×	×
ESA	External scale deviation and sum of pulses	Decimal	0 to 1	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([Panasonic MINAS A5])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
PRM0	-/-	R/W	-/-	-/-
PRM1	-/-	R/W	-/-	-/-
PRM2	-/-	R/W	-/-	-/-
PRM3	-/-	R/W	-/-	-/-
PRM4	-/-	R/W	-/-	-/-
PRM5	-/-	R/W	-/-	-/-
PRM6	-/-	R/W	-/-	-/-
PRMN0	-/-	R/-	-/-	-/-
PRMN1	-/-	R/-	-/-	-/-
PRMN2	-/-	R/-	-/-	-/-
PRMN3	-/-	R/-	-/-	-/-
PRMN4	-/-	R/-	-/-	-/-
PRMN5	-/-	R/-	-/-	-/-
PRMN6	-/-	R/-	-/-	-/-
PRMX0	-/-	R/-	-/-	-/-
PRMX1	-/-	R/-	-/-	-/-
PRMX2	-/-	R/-	-/-	-/-
PRMX3	-/-	R/-	-/-	-/-
PRMX4	-/-	R/-	-/-	-/-
PRMX5	-/-	R/-	-/-	-/-
PRMX6	-/-	R/-	-/-	-/-
FBPC	-/-	R/-	-/-	-/-
DVC	-/-	R/-	-/-	-/-
AESD	-/-	R/-	-/-	-/-
ESA	-/-	R/-	-/-	-/-

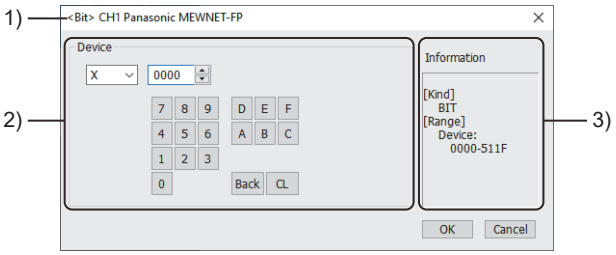
12.4.20 PANASONIC IDS equipment ([Panasonic MEWNET-FP])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([Panasonic MEWNET-FP])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([Panasonic MEWNET-FP])
	➡■3 Availability of writing/reading data to/from bit devices ([Panasonic MEWNET-FP])
Specifications of word devices	➡■4 Monitoring-supported word devices ([Panasonic MEWNET-FP])
	➡■5 Availability of writing/reading data to/from word devices ([Panasonic MEWNET-FP])

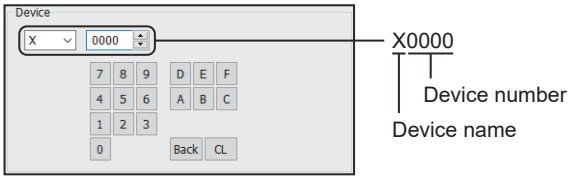
■1 Device setting dialog ([Panasonic MEWNET-FP])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([Panasonic MEWNET-FP])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.20 ■3 Availability of writing/reading data to/from bit devices ([Panasonic MEWNET-FP])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X*2	Input relay	Decimal + hexadecimal	X(Word address)(Bit address) Notation example: X5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	○	○
Y*2	Output relay	Decimal + hexadecimal	Y(Word address)(Bit address) Notation example: Y5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	○	○
L	Link relay	Decimal + hexadecimal	L(Word address)(Bit address) Notation example: L6390 The rightmost digit is a bit address. • Word address (decimal): 000 to 639 • Bit address (hexadecimal): 0 to F	○	○
R	Internal relay	Decimal + hexadecimal	R(Word address)(Bit address) Notation example: R8860 The rightmost digit is a bit address. • Word address (decimal): 000 to 886 • Bit address (hexadecimal): 0 to F	○	○
	Special relay		R(Word address)(Bit address) Notation example: R9510 The rightmost digit is a bit address. • Word address (decimal): 900 to 951 • Bit address (hexadecimal): 0 to F		
T*3	Timer contact	Decimal	0000 to 3071	○	○ (Not usable as word data)
C*3	Counter contact	Decimal	0000 to 3071	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Only those devices that have been assigned to I/O contacts by peripheral software can be used.

*3 The number of timer and counter devices differs depending on the head numbers of the counter set by the value of the system register (No. 5).

■3 Availability of writing/reading data to/from bit devices ([Panasonic MEWNET-FP])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/-	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
R (internal relay)	R/W	-/-	-/-	-/-	-/-
R (special relay)	R/-	-/-	-/-	-/-	-/-
T	R/-	-/-	-/-	-/-	-/-
C	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([Panasonic MEWNET-FP])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.20 ■5 Availability of writing/reading data to/from word devices ([Panasonic MEWNET-FP])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
EV*2	Timer/Counter (Elapsed value)	Decimal	0 to 3071	○	○
DT	Data register	Decimal	0 to 65532 90000 to 90999	○	○
LD	Link register	Decimal	0 to 8447	○	○
FL*3	File register	Decimal	0 to 32764	○	○
WX	Input relay	Decimal	000 to 511	○	○
WY	Output relay	Decimal	000 to 511	○	○
WR	Internal relay	Decimal	000 to 886	○	○
	Special relay		900 to 951		
WL	Link relay	Decimal	000 to 639	○	○
SV*2	Timer/Counter set value	Decimal	0 to 3071	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The number of timer and counter devices differs depending on the head numbers of the counter set by the value of the system register (No. 5).

*3 When FP2SH is used, only one bank of 32765 × 3 banks can be monitored.

■5 Availability of writing/reading data to/from word devices ([Panasonic MEWNET-FP])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
EV	R/W	R/W	-/-	R/W
DT	R/W	R/W	-/-	R/W
LD	R/W	R/W	-/-	R/W
FL	R/W	R/W	-/-	R/W
WX	R/-	R/-	-/-	-/-
WY	R/W	R/W	-/-	-/-
WR (internal relay)	R/W	R/W	-/-	-/-
WR (special relay)	R/-	R/-	-/-	-/-
WL	R/W	R/W	-/-	-/-
SV	R/W	R/W	-/-	R/W

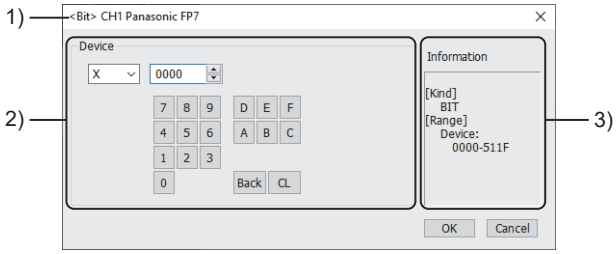
12.4.21 PANASONIC IDS equipment ([Panasonic FP7])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([Panasonic FP7])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([Panasonic FP7])
	➟■3 Availability of writing/reading data to/from bit devices ([Panasonic FP7])
Specifications of word devices	➟■4 Monitoring-supported word devices ([Panasonic FP7])
	➟■5 Availability of writing/reading data to/from word devices ([Panasonic FP7])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([Panasonic FP7])
	➟■7 Availability of writing/reading data to/from double-word devices ([Panasonic FP7])

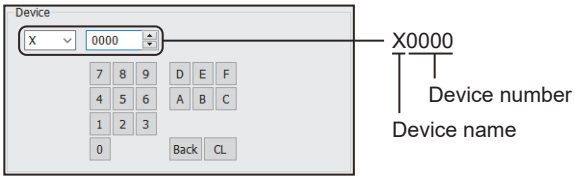
■1 Device setting dialog ([Panasonic FP7])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([Panasonic FP7])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.21 ■3 Availability of writing/reading data to/from bit devices ([Panasonic FP7])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Decimal + hexadecimal	X(Word address)(Bit address) Notation example: X5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	×	×
Y	Output relay	Decimal + hexadecimal	Y(Word address)(Bit address) Notation example: Y5110 The rightmost digit is a bit address. • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	×	×
L	Link relay	Decimal + hexadecimal	L(Word address)(Bit address) Notation example: L10230 The rightmost digit is a bit address. • Word address (decimal): 0000 to 1023 • Bit address (hexadecimal): 0 to F	×	×
R	Internal relay	Decimal + hexadecimal	R(Word address)(Bit address) Notation example: R20470 The rightmost digit is a bit address. • Word address (decimal): 0000 to 2047 • Bit address (hexadecimal): 0 to F	×	×
T	Timer contact	Decimal	0000 to 4095	×	×
C	Counter contact	Decimal	0000 to 1023	×	×
SR	System relay	Decimal + hexadecimal	SR(Word address)(Bit address) Notation example: SR2230 The rightmost digit is a bit address. • Word address (decimal): 000 to 223 • Bit address (hexadecimal): 0 to F	×	×
P	Pulse relay	Decimal + hexadecimal	P(Word address)(Bit address) Notation example: P2550 The rightmost digit is a bit address. • Word address (decimal): 000 to 255 • Bit address (hexadecimal): 0 to F	×	×
E	Error alarm relay	Decimal	0000 to 4095	×	×
IN	Direct input	Decimal + hexadecimal	S(Slot No.):IN(Word address)(Bit address) Notation example: S64:IN620 The rightmost digit is a bit address. • Slot No. (decimal): 1 to 64 • Word address (decimal): 00 to 62 • Bit address (hexadecimal): 0 to F	×	×
OT	Direct output	Decimal + hexadecimal	S(Slot No.):OT(Word address)(Bit address) Notation example: S64:OT620 The rightmost digit is a bit address. • Slot No. (decimal): 1 to 64 • Word address (decimal): 00 to 62 • Bit address (hexadecimal): 0 to F	×	×
_X	Input relay	Decimal + hexadecimal	PB(Program block No.)_X(Word address)(Bit address) Notation example: PB468_X5110 The rightmost digit is a bit address. • Program block No. (decimal): 1 to 468 • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
_Y	Output relay	Decimal + hexadecimal	PB(Program block No.)_Y(Word address)(Bit address) Notation example: PB468_Y5110 The rightmost digit is a bit address. • Program block No. (decimal): 1 to 468 • Word address (decimal): 000 to 511 • Bit address (hexadecimal): 0 to F	×	×
_L	Link relay	Decimal + hexadecimal	PB(Program block No.)_L(Word address)(Bit address) Notation example: PB468_L10230 The rightmost digit is a bit address. • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 1023 • Bit address (hexadecimal): 0 to F	×	×
_R	Internal relay	Decimal + hexadecimal	PB(Program block No.)_R(Word address)(Bit address) Notation example: PB468_R20470 The rightmost digit is a bit address. • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 2047 • Bit address (hexadecimal): 0 to F	×	×
_T	Timer contact	Decimal	PB(Program block No.)_T(Word address) Notation example: PB468_T4095 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 4095	×	×
_C	Counter contact	Decimal	PB(Program block No.)_C(Word address) Notation example: PB468_C1023 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 1023	×	×
_P	Pulse relay	Decimal + hexadecimal	PB(Program block No.)_P(Word address)(Bit address) Notation example: PB468_P2550 The rightmost digit is a bit address. • Program block No. (decimal): 1 to 468 • Word address (decimal): 000 to 255 • Bit address (hexadecimal): 0 to F	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([Panasonic FP7])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
T	R/-	-/-	-/-	-/-	-/-
C	R/-	-/-	-/-	-/-	-/-
SR	R/-	-/-	-/-	-/-	-/-
P	R/-	-/-	-/-	-/-	-/-
E	R/-	-/-	-/-	-/-	-/-
IN	R/-	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
OT	R/W	-/-	-/-	-/-	-/-
_X	R/W	-/-	-/-	-/-	-/-
_Y	R/W	-/-	-/-	-/-	-/-
_L	R/W	-/-	-/-	-/-	-/-
_R	R/W	-/-	-/-	-/-	-/-
_T	R/-	-/-	-/-	-/-	-/-
_C	R/-	-/-	-/-	-/-	-/-
_P	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([Panasonic FP7])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.21 ■5 Availability of writing/reading data to/from word devices ([Panasonic FP7])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DT	Data register	Decimal	0 to 999423	○	○
LD	Link register	Decimal	0 to 16383	○	○
WX	Input relay	Decimal	000 to 511	○	○ (Not usable as bit data)
WY	Output relay	Decimal	000 to 511	○	○ (Not usable as bit data)
WR	Internal relay	Decimal	0000 to 2047	○	○ (Not usable as bit data)
WL	Link relay	Decimal	0000 to 1023	○	○ (Not usable as bit data)
WI	Direct input	Decimal	S(Slot No.):WI(Word address) Notation example: S64:WI62 • Slot No. (decimal): 1 to 64 • Word address (decimal): 00 to 62	×	×
WO	Direct output	Decimal	S(Slot No.):WO(Word address) Notation example: S64:WO62 • Slot No. (decimal): 1 to 64 • Word address (decimal): 00 to 62	○	○ (Not usable as bit data)
WS	System relay	Decimal	0 to 223	×	×
UM	Unit memory	Decimal	S(Slot No.):UM(Word address) Notation example: S64:UM524287 • Slot No. (decimal): 1 to 64 • Word address (decimal): 0 to 524287	○	○
SD	System data register	Decimal	0 to 255	×	×
_DT	Data register	Decimal	PB(Program block No.)_DT(Word address) Notation example: PB468_DT999423 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 999423	○	○
_LD	Link register	Decimal	PB(Program block No.)_LD(Word address) Notation example: PB468_LD16383 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 16383	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
_WX	Input relay	Decimal	PB(Program block No.)_WX(Word address) Notation example: PB468_WX511 • Program block No. (decimal): 1 to 468 • Word address (decimal): 000 to 511	○	○ (Not usable as bit data)
_WY	Output relay	Decimal	PB(Program block No.)_WY(Word address) Notation example: PB468_WY511 • Program block No. (decimal): 1 to 468 • Word address (decimal): 000 to 511	○	○ (Not usable as bit data)
_WR	Internal relay	Decimal	PB(Program block No.)_WR(Word address) Notation example: PB468_WR2047 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 2047	○	○ (Not usable as bit data)
_WL	Link relay	Decimal	PB(Program block No.)_WL(Word address) Notation example: PB468_WL1023 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0000 to 1023	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([Panasonic FP7])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DT	R/W	R/W	-/-	R/W
LD	R/W	R/W	-/-	R/W
WX	R/W	R/W	-/-	-/-
WY	R/W	R/W	-/-	-/-
WR	R/W	R/W	-/-	-/-
WL	R/W	R/W	-/-	-/-
WI	R/-	R/-	-/-	-/-
WO	R/W	R/W	-/-	-/-
WS	R/-	R/-	-/-	-/-
UM	R/W	R/W	-/-	R/W
SD	R/-	R/-	-/-	-/-
_DT	R/W	R/W	-/-	R/W
_LD	R/W	R/W	-/-	R/W
_WX	R/W	R/W	-/-	-/-
_WY	R/W	R/W	-/-	-/-
_WR	R/W	R/W	-/-	-/-
_WL	R/W	R/W	-/-	-/-

■6 Monitoring-supported double-word devices ([Panasonic FP7])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.21 ■7 Availability of writing/reading data to/from double-word devices ([Panasonic FP7])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Index register	Hexadecimal	0 to E	×	×
TS	Timer set value area	Decimal	0 to 4095	×	×
TE	Timer elapsed value area	Decimal	0 to 4095	×	×
CS	Counter set value area	Decimal	0 to 1023	×	×
CE	Counter elapsed value area	Decimal	0 to 1023	×	×
_TS	Timer set value area	Decimal	PB(Program block No.)_TS(Word address) Notation example: PB468_TS4095 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 4095	×	×
_TE	Timer elapsed value area	Decimal	PB(Program block No.)_TE(Word address) Notation example: PB468_TE4095 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 4095	×	×
_CS	Counter set value area	Decimal	PB(Program block No.)_CS(Word address) Notation example: PB468_CS1023 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 1023	×	×
_CE	Counter elapsed value area	Decimal	PB(Program block No.)_CE(Word address) Notation example: PB468_CE1023 • Program block No. (decimal): 1 to 468 • Word address (decimal): 0 to 1023	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([Panasonic FP7])

The following shows whether writing/reading data to/from double-word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
I	-/-	R/W	-/-	-/-
TS	-/-	R/W	-/-	-/-
TE	-/-	R/W	-/-	-/-
CS	-/-	R/W	-/-	-/-
CE	-/-	R/W	-/-	-/-
_TS	-/-	R/W	-/-	-/-
_TE	-/-	R/W	-/-	-/-
_CS	-/-	R/W	-/-	-/-
_CE	-/-	R/W	-/-	-/-

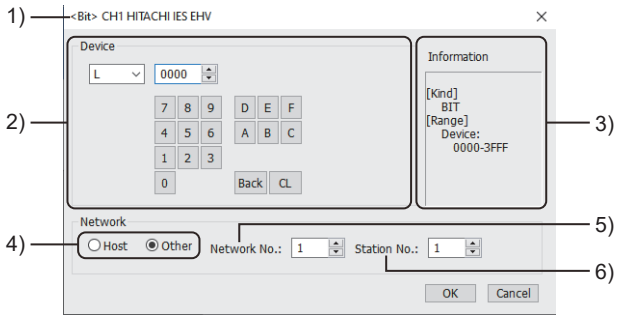
12.4.22 HITACHI IES equipment ([HITACHI IES EHV])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([HITACHI IES EHV])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([HITACHI IES EHV])
	➟■3 Availability of writing/reading data to/from bit devices ([HITACHI IES EHV])
Specifications of word devices	➟■4 Monitoring-supported word devices ([HITACHI IES EHV])
	➟■5 Availability of writing/reading data to/from word devices ([HITACHI IES EHV])

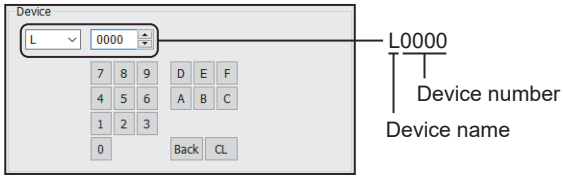
■1 Device setting dialog ([HITACHI IES EHV])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of L0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.
The setting range is [1] to [239].

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.
The setting range is [1] to [254].

■2 Monitoring-supported bit devices ([HITACHI IES EHV])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.22 ■3 Availability of writing/reading data to/from bit devices ([HITACHI IES EHV])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X*2	External input	Decimal + decimal + hexadecimal + decimal	X(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: X05A95 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95	○	○
	Remote external input	Decimal + decimal + hexadecimal + decimal	X(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: X19A95 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95		
Y*2	External output	Decimal + decimal + hexadecimal + decimal	Y(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: Y05A95 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95	○	○
	Remote external output	Decimal + decimal + hexadecimal + decimal	Y(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: Y19A95 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95		
L	1st CPU link	Hexadecimal	0000 to 3FFF	○	○
M	Data area	Hexadecimal	00000 to 7FFFF	○	○
TD	On-delay timer	Decimal	0 to 2559	○	○ (Not usable as word data)
CU	Up counter	Decimal	0 to 511	○	○ (Not usable as word data)
L1	2nd CPU link	Hexadecimal	0000 to 3FFF	○	○
SS	Single-shot timer	Decimal	0 to 2559	○	○ (Not usable as word data)
WDT	Watchdog timer	Decimal	0 to 2559	○	○ (Not usable as word data)
MS	Monostable timer	Decimal	0 to 2559	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TMR	Retentive timer	Decimal	0 to 2559	○	○ (Not usable as word data)
RCU	Ring counter	Decimal	0 to 511	○	○ (Not usable as word data)
CT	Up/Down counter	Decimal	0 to 511	○	○ (Not usable as word data)
R	Bit internal output	Hexadecimal	000 to 7BF	○	○ (Not usable as word data)
EX	Extended external input	Decimal + hexadecimal + hexadecimal	EX(Unit No.)(Slot No.)(Module bit No.) Notation example: EX5A7FF • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (hexadecimal): 000 to 7FF	○	○
EY	Extended external output	Decimal + hexadecimal + hexadecimal	EY(Unit No.)(Slot No.)(Module bit No.) Notation example: EY5A7FF • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (hexadecimal): 000 to 7FF	○	○
TDN	Off-delay timer	Decimal	0 to 2559	○	○ (Not usable as word data)
CTU	Up coil up/down counter	Decimal	0 to 511	○	○ (Not usable as word data)
CTD	Down coil up/down counter	Decimal	0 to 511	○	○ (Not usable as word data)
CL	Counter clear	Decimal	0 to 2559	○	○ (Not usable as word data)
L2	3rd CPU link	Hexadecimal	0000 to 3FFF	○	○
L3	4th CPU link	Hexadecimal	0000 to 3FFF	○	○
L4	5th CPU link	Hexadecimal	0000 to 3FFF	○	○
L5	6th CPU link	Hexadecimal	0000 to 3FFF	○	○
L6	7th CPU link	Hexadecimal	0000 to 3FFF	○	○
L7	8th CPU link	Hexadecimal	0000 to 3FFF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Do not use a device range containing a device number to which I/O is not assigned.
If used, a device range error occurs during writing/reading, which results in system alarm 322.

■3 Availability of writing/reading data to/from bit devices ([HITACHI IES EHV])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
TD	R/W	-/-	-/-	-/-	-/-
CU	R/W	-/-	-/-	-/-	-/-
L1	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
WDT	R/W	-/-	-/-	-/-	-/-
MS	R/W	-/-	-/-	-/-	-/-
TMR	R/W	-/-	-/-	-/-	-/-
RCU	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
EX	R/W	-/-	-/-	-/-	-/-
EY	R/W	-/-	-/-	-/-	-/-
TDN	R/W	-/-	-/-	-/-	-/-
CTU	R/W	-/-	-/-	-/-	-/-
CTD	R/W	-/-	-/-	-/-	-/-
CL	R/W	-/-	-/-	-/-	-/-
L2	R/W	-/-	-/-	-/-	-/-
L3	R/W	-/-	-/-	-/-	-/-
L4	R/W	-/-	-/-	-/-	-/-
L5	R/W	-/-	-/-	-/-	-/-
L6	R/W	-/-	-/-	-/-	-/-
L7	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([HITACHI IES EHV])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.22 ■5 Availability of writing/reading data to/from word devices ([HITACHI IES EHV])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC	Timer/Counter (Elapsed value)	Decimal	0 to 2559	○	○
WR	Word internal output	Hexadecimal	0000 to EFFF	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
WX*2	External input	Decimal + decimal + hexadecimal + decimal	WX(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: WX05A7 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
	Remote external input	Decimal + decimal + hexadecimal + decimal	WX(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: WX19A7 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
WY*2	External output	Decimal + decimal + hexadecimal + decimal	WY(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: WY05A7 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
	Remote external output	Decimal + decimal + hexadecimal + decimal	WY(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: WY19A7 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
WL1	2nd CPU link	Hexadecimal	000 to 3FF	○	○
WL	1st CPU link	Hexadecimal	000 to 3FF	○	○
WM	Data area	Hexadecimal	0000 to 7FFF	○	○
WEX	Extended external input	Decimal + hexadecimal + hexadecimal	WEX(Unit No.)(Slot No.)(Module bit No.) Notation example: WEX5A7F • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (hexadecimal): 00 to 7F	○	○
WEY	Extended external output	Decimal + hexadecimal + hexadecimal	WEY(Unit No.)(Slot No.)(Module bit No.) Notation example: WEY5A7F • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (hexadecimal): 00 to 7F	○	○
WN	Internal output	Hexadecimal	00000 to 1FFFF	○	○
WL2	3rd CPU link	Hexadecimal	000 to 3FF	○	○
WL3	4th CPU link	Hexadecimal	000 to 3FF	○	○
WL4	5th CPU link	Hexadecimal	000 to 3FF	○	○
WL5	6th CPU link	Hexadecimal	000 to 3FF	○	○
WL6	7th CPU link	Hexadecimal	000 to 3FF	○	○
WL7	8th CPU link	Hexadecimal	000 to 3FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Do not use a device range containing a device number to which I/O is not assigned.
If used, a device range error occurs during writing/reading, which results in system alarm 322.

■5 Availability of writing/reading data to/from word devices ([HITACHI IES EHV])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TC	R/W	R/W	-/-	-/-
WR	R/W	R/W	-/-	R/W
WX	R/W	R/W	-/-	-/-
WY	R/W	R/W	-/-	-/-
WL1	R/W	R/W	-/-	-/-
WL	R/W	R/W	-/-	-/-
WM	R/W	R/W	-/-	-/-
WEX	R/W	R/W	-/-	-/-
WEY	R/W	R/W	-/-	-/-
WN	R/W	R/W	-/-	R/W
WL2	R/W	R/W	-/-	-/-
WL3	R/W	R/W	-/-	-/-
WL4	R/W	R/W	-/-	-/-
WL5	R/W	R/W	-/-	-/-
WL6	R/W	R/W	-/-	-/-
WL7	R/W	R/W	-/-	-/-

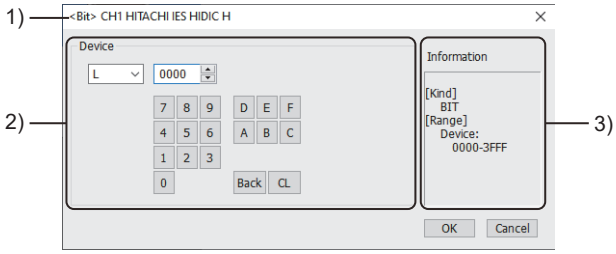
12.4.23 HITACHI IES equipment ([HITACHI IES HIDIC H])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([HITACHI IES HIDIC H])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([HITACHI IES HIDIC H])
	➟■3 Availability of writing/reading data to/from bit devices ([HITACHI IES HIDIC H])
Specifications of word devices	➟■4 Monitoring-supported word devices ([HITACHI IES HIDIC H])
	➟■5 Availability of writing/reading data to/from word devices ([HITACHI IES HIDIC H])

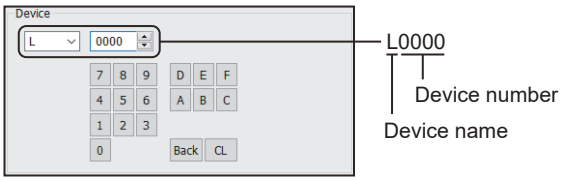
■1 Device setting dialog ([HITACHI IES HIDIC H])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of L0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([HITACHI IES HIDIC H])

The following table shows monitoring-supported bit devices.
Do not set device outside the range.
If the set device is outside the range, the object set by the device within the range cannot be displayed.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.23 ■3 Availability of writing/reading data to/from bit devices ([HITACHI IES HIDIC H])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
X[*2]	External input	Decimal + decimal + hexadecimal + decimal	X(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: X05A95 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95	○	○
	Remote external input	Decimal + decimal + decimal + decimal	X(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: X19995 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (decimal): 0 to 9 • Module bit No. (decimal): 00 to 95		
Y[*2]	External output	Decimal + decimal + hexadecimal + decimal	Y(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: Y05A95 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 00 to 95	○	○
	Remote external output	Decimal + decimal + decimal + decimal	Y(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: Y19995 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (decimal): 0 to 9 • Module bit No. (decimal): 00 to 95		
L	1st CPU link	Hexadecimal	0000 to 3FFF	○	○
M	Data area	Hexadecimal	0000 to 3FFF	○	○
TD[*3]	On-delay timer	Decimal	0 to 1023	○	○ (Not usable as word data)
CU[*3]	Up counter	Decimal	0 to 2047	○	○ (Not usable as word data)
L1	2nd CPU link	Hexadecimal	0000 to 3FFF	○	○
SS[*3]	Single-shot timer	Decimal	0 to 1023	○	○ (Not usable as word data)
WDT[*3]	Watchdog timer	Decimal	0 to 1023	○	○ (Not usable as word data)
MS[*3]	Monostable timer	Decimal	0 to 1023	○	○ (Not usable as word data)
TMR[*3]	Retentive timer	Decimal	0 to 1023	○	○ (Not usable as word data)
RCU[*3]	Ring counter	Decimal	0 to 2047	○	○ (Not usable as word data)
CT[*3]	Up/Down counter	Decimal	0 to 2047	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
R	Bit internal output	Hexadecimal	000 to 7BF	○	○ (Not usable as word data)
DIF	Rising edge detection	Decimal	0 to 511	○	○ (Not usable as word data)
DFN	Falling edge detection	Decimal	0 to 511	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Do not use a device range containing a device number to which I/O is not assigned.
Writing/reading is not performed normally.

*3 The same number cannot be used repeatedly.

■3 Availability of writing/reading data to/from bit devices ([HITACHI IES HIDIC H])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
TD	R/W	-/-	-/-	-/-	-/-
CU	R/W	-/-	-/-	-/-	-/-
L1	R/W	-/-	-/-	-/-	-/-
SS	R/W	-/-	-/-	-/-	-/-
WDT	R/W	-/-	-/-	-/-	-/-
MS	R/W	-/-	-/-	-/-	-/-
TMR	R/W	-/-	-/-	-/-	-/-
RCU	R/W	-/-	-/-	-/-	-/-
CT	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
DIF	R/W	-/-	-/-	-/-	-/-
DFN	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([HITACHI IES HIDIC H])

The following table shows monitoring-supported word devices.
Do not set device outside the range.
If the set device is outside the range, the object set by the device within the range cannot be displayed.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.23 ■5 Availability of writing/reading data to/from word devices ([HITACHI IES HIDIC H])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC*2	Timer/Counter (Elapsed value)	Decimal	0000 to 2047	○	○
WR	Word internal output	Hexadecimal	0000 to C3FF	○	○
WX*3	External input	Decimal + decimal + hexadecimal + decimal	WX(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: WX05A7 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
	Remote external input	Decimal + decimal + decimal + decimal	WX(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: WX1997 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (decimal): 0 to 9 • Module bit No. (decimal): 0 to 7	○	○
WY*3	External output	Decimal + decimal + hexadecimal + decimal	WY(Remote No.)(Unit No.)(Slot No.)(Module bit No.) Notation example: WY05A7 • Remote No. (decimal): 0 • Unit No. (decimal): 0 to 5 • Slot No. (hexadecimal): 0 to A • Module bit No. (decimal): 0 to 7	○	○
	Remote external output	Decimal + decimal + decimal + decimal	WY(Remote No.)(Remote slave station)(Slot No.)(Module bit No.) Notation example: WY1997 • Remote No. (Remote master station) (decimal): 1 to 4 • Remote slave station (decimal): 0 to 9 • Slot No. (decimal): 0 to 9 • Module bit No. (decimal): 0 to 7	○	○
WL1	2nd CPU link	Hexadecimal	000 to 3FF	○	○
WL	1st CPU link	Hexadecimal	000 to 3FF	○	○
WM	Data area	Hexadecimal	000 to 3FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The same number cannot be used repeatedly.

*3 Do not use a device range containing a device number to which I/O is not assigned.
Writing/reading is not performed normally.

■5 Availability of writing/reading data to/from word devices ([HITACHI IES HIDIC H])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TC	R/W	R/W	-/-	R/W
WR	R/W	R/W	-/-	R/W
WX	R/W	R/W	-/-	-/-
WY	R/W	R/W	-/-	-/-
WL1	R/W	R/W	-/-	-/-
WL	R/W	R/W	-/-	-/-
WM	R/W	R/W	-/-	-/-

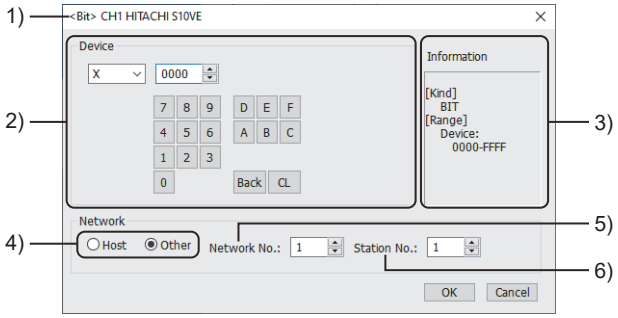
12.4.24 HITACHI equipment ([HITACHI S10VE])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([HITACHI S10VE])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([HITACHI S10VE])
	➟■3 Availability of writing/reading data to/from bit devices ([HITACHI S10VE])
Specifications of word devices	➟■4 Monitoring-supported word devices ([HITACHI S10VE])
	➟■5 Availability of writing/reading data to/from word devices ([HITACHI S10VE])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([HITACHI S10VE])
	➟■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10VE])

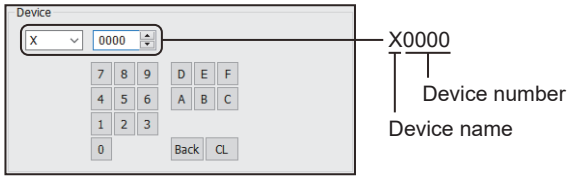
■1 Device setting dialog ([HITACHI S10VE])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([HITACHI S10VE])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.24 ■3 Availability of writing/reading data to/from bit devices ([HITACHI S10VE])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	External input	Hexadecimal	X(Address)(Bit position) Notation example: XFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
Y	External output	Hexadecimal	Y(Address)(Bit position) Notation example: YFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
GL*2	Global link register	Hexadecimal	GL(Address)(Bit position) Notation example: GLFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
R	Internal register	Hexadecimal	R(Address)(Bit position) Notation example: RFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
K	Keep relay	Hexadecimal	K(Address)(Bit position) Notation example: KFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
E	Event register	Hexadecimal	E(Address)(Bit position) Notation example: EFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
T	On-delay timer	Hexadecimal	T(Address)(Bit position) Notation example: T7F0 • Address (word unit) (hexadecimal): 00 to 7F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
C	Up-down counter	Hexadecimal	C(Address)(Bit position) Notation example: CF0 • Address (word unit) (hexadecimal): 0 to F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
U	One-shot timer	Hexadecimal	U(Address)(Bit position) Notation example: U0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
M	Extended internal register	Hexadecimal	M(Address)(Bit position) Notation example: MFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
A	Extended internal register	Hexadecimal	A(Address)(Bit position) Notation example: AFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
S	System register	Hexadecimal	S(Address)(Bit position) Notation example: SBFF0 • Address (word unit) (hexadecimal): 000 to BFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
J	Transfer register	Hexadecimal	J(Address)(Bit position) Notation example: JFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
Q	Receive register	Hexadecimal	Q(Address)(Bit position) Notation example: QFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
LB	Extended internal register	Hexadecimal	LB(Address)(Bit position) Notation example: LBFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
LR	Converter-specific internal register	Hexadecimal	LR(Address)(Bit position) Notation example: LR0FF0 • Address (word unit) (hexadecimal): 000 to 0FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
LV	Converter-specific edge contact register	Hexadecimal	LV(Address)(Bit position) Notation example: LV0FF0 • Address (word unit) (hexadecimal): 000 to 0FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
P	Process register	Hexadecimal	P(Address)(Bit position) Notation example: P080 • Address (word unit) (hexadecimal): 00 to 08 • Bit position (hexadecimal): 0 to F (Set 1 when the address is 00. Set 0 when the address is 08.)	○	○ (Not usable as word data)
V	Edge contact	Hexadecimal	V(Address)(Bit position) Notation example: VFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
CU	Up-down counter (up counter)	Hexadecimal	00 to FF	○	○ (Not usable as word data)
CD	Up-down counter (down counter)	Hexadecimal	00 to FF	○	○ (Not usable as word data)
CR	Up-down counter (reset)	Hexadecimal	00 to FF	○	○ (Not usable as word data)
NM	Nesting coil (master control)	Hexadecimal	00 to FF	○	○ (Not usable as word data)
NZ	Nesting coil (zone control)	Hexadecimal	00 to FF	○	○ (Not usable as word data)
N	Nesting coil	Hexadecimal	N(Address)(Bit position) Notation example: NF0 • Address (word unit) (hexadecimal): 0 to F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The global link register (GL) corresponds to the global link register (G) of the PLU CPU.

■3 Availability of writing/reading data to/from bit devices ([HITACHI S10VE])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
GL	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
K	R/W	-/-	-/-	-/-	-/-
E	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
U	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
A	R/W	-/-	-/-	-/-	-/-
S	R/-	-/-	-/-	-/-	-/-
J	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-
LB	R/W	-/-	-/-	-/-	-/-
LR	R/W	-/-	-/-	-/-	-/-
LV	R/W	-/-	-/-	-/-	-/-
P	R/W	-/-	-/-	-/-	-/-
V	R/W	-/-	-/-	-/-	-/-
CU	R/W	-/-	-/-	-/-	-/-
CD	R/W	-/-	-/-	-/-	-/-
CR	R/W	-/-	-/-	-/-	-/-
NM	R/W	-/-	-/-	-/-	-/-
NZ	R/W	-/-	-/-	-/-	-/-
N	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([HITACHI S10VE])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.24 ■5 Availability of writing/reading data to/from word devices ([HITACHI S10VE])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC	On-delay timer (count value)	Hexadecimal	000 to 1FF	○	○ (Not usable as bit data)
CC	Up-down counter (count value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
UC	One-shot timer (count value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)
DW[*2]	Function data register	Hexadecimal	000 to FFF	○	○
AW	Extension internal register	Hexadecimal	AW(Address)(Bit position) Notation example: AWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
SW	System register	Hexadecimal	SW(Address)(Bit position) Notation example: SWBFF0 • Address (word unit) (hexadecimal): 000 to BFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
JW	Transfer register	Hexadecimal	JW(Address)(Bit position) Notation example: JWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
QW	Receive register	Hexadecimal	QW(Address)(Bit position) Notation example: QWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
TS	On-delay timer (set value)	Hexadecimal	000 to 1FF	○	○ (Not usable as bit data)
US	One-shot timer (set value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)
CS	Up-down counter (set value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)
FW[*2]	Function work register	Hexadecimal	000 to BFF	○	○
LWW[*2]	Extension function work register	Hexadecimal	0000 to FFFF	○	○
LXW[*2]	Backup work register	Hexadecimal	0000 to 3FFF	○	○
XW	External input	Hexadecimal	XW(Address)(Bit position) Notation example: XWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
YW	External output	Hexadecimal	YW(Address)(Bit position) Notation example: YWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
RW	Internal register	Hexadecimal	RW(Address)(Bit position) Notation example: RWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
MW	Extension internal register	Hexadecimal	MW(Address)(Bit position) Notation example: MWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
KW	Keep relay	Hexadecimal	KW(Address)(Bit position) Notation example: KWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
TW	On-delay timer	Hexadecimal	TW(Address)(Bit position) Notation example: TW7F0 • Address (word unit) (hexadecimal): 00 to 7F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
UW	One-shot timer	Hexadecimal	UW(Address)(Bit position) Notation example: UW0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
CW	Up-down counter	Hexadecimal	CW(Address)(Bit position) Notation example: CW0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
GW	Global link register	Hexadecimal	GW(Address)(Bit position) Notation example: GWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
EW	Event register	Hexadecimal	EW(Address)(Bit position) Notation example: EWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
NW	Nesting coil	Hexadecimal	NW(Address)(Bit position) Notation example: NW0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
PW	Process register	Hexadecimal	PW(Address)(Bit position) Notation example: PW080 • Address (word unit) (hexadecimal): 00 to 08 • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
IW	I/O input register	Hexadecimal	000 to FFF	○	○ (Not usable as bit data)
OW	I/O output register	Hexadecimal	000 to FFF	○	○ (Not usable as bit data)
BW	Function data register	Hexadecimal	000 to 1FE	○	○ (Not usable as bit data)
LBW	Extension internal register	Hexadecimal	LBW(Address)(Bit position) Notation example: LBWFFF0 • Address (word unit) (hexadecimal): 000 to FFF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
LRW	Converter-specific internal register	Hexadecimal	LRW(Address)(Bit position) Notation example: LRW0FF0 • Address (word unit) (hexadecimal): 000 to 0FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LVW	Converter-specific edge contact register	Hexadecimal	LVW(Address)(Bit position) Notation example: LVW0FF0 • Address (word unit) (hexadecimal): 000 to 0FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
VW	Edge contact	Hexadecimal	VW(Address)(Bit position) Notation example: VWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When it is used with bit specification of word device, the offset function cannot be used.

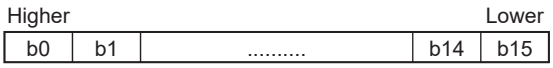
■5 Availability of writing/reading data to/from word devices ([HITACHI S10VE])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TC	R/W	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-
UC	R/W	-/-	-/-	-/-
DW*1	R/W	R/W	-/-	R/W
AW	R/W	R/W	-/-	-/-
SW	R/-	R/-	-/-	-/-
JW	R/W	R/W	-/-	-/-
QW	R/W	R/W	-/-	-/-
TS	R/W	-/-	-/-	-/-
US	R/W	-/-	-/-	-/-
CS	R/W	-/-	-/-	-/-
FW*1	R/W	R/W	-/-	R/W
LWW*1	R/W	R/W	-/-	R/W
LXW*1	R/W	R/W	-/-	R/W
XW	R/W	R/W	-/-	-/-
YW	R/W	R/W	-/-	-/-
RW	R/W	R/W	-/-	-/-
MW	R/W	R/W	-/-	-/-
KW	R/W	R/W	-/-	-/-
TW	R/W	R/W	-/-	-/-
UW	R/W	R/W	-/-	-/-
CW	R/W	R/W	-/-	-/-
GW	R/W	R/W	-/-	-/-
EW	R/W	R/W	-/-	-/-
NW	R/W	R/W	-/-	-/-
PW	R/W	R/W	-/-	-/-
IW	R/W	R/W	-/-	-/-
OW	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
BW	R/W	R/W	-/-	-/-
LBW	R/W	R/W	-/-	-/-
LRW	R/W	R/W	-/-	-/-
LVW	R/W	R/W	-/-	-/-
VW	R/W	R/W	-/-	-/-

*1 When bit specification of word device is performed, the uppermost bit is b0 and the lowermost bit is b15.



■6 Monitoring-supported double-word devices ([HITACHI S10VE])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.24 ■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10VE])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LLL	Long-word work register	Hexadecimal	0000 to 1FFF	×	×
LML	Backup long-word work register	Hexadecimal	0000 to 1FFF	×	×
LF	Floating-point work register	Hexadecimal	0000 to 1FFF	×	×
LG	Backup single-precision floating-point work register	Hexadecimal	0000 to 1FFF	×	×
DL	Function data register	Hexadecimal	000 to FFE	×	×
AL	Extension internal register	Hexadecimal	AL(Address)(Bit position) Notation example: ALFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
SL	System register	Hexadecimal	SL(Address)(Bit position) Notation example: SLBFE0 • Address (word unit) (hexadecimal): 000 to BFE • Bit position (hexadecimal): 0	×	×
JL	Transfer register	Hexadecimal	JL(Address)(Bit position) Notation example: JLFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
QL	Receive register	Hexadecimal	QL(Address)(Bit position) Notation example: QLFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
FL	Function work register	Hexadecimal	000 to BFE	×	×
LWL	Extension function work register	Hexadecimal	0000 to FFFE	×	×
LXL	Backup work register	Hexadecimal	0000 to 3FFE	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
XL	External input	Hexadecimal	XL(Address)(Bit position) Notation example: XLFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
YL	External output	Hexadecimal	YL(Address)(Bit position) Notation example: YLFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
RL	Internal register	Hexadecimal	RL(Address)(Bit position) Notation example: RLFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
ML	Extension internal register	Hexadecimal	ML(Address)(Bit position) Notation example: MLFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
KL	Keep relay	Hexadecimal	KL(Address)(Bit position) Notation example: KLFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
TL	On-delay timer	Hexadecimal	TL(Address)(Bit position) Notation example: TL7E0 • Address (word unit) (hexadecimal): 00 to 7E • Bit position (hexadecimal): 0	×	×
UL	One-shot timer	Hexadecimal	UL(Address)(Bit position) Notation example: UL0E0 • Address (word unit) (hexadecimal): 00 to 0E • Bit position (hexadecimal): 0	×	×
CL	Up-down counter	Hexadecimal	CL(Address)(Bit position) Notation example: CL0E0 • Address (word unit) (hexadecimal): 00 to 0E • Bit position (hexadecimal): 0	×	×
GWL[*2]	Global link register	Hexadecimal	GWL(Address)(Bit position) Notation example: GWLFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
EL	Event register	Hexadecimal	EL(Address)(Bit position) Notation example: ELFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
NL	Nesting coil	Hexadecimal	NL(Address)(Bit position) Notation example: NL0E0 • Address (word unit) (hexadecimal): 00 to 0E • Bit position (hexadecimal): 0	×	×
PL	Process register	Hexadecimal	PL(Address)(Bit position) Notation example: PL060 • Address (word unit) (hexadecimal): 00 to 06 • Bit position (hexadecimal): 0	×	×
IL	I/O input register	Hexadecimal	000 to FFE	×	×

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
OL	I/O output register	Hexadecimal	000 to FFEF	×	×
BL	Function data register	Hexadecimal	000 to 1FE	×	×
LBL	Extension internal register	Hexadecimal	LBL(Address)(Bit position) Notation example: LBLFFE0 • Address (word unit) (hexadecimal): 000 to FFE • Bit position (hexadecimal): 0	×	×
LRL	Converter-specific internal register	Hexadecimal	LRL(Address)(Bit position) Notation example: LRL0FE0 • Address (word unit) (hexadecimal): 000 to 0FE • Bit position (hexadecimal): 0	×	×
LVL	Converter-specific edge contact register	Hexadecimal	LVL(Address)(Bit position) Notation example: LVL0FE0 • Address (word unit) (hexadecimal): 000 to 0FE • Bit position (hexadecimal): 0	×	×
VL	Edge contact	Hexadecimal	VL(Address)(Bit position) Notation example: VLFE0 • Address (word unit) (hexadecimal): 00 to FE • Bit position (hexadecimal): 0	×	×
BD	Internal register	Hexadecimal	000 to 1FE	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The global link register (GWL) corresponds to the global link register (GL) of the PLU CPU.

■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10VE])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LLL	-/-	R/W	-/-	-/-
LML	-/-	R/W	-/-	-/-
LF	-/-	R/W	-/-	-/-
LG	-/-	R/W	-/-	-/-
DL	-/-	R/W	-/-	-/-
AL	-/-	R/W	-/-	-/-
SL	-/-	R/-	-/-	-/-
JL	-/-	R/W	-/-	-/-
QL	-/-	R/W	-/-	-/-
FL	-/-	R/W	-/-	-/-
LWL	-/-	R/W	-/-	-/-
LXL	-/-	R/W	-/-	-/-
XL	-/-	R/W	-/-	-/-
YL	-/-	R/W	-/-	-/-
RL	-/-	R/W	-/-	-/-
ML	-/-	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
KL	-/-	R/W	-/-	-/-
TL	-/-	R/W	-/-	-/-
UL	-/-	R/W	-/-	-/-
CL	-/-	R/W	-/-	-/-
GWL	-/-	R/W	-/-	-/-
EL	-/-	R/W	-/-	-/-
NL	-/-	R/W	-/-	-/-
PL	-/-	R/W	-/-	-/-
IL	-/-	R/W	-/-	-/-
OL	-/-	R/W	-/-	-/-
BL	-/-	R/W	-/-	-/-
LBL	-/-	R/W	-/-	-/-
LRL	-/-	R/W	-/-	-/-
LVL	-/-	R/W	-/-	-/-
VL	-/-	R/W	-/-	-/-
BD	-/-	R/W	-/-	-/-

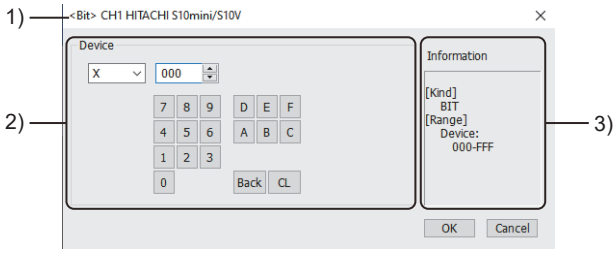
12.4.25 HITACHI equipment ([HITACHI S10mini/S10V])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([HITACHI S10mini/S10V])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([HITACHI S10mini/S10V])
	➟■3 Availability of writing/reading data to/from bit devices ([HITACHI S10mini/S10V])
Specifications of word devices	➟■4 Monitoring-supported word devices ([HITACHI S10mini/S10V])
	➟■5 Availability of writing/reading data to/from word devices ([HITACHI S10mini/S10V])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([HITACHI S10mini/S10V])
	➟■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10mini/S10V])

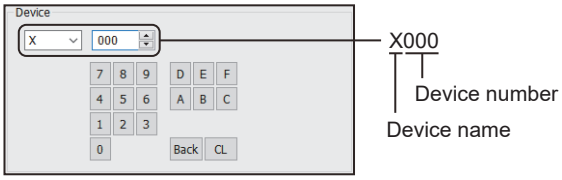
■1 Device setting dialog ([HITACHI S10mini/S10V])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([HITACHI S10mini/S10V])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.25 ■3 Availability of writing/reading data to/from bit devices ([HITACHI S10mini/S10V])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	External input	Hexadecimal	X(Address)(Bit position) Notation example: XFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
Y	External output	Hexadecimal	Y(Address)(Bit position) Notation example: YFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
GL*2	Global link register	Hexadecimal	GL(Address)(Bit position) Notation example: GLFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
R	Internal register	Hexadecimal	R(Address)(Bit position) Notation example: RFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
K	Keep relay	Hexadecimal	K(Address)(Bit position) Notation example: KFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
E	Event register	Hexadecimal	E(Address)(Bit position) Notation example: EFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
T	On-delay timer	Hexadecimal	T(Address)(Bit position) Notation example: T1F0 • Address (word unit) (hexadecimal): 00 to 1F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
C	Up-down counter	Hexadecimal	C(Address)(Bit position) Notation example: CF0 • Address (word unit) (hexadecimal): 0 to F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
U	One-shot timer	Hexadecimal	U(Address)(Bit position) Notation example: U0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
M	Extended internal register	Hexadecimal	M(Address)(Bit position) Notation example: MFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
A	Extended internal register	Hexadecimal	A(Address)(Bit position) Notation example: AFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
S	System register	Hexadecimal	S(Address)(Bit position) Notation example: SBF0 • Address (word unit) (hexadecimal): 00 to BF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
J	Transfer register	Hexadecimal	J(Address)(Bit position) Notation example: JFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)
Q	Receive register	Hexadecimal	Q(Address)(Bit position) Notation example: QFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 The global link register (GL) corresponds to the global link register (G) of the PLU CPU.

■3 Availability of writing/reading data to/from bit devices ([HITACHI S10mini/S10V])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	-/-	-/-	-/-
Y	R/W	-/-	-/-	-/-	-/-
GL	R/W	-/-	-/-	-/-	-/-
R	R/W	-/-	-/-	-/-	-/-
K	R/W	-/-	-/-	-/-	-/-
E	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
U	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
A	R/W	-/-	-/-	-/-	-/-
S	R/-	-/-	-/-	-/-	-/-
J	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([HITACHI S10mini/S10V])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.25 ■5 Availability of writing/reading data to/from word devices ([HITACHI S10mini/S10V])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TC	On-delay timer (count value)	Hexadecimal	000 to 1FF	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
CC	Up-down counter (count value)	Hexadecimal	00 to FF	○	○ (Not usable as bit data)
UC	One-shot timer (count value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)
DW[*2]	Function data register	Hexadecimal	000 to FFF	○	○
AW	Extension internal register	Hexadecimal	AW(Address)(Bit position) Notation example: AWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
SW	System register	Hexadecimal	SW(Address)(Bit position) Notation example: SWBF0 • Address (word unit) (hexadecimal): 00 to BF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
JW	Transfer register	Hexadecimal	JW(Address)(Bit position) Notation example: JWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
QW	Receive register	Hexadecimal	QW(Address)(Bit position) Notation example: QWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
TS	On-delay timer (set value)	Hexadecimal	000 to 1FF	○	○ (Not usable as bit data)
US	One-shot timer (set value)	Hexadecimal	000 to 0FF	○	○ (Not usable as bit data)
CS	Up-down counter (set value)	Hexadecimal	00 to FF	○	○ (Not usable as bit data)
FW[*2]	Function work register	Hexadecimal	000 to BFF	○	○
LWW[*2]	Extension function work register	Hexadecimal	0000 to FFFF	○	○
LXW[*2]	Backup work register	Hexadecimal	0000 to 3FFF	○	○
XW	External input	Hexadecimal	XW(Address)(Bit position) Notation example: XWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
YW	External output	Hexadecimal	YW(Address)(Bit position) Notation example: YWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
RW	Internal register	Hexadecimal	RW(Address)(Bit position) Notation example: RWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
MW	Extension internal register	Hexadecimal	MW(Address)(Bit position) Notation example: MWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
KW	Keep relay	Hexadecimal	KW(Address)(Bit position) Notation example: KWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
TW	On-delay timer	Hexadecimal	TW(Address)(Bit position) Notation example: TW1F0 • Address (word unit) (hexadecimal): 00 to 1F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
UW	One-shot timer	Hexadecimal	UW(Address)(Bit position) Notation example: UW0F0 • Address (word unit) (hexadecimal): 00 to 0F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
CW	Up-down counter	Hexadecimal	CW(Address)(Bit position) Notation example: CWF0 • Address (word unit) (hexadecimal): 0 to F • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
GW	Global link register	Hexadecimal	GW(Address)(Bit position) Notation example: GWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)
EW	Event register	Hexadecimal	EW(Address)(Bit position) Notation example: EWFF0 • Address (word unit) (hexadecimal): 00 to FF • Bit position (hexadecimal): 0	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When it is used with bit specification of word device, the offset function cannot be used.

■5 Availability of writing/reading data to/from word devices ([HITACHI S10mini/S10V])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

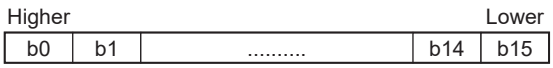
-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TC	R/W	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-
UC	R/W	-/-	-/-	-/-
DW*1	R/W	R/W	-/-	R/W
AW	R/W	R/W	-/-	-/-
SW	R/-	R/-	-/-	-/-
JW	R/W	R/W	-/-	-/-
QW	R/W	R/W	-/-	-/-
TS	R/W	-/-	-/-	-/-
US	R/W	-/-	-/-	-/-
CS	R/W	-/-	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
FW*1	R/W	R/W	-/-	R/W
LWW*1	R/W	R/W	-/-	R/W
LXW*1	R/W	R/W	-/-	R/W
XW	R/W	R/W	-/-	-/-
YW	R/W	R/W	-/-	-/-
RW	R/W	R/W	-/-	-/-
MW	R/W	R/W	-/-	-/-
KW	R/W	R/W	-/-	-/-
TW	R/W	R/W	-/-	-/-
UW	R/W	R/W	-/-	-/-
CW	R/W	R/W	-/-	-/-
GW	R/W	R/W	-/-	-/-
EW	R/W	R/W	-/-	-/-

*1 When bit specification of word device is performed, the uppermost bit is b0 and the lowermost bit is b15.



■6 Monitoring-supported double-word devices ([HITACHI S10mini/S10V])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.4.25 ■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10mini/S10V])

For the formats of devices, refer to the following.

➥6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
LLL	Long-word work register	Hexadecimal	0000 to 1FFF	×	×
LML	Backup long-word work register	Hexadecimal	0000 to 1FFF	×	×
LF	Floating-point work register	Hexadecimal	0000 to 1FFF	×	×
LG	Backup single-precision floating-point work register	Hexadecimal	0000 to 1FFF	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([HITACHI S10mini/S10V])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
LLL	-/-	R/W	-/-	-/-
LML	-/-	R/W	-/-	-/-
LF	-/-	R/W	-/-	-/-
LG	-/-	R/W	-/-	-/-

12.4.26 HIRATA equipment ([Hirata HNC])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Contact our company for the device specifications when connecting the GOT to HIRATA equipment.

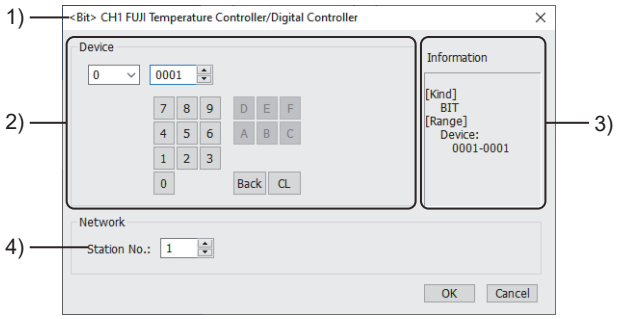
12.4.27 FUJI equipment ([FUJI Temperature Controller/Digital Controller])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([FUJI Temperature Controller/Digital Controller])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([FUJI Temperature Controller/Digital Controller])
	➡■3 Availability of writing/reading data to/from bit devices ([FUJI Temperature Controller/Digital Controller])
Specifications of word devices	➡■4 Monitoring-supported word devices ([FUJI Temperature Controller/Digital Controller])
	➡■5 Availability of writing/reading data to/from word devices ([FUJI Temperature Controller/Digital Controller])

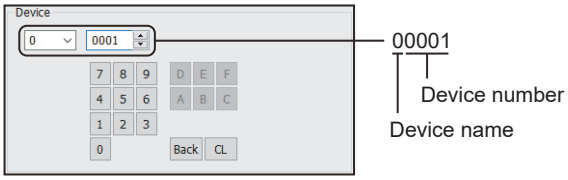
■1 Device setting dialog ([FUJI Temperature Controller/Digital Controller])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of 00001



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [1] to [199] (direct), [200] to [215] (indirect), or [216] to [255] (direct).
For indirect specification of a station number, refer to the following.

➡(1) Indirect specification of a station number ([FUJI Temperature Controller/Digital Controller])

(1) Indirect specification of a station number ([FUJI Temperature Controller/Digital Controller])

When you specify any of 200 to 215 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
200	GD10	[1] to [119], [216] to [255] Setting a value outside the above range causes a device range error.
201	GD11	
:	:	
214	GD24	
215	GD25	

■2 Monitoring-supported bit devices ([FUJI Temperature Controller/Digital Controller])

The following table shows monitoring-supported bit devices.

Devices are set with the coil and register numbers of the temperature controller.

For the coil numbers, register numbers, and their corresponding parameters' address maps, refer to the following.

➟Manual of the temperature controller used

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.27 ■3 Availability of writing/reading data to/from bit devices ([FUJI Temperature Controller/Digital Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
0	Bit data	Decimal	0001	×	○
1	Bit data	Decimal	0001 to 0016	×	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([FUJI Temperature Controller/Digital Controller])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
0	R/W	-/-	-/-	-/-	-/-
1	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([FUJI Temperature Controller/Digital Controller])

The following table shows monitoring-supported word devices.
Devices are set with the coil and register numbers of the temperature controller.
For the coil numbers, register numbers, and their corresponding parameters' address maps, refer to the following.

➟Manual of the temperature controller used

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.27 ■5 Availability of writing/reading data to/from word devices ([FUJI Temperature Controller/Digital Controller])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
3	Word data	Decimal	0001 to 4907	○	○
4	Word data	Decimal	0001 to 5032	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([FUJI Temperature Controller/Digital Controller])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
3	R/-	R/-	-/-	R/-
4	R/W	R/W	-/-	R/W

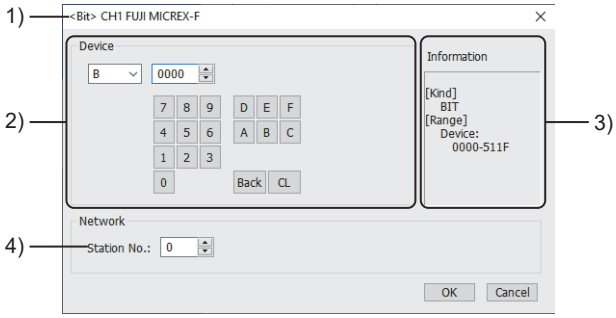
12.4.28 FUJI equipment ([FUJI MICREX-F])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([FUJI MICREX-F])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([FUJI MICREX-F])
	➟■3 Availability of writing/reading data to/from bit devices ([FUJI MICREX-F])
Specifications of word devices	➟■4 Monitoring-supported word devices ([FUJI MICREX-F])
	➟■5 Availability of writing/reading data to/from word devices ([FUJI MICREX-F])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([FUJI MICREX-F])
	➟■7 Availability of writing/reading data to/from double-word devices ([FUJI MICREX-F])

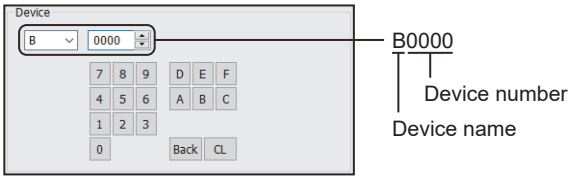
■1 Device setting dialog ([FUJI MICREX-F])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of B0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
The setting range is [0] to [99].

■2 Monitoring-supported bit devices ([FUJI MICREX-F])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.28 ■3 Availability of writing/reading data to/from bit devices ([FUJI MICREX-F])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
B	I/O relay	Decimal + hexadecimal	B(Word No.)(Bit No.) Notation example: B5110 • Word No. (decimal): 000 to 511 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
L	Link memory	Decimal + hexadecimal	L(Word No.)(Bit No.) Notation example: L5110 • Word No. (decimal): 000 to 511 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
M	Auxiliary relay	Decimal + hexadecimal	M(Word No.)(Bit No.) Notation example: M5110 • Word No. (decimal): 000 to 511 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
K	Keep relay	Decimal + hexadecimal	K(Word No.)(Bit No.) Notation example: K0630 • Word No. (decimal): 000 to 063 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
A	Annunciator relay	Decimal + hexadecimal	A(Word No.)(Bit No.) Notation example: A0450 • Word No. (decimal): 000 to 045 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
T	Timer output (0.01 s)	Decimal	000 to 511	○	○ (Not usable as word data)
	Timer output (0.1 s)	Decimal	512 to 999	○	○ (Not usable as word data)
C	Counter output	Decimal	000 to 511	○	○ (Not usable as word data)
F	Special relay	Decimal + hexadecimal	F(Word No.)(Bit No.) Notation example: F1250 • Word No. (decimal): 000 to 125 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
D	Differential relay	Decimal + hexadecimal	D(Word No.)(Bit No.) Notation example: D0630 • Word No. (decimal): 000 to 063 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([FUJI MICREX-F])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
B	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
K	R/W	-/-	-/-	-/-	-/-
A	R/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
F	R/-	-/-	-/-	-/-	-/-
D	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([FUJI MICREX-F])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.28 ■5 Availability of writing/reading data to/from word devices ([FUJI MICREX-F])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
WF	Special relay	Decimal	000 to 125	○	○ (Not usable as bit data)
WD	Differential relay	Decimal	000 to 063	○	○ (Not usable as bit data)
W24*2	Direct access	Decimal	W24:(Word No.) Notation example: W24:0255 • Word No. (decimal): 0000 to 0255	○	○
W*2*3	User file	Decimal	W(File No.):(Word No.) Notation example: W30:4095 • File No. (decimal): 30 to 109 • Word No. (decimal): 0000 to 4095	○	○
WB	I/O relay	Decimal	000 to 511	○	○ (Not usable as bit data)
WM	Auxiliary relay	Decimal	000 to 511	○	○ (Not usable as bit data)
WK	Keep relay	Decimal	000 to 063	○	○ (Not usable as bit data)
WA	Annunciator relay	Decimal	000 to 045	○	○ (Not usable as bit data)
WL	Link memory	Decimal	000 to 511	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When it is used with bit specification of word device, the offset function cannot be used.

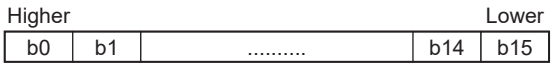
*3 When writing/reading data to/from a user file, set SI data for the data format of the PLC CPU, and 16 bits for the data length in GT Designer3.
With any setting other than the above, the PLC does not operate normally.

■5 Availability of writing/reading data to/from word devices ([FUJI MICREX-F])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
WF	R/-	R/-	-/-	-/-
WD	R/W	R/W	-/-	-/-
W24*1	R/W	R/W	-/-	R/W
W*1	R/W	-/-	-/-	R/W
WB	R/W	R/W	-/-	-/-
WM	R/W	R/W	-/-	-/-
WK	R/W	R/W	-/-	-/-
WA	R/W	R/W	-/-	-/-
WL	R/W	R/W	-/-	-/-

*1 When bit specification of word device is performed, the uppermost bit is b0 and the lowermost bit is b15.



■6 Monitoring-supported double-word devices ([FUJI MICREX-F])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.28 ■7 Availability of writing/reading data to/from double-word devices ([FUJI MICREX-F])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TR*2	Timer current value (0.01 s)	Decimal	000 to 511	×	×
CR*2	Counter current value	Decimal	000 to 511	×	×
BD	Data memory	Decimal	0000 to 4095	×	×
TS*2	Timer set value (0.01 s)	Decimal	000 to 511	×	×
W9*2	Timer current value (0.1 s)	Decimal	W9:(Word No.) Notation example: W9:0487 • Word No. (decimal): 0000 to 0487	×	×
CS*2	Counter set value	Decimal	000 to 511	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Decimal points are not displayed.

■7 Availability of writing/reading data to/from double-word devices ([FUJI MICREX-F])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
TR	-/-	R/W	-/-	-/-
CR	-/-	R/W	-/-	-/-
BD	-/-	R/W	-/-	-/-
TS	-/-	R/W	-/-	-/-
W9	-/-	R/W	-/-	-/-
CS	-/-	R/W	-/-	-/-

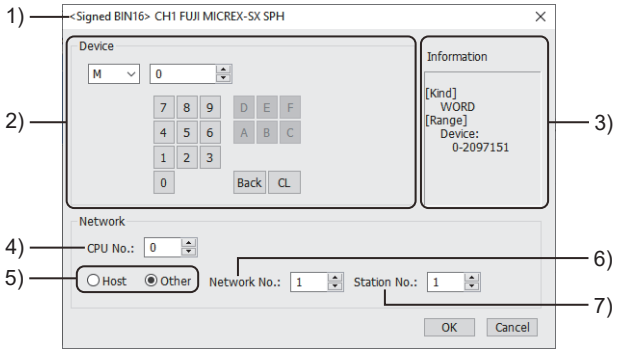
12.4.29 FUJI equipment ([FUJI MICREX-SX SPH])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([FUJI MICREX-SX SPH])
Specifications of word devices	➡■2 Monitoring-supported word devices ([FUJI MICREX-SX SPH])
	➡■3 Availability of writing/reading data to/from word devices ([FUJI MICREX-SX SPH])
Notation of devices	➡■4 Notation of devices ([FUJI MICREX-SX SPH])

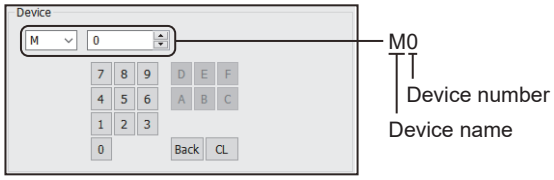
■1 Device setting dialog ([FUJI MICREX-SX SPH])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of M0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [CPU No.]
Set the CPU number of the controller.

5) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

6) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

7) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported word devices ([FUJI MICREX-SX SPH])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.29 ■3 Availability of writing/reading data to/from word devices ([FUJI MICREX-SX SPH])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
M	Non-retain memory	Decimal	0 to 2097151	○	○
L	Retain memory	Decimal	0 to 2097151	○	○
SM	System memory	Decimal	0 to 511	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from word devices ([FUJI MICREX-SX SPH])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data*1
M	R/W	R/W	-/-	R/W
L	R/W	R/W	-/-	R/W
SM	R/W	R/W	-/-	R/W

*1 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

■4 Notation of devices ([FUJI MICREX-SX SPH])

The notation of devices differs between the FUJI PLC programming software and GT Designer3.
The notation also differs according to the type of FUJI PLC programming software.

(1) Notation of devices in the single CPU system ([FUJI MICREX-SX SPH])

n: Device number

Device		Notation of devices in GT Designer3	Notation of devices in the PLC programming software	
			SX-Programmer Expert (D300win)	SX-Programmer Standard
Non-retain memory	Word device	Mn	%MW1.n	WMn
	Double-word device		%MD1.n	DMn
	Bit-specified word device	Mn.b0 to Mn.b15	%MX1.n.01 to %MX1.n.15	Mn0 to MnF*1
Retain memory	Word device	Ln	%MW3.n	WLn
	Double-word device		%MD3.n	DLn
	Bit-specified word device	Ln.b0 to Ln.b15	%MX3.n.01 to %MX3.n.15	Ln0 to LnF*1
System memory	Word device	SMn	%MW10.n	WSMn
	Double-word device		%MD10.n	DSMn
	Bit-specified word device	SMn.b0 to SMn.b15	%MX10.n.01 to %MX10.n.15	SMn0 to SMnF*1

*1 The device number is not displayed when it is 0.

(2) Notation of devices in the multiple CPU system ([FUJI MICREX-SX SPH])

n: Device number

p: CPU number

Device		Notation of devices in GT Designer3	Notation of devices in the PLC programming software	
			SX-Programmer Expert (D300win)	SX-Programmer Standard
Non-retain memory	Word device	0-FF/p Mn	%MWp.1.n	WMp.n
	Double-word device		%MDp.1.n	DMp.n
	Bit-specified word device	0-FF/p Mn.b0 to 0-FF/p Mn.b15	%MXp.1.n.01 to %MXp.1.n.15	Mp.n0 to Mp.nF*1
Retain memory	Word device	0-FF/p Ln	%MWp.3.n	WLp.n
	Double-word device		%MDp.3.n	DLp.n
	Bit-specified word device	0-FF/p Ln.b0 to 0-FF/p Ln.b15	%MXp.3.n.01 to %MXp.3.n.15	Lp.n0 to Lp.nF*1
System memory	Word device	0-FF/p SMn	%MWp.10.n	WSMp.n
	Double-word device		%MDp.10.n	DSMp.n
	Bit-specified word device	%MXp.10.n.01 to %MXp.10.n.15	%MX10.n.01 to %MX10.n.15	SMp.n0 to SMp.nF*1

*1 The device number is not displayed when it is 0.

12.4.30 MURATEC equipment ([Muratec MPC/MCR])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Contact our company for the device specifications when connecting the GOT to MURATEC equipment.

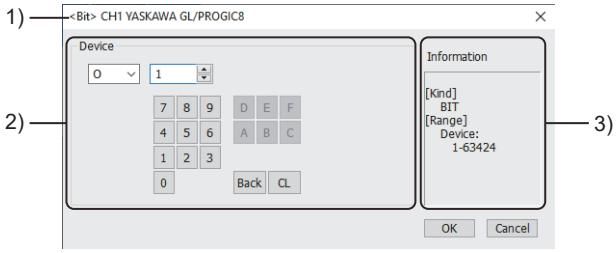
12.4.31 YASKAWA equipment ([YASKAWA GL/PROGIC8])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([YASKAWA GL/PROGIC8])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([YASKAWA GL/PROGIC8])
	➟■3 Availability of writing/reading data to/from bit devices ([YASKAWA GL/PROGIC8])
Specifications of word devices	➟■4 Monitoring-supported word devices ([YASKAWA GL/PROGIC8])
	➟■5 Display values of link register and holding register ([YASKAWA GL/PROGIC8])
	➟■6 Availability of writing/reading data to/from word devices ([YASKAWA GL/PROGIC8])

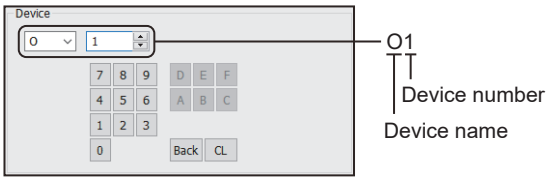
■1 Device setting dialog ([YASKAWA GL/PROGIC8])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of O1



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([YASKAWA GL/PROGIC8])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.31 ■3 Availability of writing/reading data to/from bit devices ([YASKAWA GL/PROGIC8])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I*2	Input relay	Decimal	1 to 63424	○	○
O*3	Coil	Decimal	1 to 63424	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Link coil	Decimal	D(Channel No.)(Device) Notation example: D12048 • Channel No. (decimal): 0 to 2 • Device (decimal): 1 to 2048 When [Channel No.] is [0], (Channel No.) is unnecessary.	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Change the input relay 10001 to 14096 to I1 to I4096 for setting. (When set in default)

*3 Set the internal coil N1 to N1536 as O513 to O2048.
However, setting must not exceed O1 to O512 and O513 to O2048.

■3 Availability of writing/reading data to/from bit devices ([YASKAWA GL/PROGIC8])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/-	-/-	R/-	R/-	-/-
O	R/W	-/-	R/W	R/W	-/-
D	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YASKAWA GL/PROGIC8])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.31 ■6 Availability of writing/reading data to/from word devices ([YASKAWA GL/PROGIC8])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
Z*3	Input register	Decimal	1 to 31840	○	○
R*2	Link register	Decimal	R(Channel No.)(Device) Notation example: R12048 • Channel No. (decimal): 0 to 2 • Device (decimal): 1 to 2048 When [Channel No.] is [0], (Channel No.) is unnecessary.	○	○
W*2*4	Holding register	Decimal	1 to 28291	○	○
K*5	Constant register	Decimal	1 to 4096	○	○
SW*2	Holding register	Decimal	1 to 28291	○	○
SR*2	Link register	Decimal	SR(Channel No.)(Device) Notation example: SR12048 • Channel No. (decimal): 0 to 2 • Device (decimal): 1 to 2048 When [Channel No.] is [0], (Channel No.) is unnecessary.	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 For the relationship between SR/SW and R/W, refer to the following.

➟12.4.31 ■5 Display values of link register and holding register ([YASKAWA GL/PROGIC8])

*3 Change the input register 30001 to 30512 to Z1 to Z512 for setting. (When set in default)

*4 Change the holding register 40001 to 49999 to W1 to W9999 for setting. (When set in default)

*5 Change the constant register 31001 to 35096 to K1 to K4096 for setting. (When set in default)

■5 Display values of link register and holding register ([YASKAWA GL/PROGIC8])

SR and SW are virtual registers compatible with the data format used to display internal data of PLCs using R or W. The following shows the difference between the display values of SR/SW and those of R/W corresponding to the values of PLC internal data.

PLC internal data (16 bits)	SR, SW	R, W
9999	9999	9999
1001	1001	1001
1000	1000	1000
999	999	999
0	0	0
-1	-1	32769
-999	-999	33767
-1000	-1000	33768
-1001	-1001	33769
-9999	-9999	42767

■6 Availability of writing/reading data to/from word devices ([YASKAWA GL/PROGIC8])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
Z	R/-	R/-	-/-	R/-
R	R/W	R/W	-/-	R/W
W	R/W	R/W	-/-	R/W
K	R/W	R/W	-/-	R/W
SW	R/W	R/W	-/-	R/W
SR	R/W	R/W	-/-	R/W

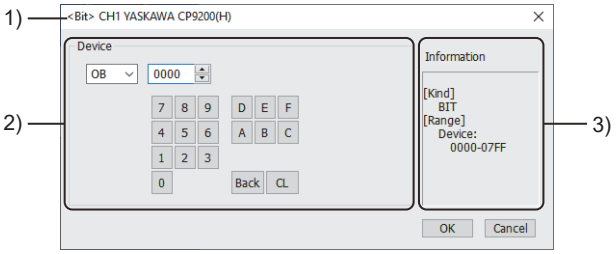
12.4.32 YASKAWA equipment ([YASKAWA CP9200(H)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([YASKAWA CP9200(H)])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([YASKAWA CP9200(H)])
	➡■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9200(H)])
Specifications of word devices	➡■4 Monitoring-supported word devices ([YASKAWA CP9200(H)])
	➡■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9200(H)])

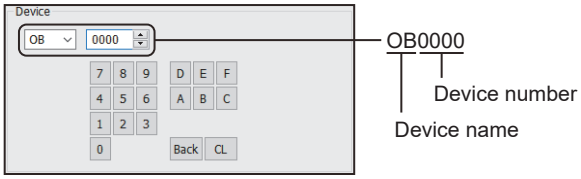
■1 Device setting dialog ([YASKAWA CP9200(H)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of OB0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([YASKAWA CP9200(H)])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.32 ■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9200(H)])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IB*2	Input relay	Hexadecimal	0000 to 07FF	○	○
OB*2	Coil	Hexadecimal	0000 to 07FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 During operation of CP-9200H, specify the reference No. and quantities so that they do not cover both IB*** and OB***.

■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9200(H)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IB	R/W	-/-	R/W	R/W	-/-
OB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YASKAWA CP9200(H)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.32 ■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9200(H)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DW	Data register	Decimal	0 to 2047	○	○
MW*2	Common register	Decimal	0 to 7694	○	○
IW	Input register	Hexadecimal	0000 to 007F	○	○
OW	Output register	Hexadecimal	0000 to 007F	○	○
ZD	Data register	Decimal	0 to 2047	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 To use data registers of CPU #1 during operation of CP-9200, copy them to MW0 to MW7694.

■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9200(H)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DW	R/W	R/W	-/-	R/W
MW	R/W	R/W	-/-	R/W
IW	R/W	R/W	-/-	R/W
OW	R/W	R/W	-/-	R/W
ZD	R/W	R/W	-/-	R/W

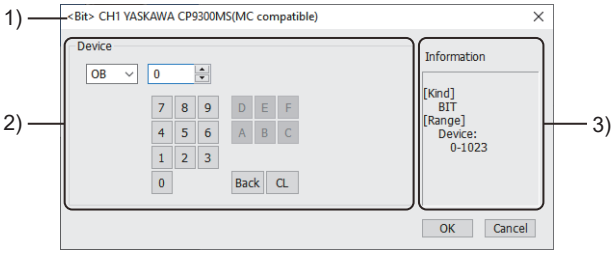
12.4.33 YASKAWA equipment ([YASKAWA CP9300MS(MC compatible)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([YASKAWA CP9300MS(MC compatible)])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([YASKAWA CP9300MS(MC compatible)])
	➡■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9300MS(MC compatible)])
Specifications of word devices	➡■4 Monitoring-supported word devices ([YASKAWA CP9300MS(MC compatible)])
	➡■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9300MS(MC compatible)])

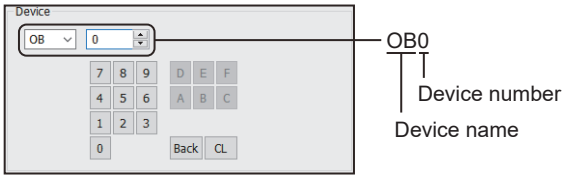
■1 Device setting dialog ([YASKAWA CP9300MS(MC compatible)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of OB0



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([YASKAWA CP9300MS(MC compatible)])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.33 ■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9300MS(MC compatible)])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IB	Input relay	Decimal	0 to 1023	○	○
OB	Coil	Decimal	0 to 1023	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([YASKAWA CP9300MS(MC compatible)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IB	R/-	-/-	R/-	R/-	-/-
OB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YASKAWA CP9300MS(MC compatible)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.33 ■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9300MS(MC compatible)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
M	Data register	Decimal	0 to 2047	○	○
I	Input register	Decimal	0 to 63	○	○
o	Output register	Decimal	0 to 63	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([YASKAWA CP9300MS(MC compatible)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
M	R/W	R/W	-/-	R/W
I	R/W	R/W	-/-	R/W
o	R/W	R/W	-/-	R/W

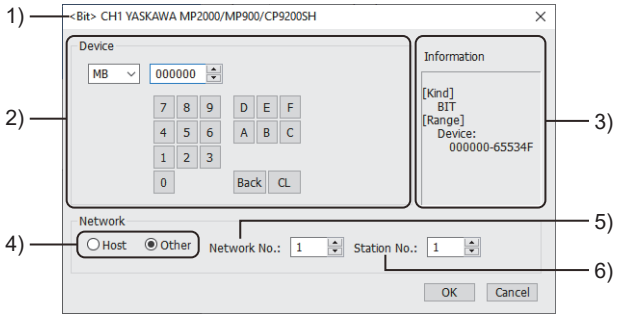
12.4.34 YASKAWA equipment ([YASKAWA MP2000/MP900/CP9200SH])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([YASKAWA MP2000/MP900/CP9200SH])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([YASKAWA MP2000/MP900/CP9200SH])
	➡■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP2000/MP900/CP9200SH])
Specifications of word devices	➡■4 Monitoring-supported word devices ([YASKAWA MP2000/MP900/CP9200SH])
	➡■5 Availability of writing/reading data to/from word devices ([YASKAWA MP2000/MP900/CP9200SH])

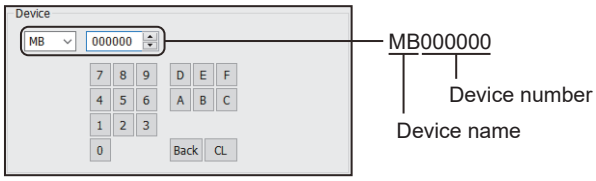
■1 Device setting dialog ([YASKAWA MP2000/MP900/CP9200SH])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of MB000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([YASKAWA MP2000/MP900/CP9200SH])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.34 ■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP2000/MP900/CP9200SH])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IB	Input relay	Hexadecimal	00000 to 7FFFF	○	○
MB	Coil	Decimal + hexadecimal	MB(Word address)(Bit No.) Notation example: MB655340 The rightmost digit is a bit address. • Channel No. (decimal): 00000 to 65534 • Bit No. (hexadecimal): 0 to F	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP2000/MP900/CP9200SH])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IB	R/-	-/-	R/-	R/-	-/-
MB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YASKAWA MP2000/MP900/CP9200SH])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.34 ■5 Availability of writing/reading data to/from word devices ([YASKAWA MP2000/MP900/CP9200SH])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IW	Input register	Hexadecimal	0000 to 7FFF	○	○
MW	Holding register	Decimal	0 to 65534	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([YASKAWA MP2000/MP900/CP9200SH])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
IW	R/-	R/-	-/-	R/-
MW*1	R/W	R/W	-/-	R/W

*1 For the CP-317, only reading is possible for bit specification of word devices.

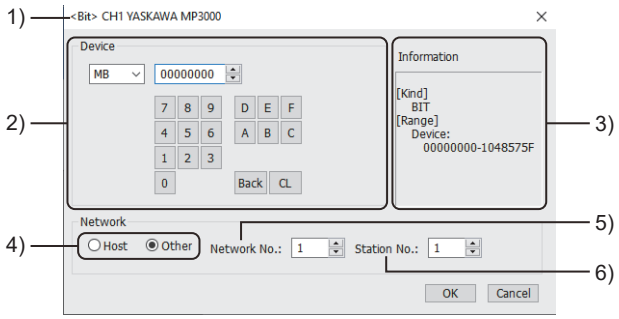
12.4.35 YASKAWA equipment ([YASKAWA MP3000])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([YASKAWA MP3000])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([YASKAWA MP3000])
	➟■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP3000])
Specifications of word devices	➟■4 Monitoring-supported word devices ([YASKAWA MP3000])
	➟■5 Availability of writing/reading data to/from word devices ([YASKAWA MP3000])

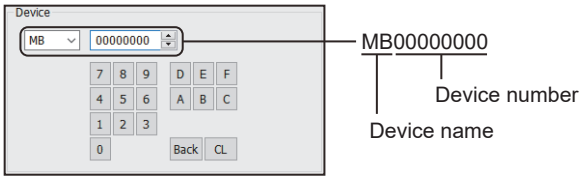
■1 Device setting dialog ([YASKAWA MP3000])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of MB00000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([YASKAWA MP3000])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.35 ■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP3000])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IB	Input register	Hexadecimal	000000 to 21FFFF	○	○
OB	Output register	Hexadecimal	000000 to 21FFFF	○	○
MB	Data register	Decimal + hexadecimal	MB(Word address)(Bit No.) Notation example: MB10485750 The rightmost digit is a bit address. • Channel No. (decimal): 0000000 to 1048575 • Bit No. (hexadecimal): 0 to F	○	○
YGB*2	G register	Decimal + hexadecimal	YGB(Word address)(Bit No.) Notation example: YGB20971510 The rightmost digit is a bit address. • Channel No. (decimal): 0000000 to 2097151 • Bit No. (hexadecimal): 0 to F	○	○
SB	System register	Decimal + hexadecimal	SB(Word address)(Bit No.) Notation example: SB655340 The rightmost digit is a bit address. • Channel No. (decimal): 00000 to 65534 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 This device is displayed as GB in the peripherals of the YASKAWA PLC.

■3 Availability of writing/reading data to/from bit devices ([YASKAWA MP3000])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IB	R/-	-/-	R/-	R/-	-/-
OB	R/W	-/-	R/W	R/W	-/-
MB	R/W	-/-	R/W	R/W	-/-
YGB	R/W	-/-	R/W	R/W	-/-
SB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YASKAWA MP3000])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.35 ■5 Availability of writing/reading data to/from word devices ([YASKAWA MP3000])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IW	Input register	Hexadecimal	00000 to 21FFF	○	○
OW	Output register	Hexadecimal	00000 to 21FFF	○	○
MW	Data register	Decimal	0 to 1048575	○	○
YGW*2	G register	Decimal	0 to 2097151	○	○
SW	System register	Decimal	0 to 65534	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 This device is displayed as GW in the peripherals of the YASKAWA PLC.

■5 Availability of writing/reading data to/from word devices ([YASKAWA MP3000])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
IW	R/-	R/-	-/-	R/-
OW	R/W	R/W	-/-	R/W
MW	R/W	R/W	-/-	R/W
YGW	R/W	R/W	-/-	R/W
SW	R/W	R/W	-/-	R/W

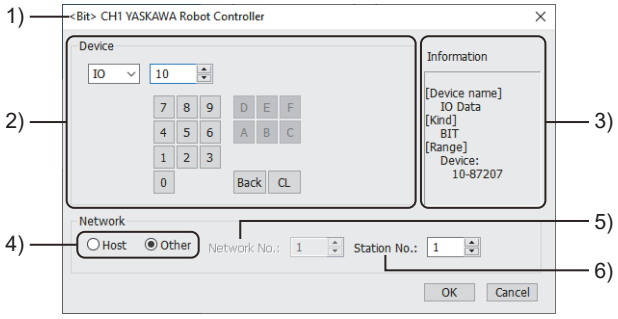
12.4.36 YASKAWA equipment ([YASKAWA Robot Controller])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([YASKAWA Robot Controller])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([YASKAWA Robot Controller])
	➡■3 IO Data device details ([YASKAWA Robot Controller])
	➡■4 Availability of writing/reading data to/from bit devices ([YASKAWA Robot Controller])
Specifications of byte devices	➡■5 Monitoring-supported byte devices ([YASKAWA Robot Controller])
	➡■6 Availability of writing/reading data to/from byte devices ([YASKAWA Robot Controller])
Specifications of word devices	➡■7 Monitoring-supported word devices ([YASKAWA Robot Controller])
	➡■8 Robot Control device details ([YASKAWA Robot Controller])
	➡■9 Availability of writing/reading data to/from word devices ([YASKAWA Robot Controller])
Specifications of double-word devices	➡■10 Monitoring-supported double-word devices ([YASKAWA Robot Controller])
	➡■11 Availability of writing/reading data to/from double-word devices ([YASKAWA Robot Controller])
Precautions	➡■12 Precautions ([YASKAWA Robot Controller])

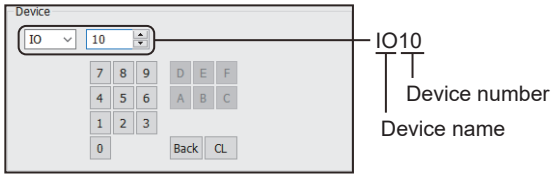
■1 Device setting dialog ([YASKAWA Robot Controller])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of IO10



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.
The setting range is [1] (fixed).

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.
The setting range is [1] to [120].

■2 Monitoring-supported bit devices ([YASKAWA Robot Controller])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.36 ■4 Availability of writing/reading data to/from bit devices ([YASKAWA Robot Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IO	IO Data	Decimal + octal	IO(Byte address)(Bit address) Notation example: IO87200 The rightmost digit is a bit address. • Byte address (decimal): 1 to 8720 • Bit address (octal): 0 to 7 For the relationship between the data and device range of the robot controller, refer to the following. ➟12.4.36 ■3 IO Data device details ([YASKAWA Robot Controller])	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 IO Data device details ([YASKAWA Robot Controller])

The following shows the relationship between the data and device range of the robot controller.
The rightmost digit of each device number is a bit address.

Device range	Virtual device name
10 to 5127	Robot general-purpose input
10010 to 15127	Robot general-purpose output
20010 to 25127	External input
27010 to 29567	Network input
30010 to 35127	External output
37010 to 39567	Network output
40010 to 42567	Robot-dedicated input
50010 to 55127	Robot-dedicated output
60010 to 60647	Interface panel input
70010 to 79997	Auxiliary relay
80010 to 85127	Robot control status
87010 to 87207	Pseudo input

■4 Availability of writing/reading data to/from bit devices ([YASKAWA Robot Controller])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IO*1	R/W	-/-	R/W	-/-	-/-

*1 Availability of reading/writing depends on the device number.

➡12.4.36 ■3 IO Data device details ([YASKAWA Robot Controller])

■5 Monitoring-supported byte devices ([YASKAWA Robot Controller])

The following table shows monitoring-supported byte devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.36 ■6 Availability of writing/reading data to/from byte devices ([YASKAWA Robot Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
B	Byte Variable	Decimal	0 to 1999	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■6 Availability of writing/reading data to/from byte devices ([YASKAWA Robot Controller])

The following shows whether writing/reading data to/from byte devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
B	-/-	R/W	-/-	-/-	-/-

■7 Monitoring-supported word devices ([YASKAWA Robot Controller])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.36 ■9 Availability of writing/reading data to/from word devices ([YASKAWA Robot Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Integer Variable	Decimal	0 to 1999	○	○
M	Resister Data	Decimal	0 to 999	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RC*2	Robot Control	Hexadecimal + decimal + decimal	RC(Command No.)-(Instance)((Attribute)) Notation example: RC70-8720(13) • Command No. (hexadecimal): 70 to 8C, 300 to 30C • Instance (decimal): 0 to 8720 • Attribute (decimal): 0 to 13 For the relationship between data that can be acquired using Robot Control and the virtual GOT devices, refer to the following. ➟12.4.36 ■8 Robot Control device details ([YASKAWA Robot Controller])	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Not available for a text display or text input object.

■8 Robot Control device details ([YASKAWA Robot Controller])

Data that can be acquired using the Robot Control is assigned to the GOT virtual device (RC device).
Specify the Command No., Instance, and Attribute for the RC device to enable monitoring of the corresponding data.
Note the following when using the RC device.

Precautions	Description
Basic use of the RC device	Read all the elements to a GOT internal device in a batch using the script function or device data transfer function to monitor the data stored in the device. Setting the RC device to an object or others to monitor each element individually will decrease the monitoring speed.
Setting of the device data type and number of devices	Check the size of each data corresponding to the Command No., Instance, and Attribute to be specified. Set the data type and number of devices in the device settings so that the corresponding data can be stored.
Objects for which the RC device cannot be used	Do not specify the RC device directly in the following object settings for which consecutive devices are used. • Text display: Monitor device • Text input: Monitor device • Parts movement: [Device] (When [Position] is selected for [Move Way]) • Simple alarm display: Monitor device (When [Continuous] is selected for [Device No.]) • Recipe display (record list): [Control target record name], [Narrow down record names], or [Cursor row record name] • Trend graph: Monitor device (When [Continuous] is selected for [Device Setting]) • Document display: [Keyword Device] • Text print: Monitor device As described in the column for Basic use of the RC device, read all the elements to a GOT internal device in a batch to monitor the data stored in the device.

For details on each command, refer to the following.

➟Manual of the YASKAWA robot controller

The GOT supports the following commands.

Command No. (hexadecimal)	Command name
72	Status information read command
73	Execution job information read command
74	Axis configuration information read command
75	Robot position data read command
76	Position deviation read command
77	Torque data read command
7F	Robot position variable (P) read/write command
82	Alarm reset/error cancel command
88	Control time acquisition command
307	Robot position variable (P) multi-read/-write command
30A	Alarm data read command (subcode character string supported)
30B	Alarm history read command (subcode character string supported)

■9 Availability of writing/reading data to/from word devices ([YASKAWA Robot Controller])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
I	R/W	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-
RC	R/W	R/W	-/-	R/-

■10 Monitoring-supported double-word devices ([YASKAWA Robot Controller])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.4.36 ■11 Availability of writing/reading data to/from double-word devices ([YASKAWA Robot Controller])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Double Int Variable	Decimal	0 to 1999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■11 Availability of writing/reading data to/from double-word devices ([YASKAWA Robot Controller])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
D	-/-	R/W	-/-	-/-

■12 Precautions ([YASKAWA Robot Controller])

(1) Precautions when writing devices in a batch ([YASKAWA Robot Controller])

When many devices are written in a batch using the recipe function or device data transfer function, system alarm 402 (communication timeout error) may occur.
Take either of the following corrective actions.

- Specifying a longer communication timeout period
- Reducing the number of devices written in a batch

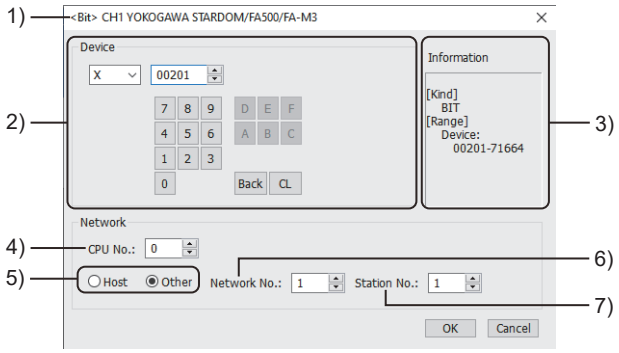
12.4.37 YOKOGAWA equipment ([YOKOGAWA STARDOM/FA500/FA-M3])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([YOKOGAWA STARDOM/FA500/FA-M3])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([YOKOGAWA STARDOM/FA500/FA-M3])
	➟■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA STARDOM/FA500/FA-M3])
Specifications of word devices	➟■4 Monitoring-supported word devices ([YOKOGAWA STARDOM/FA500/FA-M3])
	➟■5 Availability of writing/reading data to/from word devices ([YOKOGAWA STARDOM/FA500/FA-M3])

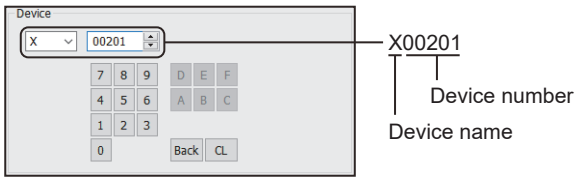
■1 Device setting dialog ([YOKOGAWA STARDOM/FA500/FA-M3])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X00201



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [CPU No.]
Set the CPU number of the controller.
When monitoring a single CPU system, set the CPU No. to [0].
When monitoring a multiple CPU system, set the CPU No. to any of [0] to [4].
When [0] is set, the GOT monitors CPU No. 1.

5) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

6) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

7) [Station No.]

This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([YOKOGAWA STARDOM/FA500/FA-M3])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.37 ■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA STARDOM/FA500/FA-M3])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

If a device outside the setting range is set for an object, the value display at the object is indefinite.
However, no error is displayed for system alarm.
A device to be set for an object must be in the device range of YOKOGAWA PLC.
For the device range of YOKOGAWA PLC, refer to the manual below.

➟Manual of YOKOGAWA PLC

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input relay	Decimal + decimal	X(Slot No.)(Terminal No.) Notation example: X71601 • Slot No. (decimal): 002 to 716 • Terminal No. (decimal): 01 to 64	○	○
Y	Output relay	Decimal + decimal	Y(Slot No.)(Terminal No.) Notation example: Y71601 • Slot No. (decimal): 002 to 716 • Terminal No. (decimal): 01 to 64	○	○
I	Internal relay	Decimal	1 to 65535	○	○
TU	Timer	Decimal	1 to 3072	○	○ (Not usable as word data)
CU	Counter	Decimal	1 to 3072	○	○ (Not usable as word data)
M	Special relay	Decimal	1 to 9984	○	○
L	Link relay	Decimal + decimal	L(FA link relay No. - 1)(Link relay No.) Notation example: L70001 • FA link module No. - 1 (decimal): 0 to 7 (Set the link module No. minus 1.) • Link relay No. (decimal): 0001 to 8192	○	○
E	Shared relay	Decimal	1 to 4096	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA STARDOM/FA500/FA-M3])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/-	-/-	R/-	R/-	-/-
Y	R/W	-/-	R/W	R/W	-/-
I	R/W	-/-	R/W	R/W	-/-
TU	R/W	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
CU	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
E	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([YOKOGAWA STARDOM/FA500/FA-M3])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.37 ■5 Availability of writing/reading data to/from word devices ([YOKOGAWA STARDOM/FA500/FA-M3])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
TP	Timer	Decimal	1 to 3072	○	○ (Not usable as bit data)
CP	Counter	Decimal	1 to 3072	○	○ (Not usable as bit data)
D	Data register	Decimal	1 to 65535	○	○
Z	Special register	Decimal	1 to 1024	○	×
B	File register	Decimal	1 to 262144	○	○
V	Index register	Decimal	1 to 256	○	○
TS	Timer	Decimal	1 to 3072	○	○ (Not usable as bit data)
CS	Counter	Decimal	1 to 3072	○	○ (Not usable as bit data)
R	Shared register	Decimal	1 to 4096	○	○
W	Link register	Decimal + decimal	W(FA link module No. - 1)(Link register No.) Notation example: W70001 • FA link module No. - 1 (decimal): 0 to 7 (Set the link module No. minus 1.) • Link register No. (decimal): 0001 to 8192	○	×
F	Cache register	Decimal	000001 to 524288	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([YOKOGAWA STARDOM/FA500/FA-M3])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TP	R/W	R/W	-/-	-/-
CP	R/W	R/W	-/-	-/-
D	R/W	R/W	-/-	R/W
Z	R/W	R/W	-/-	R/W
B	R/W	R/W	-/-	R/W
V	R/W	R/W	-/-	R/W
TS	R/-	R/-	-/-	-/-
CS	R/-	R/-	-/-	-/-
R	R/W	R/W	-/-	R/W
W	R/W	R/W	-/-	R/W
F	R/W	R/W	-/-	R/W

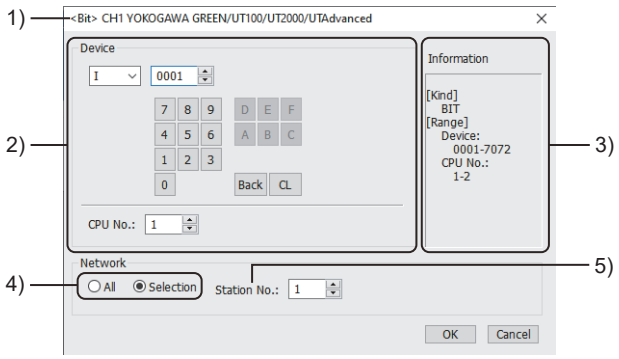
12.4.38 YOKOGAWA equipment ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])
	➟■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])
Specifications of word devices	➟■4 Monitoring-supported word devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])
	➟■5 Availability of writing/reading data to/from word devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

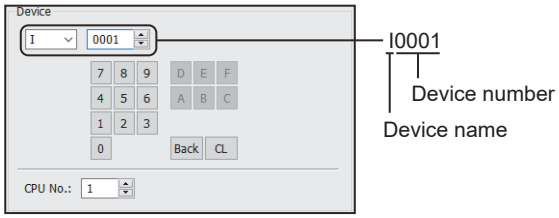
■1 Device setting dialog ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I0001



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Monitor target specification
Set the monitor target of the set device.

Item	Description
[All]	Select this item when writing data to all the connected temperature controllers. During monitoring, the temperature controller set for [Host Address] of the [Controller Setting] window is monitored. When data is input from a numerical input object, the data is written to all the connected temperature controllers. When no data is input, the temperature controller set for [Host Address] is monitored. When bit specification of word device is performed, data is written to the temperature controller set for [Host Address].

Item	Description
[Selection]	Select this item when monitoring the temperature controller that has the specified station number.

5) [Station No.]

This item appears when [Selection] is selected for the monitor target specification.

The setting range is [0] to [99] (direct) or [100] to [115] (indirect).

For indirect specification of a station number, refer to the following.

➡(1) Indirect specification of a station number ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

(1) Indirect specification of a station number ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [99] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.38 ■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Internal relay	Decimal	C(CPU No.)-I(Device) Notation example: C2-I0001 • CPU No. (decimal): 1 to 2 • Device (decimal): 0001 to 7072 When there is no setting for the CPU No. in the communication settings on the temperature controller side, set the CPU No. on the GOT side to 1 (default).	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	R/W	-/-	-/-

■4 Monitoring-supported word devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.38 ■5 Availability of writing/reading data to/from word devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Data register	Decimal	C(CPU No.)-D(Device) Notation example: C2-D0001 • CPU No. (decimal): 1 to 2 • Device (decimal): 0001 to 9000 When there is no setting for the CPU No. in the communication settings on the temperature controller side, set the CPU No. on the GOT side to 1 (default).	○	○
B	File register	Decimal	0001 to 1600	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([YOKOGAWA GREEN/UT100/UT2000/UTAdvanced])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
D	R/W	-/-	-/-	R/W
B	R/W	-/-	-/-	R/W

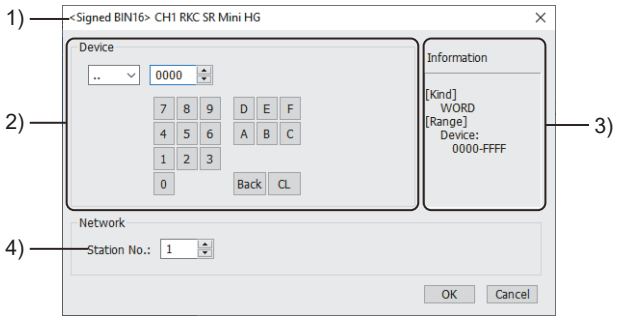
12.4.39 RKC equipment ([RKC SR Mini HG])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([RKC SR Mini HG])
Specifications of word devices	➟■2 Monitoring-supported word devices ([RKC SR Mini HG])
	➟■3 Availability of writing/reading data to/from word devices ([RKC SR Mini HG])

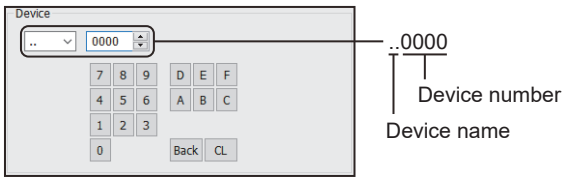
■1 Device setting dialog ([RKC SR Mini HG])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of ..0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
Specify a station number.
Set it by a value of unit address +1 in decimal.
Example 1) When the unit address is 0: Set 1.
Example 2) When the unit address is F: Set 16.
The setting range is [0] to [99] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.
➟(1) Indirect specification of a station number ([RKC SR Mini HG])

(1) Indirect specification of a station number ([RKC SR Mini HG])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [99] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported word devices ([RKC SR Mini HG])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.39 ■3 Availability of writing/reading data to/from word devices ([RKC SR Mini HG])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
..	Data	Hexadecimal	0000 to FFFF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from word devices ([RKC SR Mini HG])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
..	R/W	R/W	-/-	R/W

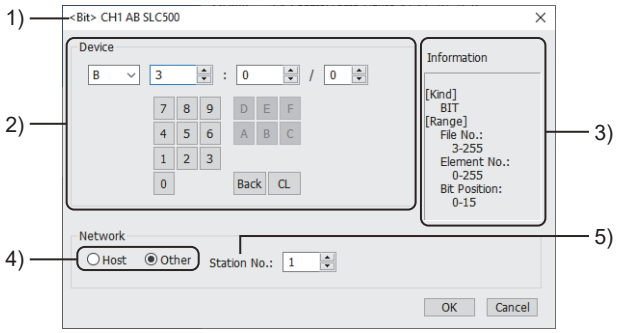
12.4.40 ALLEN-BRADLEY equipment ([AB SLC500])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([AB SLC500])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([AB SLC500])
	➟■3 Availability of writing/reading data to/from bit devices ([AB SLC500])
Specifications of word devices	➟■4 Monitoring-supported word devices ([AB SLC500])
	➟■5 Availability of writing/reading data to/from word devices ([AB SLC500])

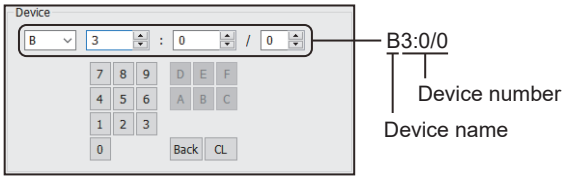
■1 Device setting dialog ([AB SLC500])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of B3:0/0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([AB SLC500])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.40 ■3 Availability of writing/reading data to/from bit devices ([AB SLC500])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.
○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T	Timer (completion bit)	Decimal	T(File No.):(Element No.)/13(DN) Notation example: T4:255/13(DN) • File No. (decimal): 4 to 255 • Element No. (decimal): 0 to 255	○	×
	Timer (timing bit)		T(File No.):(Element No.)/14(TT) Notation example: T4:255/14(TT) • File No. (decimal): 4 to 255 • Element No. (decimal): 0 to 255		
C	Counter (completion bit)	Decimal	C(File No.):(Element No.)/13(DN) Notation example: C5:255/13(DN) • File No. (decimal): 5 to 255 • Element No. (decimal): 0 to 255	○	×
	Counter (down counter)		C(File No.):(Element No.)/14(CD) Notation example: C5:255/14(CD) • File No. (decimal): 5 to 255 • Element No. (decimal): 0 to 255		
	Counter (up counter)		C(File No.):(Element No.)/15(CU) Notation example: C5:255/15(CU) • File No. (decimal): 5 to 255 • Element No. (decimal): 0 to 255		
B	Bit	Decimal	B(File No.):(Element No.)/(Bit position) Notation example: B3:255/0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255 • Bit position (decimal): 0 to 15	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.
➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([AB SLC500])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
B	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([AB SLC500])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.
➟12.4.40 ■5 Availability of writing/reading data to/from word devices ([AB SLC500])
For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T	Timer (set value)	Decimal	T(File No.):(Element No.).1(PRE) Notation example: T4:255.1(PRE) • File No. (decimal): 4 to 255 • Element No. (decimal): 0 to 255	○	×
	Timer (current value)		T(File No.):(Element No.).2(ACC) Notation example: T4:255.2(ACC) • File No. (decimal): 4 to 255 • Element No. (decimal): 0 to 255		
C	Counter (set value)	Decimal	C(File No.):(Element No.).1(PRE) Notation example: C5:255.1(PRE) • File No. (decimal): 5 to 255 • Element No. (decimal): 0 to 255	○	×
	Counter (current value)		C(File No.):(Element No.).2(ACC) Notation example: C5:255.2(ACC) • File No. (decimal): 5 to 255 • Element No. (decimal): 0 to 255		
N	Integer	Decimal	N(File No.):(Element No.) Notation example: N7:255 • File No. (decimal): 7 to 255 • Element No. (decimal): 0 to 255	○	○
B	Bit	Decimal	B(File No.):(Element No.) Notation example: B3:255 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([AB SLC500])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data*1
T	R/W	R/-	-/-	R/W
C	R/W	R/-	-/-	R/W
N	R/W	R/W	-/-	R/W
B	R/W	R/W	-/-	-/-

*1 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

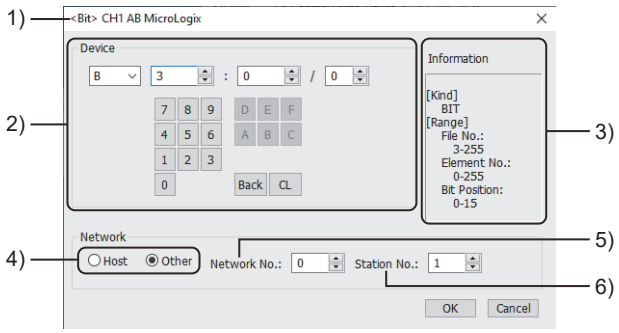
12.4.41 ALLEN-BRADLEY equipment ([AB MicroLogix])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([AB MicroLogix])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([AB MicroLogix])
	➟■3 Availability of writing/reading data to/from bit devices ([AB MicroLogix])
Specifications of word devices	➟■4 Monitoring-supported word devices ([AB MicroLogix])
	➟■5 Availability of writing/reading data to/from word devices ([AB MicroLogix])
Specifications of double-word devices	➟■6 Monitoring-supported double-word devices ([AB MicroLogix])
	➟■7 Availability of writing/reading data to/from double-word devices ([AB MicroLogix])

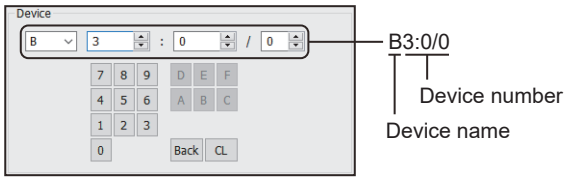
■1 Device setting dialog ([AB MicroLogix])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of B3:0/0



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([AB MicroLogix])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.41 ■3 Availability of writing/reading data to/from bit devices ([AB MicroLogix])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

The GOT reads the value from a device and then write a value to the device.

Do not change the device value with a sequence program until the GOT completes writing a value to the device.

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T	Timer (completion bit)	Decimal	T(File No.):(Element No.)/13(DN) Notation example: T3:255/13(DN) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	×
	Timer (timing bit)		T(File No.):(Element No.)/14(TT) Notation example: T3:255/14(TT) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255		
C	Counter (completion bit)	Decimal	C(File No.):(Element No.)/13(DN) Notation example: C3:255/13(DN) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	×
	Counter (down counter)		C(File No.):(Element No.)/14(CD) Notation example: C3:255/14(CD) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255		
	Counter (up counter)		C(File No.):(Element No.)/15(CU) Notation example: C3:255/15(CU) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255		
I	Input	Decimal	I:(Slot No.).(Element No.)/(Bit position) Notation example: I:16.7/0 • Slot No. (decimal): 0 to 16 • Element No. (decimal): 0 to 7 • Bit position (decimal): 0 to 15	○	○
O	Output	Decimal	O:(Slot No.).(Element No.)/(Bit position) Notation example: O:16.7/0 • Slot No. (decimal): 0 to 16 • Element No. (decimal): 0 to 7 • Bit position (decimal): 0 to 15	○	○
B	Bit	Decimal	B(File No.):(Element No.)/(Bit position) Notation example: B3:255/0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255 • Bit position (decimal): 0 to 15	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([AB MicroLogix])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
I	R/W	-/-	-/-	-/-	-/-
O	R/W	-/-	-/-	-/-	-/-
B	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([AB MicroLogix])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.41 ■5 Availability of writing/reading data to/from word devices ([AB MicroLogix])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input	Decimal	I:(Slot No.).(Element No.) Notation example: I:16.0 • Slot No. (decimal): 0 to 16 • Element No. (decimal): 0 to 7	○	○
O	Output	Decimal	O:(Slot No.).(Element No.) Notation example: O:16.0 • Slot No. (decimal): 0 to 16 • Element No. (decimal): 0 to 7	○	○
T	Timer (set value)	Decimal	T(File No.):(Element No.).1(PRE) Notation example: T3:255.1(PRE) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	×
	Timer (current value)		T(File No.):(Element No.).2(ACC) Notation example: T3:255.2(ACC) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255		
C	Counter (set value)	Decimal	C(File No.):(Element No.).1(PRE) Notation example: C3:255.1(PRE) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	×
	Counter (current value)		C(File No.):(Element No.).2(ACC) Notation example: C3:255.2(ACC) • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255		
N	Integer	Decimal	N(File No.):(Element No.) Notation example: N7:0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	○
B	Bit	Decimal	B(File No.):(Element No.) Notation example: B3:0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
S	Status	Decimal	S(File No.):(Device) Notation example: S2:163 • File No. (decimal): 2 • Device (decimal): 0 to 163	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([AB MicroLogix])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data*1
I	R/W	R/W	-/-	-/-
O	R/W	R/W	-/-	-/-
T	R/W	R/-	-/-	R/W
C	R/W	R/-	-/-	R/W
N	R/W	R/W	-/-	R/W
B	R/W	R/W	-/-	-/-
S	R/W	R/W	-/-	R/W

*1 The GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

■6 Monitoring-supported double-word devices ([AB MicroLogix])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.41 ■7 Availability of writing/reading data to/from double-word devices ([AB MicroLogix])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
L	32bit integer	Decimal	L(File No.):(Element No.) Notation example: L3:0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	×	×
F	32bit float	Decimal	F(File No.):(Element No.) Notation example: F3:0 • File No. (decimal): 3 to 255 • Element No. (decimal): 0 to 255	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([AB MicroLogix])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
L	-/-	R/W	-/-	-/-
F	-/-	R/W	-/-	-/-

12.4.42 ALLEN-BRADLEY equipment ([AB MicroLogix (Extended)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Contact our company for the device specifications when connecting the GOT to ALLEN-BRADLEY equipment.

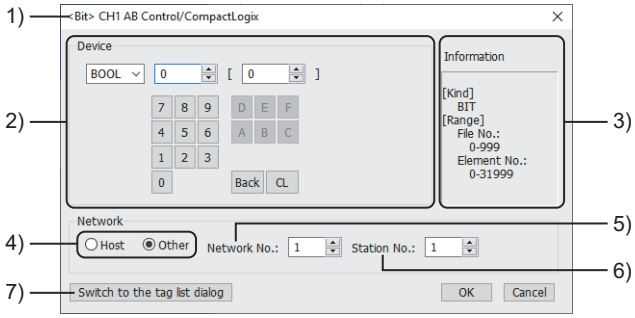
12.4.43 ALLEN-BRADLEY equipment ([AB Control/CompactLogix])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([AB Control/CompactLogix])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([AB Control/CompactLogix])
	➡■3 Availability of writing/reading data to/from bit devices ([AB Control/CompactLogix])
Specifications of word devices	➡■4 Monitoring-supported word devices ([AB Control/CompactLogix])
	➡■5 Availability of writing/reading data to/from word devices ([AB Control/CompactLogix])
Specifications of double-word devices	➡■6 Monitoring-supported double-word devices ([AB Control/CompactLogix])
	➡■7 Availability of writing/reading data to/from double-word devices ([AB Control/CompactLogix])

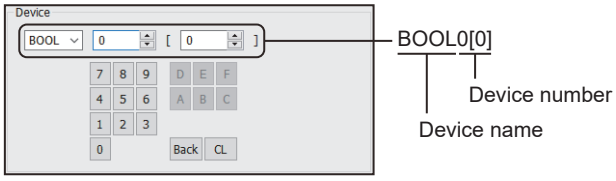
■1 Device setting dialog ([AB Control/CompactLogix])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of BOOL0[0]



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

7) [Switch to the tag list dialog] button

You can open the tag list dialog to check the tags imported to GT Designer3.

➟6.1.8 ■4 Tag list dialog (RSLogix 5000 tag)

■2 Monitoring-supported bit devices ([AB Control/CompactLogix])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.43 ■3 Availability of writing/reading data to/from bit devices ([AB Control/CompactLogix])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
BOOL	Bit data	Decimal	BOOL(File No.):[(Element No.)] Notation example: BOOL999[0] • File No. (decimal): 0 to 999 • Element No. (decimal): 0 to 31999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([AB Control/CompactLogix])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
BOOL	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([AB Control/CompactLogix])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.43 ■5 Availability of writing/reading data to/from word devices ([AB Control/CompactLogix])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
INT	Word data	Decimal	INT(File No.):[(Element No.)] Notation example: INT999[0] • File No. (decimal): 0 to 999 • Element No. (decimal): 0 to 999	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([AB Control/CompactLogix])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
INT	R/W	R/W	-/-	R/W

■6 Monitoring-supported double-word devices ([AB Control/CompactLogix])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.43 ■7 Availability of writing/reading data to/from double-word devices ([AB Control/CompactLogix])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DINT	Double-word data	Decimal	DINT(File No.):[(Element No.)] Notation example: DINT999[0] • File No. (decimal): 0 to 999 • Element No. (decimal): 0 to 999	×	×
REAL	Floating point data	Decimal	REAL(File No.):[(Element No.)] Notation example: REAL999[0] • File No. (decimal): 0 to 999 • Element No. (hexadecimal): 0 to 999	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([AB Control/CompactLogix])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
DINT	-/-	R/W	-/-	-/-
REAL	-/-	R/W	-/-	-/-

12.4.44 ALLEN-BRADLEY equipment ([AB Control/CompactLogix(Tag)])

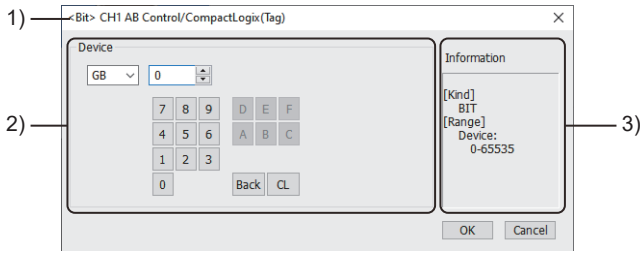
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([AB Control/CompactLogix(Tag)])
Device specifications	➟■2 Monitoring-supported devices ([AB Control/CompactLogix(Tag)])

■1 Device setting dialog ([AB Control/CompactLogix(Tag)])

Set a device to be monitored.
In the device setting dialog, only GOT internal devices are settable.
For how to set AB native tags, refer to the following.

➟6.1.9 How to set AB native tags



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.

3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported devices ([AB Control/CompactLogix(Tag)])

When this communication driver is used, the AB native tags are usable in the device setting.
For details on usable AB native tags, refer to the following.

➟6.1.9 ■1 Usable AB native tags

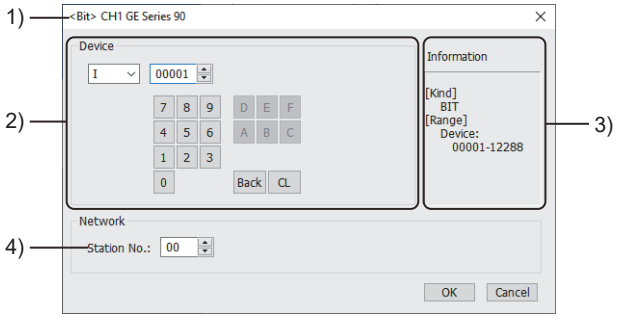
12.4.45 GE equipment ([GE Series 90])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

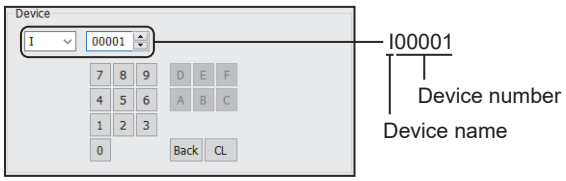
Item	Reference
Device setting dialog	➡12.4.45 ■1 Device setting dialog ([GE Series 90])
Specifications of bit devices	➡12.4.45 ■2 Monitoring-supported bit devices ([GE Series 90])
	➡12.4.45 ■3 Availability of writing/reading data to/from bit devices ([GE Series 90])
Specifications of word devices	➡12.4.45 ■4 Monitoring-supported word devices ([GE Series 90])
	➡12.4.45 ■5 Availability of writing/reading data to/from word devices ([GE Series 90])

■1 Device setting dialog ([GE Series 90])

Set a device to be monitored.



1) Title
   Data type and channel number of the device to be set
2) [Device]
   Set the device name and device number.
   If a bit number needs to be specified, the setting item is displayed.
   Example) Setting of I00001



3) [Information]
   Displays the setting range of each setting item according to the selected device.
4) [Station No.]
   Specify a station number.
   The setting range is [00] to [31].

■2 Monitoring-supported bit devices ([GE Series 90])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.45 ■3 Availability of writing/reading data to/from bit devices ([GE Series 90])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input	Decimal	00001 to 12288	○	○
Q	Output	Decimal	00001 to 12288	○	○
M	Internal	Decimal	00001 to 12288	○	○
T	Temporary	Decimal	001 to 256	○	○
S	System status	Decimal	001 to 128	○	×
SA	System status	Decimal	001 to 128	○	○
SB	System status	Decimal	001 to 128	○	○
SC	System status	Decimal	001 to 128	○	○
G	Global data	Decimal	0001 to 7680	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([GE Series 90])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	R/W	-/-	-/-
Q	R/W	-/-	R/W	-/-	-/-
M	R/W	-/-	R/W	-/-	-/-
T	R/W	-/-	R/W	-/-	-/-
S	R/-	-/-	R/-	-/-	-/-
SA	R/W	-/-	R/W	-/-	-/-
SB	R/W	-/-	R/W	-/-	-/-
SC	R/W	-/-	R/W	-/-	-/-
G	R/W	-/-	R/W	-/-	-/-

■4 Monitoring-supported word devices ([GE Series 90])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.45 ■5 Availability of writing/reading data to/from word devices ([GE Series 90])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
R	System register	Decimal	00001 to 32640	○	○
AI	Analog input register	Decimal	00001 to 32640	○	○
AQ	Analog output register	Decimal	00001 to 32640	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([GE Series 90])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
R	R/W	R/W	-/-	R/W
AI	R/W	R/W	-/-	R/W
AQ	R/W	R/W	-/-	R/W

12.4.46 LS IS equipment ([LS Industrial Systems XGK])

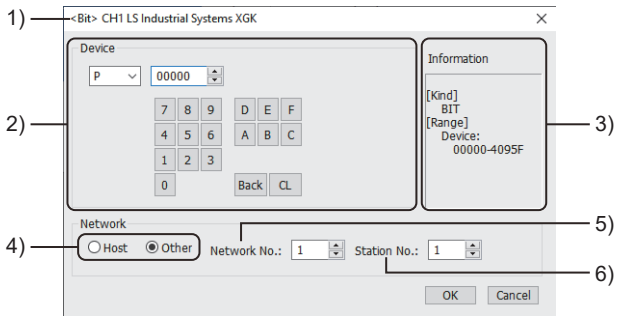
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([LS Industrial Systems XGK])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([LS Industrial Systems XGK])
	➟■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems XGK])
Specifications of word devices	➟■4 Monitoring-supported word devices ([LS Industrial Systems XGK])
	➟■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems XGK])

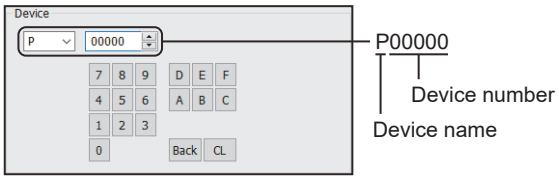
■1 Device setting dialog ([LS Industrial Systems XGK])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of P00000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.
The setting range is [1] to [239].

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.
The setting range is [1] to [64].

■2 Monitoring-supported bit devices ([LS Industrial Systems XGK])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.4.46 ■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems XGK])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
P	I/O Relay	Decimal + hexadecimal	P(Device)(Bit No.) Notation example: P40950 The rightmost digit is a bit address. • Device (decimal): 0 to 4095 • Bit No. (hexadecimal): 0 to F	○	○
L	Link relay	Decimal + hexadecimal	L(Device)(Bit No.) Notation example: L112630 The rightmost digit is a bit address. • Device (decimal): 0 to 11263 • Bit No. (hexadecimal): 0 to F	○	○
M	Auxiliary relay	Decimal + hexadecimal	M(Device)(Bit No.) Notation example: M40950 The rightmost digit is a bit address. • Device (decimal): 0 to 4095 • Bit No. (hexadecimal): 0 to F	○	○
K	Keep Relay	Decimal + hexadecimal	K(Device)(Bit No.) Notation example: K40950 The rightmost digit is a bit address. • Device (decimal): 0 to 4095 • Bit No. (hexadecimal): 0 to F	○	○
T	Timer contact	Decimal	0000 to 8191	○	○ (Not usable as word data)
C	Counter contact	Decimal	0000 to 4095	○	○ (Not usable as word data)
F	Special relay	Decimal + hexadecimal	F(Device)(Bit No.) Notation example: F40950 The rightmost digit is a bit address. • Device (decimal): 0 to 4095 • Bit No. (hexadecimal): 0 to F	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems XGK])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
P	R/W	-/-	R/W	-/-	-/-
L	R/W	-/-	R/W	-/-	-/-
M	R/W	-/-	R/W	-/-	-/-
K	R/W	-/-	R/W	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
F*1	R/W	-/-	R/W	-/-	-/-

*1 Data cannot be written to F00000 to F1023F.

■4 Monitoring-supported word devices ([LS Industrial Systems XGK])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.46 ■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems XGK])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Data Register	Decimal	000000 to 524287	○	○
R	File Register	Decimal	00000 to 32767	○	○
ZR	File Register	Decimal	000000 to 524287	○	○
U*2	Analog Data Register	Hexadecimal + decimal	U(BaseNo.)(SlotNo.).(Special module No.) Notation example: U7F.00 • BaseNo. (hexadecimal): 0 to 7 • SlotNo. (hexadecimal): 0 to F • Special module No. (decimal): 00 to 31	○	○
N	Comm. Data Register	Decimal	00000 to 21503	○	○
Z	Index Register	Decimal	000 to 255	○	○
T	Timer current value	Decimal	0000 to 8191	○	○ (Not usable as bit data)
C	Counter current value	Decimal	0000 to 4095	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When the device type is the double-word (32 bits) type, set an even number for the special module number only.

■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems XGK])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
D	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W
ZR	R/W	R/W	-/-	R/W
U	R/W	R/W	-/-	R/W
N	R/W	R/W	-/-	R/W
Z	R/W	R/W	-/-	R/W
T	R/W	R/W	-/-	-/-
C	R/W	R/W	-/-	-/-

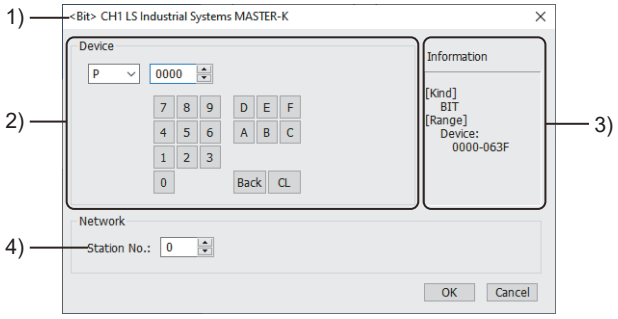
12.4.47 LS IS equipment ([LS Industrial Systems MASTER-K])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([LS Industrial Systems MASTER-K])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([LS Industrial Systems MASTER-K])
	➟■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems MASTER-K])
Specifications of word devices	➟■4 Monitoring-supported word devices ([LS Industrial Systems MASTER-K])
	➟■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems MASTER-K])

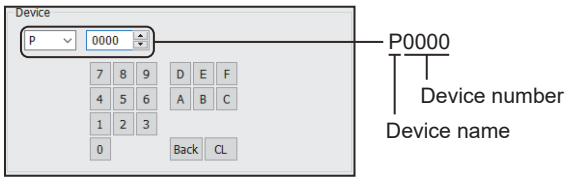
■1 Device setting dialog ([LS Industrial Systems MASTER-K])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of P0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Station No.]
This item appears when [Selection] is selected for the monitor target specification.
The setting range is [0] to [31] (direct) or [100] to [115] (indirect).
For indirect specification of a station number, refer to the following.

➟(1) Indirect specification of a station number ([LS Industrial Systems MASTER-K])

(1) Indirect specification of a station number ([LS Industrial Systems MASTER-K])

When you specify any of 100 to 115 for the station number, the value of the corresponding GOT data register (GD10 to GD25) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
100	GD10	[0] to [31] Setting a value outside the above range causes a device range error.
101	GD11	
:	:	
114	GD24	
115	GD25	

■2 Monitoring-supported bit devices ([LS Industrial Systems MASTER-K])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.47 ■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems MASTER-K])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
P	I/O relay	Decimal + hexadecimal	P(Device)(Bit No.) Notation example: P0630 • Device (decimal): 000 to 063 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
L	Link relay	Decimal + hexadecimal	L(Device)(Bit No.) Notation example: L0630 • Device (decimal): 000 to 063 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
M	Auxiliary relay	Decimal + hexadecimal	M(Device)(Bit No.) Notation example: M1910 • Device (decimal): 000 to 191 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
K	Keep relay	Decimal + hexadecimal	K(Device)(Bit No.) Notation example: K0310 • Device (decimal): 000 to 031 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)
T	Timer (contact)	Decimal	0 to 255	○	○ (Not usable as word data)
C	Counter (contact)	Decimal	0 to 255	○	○ (Not usable as word data)
F	Special relay	Decimal + hexadecimal	F(Device)(Bit No.) Notation example: F0630 • Device (decimal): 000 to 063 • Bit No. (hexadecimal): 0 to F	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([LS Industrial Systems MASTER-K])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
P	R/W	-/-	-/-	-/-	-/-
L	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
K	R/W	-/-	-/-	-/-	-/-
T	R/W	-/-	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-	-/-
F	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([LS Industrial Systems MASTER-K])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➥12.4.47 ■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems MASTER-K])

For the formats of devices, refer to the following.

➥6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T	Timer (current value)	Decimal	0 to 255	○	○ (Not usable as bit data)
C	Counter (current value)	Decimal	0 to 255	○	○ (Not usable as bit data)
D	Data register	Decimal	0 to 9999	○	○ (Not usable as bit data)
F	Special relay	Decimal	000 to 063	○	○ (Not usable as bit data)
P	I/O relay	Decimal	000 to 063	○	○ (Not usable as bit data)
M	Auxiliary relay	Decimal	000 to 191	○	○ (Not usable as bit data)
K	Keep relay	Decimal	000 to 031	○	○ (Not usable as bit data)
L	Link relay	Decimal	000 to 063	○	○ (Not usable as bit data)
S	Step controller	Decimal	0 to 99	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➥10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([LS Industrial Systems MASTER-K])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
T	R/W	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-
D	R/W	R/W	-/-	-/-
F	R/-	R/-	-/-	-/-
P	R/W	R/W	-/-	-/-
M	R/W	R/W	-/-	-/-
K	R/W	R/W	-/-	-/-
L	R/W	R/W	-/-	-/-
S	R/W	-/-	-/-	-/-

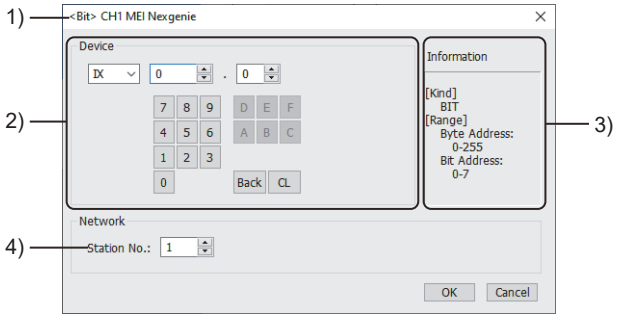
12.4.48 MITSUBISHI INDIA equipment ([MEI Nexgenie])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

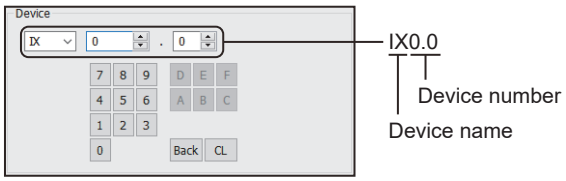
Item	Reference
Device setting dialog	➡■1 Device setting dialog ([MEI Nexgenie])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([MEI Nexgenie])
	➡■3 Availability of writing/reading data to/from bit devices ([MEI Nexgenie])
Specifications of word devices	➡■4 Monitoring-supported word devices ([MEI Nexgenie])
	➡■5 Availability of writing/reading data to/from word devices ([MEI Nexgenie])

■1 Device setting dialog ([MEI Nexgenie])

Set a device to be monitored.



1) Title
   Data type and channel number of the device to be set
2) [Device]
   Set the device name and device number.
   If a bit number needs to be specified, the setting item is displayed.
   Example) Setting of IX0.0



3) [Information]
   Displays the setting range of each setting item according to the selected device.
4) [Station No.]
   This item appears when [Selection] is selected for the monitor target specification.
   The setting range is [1] to [247].

■2 Monitoring-supported bit devices ([MEI Nexgenie])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.48 ■3 Availability of writing/reading data to/from bit devices ([MEI Nexgenie])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IX	Input	Decimal + octal	IX(Byte address).(Bit address) Notation example: IX255.0 • Byte address (decimal): 0 to 255 • Bit address (octal): 0 to 7	×	×
QX	Output	Decimal + octal	QX(Byte address).(Bit address) Notation example: QX255.0 • Byte address (decimal): 0 to 255 • Bit address (octal): 0 to 7	×	×
MX	Marker	Decimal + octal	MX(Byte address).(Bit address) Notation example: MX8191.0 • Byte address (decimal): 0 to 8191 • Bit address (octal): 0 to 7	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([MEI Nexgenie])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
IX	R/-	-/-	-/-	-/-	-/-
QX	R/-	-/-	-/-	-/-	-/-
MX	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MEI Nexgenie])

The following table shows monitoring-supported word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.48 ■5 Availability of writing/reading data to/from word devices ([MEI Nexgenie])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IW	Input	Decimal	0 to 254	×	×
QW	Output	Decimal	0 to 254	×	×
MW	Marker	Decimal	0 to 32254	○	○ (Not usable as bit data)
SW	System Word	Decimal	0 to 468	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([MEI Nexgenie])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
IW	R/-	R/-	-/-	-/-
QW	R/-	R/-	-/-	-/-
MW	R/W	R/W	-/-	-/-
SW*1	R/W	R/W	-/-	-/-

*1 Some devices are read-only.
For the details, refer to the following manual.
➟Manual of the PLC used

12.4.49 SICK equipment ([SICK Flexi Soft])

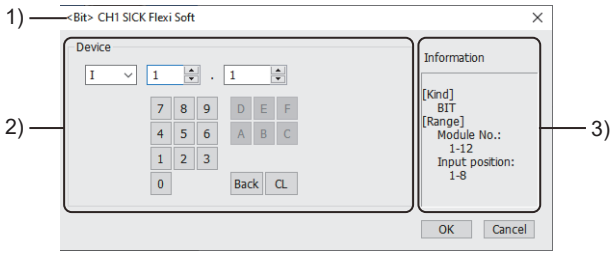
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The device specifications are the same as those of MELSEC-WS series.

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([SICK Flexi Soft])
Specifications of bit devices	➟12.3.11 ■1 Monitoring-supported bit devices ([MELSEC-WS])
	➟12.3.11 ■2 Availability of writing/reading data to/from bit devices ([MELSEC-WS])
Specifications of word devices	➟12.3.11 ■3 Monitoring-supported word devices ([MELSEC-WS])
	➟12.3.11 ■4 Availability of writing/reading data to/from word devices ([MELSEC-WS])
Engineering software for SICK equipment and device representation of GT Designer3	➟12.3.11 ■5 Engineering software for MELSEC-WS and device representation of GT Designer3 ([MELSEC-WS])
Offset specifications	➟12.3.11 ■6 Offset specification ([MELSEC-WS])

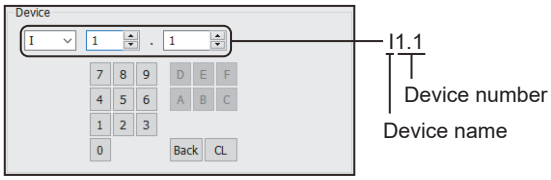
■1 Device setting dialog ([SICK Flexi Soft])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I1.1



3) [Information]
Displays the setting range of each setting item according to the selected device.

12.4.50 SIEMENS equipment ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The item selectable for [Controller Type] in the [Controller Setting] window varies by GOT model.

• For GT27, GT25, GT23, and GS25

[SIEMENS S7-200]

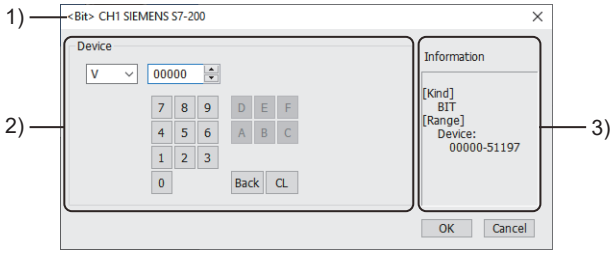
• For GT21 and GS21

[SIEMENS S7-200(CN/SMART)]

Item	Reference
Device setting dialog	➥■1 Device setting dialog ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
Specifications of bit devices	➥■2 Monitoring-supported bit devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
	➥■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
Specifications of word devices	➥■4 Monitoring-supported word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
	➥■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
Specifications of double-word devices	➥■6 Monitoring-supported double-word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])
	➥■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

■1 Device setting dialog ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

Set a device to be monitored.



1) Title

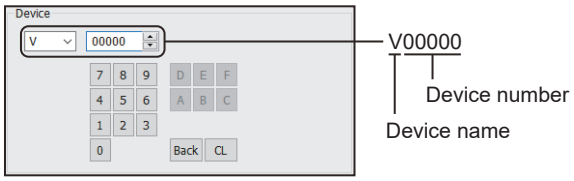
Data type and channel number of the device to be set

2) [Device]

Set the device name and device number.

If a bit number needs to be specified, the setting item is displayed.

Example) Setting of V00000



3) [Information]

Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➥12.4.50 ■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7-200] or [SIEMENS S7-

200(CN/SMART)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
I	Input relay	Decimal + octal	I(Byte address)(Bit address) Notation example: I70 • Byte address (decimal): 0 to 7 • Bit address (octal): 0 to 7	I(Byte address)(Bit address) Notation example: I70 • Byte address (decimal): 00 to 31 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
Q*2	Output relay	Decimal + octal	Q(Byte address)(Bit address) Notation example: Q70 • Byte address (decimal): 0 to 7 • Bit address (octal): 0 to 7	Q(Byte address)(Bit address) Notation example: Q70 • Byte address (decimal): 00 to 31 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
M	Bit memory	Decimal + octal	M(Byte address)(Bit address) Notation example: M310 • Byte address (decimal): 00 to 31 • Bit address (octal): 0 to 7		○	○ (Not usable as word data)
S	Sequence control relay	Decimal + octal	S(Byte address)(Bit address) Notation example: S310 • Byte address (decimal): 00 to 31 • Bit address (octal): 0 to 7		○	○
T	Timer	Decimal	0 to 255		×	×
C	Counter	Decimal	0 to 255		×	×
SM	Special memory	Decimal + octal	SM(Byte address)(Bit address) Notation example: SM1940 • Byte address (decimal): 000 to 194 • Bit address (octal): 0 to 7	SM(Byte address)(Bit address) Notation example: SM1940 • Byte address (decimal): 0000 to 2047 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
V	Variable memory	Decimal + octal	V(Byte address)(Bit address) Notation example: V51190 • Byte address (decimal): 0000 to 5119 • Bit address (octal): 0 to 7	V(Byte address)(Bit address) Notation example: V51190 • Byte address (decimal): 00000 to 20479 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Writing is possible only while the programmable controller is running.

■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-
S	R/W	-/-	-/-	-/-	-/-
T	R/-	-/-	-/-	-/-	-/-
C	R/-	-/-	-/-	-/-	-/-

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
SM	R/W	-/-	-/-	-/-	-/-
V	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.50 ■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
T	Timer	Decimal	0 to 255		○	○ (Not usable as bit data)
C	Counter	Decimal	0 to 255		○	○ (Not usable as bit data)
VW*2	Variable memory	Decimal	0 to 5118	0 to 20478	○	○ (Not usable as bit data)
IW*2	Input relay	Decimal	0 to 6	0 to 30	○	○ (Not usable as bit data)
QW*2*3	Output relay	Decimal	0 to 6	0 to 30	○	○ (Not usable as bit data)
MW*2	Bit memory	Decimal	0 to 30		○	○ (Not usable as bit data)
AIW*2	Analog input	Decimal	0 to 30	0 to 110	×	×
AQW*2*3	Analog output	Decimal	0 to 30	0 to 110	○	○ (Not usable as bit data)
SMW*2	Special memory	Decimal	0 to 192	0 to 2046	○	○ (Not usable as bit data)
SW*2	Sequence control relay	Decimal	0 to 30		○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When the device type is the word (16 bits) type, set an even number for the device number.
When the device type is the double-word (32 bits) type, set the device number in multiples of 4.

*3 Writing is possible only while the programmable controller is running.

■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
T	R/W	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-
VW	R/W	R/W	-/-	-/-
IW	R/W	R/W	-/-	-/-
QW	R/W	R/W	-/-	-/-
MW	R/W	R/W	-/-	-/-
AIW	R/-	R/-	-/-	-/-
AQW	R/W	R/W	-/-	-/-
SMW	R/W	R/W	-/-	-/-
SW	R/W	R/W	-/-	-/-

■6 Monitoring-supported double-word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.50 ■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
HC	High-speed counter	Decimal	0 to 2	0 to 5	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-200] or [SIEMENS S7-200(CN/SMART)])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
HC	-/-	R/-	-/-	-/-

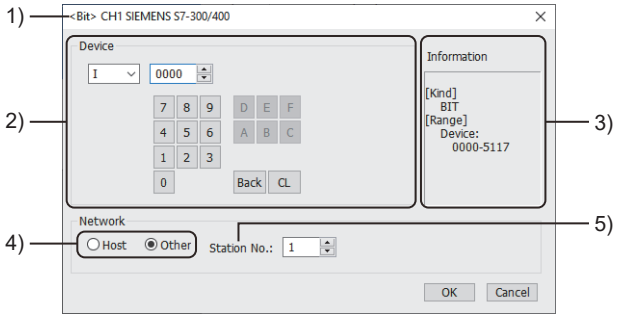
12.4.51 SIEMENS equipment ([SIEMENS S7-300/400])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([SIEMENS S7-300/400])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([SIEMENS S7-300/400])
	➡■3 Availability of reading data to/from bit devices ([SIEMENS S7-300/400])
Specifications of word devices	➡■4 Monitoring-supported word devices ([SIEMENS S7-300/400])
	➡■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-300/400])
Specifications of double-word devices	➡■6 Monitoring-supported double-word devices ([SIEMENS S7-300/400])
	➡■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-300/400])
Notation of devices	➡■8 Notation of devices ([SIEMENS S7-300/400])

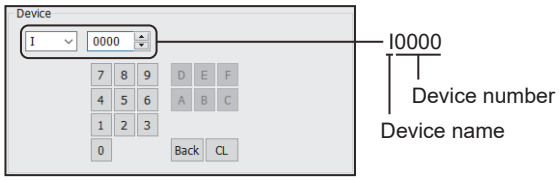
■1 Device setting dialog ([SIEMENS S7-300/400])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller set for [Host Address] of the [Controller Setting] window is monitored.
- [Other]: The controller having the specified station number (MPI address) is monitored.

5) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([SIEMENS S7-300/400])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.51 ■3 Availability of reading data to/from bit devices ([SIEMENS S7-300/400])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The notation of device setting is different between the SIEMENS PLC peripheral software and GOT.
For the notation of devices, refer to the following.

➟12.4.51 ■8 Notation of devices ([SIEMENS S7-300/400])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input relay	Decimal + octal	I(Byte address)(Bit address) Notation example: I5110 • Byte address (decimal): 000 to 511 • Bit address (octal): 0 to 7	○	○
Q	Output relay	Decimal + octal	Q(Byte address)(Bit address) Notation example: Q5110 • Byte address (decimal): 000 to 511 • Bit address (octal): 0 to 7	○	○
M	Bit memory	Decimal + octal	M(Byte address)(Bit address) Notation example: M20470 • Byte address (decimal): 0000 to 2047 • Bit address (octal): 0 to 7	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of reading data to/from bit devices ([SIEMENS S7-300/400])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use IW for I.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([SIEMENS S7-300/400])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.51 ■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-300/400])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DB*2*3	Data register	Decimal	DB(Data block No.).DBW(Device) Notation example: DB4095.DBW0 • Data block No. (decimal): 1 to 4095 • Device (Data word No.) (decimal): 0 to 65534 (Set an even number.)	○	○
IW*4	Input relay	Decimal	0 to 510	○	○
QW*4	Output relay	Decimal	0 to 510	○	○
MW*4	Bit memory	Decimal	0 to 2046	○	○
T*5	Timer (current value)	Decimal	0 to 511	○	○
C	Counter (current value)	Decimal	0 to 511	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 It is necessary to define the data block using a peripheral software or sequence program, before using this device.

*3 Continuous access across data blocks is not possible.

*4 When the device type is the word (16 bits) type, set an even number for the device number.
When the device type is the double-word (32 bits) type, set the device number in multiples of 4.

*5 Only one device can be set as the write destination.
Do not set this device as the write destination for a function to write data to consecutive devices such as the recipe function.

■5 Availability of writing/reading data to/from word devices ([SIEMENS S7-300/400])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
DB	R/W	R/W	-/-	R/W
IW*1	R/W	R/W	-/-	-/-
QW*1	R/W	R/W	-/-	-/-
MW*1	R/W	R/W	-/-	-/-
T	R/W	R/W	-/-	-/-
C	R/W	R/W	-/-	-/-

*1 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use I for IW.

■6 Monitoring-supported double-word devices ([SIEMENS S7-300/400])

The following table shows monitoring-supported double-word devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.51 ■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-300/400])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DB*2*3	Data register	Decimal	DB(Data block No.).DBD(Device) Notation example: DB4095.DBD0 • Data block No. (decimal): 1 to 4095 • Device (Data word No.) (decimal): 0 to 65532 (Set the number in multiples of 4.)	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 It is necessary to define the data block using a peripheral software or sequence program, before using this device.

*3 Continuous access across data blocks is not possible.

■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7-300/400])

The following shows whether writing/reading data to/from double-word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
DB	R/W	R/W	-/-	-/-

■8 Notation of devices ([SIEMENS S7-300/400])

The notation of device setting is different between the SIEMENS PLC peripheral software and GOT.

(1) Notation of bit devices ([SIEMENS S7-300/400])

Notation in the GOT	Notation in the PLC
Q0007	Q0.7

(2) Notation of bit-specified data register ([SIEMENS S7-300/400])

Notation in the GOT	Notation in the PLC
DB1.DBW0.b0	DB1.DBX1.0
DB1.DBW0.b1	DB1.DBX1.1
:	:
DB1.DBW0.b7	DB1.DBX1.7
DB1.DBW0.b8	DB1.DBX0.0
:	:
DB1.DBW0.b15	DB1.DBX0.7
DB1.DBW2.b0	DB1.DBX3.0
:	:
DB1.DBW2.b7	DB1.DBX3.7
DB1.DBW2.b8	DB1.DBX2.0
:	:
DB1.DBW2.b15	DB1.DBX2.7
:	:

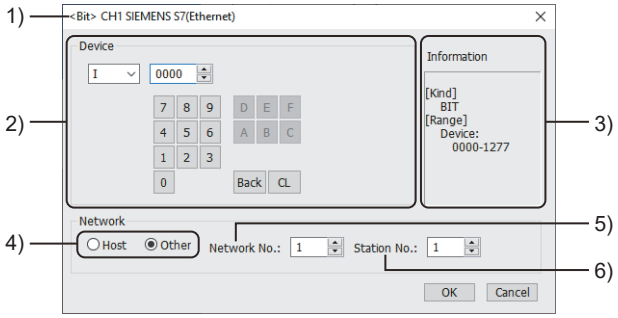
12.4.52 SIEMENS equipment ([SIEMENS S7(Ethernet)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([SIEMENS S7(Ethernet)])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([SIEMENS S7(Ethernet)])
	➡■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7(Ethernet)])
Specifications of word devices	➡■4 Monitoring-supported word devices ([SIEMENS S7(Ethernet)])
	➡■5 Availability of writing/reading data to/from word devices ([SIEMENS S7(Ethernet)])
Specifications of double-word devices	➡■6 Monitoring-supported double-word devices ([SIEMENS S7(Ethernet)])
	➡■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7(Ethernet)])
Notation of devices	➡12.4.51 ■8 Notation of devices ([SIEMENS S7-300/400])

■1 Device setting dialog ([SIEMENS S7(Ethernet)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I0000

3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller set for [Host Address] of the [Controller Setting] window is monitored.
- [Other]: The controller having the specified station number is monitored.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([SIEMENS S7(Ethernet)])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.52 ■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The notation of device setting is different between the SIEMENS PLC peripheral software and GOT.
For the notation of devices, refer to the following.

➟12.4.51 ■8 Notation of devices ([SIEMENS S7-300/400])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input relay	Decimal + octal	I(Byte address)(Bit address) Notation example: I1270 • Byte address (decimal): 000 to 127 • Bit address (octal): 0 to 7	○	○
Q	Output relay	Decimal + octal	Q(Byte address)(Bit address) Notation example: Q1270 • Byte address (decimal): 000 to 127 • Bit address (octal): 0 to 7	○	○
M	Bit memory	Decimal + octal	M(Byte address)(Bit address) Notation example: M2550 • Byte address (decimal): 000 to 255 • Bit address (octal): 0 to 7	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([SIEMENS S7(Ethernet)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use IW for I.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I	R/W	-/-	-/-	-/-	-/-
Q	R/W	-/-	-/-	-/-	-/-
M	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([SIEMENS S7(Ethernet)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.52 ■5 Availability of writing/reading data to/from word devices ([SIEMENS S7(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T*2	Timer (current value)	Decimal	0 to 255	○	○
C	Counter (current value)	Decimal	0 to 255	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DB*3*4	Data register	Decimal	DB(Data block No.).DBW(Device) Notation example: DB255.DBW0 • Data block No. (decimal): 1 to 255 • Device (Data word No.) (decimal): 0 to 2046 (Set an even number.)	○	○
IW*5	Input relay	Decimal	0 to 126	○	○
QW*5	Output relay	Decimal	0 to 126	○	○
MW*5	Bit memory	Decimal	0 to 254	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Only one device can be set as the write destination.
Do not set this device as the write destination for a function to write data to consecutive devices such as the recipe function.

*3 It is necessary to define the data block using a peripheral software or sequence program, before using this device.

*4 Continuous access across data blocks is not possible.

*5 When the device type is the word (16 bits) type, set an even number for the device number.
When the device type is the double-word (32 bits) type, set the device number in multiples of 4.

■5 Availability of writing/reading data to/from word devices ([SIEMENS S7(Ethernet)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
T	R/W	-/-	-/-	-/-
C	R/W	-/-	-/-	-/-
DB	R/W	R/W	-/-	R/W
IW*1	R/W	R/W	-/-	-/-
QW*1	R/W	R/W	-/-	-/-
MW*1	R/W	R/W	-/-	-/-

*1 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use I for IW.

■6 Monitoring-supported double-word devices ([SIEMENS S7(Ethernet)])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.52 ■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7(Ethernet)])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
DB*2*3	Data register	Decimal	DB(Data block No.).DBD(Device) Notation example: DB255.DBD0 • Data block No. (decimal): 1 to 255 • Device (Data word No.) (decimal): 0 to 2044 (Set the number in multiples of 4.)	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 It is necessary to define the data block using a peripheral software or sequence program, before using this device.

*3 Continuous access across data blocks is not possible.

■7 Availability of writing/reading data to/from double-word devices ([SIEMENS S7(Ethernet)])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
DB	R/W	R/W	-/-	-/-

12.4.53 SIEMENS equipment ([SIEMENS OP(Ethernet)])

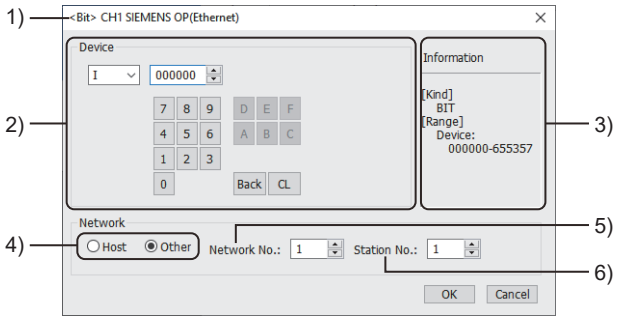
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Not available to GT2105-Q.

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([SIEMENS OP(Ethernet)])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([SIEMENS OP(Ethernet)])
	➟■3 Availability of writing/reading data to/from bit devices ([SIEMENS OP(Ethernet)])
Specifications of byte devices	➟■4 Monitoring-supported byte devices ([SIEMENS OP(Ethernet)])
	➟■5 Availability of writing/reading data to/from byte devices ([SIEMENS OP(Ethernet)])
Specifications of word devices	➟■6 Monitoring-supported word devices ([SIEMENS OP(Ethernet)])
	➟■7 Availability of writing/reading data to/from word devices ([SIEMENS OP(Ethernet)])
Specifications of double-word devices	➟■8 Monitoring-supported double-word devices ([SIEMENS OP(Ethernet)])
	➟■9 Availability of writing/reading data to/from double-word devices ([SIEMENS OP(Ethernet)])
Offset specifications	➟■10 Offset specifications ([SIEMENS OP(Ethernet)])
Notation of devices	➟12.4.51 ■8 Notation of devices ([SIEMENS S7-300/400])

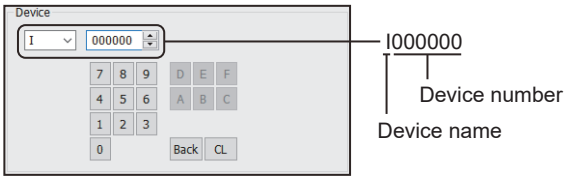
■1 Device setting dialog ([SIEMENS OP(Ethernet)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller set for [Host Address] of the [Controller Setting] window is monitored.
- [Other]: The controller having the specified station number is monitored.

5) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

6) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([SIEMENS OP(Ethernet)])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.53 ■3 Availability of writing/reading data to/from bit devices ([SIEMENS OP(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

The notation of device setting is different between the SIEMENS PLC peripheral software and GOT.
For the notation of devices, refer to the following.

➟12.4.51 ■8 Notation of devices ([SIEMENS S7-300/400])

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input relay	Decimal + octal	I(Byte address)(Bit address) Notation example: I655350 • Byte address (decimal): 00000 to 65535 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
Q*2	Output relay	Decimal + octal	Q(Byte address)(Bit address) Notation example: Q655350 • Byte address (decimal): 00000 to 65535 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
V	Variable memory	Decimal + octal	V(Byte address)(Bit address) Notation example: V204790 • Byte address (decimal): 00000 to 20479 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
M	Bit memory	Decimal + octal	M(Byte address)(Bit address) Notation example: M655350 • Byte address (decimal): 00000 to 65535 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)
S	Sequence control relay	Decimal + octal	S(Byte address)(Bit address) Notation example: S310 • Byte address (decimal): 00 to 31 • Bit address (octal): 0 to 7	○	○
T	Timer	Decimal	0 to 255	○	×
C	Counter	Decimal	0 to 255	○	×
SM	Special memory	Decimal + octal	SM(Byte address)(Bit address) Notation example: SM20470 • Byte address (decimal): 0000 to 2047 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Writing is possible only while the programmable controller is running.

■3 Availability of writing/reading data to/from bit devices ([SIEMENS OP(Ethernet)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
I*1	R/W	-/-	-/-	-/-	-/-
Q*1	R/W	-/-	-/-	-/-	-/-
V*1	R/W	-/-	-/-	-/-	-/-
M*1	R/W	-/-	-/-	-/-	-/-
S*1	R/W	-/-	-/-	-/-	-/-
T	R/-	-/-	-/-	-/-	-/-
C	R/-	-/-	-/-	-/-	-/-
SM*1	R/W	-/-	-/-	-/-	-/-

*1 To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use IW for I.

■4 Monitoring-supported byte devices ([SIEMENS OP(Ethernet)])

The following table shows monitoring-supported byte devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.53 ■5 Availability of writing/reading data to/from byte devices ([SIEMENS OP(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
IB	Input relay	Decimal	0 to 65535	×	×
QB	Output relay	Decimal	0 to 65535	×	×
MB	Bit memory	Decimal	0 to 65535	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from byte devices ([SIEMENS OP(Ethernet)])

The following shows whether writing/reading data to/from byte devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of byte data
IB	R/W	-/-	-/-	-/-	-/-
QB	R/W	-/-	-/-	-/-	-/-
MB	R/W	-/-	-/-	-/-	-/-

■6 Monitoring-supported word devices ([SIEMENS OP(Ethernet)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.53 ■7 Availability of writing/reading data to/from word devices ([SIEMENS OP(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
T*2	Timer	Decimal	0 to 65535	○	○ (Not usable as bit data)
C	Counter	Decimal	0 to 65535	○	○ (Not usable as bit data)
DB*3*4	Data register	Decimal	DB(Data block No.).DBW(Device) Notation example: DB65535.DBW0 • Data block No. (decimal): 1 to 65535 • Device (Data word No.) (decimal): 0 to 65534 (Set an even number.)	○	○
VW*5	Variable memory	Decimal	0 to 20478	○	○ (Not usable as bit data)
IW*5	Input relay	Decimal	0 to 65534	○	○ (Not usable as bit data)
QW*5*6	Output relay	Decimal	0 to 65534	○	○ (Not usable as bit data)
MW*5	Bit memory	Decimal	0 to 65534	○	○ (Not usable as bit data)
AIW*5	Analog input	Decimal	0 to 110	○	×
AQW*5*6	Analog output	Decimal	0 to 110	○	○ (Not usable as bit data)
SMW*5	Special memory	Decimal	0 to 2046	○	○ (Not usable as bit data)
SW*5	Sequence control relay	Decimal	0 to 30	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Only one device can be set as the write destination.
Do not set this device as the write destination for a function to write data to consecutive devices such as the recipe function.

*3 It is necessary to define the data block using a peripheral software or sequence program, before using this device.

*4 Continuous access across data blocks is not possible.

*5 When the device type is the word (16 bits) type, set an even number for the device number.
When the device type is the double-word (32 bits) type, set the device number in multiples of 4.

*6 Writing is possible only while the programmable controller is running.

■7 Availability of writing/reading data to/from word devices ([SIEMENS OP(Ethernet)])

The following shows whether writing/reading data to/from word devices is available by device type.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
T	R/W	R/W	-/-	-/-

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
C	R/W	R/W	-/-	-/-
DB	R/W	R/W	-/-	R/W
VW*1	R/W	R/W	-/-	-/-
IW*1	R/W	R/W	-/-	-/-
QW*1	R/W	R/W	-/-	-/-
MW*1	R/W	R/W	-/-	-/-
AIW	R/-	R/-	-/-	-/-
AQW	R/W	R/W	-/-	-/-
SMW*1	R/W	R/W	-/-	-/-
SW*1	R/W	R/W	-/-	-/-

*1 To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use I for IW.

■8 Monitoring-supported double-word devices ([SIEMENS OP(Ethernet)])

The following table shows monitoring-supported double-word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.53 ■9 Availability of writing/reading data to/from double-word devices ([SIEMENS OP(Ethernet)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
ID	Input relay	Decimal	0 to 65532 (Set the number in multiples of 4.)	×	×
QD	Output relay	Decimal	0 to 65532 (Set the number in multiples of 4.)	×	×
MD	Bit memory	Decimal	0 to 65532 (Set the number in multiples of 4.)	×	×
DB*2*3	Data register	Decimal	DB(Data block No.).DBD(Device) Notation example: DB4095.DBD0 • Data block No. (decimal): 1 to 4095 • Device (Data word No.) (decimal): 0 to 65532 (Set the number in multiples of 4.)	○	○
HC	High-speed counter	Decimal	0 to 3	×	×

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 It is necessary to define the data block using a peripheral software or sequence program, before using this device.
*3 Continuous access across data blocks is not possible.

■9 Availability of writing/reading data to/from double-word devices ([SIEMENS OP(Ethernet)])

The following shows whether writing/reading data to/from double-word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of double-word data
ID	-/-	R/W	-/-	-/-
QD	-/-	R/W	-/-	-/-
MD	-/-	R/W	-/-	-/-
DB	R/W	R/W	-/-	-/-
HC	-/-	R/-	-/-	-/-

■10 Offset specifications ([SIEMENS OP(Ethernet)])

The following shows the offset specifications of each device when using the offset function.
For the notation and range of devices, refer to the following.

➟12.4.53 ■2 Monitoring-supported bit devices ([SIEMENS OP(Ethernet)])
12.4.53 ■4 Monitoring-supported byte devices ([SIEMENS OP(Ethernet)])
12.4.53 ■6 Monitoring-supported word devices ([SIEMENS OP(Ethernet)])
12.4.53 ■8 Monitoring-supported double-word devices ([SIEMENS OP(Ethernet)])

<table>
<tr><th colspan="2" rowspan="2">Device</th><th colspan="2">Offset specifications</th></tr>
<tr><th>GT27, GT25, GT23, SoftGOT2000, and GS25</th><th>GT21 and GS21</th></tr>
<tr><td rowspan="7">Bit device</td><td>I</td><td colspan="2" rowspan="6">When the bit address is increased by 8 bits, the byte address is increased by 1 byte.
Example) Offset for I000000
When offset value is 10, I000012 is monitored.</td></tr>
<tr><td>Q</td></tr>
<tr><td>V</td></tr>
<tr><td>M</td></tr>
<tr><td>S</td></tr>
<tr><td>SM</td></tr>
<tr><td rowspan="2">T
C</td><td colspan="2" rowspan="2">Example) Offset for T0
When offset value is 10, T10 is monitored.</td></tr>
<tr><td rowspan="3">Byte device</td><td>IB</td></tr>
<tr><td>QB</td><td colspan="2" rowspan="2">Example) Offset for IB0
When offset value is 10, IB10 is monitored.</td></tr>
<tr><td>MB</td></tr>
<tr><td rowspan="11">Word device</td><td>T
C</td><td colspan="2">Example) Offset for T0
When offset value is 10, T10 is monitored.</td></tr>
<tr><td rowspan="2">DB</td><td colspan="2">The offset target is device number (data word number).
When a bit is specified, the bit is not supported for the bit number offset.</td></tr>
<tr><td>The offset value is specified as offset regardless of the data type.
Example) Offset for DB1.DBW0
When offset value is 10, DB1.DBW10 is monitored.</td><td>The offset value is changed and the value is specified for offset according to the data type.
Example) Offset for DB1.DBW0
When offset value is 10, DB1.DBW20 is monitored.</td></tr>
<tr><td>VW
IW
QW
MW
AIW
AQW
SMW
SW</td><td colspan="2">The offset value is specified as offset regardless of the data type.
Example) Offset for VW0
When offset value is 10, VW10 is monitored.</td><td>The offset value is changed and the value is specified for offset according to the data type.
Example) Offset for VW0
When offset value is 10, VW20 are monitored.</td></tr>
<tr><td rowspan="4">Double-word device</td><td>ID
QD
MD</td><td colspan="2">The offset value is specified as offset regardless of the data type.
Example) Offset for ID0
When offset value is 10, ID10 is monitored.</td><td>The offset value is changed and the value is specified for offset according to the data type.
Example) Offset for ID0
When offset value is 10, ID40 is monitored.</td></tr>
<tr><td rowspan="2">DB</td><td colspan="2">The offset target is device number (data word number).</td></tr>
<tr><td>The offset value is specified as offset regardless of the data type.
Example) Offset for DB1.DBD0
When offset value is 10, DB1.DBD10 is monitored.</td><td>The offset value is changed and the value is specified for offset according to the data type.
Example) Offset for DB1.DBD0
When offset value is 10, DB1.DBD20 is monitored.</td></tr>
<tr><td>HC</td><td colspan="2">Example) Offset for HC0
When offset value is 1, HC1 is monitored.</td></tr>
</table>

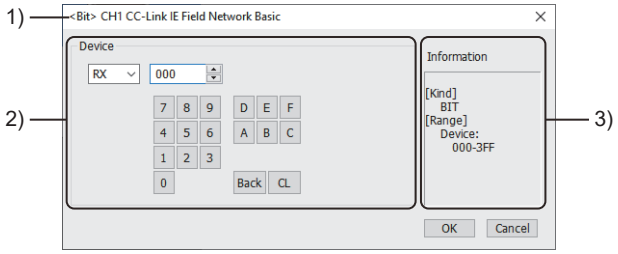
12.4.54 CLPA ([CC-Link IE Field Network Basic])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([CC-Link IE Field Network Basic])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([CC-Link IE Field Network Basic])
	➟■3 Availability of writing/reading data to/from bit devices ([CC-Link IE Field Network Basic])
Specifications of word devices	➟■4 Monitoring-supported word devices ([CC-Link IE Field Network Basic])
	➟■5 Availability of writing/reading data to/from word devices ([CC-Link IE Field Network Basic])
Remote device setting of the GOT (remote station)	➟■6 Remote device setting of the GOT (remote station) ([CC-Link IE Field Network Basic])

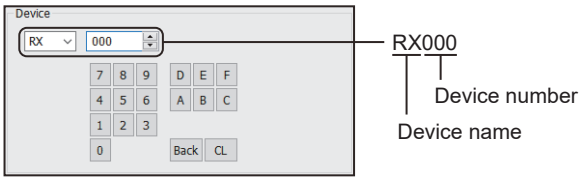
■1 Device setting dialog ([CC-Link IE Field Network Basic])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of RX000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([CC-Link IE Field Network Basic])

The following table shows monitoring-supported bit devices.
The device range shown in this section indicates the maximum settable values in GT Designer3.
The range of devices that can actually be monitored depends on the number of stations occupied by remote stations that are set in the master station.
Before setting the device range, check the number of occupied stations that are assigned to the GOT.
If a non-existent device or a device number out of the range is set for an object, other objects for which correct devices are set may not be monitored.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.54 ■3 Availability of writing/reading data to/from bit devices ([CC-Link IE Field Network Basic])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
RX	Remote input	Hexadecimal	000 to 3FF	○	○
RY	Remote output	Hexadecimal	000 to 3FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([CC-Link IE Field Network Basic])

The following shows whether writing/reading data to/from bit devices is available by device type.

When the device type is other than the bit type, set the device No. in multiples of 16.

R/W: Both read and write

R/-: Read only

-/W: Write only

-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
RX	R/W	-/-	R/W	R/W	-/-
RY	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([CC-Link IE Field Network Basic])

The following table shows monitoring-supported word devices.

The device range shown in this section indicates the maximum settable values in GT Designer3.

The range of devices that can actually be monitored depends on the number of stations occupied by remote stations that are set in the master station.

Before setting the device range, check the number of occupied stations that are assigned to the GOT.

If a non-existent device or a device number out of the range is set for an object, other objects for which correct devices are set may not be monitored.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.54 ■5 Availability of writing/reading data to/from word devices ([CC-Link IE Field Network Basic])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
Ww	Remote register	Hexadecimal	000 to 1FF	○	○
Wr	Remote register	Hexadecimal	000 to 1FF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([CC-Link IE Field Network Basic])

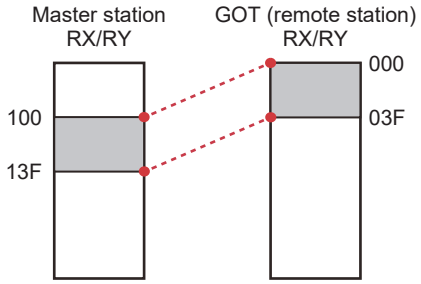
The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
Ww	R/W	R/W	-/-	R/W
Wr	R/W	R/W	-/-	R/W

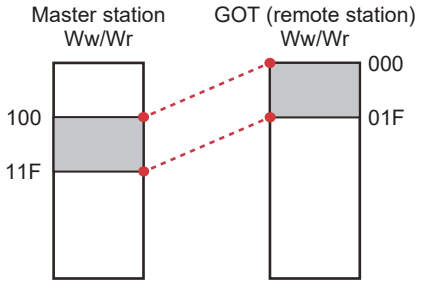
■6 Remote device setting of the GOT (remote station) ([CC-Link IE Field Network Basic])

The devices assigned to the GOT in the master station are allocated in the range starting from the first number in the GOT.
The following shows the examples of device assignment in the master station and in the GOT (remote station).
In the example of remote device assignment (RX/RY 1 station occupied), the remote devices assigned to the GOT (remote station) are RX100 to RX13F and RY100 to RY13F in the master station. Note that the corresponding remote devices in the GOT are RX000 to RX03F and RY000 to RY03F.

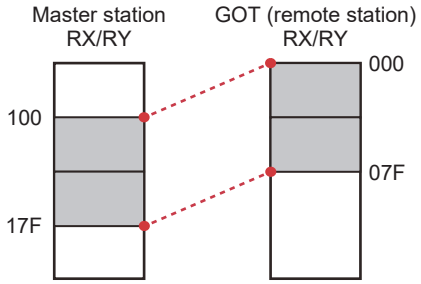
Example of remote device assignment
RX/RY 1 station occupied



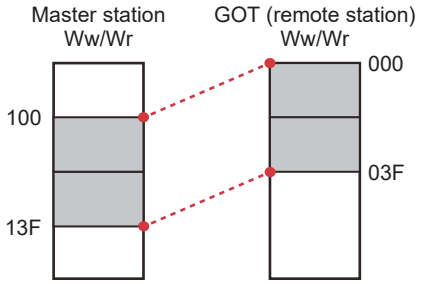
Example of remote device assignment
Ww/Wr 1 station occupied



Example of remote device assignment
RX/RY 2 station occupied



Example of remote device assignment
Ww/Wr 2 station occupied



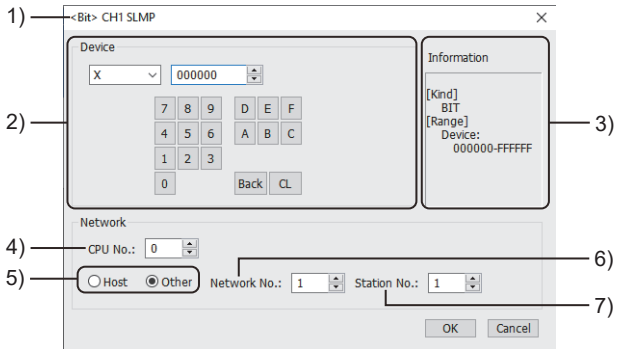
12.4.55 CLPA ([SLMP])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([SLMP])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([SLMP])
	➟■3 Availability of writing/reading data to/from bit devices ([SLMP])
Specifications of word devices	➟■4 Monitoring-supported word devices ([SLMP])
	➟■5 Availability of writing/reading data to/from word devices ([SLMP])

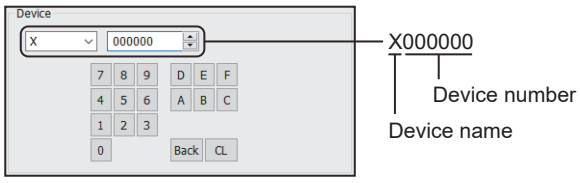
■1 Device setting dialog ([SLMP])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of X000000



3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [CPU No.]
Set the CPU number of the controller.

5) Station type specification
Select the station type (host or other) for the controller to be monitored.
- [Host]: The controller to be monitored is the host station.
- [Other]: The controller to be monitored is not the host station.

6) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.

7) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.

■2 Monitoring-supported bit devices ([SLMP])

The following table shows monitoring-supported bit devices.

To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.55 ■3 Availability of writing/reading data to/from bit devices ([SLMP])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
X	Input	Hexadecimal	000000 to FFFFFF	○	○
Y	Output	Hexadecimal	000000 to FFFFFF	○	○
B	Link relay	Hexadecimal	000000 to FFFFFF	○	○
M	Internal relay	Decimal	0 to 16777215	○	○
L	Latch relay	Decimal	0 to 16777215	○	○
F	Annunciator	Decimal	0 to 16777215	○	○
V	Edge relay	Decimal	0 to 16777215	○	○
TC	Timer Coil	Decimal	0 to 16777215	○	○ (Not usable as word data)
TS	Timer contact	Decimal	0 to 16777215	○	○ (Not usable as word data)
CC	Counter Coil	Decimal	0 to 16777215	○	○ (Not usable as word data)
CS	Counter contact	Decimal	0 to 16777215	○	○ (Not usable as word data)
STC	Retentive timer Coil	Decimal	0 to 16777215	○	○ (Not usable as word data)
STS	Retentive timer Contact	Decimal	0 to 16777215	○	○ (Not usable as word data)
SB	Link special relay	Hexadecimal	000000 to FFFFFF	○	○
SM	Special relay	Decimal	0 to 16777215	○	○
DX	Direct access input	Hexadecimal	000000 to FFFFFF	○	○
DY	Direct access output	Hexadecimal	000000 to FFFFFF	○	○
JnX*2	Link input (link direct device)	Hexadecimal	J(Network No.)-X(Device) Notation example: J1-X000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○
JnY*2	Link output (link direct device)	Hexadecimal	J(Network No.)-Y(Device) Notation example: J1-Y000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○
JnB*2	Link relay (link direct device)	Hexadecimal	J(Network No.)-B(Device) Notation example: J1-B000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
JnSB*2	Link special relay (link direct device)	Hexadecimal	J(Network No.)-SB(Device) Notation example: J1-SB000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Not available to GT21 and GS21.

■3 Availability of writing/reading data to/from bit devices ([SLMP])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
X	R/W	-/-	R/W	R/W	-/-
Y	R/W	-/-	R/W	R/W	-/-
B	R/W	-/-	R/W	R/W	-/-
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
F	R/W	-/-	R/W	R/W	-/-
V	R/W	-/-	R/W	R/W	-/-
TC	R/W	-/-	-/-	-/-	-/-
TS	R/W	-/-	-/-	-/-	-/-
CC	R/W	-/-	-/-	-/-	-/-
CS	R/W	-/-	-/-	-/-	-/-
STC	R/W	-/-	-/-	-/-	-/-
STS	R/W	-/-	-/-	-/-	-/-
SB	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-
DX	R/W	-/-	R/W	R/W	-/-
DY	R/W	-/-	R/W	R/W	-/-
JnX	R/W	-/-	R/W	R/W	-/-
JnY	R/W	-/-	R/W	R/W	-/-
JnB	R/W	-/-	R/W	R/W	-/-
JnSB	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([SLMP])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.55 ■5 Availability of writing/reading data to/from word devices ([SLMP])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available

×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices[*1]	
				Assignment to EG devices	Access using a client
TN	Timer (current value)	Decimal	0 to 16777215	○	○ (Not usable as bit data)
CN	Counter (current value)	Decimal	0 to 16777215	○	○ (Not usable as bit data)
STN	Retentive timer (current value)	Decimal	0 to 16777215	○	○ (Not usable as bit data)
D	Data register	Decimal	0 to 16777215	○	○
SD	Special register	Decimal	0 to 16777215	○	○
W	Link register	Hexadecimal	000000 to FFFFFF	○	○
SW	Link special register	Hexadecimal	000000 to FFFFFF	○	○
R	File register (Block switching method)	Decimal	0 to 16777215	○	○
ZR	File register (Serial number access method)	Hexadecimal	000000 to FFFFFF	○	○
Z	Index register	Decimal	0 to 16777215	○	○
G[*2]	Module access device (buffer memory)	Decimal	U(Unit No.)-G(Device) Notation example: UFF-G0 • Unit No.(hexadecimal): 00 to FF • Device (decimal): 0 to 16777215	○	○
U3E0G[*2]	CPU buffer memory	Decimal	U3E0-G(Device) Notation example: U3E0-G0 • Device (decimal): 0 to 16777215	○	○
U3E1G[*2]	CPU buffer memory	Decimal	U3E1-G(Device) Notation example: U3E1-G0 • Device (decimal): 0 to 16777215	○	○
U3E2G[*2]	CPU buffer memory	Decimal	U3E2-G(Device) Notation example: U3E2-G0 • Device (decimal): 0 to 16777215	○	○
U3E3G[*2]	CPU buffer memory	Decimal	U3E3-G (Device) Notation example: U3E3-G0 • Device (decimal): 0 to 16777215	○	○
U3E0HG[*2]	Fixed-cycle area of the CPU buffer memory (multiple CPU high speed transmission memory)	Decimal	U3E0-HG(Device) Notation example: U3E0-HG0 • Device (decimal): 0 to 16777215	○	○
U3E1HG[*2]	Fixed-cycle area of the CPU buffer memory (multiple CPU high speed transmission memory)	Decimal	U3E1-HG(Device) Notation example: U3E1-HG0 • Device (decimal): 0 to 16777215	○	○
U3E2HG[*2]	Fixed-cycle area of the CPU buffer memory (multiple CPU high speed transmission memory)	Decimal	U3E2-HG(Device) Notation example: U3E2-HG0 • Device (decimal): 0 to 16777215	○	○
U3E3HG[*2]	Fixed-cycle area of the CPU buffer memory (multiple CPU high speed transmission memory)	Decimal	U3E3-HG(Device) Notation example: U3E3-HG0 • Device (decimal): 0 to 16777215	○	○
JnW[*2]	Link register (link direct device)	Hexadecimal	J(Network No.)-W(Device) Notation example: J1-W000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
JnSW*2	Link special register (link direct device)	Hexadecimal	J(Network No.)-SW(Device) Notation example: J1-SW000000 • Network No. (decimal): 1 to 239 • Device (hexadecimal): 000000 to FFFFFF	○	○
RD*2	Refresh data register	Decimal	0 to 4294967295	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 Not available to GT21 and GS21.

■5 Availability of writing/reading data to/from word devices ([SLMP])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
TN	R/W	R/W	-/-	-/-
CN	R/W	R/W	-/-	-/-
STN	R/W	R/W	-/-	-/-
D*1	R/W	R/W	-/-	R/W
SD*1	R/W	R/W	-/-	R/W
W*1	R/W	R/W	-/-	R/W
SW*1	R/W	R/W	-/-	R/W
R*1	R/W	R/W	-/-	R/W
ZR*1	R/W	R/W	-/-	R/W
Z	R/W	R/W	-/-	-/-
G	R/W	R/W	-/-	R/W
U3E0G	R/W	R/W	-/-	R/W
U3E1G	R/W	R/W	-/-	R/W
U3E2G	R/W	R/W	-/-	R/W
U3E3G	R/W	R/W	-/-	R/W
U3E0HG	R/W	R/W	-/-	R/W
U3E1HG	R/W	R/W	-/-	R/W
U3E2HG	R/W	R/W	-/-	R/W
U3E3HG	R/W	R/W	-/-	R/W
JnW	R/W	R/W	-/-	R/W
JnSW	R/W	R/W	-/-	R/W
RD	R/W	R/W	-/-	R/W

*1 When bit specification of word device is performed, the GOT reads the value from a device and then write a value to the device.
Do not change the device value with a sequence program until the GOT completes writing a value to the device.

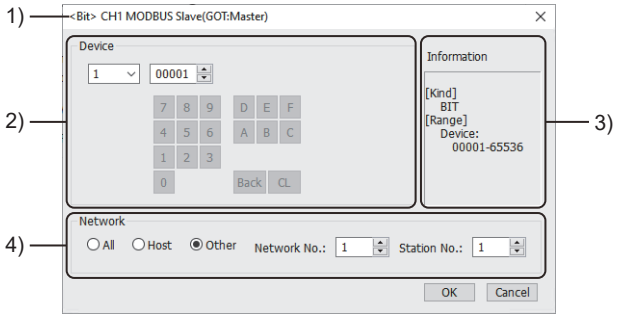
12.4.56 MODBUS ([MODBUS Slave(GOT:Master)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([MODBUS Slave(GOT:Master)])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([MODBUS Slave(GOT:Master)])
	➡■3 Availability of writing/reading data to/from bit devices ([MODBUS Slave(GOT:Master)])
Specifications of word devices	➡■4 Monitoring-supported word devices ([MODBUS Slave(GOT:Master)])
	➡■5 Availability of writing/reading data to/from word devices ([MODBUS Slave(GOT:Master)])
Notation of devices	➡■6 Notation of devices ([MODBUS Slave(GOT:Master)])
Function code	➡■7 Function code ([MODBUS Slave(GOT:Master)])

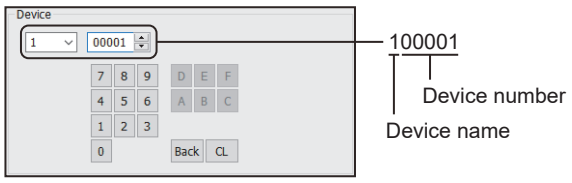
■1 Device setting dialog ([MODBUS Slave(GOT:Master)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of 100001

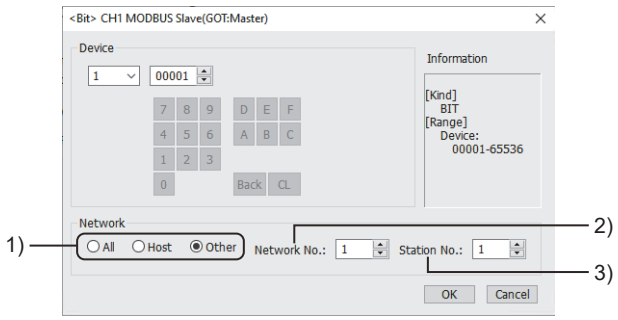


3) [Information]
Displays the setting range of each setting item according to the selected device.

4) [Network Setting]
The setting depends on the connection type.

➡(1) Network setting for the MODBUS/RTU connection ([MODBUS Slave(GOT:Master)])
(3) Network setting for the MODBUS/TCP connection ([MODBUS Slave(GOT:Master)])

(1) Network setting for the MODBUS/RTU connection ([MODBUS Slave(GOT:Master)])



1) Monitor target specification

Set the monitoring target of the set device.

Item	Description
[All]	Select this item when writing data to all the connected controllers. During monitoring, the controller set for [Host Address] of the [Controller Setting] window is monitored. When data is input from a numerical input object, the data is written to all the connected controllers. When no data is input, the controller set for [Host Address] is monitored.
[Host]	Select this item when monitoring the controller set as the host station.
[Other]	Select this item when monitoring the controller that has the specified station number.

2) [Network No.]

This item appears when [Other] is selected for the station type.

For the MODBUS/RTU connection, set 1.

3) [Station No.]

This item appears when [Other] is selected for the station type.

Specify a station number.

The setting range is [1] to [247] (direct) or [248] to [254] (indirect).

For indirect specification of a station number, refer to the following.

➟(2) Indirect specification of a station number for the MODBUS/RTU master connection ([MODBUS Slave(GOT:Master)])

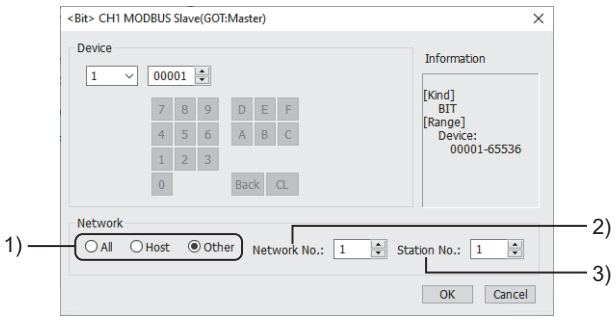
(2) Indirect specification of a station number for the MODBUS/RTU master connection ([MODBUS Slave(GOT:Master)])

When you specify any of 248 to 254 for the station number, the value of the corresponding GOT data register (GD10 to GD16) is used as the station number.

The following shows the correspondence between station number setting values and GOT data registers (GD).

Station No.	GOT data register (GD)	Setting range
248	GD10	[0] to [255] Setting a value outside the above range causes a device range error. When "0" is set, "All station specification (broadcast)" is specified. When "255" is set, the host station is specified.
249	GD11	
:	:	
253	GD15	
254	GD16	

(3) Network setting for the MODBUS/TCP connection ([MODBUS Slave(GOT:Master)])



1) Monitor target specification
Set the monitoring target of the set device.

Item	Description
[All]	Not available to the MODBUS/TCP connection.
[Host]	Select this item when monitoring the controller set as the host station.
[Other]	Select this item when monitoring the controller that has the specified station number.

2) [Network No.]
This item appears when [Other] is selected for the station type.
Specify a network number.
The setting range is [1] to [239].

3) [Station No.]
This item appears when [Other] is selected for the station type.
Specify a station number.
The setting range is [1] to [247].

■2 Monitoring-supported bit devices ([MODBUS Slave(GOT:Master)])

The following table shows monitoring-supported bit devices.
The device range of MODBUS equipment varies by model.
When a model whose device range is not a specified using a multiple of 16 is used, monitoring to the maximum within the range may not be possible.
In this case, the device range is up to the number divisible by 16.
Example) For a model whose coil device range is from 0 to 9999
The range that can be actually monitored is from 0 to 9984.

To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.56 ■3 Availability of writing/reading data to/from bit devices ([MODBUS Slave(GOT:Master)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
1	Input relay	Decimal	00001 to 65536	○	○ (Not usable as word data)
0	Coils	Decimal	00001 to 65536	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([MODBUS Slave(GOT:Master)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
1	R/-	-/-	-/-	-/-	-/-
0	R/W	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([MODBUS Slave(GOT:Master)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.56 ■5 Availability of writing/reading data to/from word devices ([MODBUS Slave(GOT:Master)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
4	Holding register	Decimal	00001 to 65536	○	○ (Not usable as bit data)
3	Input register	Decimal	00001 to 65536	○	○ (Not usable as bit data)
6	Extension file register	Decimal	(File No.)-6(Device) Notation example: 418-600000 • File No. (decimal): 0 to 418 • Device (decimal): 00000 to 09999	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([MODBUS Slave(GOT:Master)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

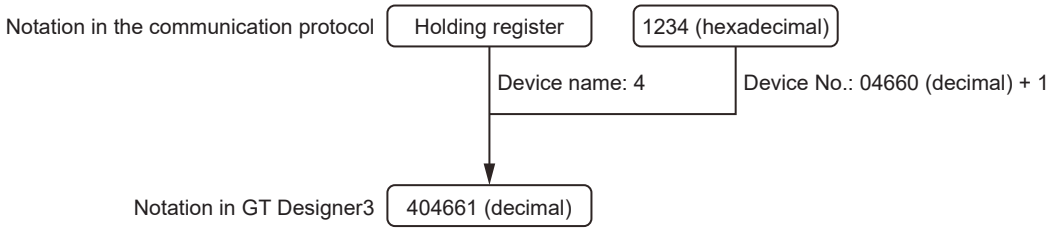
Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
4	R/W	R/W	-/-	R/W
3	R/-	R/-	-/-	R/-
6	R/W	R/W	-/-	R/W

■6 Notation of devices ([MODBUS Slave(GOT:Master)])

The notation of addresses and that of devices differ between the MODBUS/RTU communication protocol and GT Designer3.
Set the devices using the notation used in GT Designer3.

Notation in the communication protocol		Notation in the GOT	
Device name	Address (hexadecimal)	Device name	Device No. (decimal)
Coils	0000 to FFFF	0	00001 to 65536
Input relay	0000 to FFFF	1	00001 to 65536
Input register	0000 to FFFF	3	00001 to 65536
Holding register	0000 to FFFF	4	00001 to 65536
Extension file register	0000 to 270F	6	00000 to 09999

Example) Monitoring the holding register 1234 (hexadecimal)
Set 404661 in GT Designer3.



■7 Function code ([MODBUS Slave(GOT:Master)])

The GOT supports the following function codes.

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]	
		MODBUS/RTU	MODBUS/TCP
0x01	Read Coils	1 to 2000	1 to 1000
0x02	Read Discrete Inputs	1 to 2000	1 to 1000
0x03	Read Holding Registers	1 to 125	1 to 125
0x04	Read Input Registers	1 to 125	1 to 125
0x05	Write Single Coil	1	1
0x06	Write Single Register	1	1
0x0F	Write Multiple Coils	1 to 1968	1 to 800
0x10	Write Multiple Register	1 to 123	1 to 123
0x14	Read File Record	1 to 124	1 to 124
0x15	Write File Record	1 to 122	1 to 122

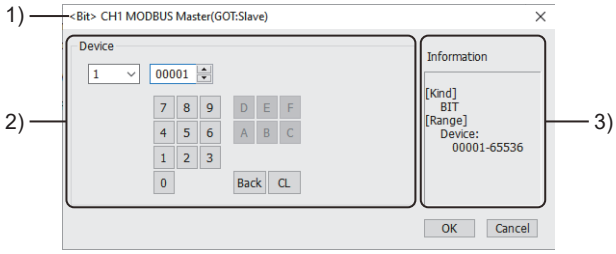
12.4.57 MODBUS ([MODBUS Master(GOT:Slave)])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([MODBUS Master(GOT:Slave)])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([MODBUS Master(GOT:Slave)])
	➟■3 Availability of writing/reading data to/from bit devices ([MODBUS Master(GOT:Slave)])
Specifications of word devices	➟■4 Monitoring-supported word devices ([MODBUS Master(GOT:Slave)])
	➟■5 Availability of writing/reading data to/from word devices ([MODBUS Master(GOT:Slave)])
Notation of devices	➟12.4.56 ■6 Notation of devices ([MODBUS Slave(GOT:Master)])
Function code	➟■6 Function code ([MODBUS Master(GOT:Slave)])

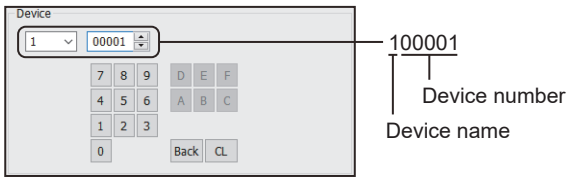
■1 Device setting dialog ([MODBUS Master(GOT:Slave)])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of 100001



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([MODBUS Master(GOT:Slave)])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.57 ■3 Availability of writing/reading data to/from bit devices ([MODBUS Master(GOT:Slave)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
1	Input relay	Decimal	00001 to 65536	00001 to 10000	○	○
0	Coils	Decimal	00001 to 65536	00001 to 10000	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([MODBUS Master(GOT:Slave)])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
1	R/W	-/-	R/W	R/W	-/-
0	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([MODBUS Master(GOT:Slave)])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.57 ■5 Availability of writing/reading data to/from word devices ([MODBUS Master(GOT:Slave)])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range		Specifications of EG devices*1	
			GT27, GT25, GT23, SoftGOT2000, and GS25	GT21 and GS21	Assignment to EG devices	Access using a client
4	Holding register	Decimal	00001 to 65536	00001 to 10000	○	○
3	Input register	Decimal	00001 to 65536	00001 to 10000	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■5 Availability of writing/reading data to/from word devices ([MODBUS Master(GOT:Slave)])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
4	R/W	R/W	-/-	R/W
3	R/W	R/W	-/-	R/W

■6 Function code ([MODBUS Master(GOT:Slave)])

The GOT supports the following function codes.

Function code	Function	Number of devices that are accessible with one message [Unit: point(s)]	
		MODBUS/RTU	MODBUS/TCP
0x01	Read Coils	1 to 2000	1 to 2000
0x02	Read Discrete Inputs	1 to 2000	1 to 2000
0x03	Read Holding Registers	1 to 125	1 to 125
0x04	Read Input Registers	1 to 125	1 to 125
0x05	Write Single Coil	1	1
0x06	Write Single Register	1	1
0x08*1	Diagnostics	-	-
0x0F	Write Multiple Coils	1 to 1968	1 to 1968
0x10	Write Multiple Register	1 to 123	1 to 123

*1 Only available to the loopback (sub function code 0x0000).

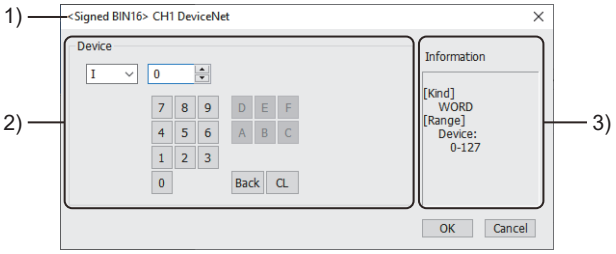
12.4.58 ODVA ([DeviceNet])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([DeviceNet])
Specifications of word devices	➟■2 Monitoring-supported word devices ([DeviceNet])
	➟■3 Availability of writing/reading data to/from word devices ([DeviceNet])

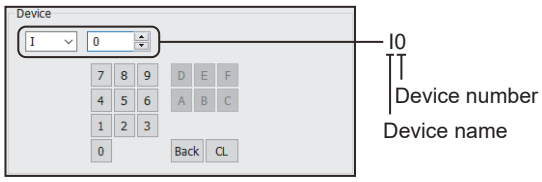
■1 Device setting dialog ([DeviceNet])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of I0



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported word devices ([DeviceNet])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.58 ■3 Availability of writing/reading data to/from word devices ([DeviceNet])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
I	Input	Decimal	0 to 127	○	○
O	Output	Decimal	0 to 127	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from word devices ([DeviceNet])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
I	R/W	R/W	-/-	R/W
O	R/-	R/-	-/-	R/-

12.4.59 OPC ([OPC UA])

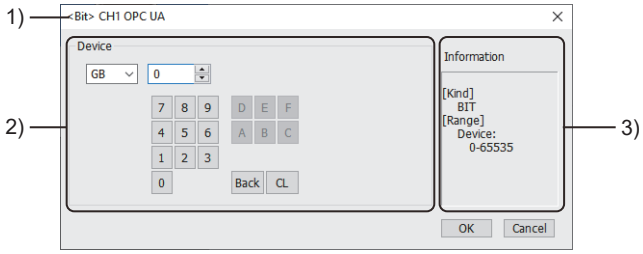
GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([OPC UA])
Device specifications	➟■2 Monitoring-supported devices ([OPC UA])

■1 Device setting dialog ([OPC UA])

Set a device to be monitored.
In the device setting dialog, only GOT internal devices are settable.
For information on setting OPC UA tags, refer to the following.

➟6.1.10 How to set OPC UA tags



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.

3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported devices ([OPC UA])

To monitor an OPC UA server, use OPC UA tags.
For the usable OPC UA tags, refer to the following.

➟6.1.10 ■1 Usable OPC UA tags

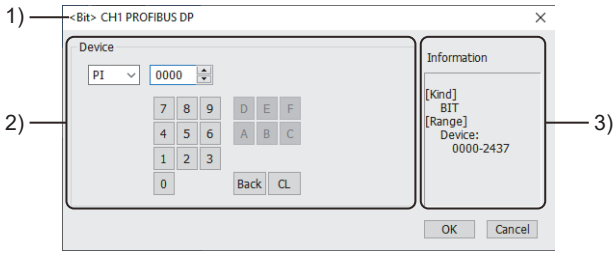
12.4.60 PROFIBUS ([PROFIBUS DP])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➟■1 Device setting dialog ([PROFIBUS DP])
Specifications of bit devices	➟■2 Monitoring-supported bit devices ([PROFIBUS DP])
	➟■3 Availability of writing/reading data to/from bit devices ([PROFIBUS DP])
Specifications of word devices	➟■4 Monitoring-supported word devices ([PROFIBUS DP])
	➟■5 Availability of writing/reading data to/from word devices ([PROFIBUS DP])

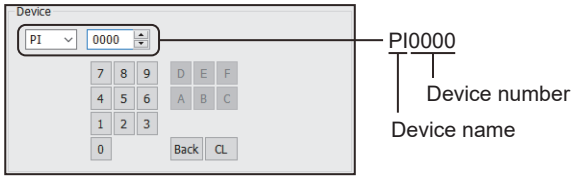
■1 Device setting dialog ([PROFIBUS DP])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of PI0000



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([PROFIBUS DP])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.60 ■3 Availability of writing/reading data to/from bit devices ([PROFIBUS DP])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PI	Input relay	Decimal + octal	PI(Byte address)(Bit address) Notation example: PI2430 • Byte address (decimal): 000 to 243 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PQ	Output relay	Decimal + octal	PQ(Byte address)(Bit address) Notation example: PQ2430 • Byte address (decimal): 000 to 243 • Bit address (octal): 0 to 7	○	○ (Not usable as word data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([PROFIBUS DP])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
To use the device as word data, use the word device that has the same device name appended with "W".
Example) Use PIW for PI.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
PI	R/W	-/-	-/-	-/-	-/-
PQ	R/-	-/-	-/-	-/-	-/-

■4 Monitoring-supported word devices ([PROFIBUS DP])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.60 ■5 Availability of writing/reading data to/from word devices ([PROFIBUS DP])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
PIW*2	Input relay	Decimal	0 to 242	○	○ (Not usable as bit data)
PQW*2	Output relay	Decimal	0 to 242	○	○ (Not usable as bit data)

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➡10.13 Monitoring a Controller through a GOT (Server/Client Function)

*2 When the device type is the word (16 bits) type, set an even number for the device number.
When the device type is the double-word (32 bits) type, set the device number in multiples of 4.

■5 Availability of writing/reading data to/from word devices ([PROFIBUS DP])

The following shows whether writing/reading data to/from word devices is available by device type.
To use the device as bit data, use the bit device that has the same device name without "W".
Example) Use PI for PIW.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
PIW	R/W	R/W	-/-	-/-
PQW	R/-	R/-	-/-	-/-

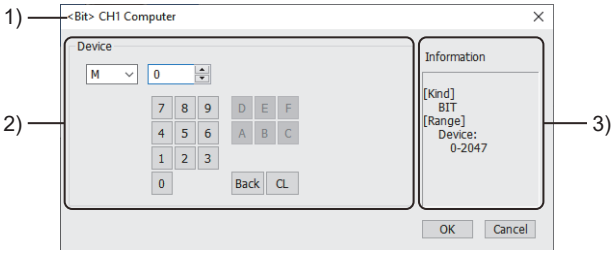
12.4.61 Microcomputer ([Computer])

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Item	Reference
Device setting dialog	➡■1 Device setting dialog ([Computer])
Specifications of bit devices	➡■2 Monitoring-supported bit devices ([Computer])
	➡■3 Availability of writing/reading data to/from bit devices ([Computer])
Specifications of word devices	➡■4 Monitoring-supported word devices ([Computer])
	➡■5 Availability of writing/reading data to/from word devices ([Computer])

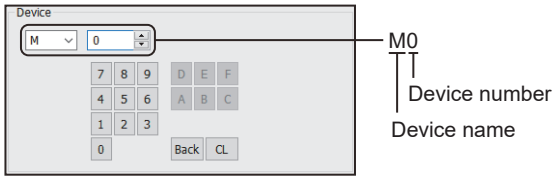
■1 Device setting dialog ([Computer])

Set a device to be monitored.



1) Title
Data type and channel number of the device to be set

2) [Device]
Set the device name and device number.
If a bit number needs to be specified, the setting item is displayed.
Example) Setting of M0



3) [Information]
Displays the setting range of each setting item according to the selected device.

■2 Monitoring-supported bit devices ([Computer])

The following table shows monitoring-supported bit devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➡12.4.61 ■3 Availability of writing/reading data to/from bit devices ([Computer])

For the formats of devices, refer to the following.

➡6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
M	Internal relay	Decimal	0 to 2047	○	○
L	Latch relay	Decimal	0 to 2047	○	○
SM	Special relay	Decimal	0 to 63	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

■3 Availability of writing/reading data to/from bit devices ([Computer])

The following shows whether writing/reading data to/from bit devices is available by device type.
When the device type is other than the bit type, set the device No. in multiples of 16.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type				
	Bit	Byte (8 bits)	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)
M	R/W	-/-	R/W	R/W	-/-
L	R/W	-/-	R/W	R/W	-/-
SM	R/W	-/-	R/W	R/W	-/-

■4 Monitoring-supported word devices ([Computer])

The following table shows monitoring-supported word devices.
To check whether writing/reading data to/from each device is available, refer to the following.

➟12.4.61 ■5 Availability of writing/reading data to/from word devices ([Computer])

For the formats of devices, refer to the following.

➟6.1.1 Formats of devices, labels, and tags

○: Available
×: Not available

Device name		Device No. representation	Setting range	Specifications of EG devices*1	
				Assignment to EG devices	Access using a client
D	Data register	Decimal	0 to 4095	○	○
SD	Special register	Decimal	0 to 15	○	○
R	File register	Decimal	0 to 4095	○	○

*1 For the devices assigned to EG devices (gateway devices) and the compatible clients, refer to the following.

➟10.13 Monitoring a Controller through a GOT (Server/Client Function)

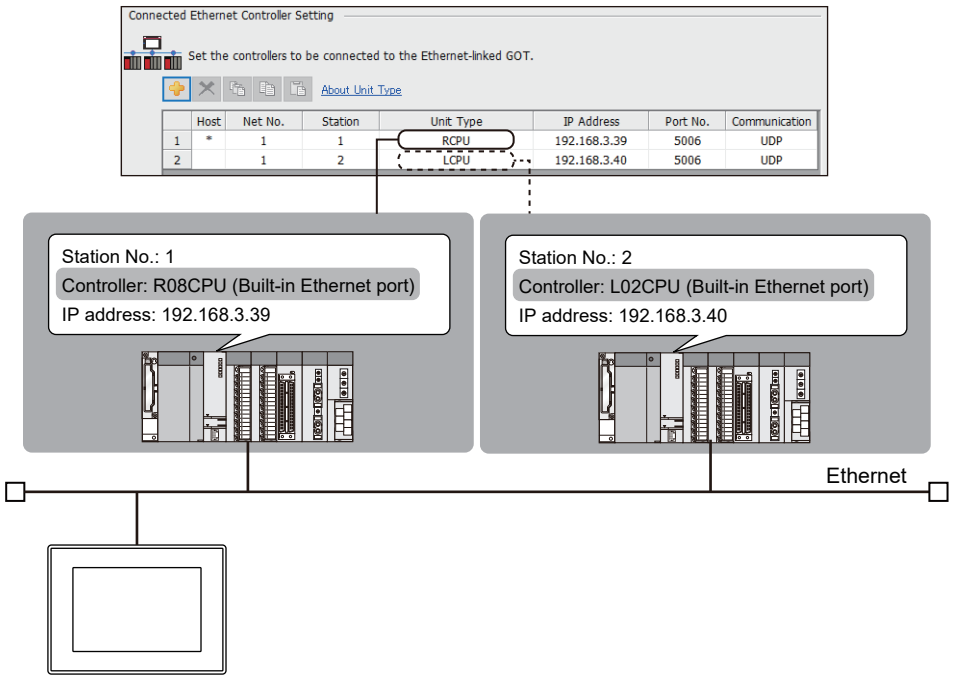
■5 Availability of writing/reading data to/from word devices ([Computer])

The following shows whether writing/reading data to/from word devices is available by device type.
R/W: Both read and write
R/-: Read only
-/W: Write only
-/-: No read/write access

Device name	Device type			
	Word (16 bits)	Double-word (32 bits)	Quad-word (64 bits)	Bit of word data
D	R/W	R/W	-/-	R/W
SD	R/W	R/W	-/-	R/W
R	R/W	R/W	-/-	R/W

12.5 [Unit Type] in [Connected Ethernet Controller Setting]

In the [Controller Setting] window, if you select an Ethernet interface, [Connected Ethernet Controller Setting] appears.
Register the controller to be connected to the GOT by Ethernet.
Set [Unit Type] according to the connected controller or communication module.



The selectable items for [Unit Type] vary according to the selection for [Controller Type].
For the selectable items for each controller type, refer to the following.

➟12.5.1 Selectable items for [Unit Type]

For the correspondence between the selectable items for [Unit Type] and the controllers or communication modules, refer to the following.

➟12.5.2 Correspondence between the selection for [Unit Type] and the equipment used

12.5.1 Selectable items for [Unit Type]

The selectable items for [Unit Type] in [Connected Ethernet Controller Setting] vary according to the selection for [Controller Type].

➟■1 Selectable items for connection to Mitsubishi Electric equipment
■2 Selectable items for connection to non-Mitsubishi Electric equipment

■1 Selectable items for connection to Mitsubishi Electric equipment

The following shows the selectable items when [MITSUBISHI ELECTRIC] is selected for [manufacturer].

[Controller Type] (When [Ethernet: Multi] is set to [I/F])	[Unit Type] in [Connected Ethernet Controller Setting]
[MELSEC MX controller]	[MX-R(Ethernet)] [MX-R(CC-Link IE TSN)] [MX-F(Ethernet)] [MX-F(CC-Link IE TSN)] [RCPU] [RnCCPU/RnWCPU] [RnNCCPU][*1] [LHCPU] [FX5CPU] [QnUD(P)V/QnUDE(H)] [Q17nNC][*1] [QnD(H)CCPU] [RJ71GN11-T2/RD78G(H)] [RJ71EN71] [FX5-CCLGN-MS/FX5-nSSC-G] [FX5-ENET] [QJ71E71/LJ71E71] [LCPU] [NZ2GF-ETB] [AJ71QE71][*1] [AJ71E71][*1] [CR800] [CRnD-700] [Q17nDSR]
[MELSEC iQ-R, RnMT/NC/RT, CR800-D][*1]	
[MELSEC iQ-R, RnMT/RT, CR800-D][*2*3]	
[MELSEC iQ-L] [MELSEC iQ-F] [MELSEC-Q/QS, Q17nD/M/NC/DR/DSR, CRnD-700][*1] [MELSEC-Q, Q17nD/M/DR/DSR, CRnD-700][*2*3] [MELSEC-QnA, MELDAS C6*][*1] [MELSEC-L] [MELSEC-A][*1]	[MX-R(Ethernet)] [MX-R(CC-Link IE TSN)] [MX-F(Ethernet)] [MX-F(CC-Link IE TSN)] [RCPU] [RnCCPU/RnWCPU] [RnNCCPU][*1] [LHCPU] [FX5CPU] [QnUD(P)V/QnUDE(H)] [Q17nNC][*1] [QnD(H)CCPU] [RJ71GN11-T2/RD78G(H)] [RJ71EN71] [FX5-CCLGN-MS/FX5-nSSC-G] [FX5-ENET] [QJ71E71/LJ71E71] [LCPU] [NZ2GF-ETB] [AJ71QE71][*1] [AJ71E71][*1] [CR800] [CRnD-700] [Q17nDSR]
[MELSEC-FX]	[FX]

[Controller Type] (When [Ethernet: Multi] is set to [I/F])	[Unit Type] in [Connected Ethernet Controller Setting]
[MELIPC]	[MX-R(Ethernet)] [MX-R(CC-Link IE TSN)] [MX-F(Ethernet)] [MX-F(CC-Link IE TSN)] [MELIPC] [RCPU] [RnCCPU/RnWCPU] [RnNCCPU]*1 [LHCPU] [FX5CPU] [QnUD(P)V/QnUDE(H)] [Q17nNC]*1 [QnD(H)CCPU] [RJ71GN11-T2/RD78G(H)] [RJ71EN71] [FX5-CCLGN-MS/FX5-nSSC-G] [FX5-ENET] [QJ71E71/LJ71E71] [LCPU] [NZ2GF-ETB] [AJ71QE71]*1 [AJ71E71]*1 [CR800] [CRnD-700] [Q17nDSR]
[MELSERVO-JE-*C]*2	[MR-JE-C]
[MELSERVO-J5(W)-*G(-RJ), -JET-*G]	[MR-J5(D)-G/MR-JET-G]
[FREQROL 800]*2	[FREQROL]
[FREQROL 800/E700NE(Batch monitor)]	

*1 Not available to GT21 and GS21.
*2 Not available to GT SoftGOT2000.
*3 Not available to GT27, GT25, GT23, and GS25.

■2 Selectable items for connection to non-Mitsubishi Electric equipment

The following shows the selectable items when any option other than [MITSUBISHI ELECTRIC] is selected for [manufacturer].

[Controller Type] (When [Ethernet: Multi] is set to [I/F])	[Unit Type] in [Connected Ethernet Controller Setting]
[OMRON SYSMAC]	[OMRON]
[OMRON NJ/NX]	[OMRON NJ/NX] [CJ1W-EIP21]
[KEYENCE KV-700/1000/3000/5000/7000/8000]	[KEYENCE]
[TOSHIBA Unified Controller nv]*1	[TOSHIBA]
[HITACHI IES EHV]*1*2	[HITACHI IES]
[HITACHI S10VE]	[HITACHI]
[FUJI MICREX-SX SPH]*2	[FUJI]
[YASKAWA MP2000/MP900/CP9200SH]	[YASKAWA]
[YASKAWA MP3000]	
[YASKAWA Robot Controller]	[YASKAWA(YRC1000)]
[YOKOGAWA STARDOM/FA500/FA-M3]*1	[YOKOGAWA]
[AB MicroLogix]*1*2	[AB(MicroLogix)]
[AB Control/CompactLogix]*2	[AB]
[AB Control/CompactLogix(Tag)]*1	[AB(Tag)]
[LS Industrial Systems XGK]	[XGK-CPU] [XGL-EFMT(B)]
[SIEMENS S7(Ethernet)]*1	[SIEMENS S7]
[SIEMENS OP(Ethernet)]	[S7-200 OP] [S7-200 SMART OP] [S7-300/400 OP] [S7-1200 OP] [S7-1500 OP]
[SLMP]	[SLMP]
[MODBUS Slave(GOT:Master)]	[MODBUS/TCP] [MODBUS/TCP(unit ID fixed)]

*1 Not available to GT21 and GS21.
*2 Not available to GT SoftGOT2000.

12.5.2 Correspondence between the selection for [Unit Type] and the equipment used

Set [Unit Type] according to the connected controller or communication module

➥■1 When connecting a Mitsubishi Electric equipment

■2 When connecting a non-Mitsubishi Electric equipment

■1 When connecting a Mitsubishi Electric equipment

Controller or communication module			[Unit Type] on GT Designer3
MX-R		Built-in Ethernet port	[MX-R(Ethernet)]
		Ethernet module	
		CC-Link IE TSN master/local module	[MX-R(CC-Link IE TSN)]
MX-F		Built-in Ethernet port	[MX-F(Ethernet)]
		Ethernet module	
		CC-Link IE TSN master/local module	[MX-F(CC-Link IE TSN)]
RCPU	RnCPU *1	Built-in Ethernet port	[RCPU]
		Ethernet module	[RJ71EN71]
		CC-Link IE TSN master/local module	[RJ71GN11-T2/RD78G(H)]
		Motion module	
		CC-Link IE TSN Plus master/local module	
	Process CPU *1 SIL2 Process CPU *1	Built-in Ethernet port	[RCPU]
		Ethernet module	[RJ71EN71]
	Safety CPU *1	Built-in Ethernet port	[RCPU]
		Ethernet module	[RJ71EN71]
		Motion module	[RJ71GN11-T2/RD78G(H)]
	RnENCPU *1	Built-in Ethernet port (CPU P1)	[RCPU]
		Built-in Ethernet port (P1)	[RJ71EN71]
		Ethernet module	
		CC-Link IE TSN master/local module	[RJ71GN11-T2/RD78G(H)]
		Motion module	
		CC-Link IE TSN Plus master/local module	
	C Controller module *1	Built-in Ethernet port	[RnCCPU/RnWCPU]
		CC-Link IE TSN master/local module	[RJ71GN11-T2/RD78G(H)]
		Motion module	
	MELSECWinCPU *1	Built-in Ethernet port	[RnCCPU/RnWCPU]
		CC-Link IE TSN master/local module	[RJ71GN11-T2/RD78G(H)]
Motion CPU (MELSEC iQ-R series)		Built-in Ethernet port	[RCPU]
		Ethernet module	[RJ71EN71]
CNC C80		Display I/F	[RnNCCPU]
		Ethernet module	[RJ71EN71]
Robot controller (MELSEC iQ-R series)	CR800-R(R16RTCPU)	Via a Control CPU	[RCPU]
		Display I/F	[CR800]
		Ethernet module	[RJ71EN71]
	CR800-D		[CR800]
LHCPU		Built-in Ethernet port	[LHCPU]
FX5CPU		Built-in Ethernet port	[FX5CPU]
		Ethernet module	[FX5-ENET]
		CC-Link IE TSN master/local module	[FX5-CCLGN-MS/FX5-nSSC-G]
		Motion module	

Controller or communication module			[Unit Type] on GT Designer3
QCPU	Basic model QCPU *1 High Performance model QCPU *1 Process CPU *1 Redundant CPU *1 Universal model QCPU *1	Built-in Ethernet port	[QnUD(P)V/QnUDE(H)]
		Ethernet module	[QJ71E71/LJ71E71]
	C Controller module *1		[QnD(H)CCPU]
MELSEC-QS			[QJ71E71/LJ71E71]
Motion CPU (Q series)		PERIPHERAL I/F	[QnUD(P)V/QnUDE(H)]
		Ethernet module	[QJ71E71/LJ71E71]
CNC C70		Display I/F	[Q17nNC]
		Ethernet module	[QJ71E71/LJ71E71]
Robot controller (Q series)	CRnQ-700(Q172DRCPU) CR750-Q(Q172DRCPU) CR751-Q(Q172DRCPU)	Via a Control CPU	[QnUD(P)V/QnUDE(H)]
		Ethernet module	[QJ71E71/LJ71E71]
	CR800-Q(Q172DSRCPU)	Via a Control CPU	[QnUD(P)V/QnUDE(H)]
		Built-in Ethernet port	[Q17nDSR]
		Ethernet module	[QJ71E71/LJ71E71]
	CRnD-700 CR750-D CR751-D		[CRnD-700]
LCPU		Built-in Ethernet port	[LCPU]
		Ethernet module	[QJ71E71/LJ71E71]
CC-Link IE Field Network Ethernet adapter module			[NZ2GF-ETB]
MELSEC-QnA			[AJ71QE71]
MELSEC-A			[AJ71E71]
MELSEC-Q (A mode)			
Motion CPU (A series)			
FXCPU			[FX]
MELIPC			[MELIPC]
MR-JE-*C			[MR-JE-C]
MR-J5-□G(-RJ), MR-J5W-□G, MR-JET-□G, MR-J5D□-G			[MR-J5(D)-G/MR-JET-G]
FR-E7□0-NE			[FREQROL]
FR-A8□0-E, FR-A8□2-E, FR-A8□6-E			
FR-A8□0-GN, FR-A8□2-GN			
FR-A8□0-E-CRN, FR-A8□2-E-CRN			
FR-A8□0-E-R2R, FR-A8□2-E-R2R			
FR-A8□0-E-AWH			
FR-A8□0-E-LC			
FR-F8□0-E, FR-F8□2-E			
FR-E8□0-E			
FR-D8□0-E			

*1 The following lists the applicable controllers.

Type		Model
RCPU	RnCPU	R00CPU R01CPU R02CPU R04CPU R08CPU R16CPU R32CPU R120CPU
	Process CPU	R08PCPU R16PCPU R32PCPU R120PCPU
	SIL2 Process CPU	R08PSFCPU R16PSFCPU R32PSFCPU R120PSFCPU
	Safety CPU	R08SFCPU R16SFCPU R32SFCPU R120SFCPU
	RnENCPU	R04ENCPU R08ENCPU R16ENCPU R32ENCPU R120ENCPU
	C Controller module	R12CCPU-V
	MELSECWinCPU	R102WCPU-W

Type		Model
QCPU	Basic model QCPU	Q00JCPU Q00CPU Q01CPU
	High Performance model QCPU	Q02CPU Q02HCPU Q06HCPU Q12HCPU Q25HCPU
	Process CPU	Q02PHCPU Q06PHCPU Q12PHCPU Q25PHCPU
	Redundant CPU	Q12PRHCPU Q25PRHCPU
	Universal model QCPU	Q00UJCPU, Q00UJCPU-S8 Q00UCPU Q01UCPU Q02UCPU Q03UDCPU Q04UDHCPU Q06UDHCPU Q10UDHCPU Q13UDHCPU Q20UDHCPU Q26UDHCPU Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q26UDEHCPU Q50UDEHCPU Q100UDEHCPU Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU Q04UDPVCPU Q06UDPVCPU Q13UDPVCPU Q26UDPVCPU
	C Controller module	Q12DCCPU-V Q24DHCCPU-V Q24DHCCPU-LS Q24DHCCPU-VG Q26DHCCPU-LS

■2 When connecting a non-Mitsubishi Electric equipment

Manufacturer	Controller or communication module		[Unit Type] on GT Designer3
OMRON PLC	SYSMAC CJ1 SYSMAC CJ2 SYSMAC CS1		[OMRON]
	NJ	Built-in Ethernet port	[OMRON NJ/NX]
		Ethernet module	[CJ1W-EIP21]
	NX		[OMRON NJ/NX]
KEYENCE PLC			[KEYENCE]
TOSHIBA PLC			[TOSHIBA]
HITACHI IES PLC			[HITACHI IES]
HITACHI PLC			[HITACHI]
FUJI PLC			[FUJI]
YASKAWA PLC			[YASKAWA]
YASKAWA robot controller			[YASKAWA(YRC1000)]
YOKOGAWA PLC			[YOKOGAWA]
ALLEN-BRADLEY PLC	MicroLogix1000 MicroLogix1100 MicroLogix1200 MicroLogix1400 MicroLogix1500		[AB(MicroLogix)]
	ControlLogix CompactLogix		Set [Controller Type], and [Unit Type] is determined. • [AB Control/CompactLogix]: [AB] • [AB Control/CompactLogix(Tag)]: [AB(Tag)]
	FlexLogix		[AB(Tag)]
LS Industrial Systems PLC	Built-in Ethernet port		[XGK-CPU]
	Ethernet module		[XGL-EFMT(B)]
SIEMENS PLC	SIMATIC S7-200		[S7-200 OP]
	SIMATIC S7-200 SMART		[S7-200 SMART OP]
	SIMATIC S7-300 SIMATIC S7-400		Set [Controller Type], and [Unit Type] is selective. • [SIEMENS S7(Ethernet)]: [SIEMENS S7] • [SIEMENS OP(Ethernet)]: [S7-300/400 OP]
	SIMATIC S7-1200		[S7-1200 OP]
	SIMATIC S7-1500		[S7-1500 OP]
SLMP-compatible equipment			[SLMP]
MODBUS equipment			To connect a controller under the following conditions, select [MODBUS/TCP]. • The unit ID is fixed to 255 (for connecting with the GOT as the host station). • The unit ID is not fixed. To connect a controller of another station, whose unit ID is fixed to 255, with the GOT, select [MODBUS/TCP(unit ID fixed)].

12.6 ASCII Code List

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows of the list of ASCII Codes. (The blanks represent control code.)
0xA1 to 0xDF can be displayed only when the GOT's system language is Japanese.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			(SP)	0	@	P	`	p				ー	タ	ミ		
1			!	1	A	Q	a	q			。	ア	チ	ム		
2			"	2	B	R	b	r			「	イ	ツ	メ		
3			#	3	C	S	c	s			」	ウ	テ	モ		
4			$	4	D	T	d	t			、	エ	ト	ヤ		
5			%	5	E	U	e	u			・	オ	ナ	ユ		
6			&	6	F	V	f	v			ヲ	カ	ニ	ヨ		
7			'	7	G	W	g	w			ァ	キ	ヌ	ラ		
8			(	8	H	X	h	x			ィ	ク	ネ	リ		
9			)	9	I	Y	i	y			ゥ	ケ	ノ	ル		
A			*	:	J	Z	j	z			ェ	コ	ハ	レ		
B			+	;	K	[	k	{			ォ	サ	ヒ	ロ		
C			,	<	L	\	l	¦			ャ	シ	フ	ワ		
D			-	=	M	]	m	}			ュ	ス	ヘ	ン		
E			.	>	N	^	n	~			ョ	セ	ホ	゛		
F			/	?	O	_	o				ッ	ソ	マ	゜		

12.7 Restrictions for Folder Names and File Names used in GOT

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Characters which can be used in folder names and file names

- One-byte alphanumeric characters
- Symbols other than the followings

  "*/:<>?\|

  (A one-byte space cannot be used.)

■2 Character strings which cannot be used in folder names and file names

Folder names and file names containing only the following character strings (case-insensitive) cannot be used.
However, the character strings are usable as part of folder names and file names.

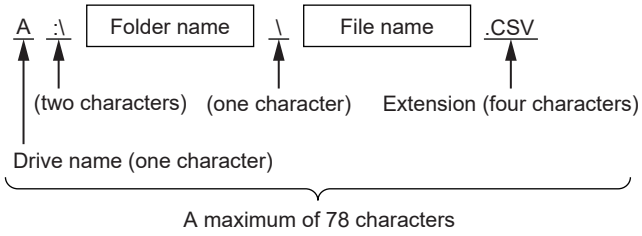
- COM1 to COM9
- LPT1 to LPT9
- AUX
- CON
- NUL
- PRN
- CLOCK$

The use of the following folder and file names is prohibited.

- Folder names starting with G2 (Except for file operation functions of script function used as arguments)
- Folder and file names starting with . (period) or \
- Folder and file names ending with . (period) or \
- Folder and file named as only . (one period) or .. (two periods)

■3 Number of characters for folder names and file names

GOTs recognize the location of a file with the following path.
Set a folder name and file name so that the total number of characters used for the path is 78 or less.
Only the folder name and file name in the path can be set by the user.
(Other part of the path is automatically specified.)
Example) File path stored by GT27 in the data storage (for CSV files)



When setting the folder name, enter \ between folder names.
(\ is counted as one character.)
Up to 20 hierarchy levels can be created.

12.8 Precautions for Using CSV File

This section describes precautions for using an imported/exported CSV file in GT Designer3.

■1 How to save CSV files

To edit a CSV file in Microsoft Excel and use the file in GT Designer3, save the file in the CSV (comma delimited) file format (*.csv).
The file cannot be used if saved in the CSV UTF-8 (comma delimited) file format (*.csv).

■2 Editing the exported file

If a device in use has a name starting from 0, the 0 may be deleted by a function of applications for editing files (spreadsheet software and others).
If a file is saved with the leading zero removed from a device name, the file cannot be imported normally.
When using a device that has a name starting from 0, edit the file with a text editor.

12.9 Precautions for Using Unicode Text File

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

This section explains for using a Unicode text file imported/exported by GT Designer3.

■1 How to save Unicode text files

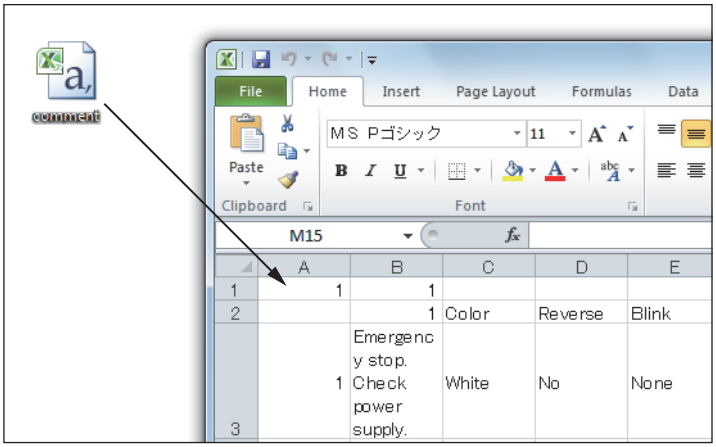
To edit and use a Unicode text file exported by GT Designer3, save the file in the Unicode text file format (*.txt).
The character code applicable to Unicode text files is Unicode (file format: UTF16 LittleEndian).

■2 Displaying Unicode text files

To display Unicode text files on a personal computer and others, use software compatible to the Unicode.
Software that is not compatible with the Unicode cannot display Unicode text files properly.

■3 Displaying Unicode text files by Microsoft Excel

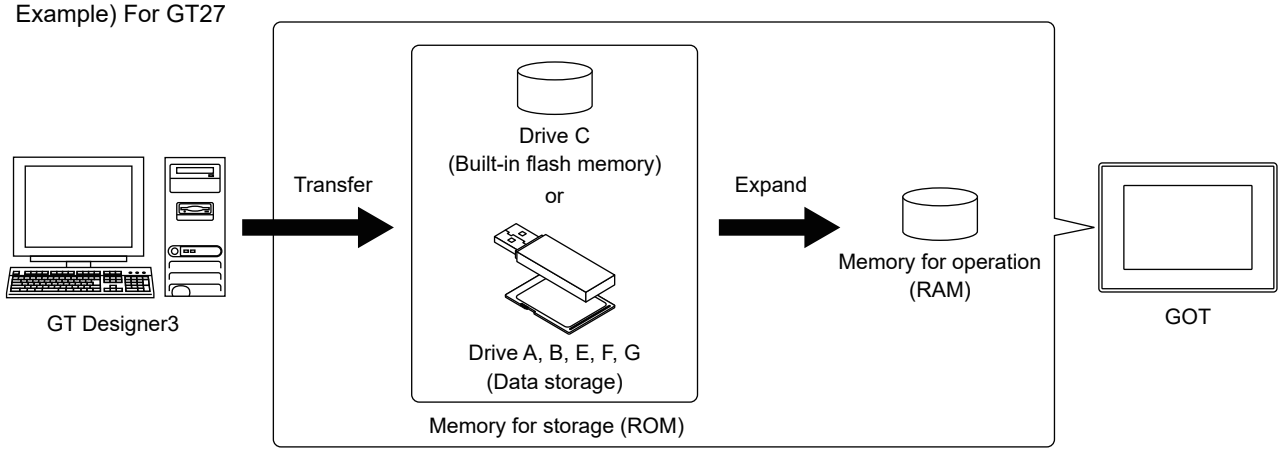
To open a Unicode text file that contains a comment of multiple lines by Microsoft Excel, drag the Unicode text file to the Microsoft Excel.
Methods other than above cannot display Unicode text files by Microsoft Excel properly.



12.10 Data Transferred to the GOT and Storage Destination

Transfer the created project to the GOT with system application in units of the package data.
The GOT operates after expanding the data stored in the memory for storage to the memory for operation (RAM).
Some data is stored in the memory for storage with being compressed. When the data is expanded to the memory for operation (RAM), the data capacity increases.
The capacity of the package data to be transferred must be less than or equal to the available space of the memory for storage (ROM) and the memory for operation (RAM) at the destination.

Example) For GT27



The following shows the data transferred to the GOT and destination drive.

Data type		Storage destination (ROM)	Expansion destination (RAM)
BootOS		Stored in the built-in flash memory (system area). The data capacity to be stored in the system area is unnecessary to be considered.	Stored in the memory for operation (RAM) (system area). The data capacity to be stored in the system area is unnecessary to be considered.
Package data	Project Data	Stored in either of the following. • Drive A • Drive B • Drive C • Drive E • Drive F • Drive G For the available drives by GOT model, refer to the following. ➟1.2.8 Drive configuration of the target GOT for data transfer	Memory for operation (RAM) (user area) ➟■2 Capacity of each drive of the GOT Some data points are expanded to the memory for operation (RAM) (system area). ➟12.10.1 ■1 (2) Capacity of the package data expanded to the memory for operation (RAM)
	System Application		
	Special Data*1		

*1 Not available to GT23, GT21, and GS21.

12.10.1 Data transferred to the GOT and capacity of the destination drive

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

■1 Capacity of package data

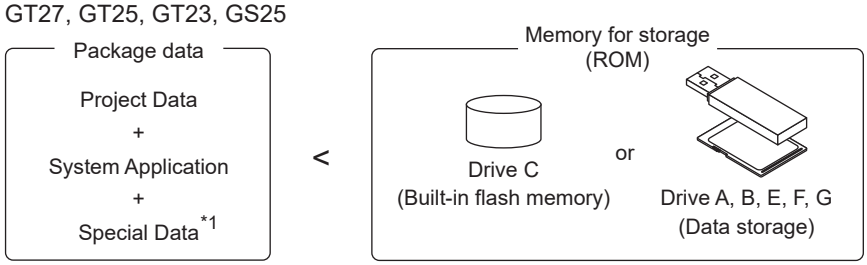
For how to check the capacity of the package data, refer to the following.

➟12.10.1 ■3 (1) Checking the capacity of the package data

(1) Capacity of the package data transferred to the memory for storage (ROM)

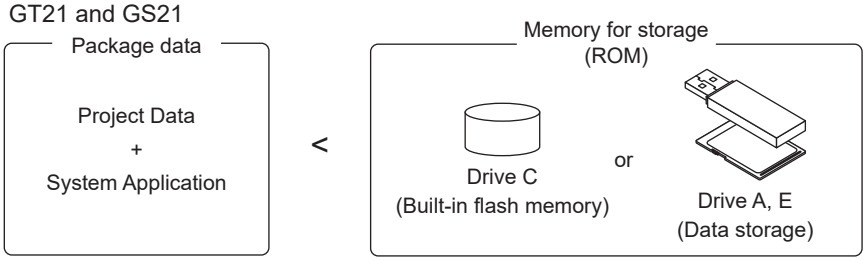
The total capacity of the project data, system application, and the special data must be less than or equal to the available space of the memory for storage (ROM).

• GT27, GT25, GT23, GS25



*1 Not available to GT23.

• GT21 and GS21



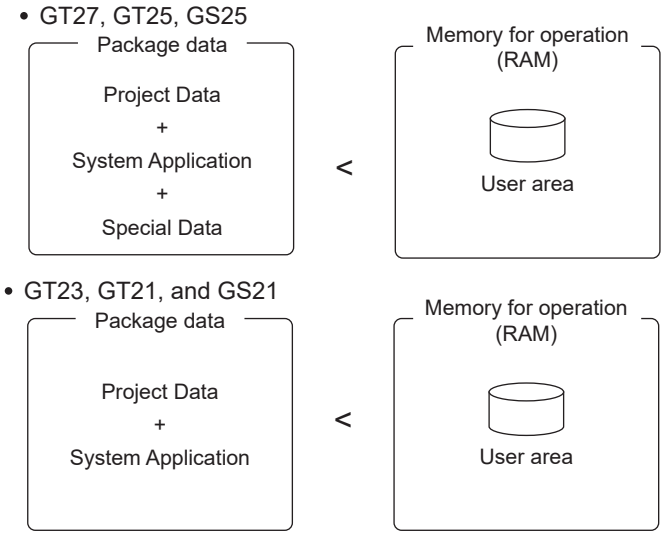
*1 Drive E is not available for GS21.

For the available drives by GOT model, refer to the following.

➟1.2.8 Drive configuration of the target GOT for data transfer

(2) Capacity of the package data expanded to the memory for operation (RAM)

The total capacity of the project data, system application, and the special data must be less than or equal to the available space of the memory for operation (RAM).



The following data points of the system application are expanded to the system area of the memory for operation (RAM). Considering the data capacity is unnecessary.

Data type		Data stored in the memory for operation (RAM) (system area)
System Application	Standard Function	Standard System Application
		Standard Font
	Extended Function	GOT Platform Library
		GOT Function Expansion Library

■2 Capacity of each drive of the GOT

(1) GT27

Drive		Name	Capacity
Storage memory (ROM)	Drive A	Standard SD card	Depends on the data storage used.
	Drive B	USB Drive	Depends on the data storage used.
	Drive C	Built-in flash memory (user area)	GT27 (except GT2705-V): 57 MB GT2705-V: 32 MB
	Drive E	USB Drive	Depends on the data storage used. The following models do not have drive E. • GT2712-STWA • GT2712-STWD • GT2710-VTWA • GT2710-VTWD
	Drive F	USB Drive	Depends on the data storage used.
	Drive G	USB Drive	Depends on the data storage used.
	Drive X	Current drive	Depends on the data storage used.
Operation memory (RAM)	-	Memory for operation (RAM) (user area)	GT27 (except GT2705-V) • Function version A and B: 128 MB • Function version C or later: 256 MB If the system application version is 01.38.*** or earlier, the capacity is 128 MB even though the function version is C or later. GT2705-V: 80 MB

(2) GT25, GS25

Drive		Name	Capacity
Storage memory (ROM)	Drive A	Standard SD card	Depends on the data storage used.
	Drive B	USB Drive	Depends on the data storage used. The following models do not have drive B. • GT2505-V • GT25HS-V
	Drive C	Built-in flash memory (user area)	32 MB
	Drive E	USB Drive	Depends on the data storage used. The following models do not have drive E. • GT2512F-STNA • GT2512F-STND • GT2510-VTWA • GT2510-VTWD • GT2510F-VTNA • GT2510F-VTND • GT2508-VTWA • GT2508-VTWD • GT2508F-VTNA • GT2508F-VTND • GT2507T-WTSD
	Drive F	USB Drive	Depends on the data storage used.
	Drive G	USB Drive	Depends on the data storage used.
	Drive X	Current drive	Depends on the data storage used.
Operation memory (RAM)	-	Memory for operation (RAM) (user area)	GT25-W, GS25: 128 MB GT25-S, GT25-V, GT25HS-V: 80 MB

(3) GT23

Drive		Name	Capacity
Storage memory (ROM)	Drive A	Standard SD card	Depends on the data storage used.
	Drive B	USB Drive	Depends on the data storage used.
	Drive C	Built-in flash memory (user area)	9 MB
	Drive E	USB Drive	Depends on the data storage used.
	Drive F	USB Drive	Depends on the data storage used.
	Drive G	USB Drive	Depends on the data storage used.
	Drive X	Current drive	Depends on the data storage used.
Operation memory (RAM)	-	Memory for operation (RAM) (user area)	9 MB

(4) GT21 and GS21

Drive		Name	Capacity
Storage memory (ROM)	Drive A[*1]	Standard SD card	Depends on the data storage used.
	Drive C	Built-in flash memory (user area)	• GT2107-W:15 MB • GT2105-Q:9 MB • GT2104-R:9 MB • GT2104-P:6 MB • GT2103-P:3 MB • GS21-W-N: 15 MB • GS21-W: 9 MB
	Drive E	USB Drive	Depends on the data storage used. The following models do not have drive E. • GT2105-Q • GT2104-R • GT2104-P • GT2103-P • GS21
	Drive X	Current drive	Depends on the data storage used.

Drive		Name	Capacity
Operation memory (RAM)	-	Memory for operation (RAM) (user area)	• GT2107-W:15 MB • GT2105-Q:9 MB • GT2104-R:9 MB • GT2104-P:6 MB • GT2103-P:3 MB • GS21-W-N: 64 MB • GS21-W: 9 MB
		Memory for operation (RAM) (buffering area)	1 MB

*1 To use an SD card on GT2103-P, mount the SD card unit (GT21-03SDCD) on the GOT.

■3 Checking the capacity of the package data and available space of the destination drive

(1) Checking the capacity of the package data

• Checking in the [Data Size (Project)] dialog

➟11.11.2 Checking data size of project

• Checking in the [Write Option] dialog

➟4.8.3 [Write Option] dialog (for writing data to one GOT)

(2) Checking the available space of the destination drive

Checking [Communicate with GOT] dialog ([GOT Write] tab) or the [GOT Information - Detail] dialog

➟4.8.2 [Communicate with GOT] dialog

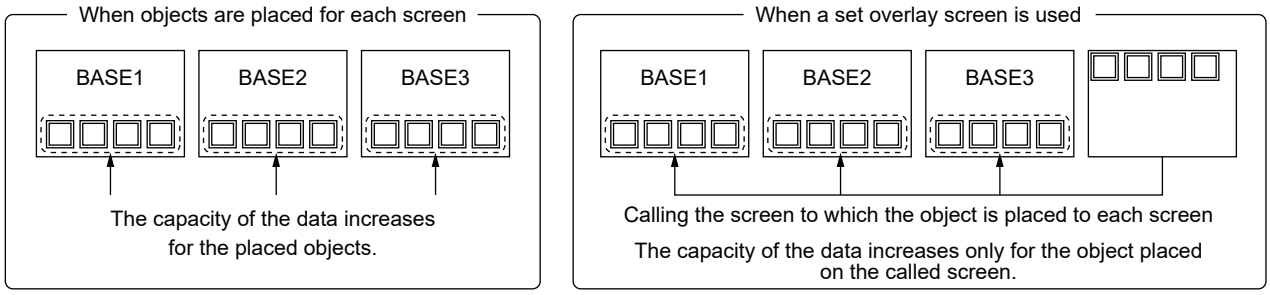
■4 Reducing the capacity of the package data

Reduce the capacity of the package data by the following methods when the capacity of the package data exceeds the capacity of the memory for storage (ROM) and the memory for operation (RAM).

(1) Using a set overlay screen

When you placing the same object on multiple screens, reduce the capacity of the data by using the set overlay screen.

➟8.29 Placing Another Screen on a Screen



(2) Reducing the number of figures and objects

Reduce the number of figures and objects placed on the screen.

(3) Reducing the number of the project settings

Delete unnecessary settings.

(4) Reducing the number of system applications transferred to the GOT

In the [Application Selection] dialog, deselect unnecessary system applications (extended functions) and special data.

➟4.2 Setting a System Application to be Written to the GOT

For the size of the system applications (extended functions) and the special data, refer to the following.

➟12.10.2 Transferred data size list

12.10.2 Transferred data size list

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the data size of the system applications and special data used in the GOT.

➥■1 Data size of system applications
■2 Data size of special data

■1 Data size of system applications

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➥(1) Communication driver (GT27)
(2) Communication driver (GT25)
(3) Communication driver (GT23)
(4) Communication driver (GT21)
(5) Communication driver (GS25)
(6) Communication driver (GS21)
(7) Extended function (GT27)
(8) Extended function (GT25)
(9) Extended function (GT23)
(10) Extended function (GT21)
(11) Extended function (GS25)
(12) Extended function (GS21)

(1) Communication driver (GT27)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Bus/Network Group]	[BuS(A/QnA)]	800 KB	795 KB
	[BUS(Q)]	840 KB	945 KB
	[MELSECNET/H]	840 KB	945 KB
	[CC-Link IE TSN]	535 KB	785 KB
	[CC-Link IE Controller Network]	840 KB	945 KB
	[CC-Link IE Field Network]	840 KB	945 KB
	[CC-Link Ver.2(ID)]	820 KB	945 KB

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	840 KB	975 KB
	[Ethernet(FX), Gateway]	600 KB	735 KB
	[Ethernet(MELSERVO), Gateway]	680 KB	875 KB
	[Ethernet(FREQROL), Gateway]	240 KB	405 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	310 KB	588 KB
	[Ethernet(OMRON), Gateway]	320 KB	525 KB
	[Ethernet(OMRON NJ/NX), Gateway]	229.4 KB	532.5 KB
	[Ethernet(KEYENCE), Gateway]	260 KB	465 KB
	[Ethernet(MICROCOMPUTER)]	200 KB	335 KB
	[Ethernet(TOSHIBA nv), Gateway]	195 KB	330 KB
	[Ethernet(HITACHI IES), Gateway]	300 KB	365 KB
	[Ethernet(HITACHI), Gateway]	235 KB	410 KB
	[Ethernet(FUJI), Gateway]	270 KB	490 KB
	[Ethernet(YASKAWA), Gateway]	340 KB	585 KB
	[Ethernet(YASKAWA MP3000), Gateway]	315 KB	654 KB
	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	170 KB	350 KB
	[Ethernet(YOKOGAWA), Gateway]	420 KB	625 KB
	[Ethernet(AB MicroLogix), Gateway]	415 KB	470 KB
	[Ethernet(AB), Gateway]	340 KB	495 KB
	[Ethernet(AB Tag), Gateway]	300 KB	1055 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	250 KB	315 KB
	[Ethernet(SIEMENS S7), Gateway]	300 KB	445 KB
	[Ethernet(SIEMENS OP), Gateway]	360 KB	445 KB
	[Ethernet(CC-Link IE Field Network Basic)]	180 KB	718 KB
	[Ethernet(SLMP), Gateway]	220 KB	720 KB
	[MODBUS/TCP Master, Gateway]	280 KB	405 KB
	[MODBUS/TCP Slave, Gateway]	197 KB	1654 KB
[Serial(MELSEC)]		840 KB	975 KB
[AJ71QC24, MELDAS C6*]		800 KB	905 KB
[AJ71C24/UC24]		800 KB	795 KB
[MELSEC-FX]		600 KB	735 KB
[MELSEC-WS]		240 KB	295 KB
[CC-Link(G4)]		800 KB	905 KB
[MELSERVO-J4,J3,J2S/M,JE]		680 KB	875 KB
[Multidrop(Slave)]		800 KB	905 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		240 KB	405 KB
[FREQROL 800]		240 KB	405 KB
[FREQROL(Batch monitor)]		300 KB	610 KB
[IAI X-SEL]		240 KB	445 KB
[IAI ROBO CYLINDER]		240 KB	445 KB
[Azbil SDC/DMC]		200 KB	375 KB
[Azbil DMC50]		200 KB	375 KB
[OMRON SYSMAC]		200 KB	505 KB
[OMRON THERMAC/INPANEL NEO]		200 KB	295 KB
[OMRON Digital Temperature Controller]		192 KB	396 KB
[Serial(KEYENCE)]		260 KB	455 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[KOYO KOSTAC/DL]	200 KB	295 KB
[JTECT TOYOPUC-PC]	220 KB	425 KB
[SHARP JW]	220 KB	325 KB
[SHINKO TECHNOS CONTROLLER]	200 KB	375 KB
[CHINO MODBUS device]	200 KB	375 KB
[TOSHIBA PROSEC T/V]	200 KB	395 KB
[SHIBAURA MACHINE TCmini]	220 KB	335 KB
[Panasonic MEWNET-FP]	200 KB	395 KB
[Panasonic MEWTOCOL-7]	285 KB	590 KB
[Panasonic MINAS A4]	320 KB	565 KB
[Panasonic MINAS A5]	320 KB	565 KB
[HITACHI IES HIDIC H]	220 KB	415 KB
[HITACHI IES HIDIC H(Protocol2)]	220 KB	415 KB
[HITACHI S10mini/S10V]	240 KB	445 KB
[Hirata HNC]	240 KB	440 KB
[FUJI Temperature Controller/Digital Controller]	200 KB	375 KB
[FUJI MICREX-F]	340 KB	535 KB
[FUJI MICREX-SX SPH]	280 KB	435 KB
[Muratec MPC]	150 KB	290 KB
[Muratec MCR]	150 KB	315 KB
[YASKAWA GL]	260 KB	465 KB
[YASKAWA CP9200(H)]	260 KB	465 KB
[YASKAWA CP9300MS(MC compatible)]	260 KB	465 KB
[YASKAWA MP2000/MP900/CP9200SH]	260 KB	465 KB
[YOKOGAWA FA500/FA-M3/STARDOM]	460 KB	625 KB
[YOKOGAWA GREEN/UT100/UT2000/UT Advance]	360 KB	595 KB
[RKC SR Mini HG(MODBUS)]	260 KB	495 KB
[AB SLC500,AB 1:N]	400 KB	575 KB
[AB MicroLogix]	400 KB	575 KB
[AB MicroLogix(Extended)]	400 KB	575 KB
[AB Control/CompactLogix]	360 KB	525 KB
[GE (SNP-X)]	200 KB	295 KB
[LS Industrial Systems MASTER-K]	200 KB	385 KB
[MEI Nexgenie]	305 KB	535 KB
[SICK Flexi Soft]	260 KB	295 KB
[SIEMENS S7-300/400]	300 KB	405 KB
[SIEMENS S7-200]	320 KB	405 KB
[MODBUS/RTU Master]	260 KB	495 KB
[MODBUS/RTU Slave]	222 KB	1676 KB
[DeviceNet]	255 KB	380 KB
[PROFIBUS DP]	255 KB	385 KB
[Computer]	200 KB	375 KB

(2) Communication driver (GT25)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Bus/Network Group]	[BuS(A/QnA)]	800 KB	795 KB
	[BUS(Q)]	840 KB	945 KB
	[MELSECNET/H]	840 KB	945 KB
	[CC-Link IE TSN]	535 KB	785 KB
	[CC-Link IE Controller Network]	840 KB	945 KB
	[CC-Link IE Field Network]	840 KB	945 KB
	[CC-Link Ver.2(ID)]	820 KB	945 KB
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	840 KB	975 KB
	[Ethernet(FX), Gateway]	600 KB	735 KB
	[Ethernet(MELSERVO), Gateway]	680 KB	875 KB
	[Ethernet(FREQROL), Gateway]	240 KB	405 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	310 KB	588 KB
	[Ethernet(OMRON), Gateway]	320 KB	525 KB
	[Ethernet(OMRON NJ/NX), Gateway]	229.4 KB	532.5 KB
	[Ethernet(KEYENCE), Gateway]	260 KB	465 KB
	[Ethernet(MICROCOMPUTER)]	200 KB	335 KB
	[Ethernet(TOSHIBA nv), Gateway]	195 KB	330 KB
	[Ethernet(HITACHI IES), Gateway]	300 KB	365 KB
	[Ethernet(HITACHI), Gateway]	235 KB	410 KB
	[Ethernet(FUJI), Gateway]	270 KB	490 KB
	[Ethernet(YASKAWA), Gateway]	340 KB	585 KB
	[Ethernet(YASKAWA MP3000), Gateway]	315 KB	654 KB
	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	170 KB	350 KB
	[Ethernet(YOKOGAWA), Gateway]	420 KB	625 KB
	[Ethernet(AB MicroLogix), Gateway]	415 KB	470 KB
	[Ethernet(AB), Gateway]	340 KB	495 KB
	[Ethernet(AB Tag), Gateway]	300 KB	1055 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	250 KB	315 KB
	[Ethernet(SIEMENS S7), Gateway]	300 KB	445 KB
	[Ethernet(SIEMENS OP), Gateway]	360 KB	445 KB
	[Ethernet(CC-Link IE Field Network Basic)]	180 KB	718 KB
	[Ethernet(SLMP), Gateway]	220 KB	720 KB
	[MODBUS/TCP Master, Gateway]	280 KB	405 KB
	[MODBUS/TCP Slave, Gateway]	197 KB	1654 KB
[Serial(MELSEC)]		840 KB	975 KB
[AJ71QC24, MELDAS C6*]		800 KB	905 KB
[AJ71C24/UC24]		800 KB	795 KB
[MELSEC-FX]		600 KB	735 KB
[MELSEC-WS]		240 KB	295 KB
[CC-Link(G4)]		800 KB	905 KB
[MELSERVO-J4,J3,J2S/M,JE]		680 KB	875 KB
[Multidrop(Slave)]		800 KB	905 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		240 KB	405 KB
[FREQROL 800]		240 KB	405 KB
[FREQROL(Batch monitor)]		300 KB	610 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[IAI X-SEL]	240 KB	445 KB
[IAI ROBO CYLINDER]	240 KB	445 KB
[Azbil SDC/DMC]	200 KB	375 KB
[Azbil DMC50]	200 KB	375 KB
[OMRON SYSMAC]	200 KB	505 KB
[OMRON THERMAC/INPANEL NEO]	200 KB	295 KB
[OMRON Digital Temperature Controller]	192 KB	396 KB
[Serial(KEYENCE)]	260 KB	455 KB
[KOYO KOSTAC/DL]	200 KB	295 KB
[JTECT TOYOPUC-PC]	220 KB	425 KB
[SHARP JW]	220 KB	325 KB
[SHINKO TECHNOS CONTROLLER]	200 KB	375 KB
[CHINO MODBUS device]	200 KB	375 KB
[TOSHIBA PROSEC T/V]	200 KB	395 KB
[SHIBAURA MACHINE TCmini]	220 KB	335 KB
[Panasonic MEWNET-FP]	200 KB	395 KB
[Panasonic MEWTOCOL-7]	285 KB	590 KB
[Panasonic MINAS A4]	320 KB	565 KB
[Panasonic MINAS A5]	320 KB	565 KB
[HITACHI IES HIDIC H]	220 KB	415 KB
[HITACHI IES HIDIC H(Protocol2)]	220 KB	415 KB
[HITACHI S10mini/S10V]	240 KB	445 KB
[Hirata HNC]	240 KB	440 KB
[FUJI Temperature Controller/Digital Controller]	200 KB	375 KB
[FUJI MICREX-F]	340 KB	535 KB
[FUJI MICREX-SX SPH]	280 KB	435 KB
[Muratec MPC]	150 KB	290 KB
[Muratec MCR]	150 KB	315 KB
[YASKAWA GL]	260 KB	465 KB
[YASKAWA CP9200(H)]	260 KB	465 KB
[YASKAWA CP9300MS(MC compatible)]	260 KB	465 KB
[YASKAWA MP2000/MP900/CP9200SH]	260 KB	465 KB
[YOKOGAWA FA500/FA-M3/STARDOM]	460 KB	625 KB
[YOKOGAWA GREEN/UT100/UT2000/UT Advance]	360 KB	595 KB
[RKC SR Mini HG(MODBUS)]	260 KB	495 KB
[AB SLC500,AB 1:N]	400 KB	575 KB
[AB MicroLogix]	400 KB	575 KB
[AB MicroLogix(Extended)]	400 KB	575 KB
[AB Control/CompactLogix]	360 KB	525 KB
[GE (SNP-X)]	200 KB	295 KB
[LS Industrial Systems MASTER-K]	200 KB	385 KB
[MEI Nexgenie]	305 KB	535 KB
[SICK Flexi Soft]	260 KB	295 KB
[SIEMENS S7-300/400]	300 KB	405 KB
[SIEMENS S7-200]	320 KB	405 KB
[MODBUS/RTU Master]	260 KB	495 KB

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[MODBUS/RTU Slave]		222 KB	1676 KB
[DeviceNet]		255 KB	380 KB
[PROFIBUS DP]		255 KB	385 KB
[Computer]		200 KB	375 KB

(3) Communication driver (GT23)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	840 KB	975 KB
	[Ethernet(FX), Gateway]	600 KB	735 KB
	[Ethernet(MELSERVO), Gateway]	680 KB	875 KB
	[Ethernet(FREQROL), Gateway]	240 KB	405 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	310 KB	588 KB
	[Ethernet(OMRON), Gateway]	320 KB	525 KB
	[Ethernet(OMRON NJ/NX), Gateway]	229.4 KB	532.5 KB
	[Ethernet(KEYENCE), Gateway]	260 KB	465 KB
	[Ethernet(MICROCOMPUTER)]	200 KB	335 KB
	[Ethernet(TOSHIBA nv), Gateway]	195 KB	330 KB
	[Ethernet(HITACHI IES), Gateway]	300 KB	365 KB
	[Ethernet(HITACHI), Gateway]	235 KB	410 KB
	[Ethernet(FUJI), Gateway]	270 KB	490 KB
	[Ethernet(YASKAWA), Gateway]	340 KB	585 KB
	[Ethernet(YASKAWA MP3000), Gateway]	315 KB	654 KB
	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	170 KB	350 KB
	[Ethernet(YOKOGAWA), Gateway]	420 KB	625 KB
	[Ethernet(AB MicroLogix), Gateway]	415 KB	470 KB
	[Ethernet(AB), Gateway]	340 KB	495 KB
	[Ethernet(AB Tag), Gateway]	300 KB	1055 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	250 KB	315 KB
	[Ethernet(SIEMENS S7), Gateway]	300 KB	445 KB
	[Ethernet(SIEMENS OP), Gateway]	360 KB	445 KB
	[Ethernet(CC-Link IE Field Network Basic)]	185 KB	718 KB
	[Ethernet(SLMP), Gateway]	220 KB	720 KB
	[MODBUS/TCP Master, Gateway]	280 KB	405 KB
	[MODBUS/TCP Slave, Gateway]	197 KB	1654 KB
[Serial(MELSEC)]		840 KB	975 KB
[AJ71QC24, MELDAS C6*]		800 KB	905 KB
[AJ71C24/UC24]		800 KB	795 KB
[MELSEC-FX]		600 KB	735 KB
[MELSEC-WS]		240 KB	295 KB
[CC-Link(G4)]		800 KB	905 KB
[MELSERVO-J4,J3,J2S/M,JE]		680 KB	875 KB
[Multidrop(Slave)]		800 KB	905 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		240 KB	405 KB
[FREQROL 800]		240 KB	405 KB
[FREQROL(Batch monitor)]		300 KB	610 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[IAI X-SEL]	240 KB	445 KB
[IAI ROBO CYLINDER]	240 KB	445 KB
[Azbil SDC/DMC]	200 KB	375 KB
[Azbil DMC50]	200 KB	375 KB
[OMRON SYSMAC]	200 KB	505 KB
[OMRON THERMAC/INPANEL NEO]	200 KB	295 KB
[OMRON Digital Temperature Controller]	192 KB	396 KB
[Serial(KEYENCE)]	260 KB	455 KB
[KOYO KOSTAC/DL]	200 KB	295 KB
[JTECT TOYOPUC-PC]	220 KB	425 KB
[SHARP JW]	220 KB	325 KB
[SHINKO TECHNOS CONTROLLER]	200 KB	375 KB
[CHINO MODBUS device]	200 KB	375 KB
[TOSHIBA PROSEC T/V]	200 KB	395 KB
[SHIBAURA MACHINE TCmini]	220 KB	335 KB
[Panasonic MEWNET-FP]	200 KB	395 KB
[Panasonic MEWTOCOL-7]	285 KB	590 KB
[Panasonic MINAS A4]	320 KB	565 KB
[Panasonic MINAS A5]	320 KB	565 KB
[HITACHI IES HIDIC H]	220 KB	415 KB
[HITACHI IES HIDIC H(Protocol2)]	220 KB	415 KB
[HITACHI S10mini/S10V]	240 KB	445 KB
[Hirata HNC]	240 KB	440 KB
[FUJI Temperature Controller/Digital Controller]	200 KB	375 KB
[FUJI MICREX-F]	340 KB	535 KB
[FUJI MICREX-SX SPH]	280 KB	435 KB
[Muratec MPC]	150 KB	290 KB
[Muratec MCR]	150 KB	315 KB
[YASKAWA GL]	260 KB	465 KB
[YASKAWA CP9200(H)]	260 KB	465 KB
[YASKAWA CP9300MS(MC compatible)]	260 KB	465 KB
[YASKAWA MP2000/MP900/CP9200SH]	260 KB	465 KB
[YOKOGAWA FA500/FA-M3/STARDOM]	460 KB	625 KB
[YOKOGAWA GREEN/UT100/UT2000/UT Advance]	360 KB	595 KB
[RKC SR Mini HG(MODBUS)]	260 KB	495 KB
[AB SLC500,AB 1:N]	400 KB	575 KB
[AB MicroLogix]	400 KB	575 KB
[AB MicroLogix(Extended)]	400 KB	575 KB
[AB Control/CompactLogix]	360 KB	525 KB
[GE (SNP-X)]	200 KB	295 KB
[LS Industrial Systems MASTER-K]	200 KB	385 KB
[MEI Nexgenie]	305 KB	535 KB
[SICK Flexi Soft]	260 KB	295 KB
[SIEMENS S7-300/400]	300 KB	405 KB
[SIEMENS S7-200]	320 KB	405 KB
[MODBUS/RTU Master]	260 KB	495 KB

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[MODBUS/RTU Slave]		222 KB	1676 KB
[Computer]		200 KB	375 KB

(4) Communication driver (GT21)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	0 KB	0 KB
	[Ethernet(FX), Gateway]	0 KB	0 KB
	[Ethernet(MELSERVO), Gateway]	0 KB	0 KB
	[Ethernet(FREQROL), Gateway]	0 KB	0 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	0 KB	0 KB
	[Ethernet(OMRON), Gateway]	0 KB	0 KB
	[Ethernet(OMRON NJ/NX), Gateway]	0 KB	0 KB
	[Ethernet(KEYENCE), Gateway]	0 KB	0 KB
	[Ethernet(FUJI), Gateway]	0 KB	0 KB
	[Ethernet(YASKAWA), Gateway]	0 KB	0 KB
	[Ethernet(YASKAWA MP3000), Gateway]	0 KB	0 KB
	[Ethernet(AB), Gateway]	0 KB	0 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	0 KB	0 KB
	[Ethernet(SIEMENS OP), Gateway]	0 KB	0 KB
	[Ethernet(CC-Link IE Field Network Basic)]	0 KB	0 KB
	[Ethernet(SLMP), Gateway]	0 KB	0 KB
	[MODBUS/TCP Master, Gateway]	0 KB	0 KB
	[MODBUS/TCP Slave, Gateway]	0 KB	0 KB
	[Ethernet(MICROCOMPUTER)]	0 KB	0 KB
[Serial(MELSEC)]		0 KB	0 KB
[MELSEC-A]		0 KB	0 KB
[AJ71C24/UC24]		0 KB	0 KB
[MELSEC-FX]		0 KB	0 KB
[MELSEC-WS]		0 KB	0 KB
[CC-Link(G4)]		0 KB	0 KB
[MELSERVO-J4,J3,J2S/M,JE]		0 KB	0 KB
[Multidrop(Slave)]		0 KB	0 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		0 KB	0 KB
[FREQROL 800]		0 KB	0 KB
[FREQROL(Batch monitor)]		0 KB	0 KB
[Laser Displacement Sensor MH11] (Only available to GT2104-PMBDS2)		0 KB	0 KB
[IAI X-SEL]		0 KB	0 KB
[IAI ROBO CYLINDER]		0 KB	0 KB
[Azbil SDC/DMC]		0 KB	0 KB
[Azbil DMC50]		0 KB	0 KB
[OMRON SYSMAC]		0 KB	0 KB
[OMRON THERMAC/INPANEL NEO]		0 KB	0 KB
[OMRON Digital Temperature Controller]		0 KB	0 KB
[Serial(KEYENCE)]		0 KB	0 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[SHIBAURA MACHINE TCmini]	0 KB	0 KB
[Panasonic MEWNET-FP]	0 KB	0 KB
[Panasonic MEWTOCOL-7]	0 KB	0 KB
[FUJI Temperature Controller/Digital Controller]	0 KB	0 KB
[FUJI MICREX-SX SPH]	0 KB	0 KB
[YASKAWA MP2000/MP900/CP9200SH]	0 KB	0 KB
[AB SLC500, AB 1:N]	0 KB	0 KB
[AB MicroLogix]	0 KB	0 KB
[LS Industrial Systems MASTER-K]	0 KB	0 KB
[MEI Nexgenie]	0 KB	0 KB
[SICK Flexi Soft]	0 KB	0 KB
[SIEMENS S7-300/400]	0 KB	0 KB
[SIEMENS S7-200]	0 KB	0 KB
[MODBUS/RTU Master]	0 KB	0 KB
[MODBUS/RTU Slave]	0 KB	0 KB
[Computer]	0 KB	0 KB

(5) Communication driver (GS25)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Bus/Network Group]	[BuS(A/QnA)]	800 KB	795 KB
	[BUS(Q)]	840 KB	945 KB
	[MELSECNET/H]	840 KB	945 KB
	[CC-Link IE Controller Network]	840 KB	945 KB
	[CC-Link IE Field Network]	840 KB	945 KB
	[CC-Link Ver.2(ID)]	820 KB	945 KB

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	840 KB	975 KB
	[Ethernet(FX), Gateway]	600 KB	735 KB
	[Ethernet(MELSERVO), Gateway]	680 KB	875 KB
	[Ethernet(FREQROL), Gateway]	240 KB	405 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	310 KB	588 KB
	[Ethernet(OMRON), Gateway]	320 KB	525 KB
	[Ethernet(OMRON NJ/NX), Gateway]	229.4 KB	532.5 KB
	[Ethernet(KEYENCE), Gateway]	260 KB	465 KB
	[Ethernet(MICROCOMPUTER)]	200 KB	335 KB
	[Ethernet(TOSHIBA nv), Gateway]	195 KB	330 KB
	[Ethernet(HITACHI IES), Gateway]	300 KB	365 KB
	[Ethernet(HITACHI), Gateway]	235 KB	410 KB
	[Ethernet(FUJI), Gateway]	270 KB	490 KB
	[Ethernet(YASKAWA), Gateway]	340 KB	585 KB
	[Ethernet(YASKAWA MP3000), Gateway]	315 KB	654 KB
	[Ethernet(YASKAWA High Speed Ethernet Server), Gateway]	170 KB	350 KB
	[Ethernet(YOKOGAWA), Gateway]	420 KB	625 KB
	[Ethernet(AB MicroLogix), Gateway]	415 KB	470 KB
	[Ethernet(AB), Gateway]	340 KB	495 KB
	[Ethernet(AB Tag), Gateway]	300 KB	1055 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	250 KB	315 KB
	[Ethernet(SIEMENS S7), Gateway]	300 KB	445 KB
	[Ethernet(SIEMENS OP), Gateway]	360 KB	445 KB
	[Ethernet(CC-Link IE Field Network Basic)]	180 KB	718 KB
	[Ethernet(SLMP), Gateway]	220 KB	720 KB
	[MODBUS/TCP Master, Gateway]	280 KB	405 KB
	[MODBUS/TCP Slave, Gateway]	197 KB	1654 KB
[Serial(MELSEC)]		840 KB	975 KB
[AJ71QC24, MELDAS C6*]		800 KB	905 KB
[AJ71C24/UC24]		800 KB	795 KB
[MELSEC-FX]		600 KB	735 KB
[MELSEC-WS]		240 KB	295 KB
[CC-Link(G4)]		800 KB	905 KB
[MELSERVO-J4,J3,J2S/M,JE]		680 KB	875 KB
[Multidrop(Slave)]		800 KB	905 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		240 KB	405 KB
[FREQROL 800]		240 KB	405 KB
[FREQROL(Batch monitor)]		300 KB	610 KB
[IAI X-SEL]		240 KB	445 KB
[IAI ROBO CYLINDER]		240 KB	445 KB
[Azbil SDC/DMC]		200 KB	375 KB
[Azbil DMC50]		200 KB	375 KB
[OMRON SYSMAC]		200 KB	505 KB
[OMRON THERMAC/INPANEL NEO]		200 KB	295 KB
[OMRON Digital Temperature Controller]		192 KB	396 KB
[Serial(KEYENCE)]		260 KB	455 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[KOYO KOSTAC/DL]	200 KB	295 KB
[JTECT TOYOPUC-PC]	220 KB	425 KB
[SHARP JW]	220 KB	325 KB
[SHINKO TECHNOS CONTROLLER]	200 KB	375 KB
[CHINO MODBUS device]	200 KB	375 KB
[TOSHIBA PROSEC T/V]	200 KB	395 KB
[SHIBAURA MACHINE TCmini]	220 KB	335 KB
[Panasonic MEWNET-FP]	200 KB	395 KB
[Panasonic MEWTOCOL-7]	285 KB	590 KB
[Panasonic MINAS A4]	320 KB	565 KB
[Panasonic MINAS A5]	320 KB	565 KB
[HITACHI IES HIDIC H]	220 KB	415 KB
[HITACHI IES HIDIC H(Protocol2)]	220 KB	415 KB
[HITACHI S10mini/S10V]	240 KB	445 KB
[Hirata HNC]	240 KB	440 KB
[FUJI Temperature Controller/Digital Controller]	200 KB	375 KB
[FUJI MICREX-F]	340 KB	535 KB
[FUJI MICREX-SX SPH]	280 KB	435 KB
[Muratec MPC]	150 KB	290 KB
[Muratec MCR]	150 KB	315 KB
[YASKAWA GL]	260 KB	465 KB
[YASKAWA CP9200(H)]	260 KB	465 KB
[YASKAWA CP9300MS(MC compatible)]	260 KB	465 KB
[YASKAWA MP2000/MP900/CP9200SH]	260 KB	465 KB
[YOKOGAWA FA500/FA-M3/STARDOM]	460 KB	625 KB
[YOKOGAWA GREEN/UT100/UT2000/UT Advance]	360 KB	595 KB
[RKC SR Mini HG(MODBUS)]	260 KB	495 KB
[AB SLC500,AB 1:N]	400 KB	575 KB
[AB MicroLogix]	400 KB	575 KB
[AB MicroLogix(Extended)]	400 KB	575 KB
[AB Control/CompactLogix]	360 KB	525 KB
[GE (SNP-X)]	200 KB	295 KB
[LS Industrial Systems MASTER-K]	200 KB	385 KB
[MEI Nexgenie]	305 KB	535 KB
[SICK Flexi Soft]	260 KB	295 KB
[SIEMENS S7-300/400]	300 KB	405 KB
[SIEMENS S7-200]	320 KB	405 KB
[MODBUS/RTU Master]	260 KB	495 KB
[MODBUS/RTU Slave]	222 KB	1676 KB
[DeviceNet]	255 KB	380 KB
[PROFIBUS DP]	255 KB	385 KB
[Computer]	200 KB	375 KB

(6) Communication driver (GS21)

Communication driver		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Ethernet Connection]	[Ethernet(MITSUBISHI ELECTRIC), Gateway]	0 KB	0 KB
	[Ethernet(FX), Gateway]	0 KB	0 KB
	[Ethernet(MELSERVO), Gateway]	0 KB	0 KB
	[Ethernet(FREQROL), Gateway]	0 KB	0 KB
	[Ethernet(FREQROL(Batch monitor)), Gateway]	0 KB	0 KB
	[Ethernet(OMRON), Gateway]	0 KB	0 KB
	[Ethernet(OMRON NJ/NX), Gateway]	0 KB	0 KB
	[Ethernet(KEYENCE), Gateway]	0 KB	0 KB
	[Ethernet(FUJI), Gateway]	0 KB	0 KB
	[Ethernet(YASKAWA), Gateway]	0 KB	0 KB
	[Ethernet(YASKAWA MP3000), Gateway]	0 KB	0 KB
	[Ethernet(AB), Gateway]	0 KB	0 KB
	[Ethernet(LS Industrial Systems XGK), Gateway]	0 KB	0 KB
	[Ethernet(SIEMENS OP), Gateway]	0 KB	0 KB
	[Ethernet(CC-Link IE Field Network Basic)]	0 KB	0 KB
	[Ethernet(SLMP), Gateway]	0 KB	0 KB
	[MODBUS/TCP Master, Gateway]	0 KB	0 KB
	[MODBUS/TCP Slave, Gateway]	0 KB	0 KB
	[Ethernet(MICROCOMPUTER)]	0 KB	0 KB
[Serial(MELSEC)]		0 KB	0 KB
[MELSEC-A]		0 KB	0 KB
[AJ71C24/UC24]		0 KB	0 KB
[MELSEC-FX]		0 KB	0 KB
[MELSEC-WS]		0 KB	0 KB
[CC-Link(G4)]		0 KB	0 KB
[MELSERVO-J4,J3,J2S/M,JE]		0 KB	0 KB
[Multidrop(Slave)] (Only available to GS21-W-N)		0 KB	0 KB
[FREQROL 500/700/800, SENSORLESS SERVO]		0 KB	0 KB
[FREQROL 800]		0 KB	0 KB
[FREQROL(Batch monitor)]		0 KB	0 KB
[IAI X-SEL]		0 KB	0 KB
[IAI ROBO CYLINDER]		0 KB	0 KB
[Azbil SDC/DMC]		0 KB	0 KB
[Azbil DMC50]		0 KB	0 KB
[OMRON SYSMAC]		0 KB	0 KB
[OMRON THERMAC/INPANEL NEO]		0 KB	0 KB
[OMRON Digital Temperature Controller]		0 KB	0 KB
[Serial(KEYENCE)]		0 KB	0 KB
[SHIBAURA MACHINE TCmini]		0 KB	0 KB
[Panasonic MEWNET-FP]		0 KB	0 KB
[Panasonic MEWTOCOL-7]		0 KB	0 KB
[FUJI Temperature Controller/Digital Controller]		0 KB	0 KB
[FUJI MICREX-SX SPH]		0 KB	0 KB
[YASKAWA MP2000/MP900/CP9200SH]		0 KB	0 KB

Communication driver	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[AB SLC500, AB 1:N]	0 KB	0 KB
[AB MicroLogix]	0 KB	0 KB
[LS Industrial Systems MASTER-K]	0 KB	0 KB
[MEI Nexgenie]	0 KB	0 KB
[SICK Flexi Soft]	0 KB	0 KB
[SIEMENS S7-300/400]	0 KB	0 KB
[SIEMENS S7-200]	0 KB	0 KB
[MODBUS/RTU Master]	0 KB	0 KB
[MODBUS/RTU Slave]	0 KB	0 KB
[Computer]	0 KB	0 KB

(7) Extended function (GT27)

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Key Window Design Information]	When a basic-type or stylish-type screen design is used		1255 KB	2615 KB
	When a dark-tone-flat-type or light-tone-flat-type screen design is used		567 KB	2103 KB
[Base Screen Size Expansion]			40 KB	60 KB
[Graphic Acceleration Driver]			2048 KB	15910 KB
[Standard Font]	[Japanese]		460 KB	1440 KB
	[Chinese(Simplified)]		320 KB	960 KB
	[Chinese(Traditional)]		500 KB	1300 KB
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	450 KB	800 KB
		[Japanese(Kanji)]	1150 KB	1980 KB
		[Chinese(Simplified)] (Character code: [GB2312])	600 KB	960 KB
		[Chinese(Simplified)] (Character code: [GBK])	1600 KB	2140 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2172 KB	2736 KB
		[Chinese(Traditional)]	1100 KB	1800 KB
		[Hangul]	300 KB	840 KB
	[Kaisho]	[Alphanumeric/Kana]	510 KB	928 KB
		[Japanese(Kanji)]	1200 KB	1853 KB
		[Chinese(Simplified)] (Character code: [GB2312])	570 KB	960KB
		[Chinese(Simplified)] (Character code: [GBK])	1780 KB	2340 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2432 KB	2756 KB
		[Chinese(Traditional)]	1400 KB	2070 KB
		[Hangul]	300 KB	870 KB
[Kana-Kanji/Pinyin Conversion]	When [Kana-Kanji] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		1001 KB	1800 KB
	When [Pinyin Simplified Characters] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		2128 KB	3245 KB
[Wireless LAN]			600 KB	512 KB

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[SoftGOT-GOT Link Function]		40 KB	200 KB
[System Launcher]	[System Launcher (Basic)]	701 KB	2309 KB
	[System Launcher (Servo Network)]	330 KB	1530 KB
[iQSS Utility]		631 KB	1613 KB
[Network Drive]		883 KB	2565 KB
[Sequence Program Monitor]	[Sequence Program Monitor(Ladder)]	970 KB	2620 KB
	[Sequence Program Monitor(iQ-R/iQ-L Ladder)]	2390 KB	4590 KB
	[Sequence Program Monitor(iQ-F Ladder)]	2390 KB	4590 KB
	[Sequence Program Monitor(SFC)]	740 KB	1420 KB
[FX Ladder Monitor]		760 KB	760 KB
[Backup/Restoration]		320 KB	860 KB
[Gateway]	[Gateway(Server, Client)]	200 KB	500 KB
	[Gateway(Mail)]	128 KB	500 KB
	[Gateway(FTP Server)]	60 KB	400 KB
	[File Transfer]	40 KB	2100 KB
[Barcode]	[Bar Code (Serial)]	40 KB	100 KB
	[Bar Code (USB)]	40 KB	100 KB
[RFID]		40 KB	100 KB
[PC Remote Operation(Serial)]		40 KB	60 KB
[PC Remote Operation(Ethernet)]	[Graphics Setting] is set to [GOT Graphic Ver.2]	345 KB	6640 KB
	[Graphics Setting] is set to [GOT Graphic Ver.1]	200 KB	4440 KB
[VNC Server]		280 KB	5140 KB
[Video/Multimedia]	[Video/RGB]	120 KB	240 KB
	[Video/RGB (Object)]	190 KB	567 KB
	[Multimedia]	335 KB	660 KB
[External I/O / Operation Panel]		80 KB	100 KB
[Report]		50 KB	100 KB
[Printer]	[Printer(PictBridge)]	260 KB	1110 KB
	[Printer(Serial)]	80 KB	200 KB
	[Printer(ESC/P-R)]	100 KB	3072 KB
	[Printer(PCL5)]	100 KB	3072 KB
[Sound Output]		100 KB	200 KB
[GOT Network Interaction]		100 KB	977 KB
[GOT Mobile Function]		4904 KB	13693 KB
[Device Data Transfer]		40 KB	100 KB
[Hard Copy PDF Output]		280 KB	20992 KB
[MES Interface]		512 KB	500 KB
[Device monitor]		400 KB	1180 KB
[Network monitor]		260 KB	340 KB
[Log Viewer]		1240 KB	3800 KB
[Intelligent module monitor]		460 KB	620 KB
[Servo amplifier monitor]		660 KB	680 KB
[Drive Recorder]		780 KB	2918 KB
[Servo amplifier graph]		860 KB	11410 KB
[R motion monitor]		1100 KB	1600 KB
[Q motion monitor]		720 KB	660 KB

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[CNC Monitor]		600 KB	1500 KB
[CNC Data I/O]		310 KB	880 KB
[CNC Manufacturing Program Editor]		290 KB	738 KB
[CNC Monitor 2]		350 KB	2700 KB
[Motion Program Editor]		310 KB	760 KB
[Motion Program Input/Output]		810 KB	1110 KB
[Motion SFC Monitor]		560 KB	1040 KB
[Motion SFC Monitor]	[R Motion SFC Monitor]	836 KB	1424 KB
	[Q Motion SFC Monitor]	560 KB	1040 KB
[FX list editor]		580 KB	1080 KB
[CC-Link IE TSN/CC-Link IE Field Network diagnostics]		920 KB	2618 KB
[Vision Sensor Monitor]		1303 KB	31235 KB
[Recipe Operation]		112 KB	430 KB
[Recipe Display (Record List)]		60 KB	980 KB
[Operation log screen image]		105 KB	205 KB
[Operator Authentication]		620 KB	1020 KB
[File Manager]		210 KB	4405 KB
[File Print]		793 KB	20482 KB
[Document Display]	[Document Display (Document Converter)]	100 KB	4100 KB
	[Document Display (PDF)]	5120 KB	35840 KB
	[PDF Search/bookmark Function]	205 KB	825 KB
[MELSEC-L Troubleshooting Function]		320 KB	780 KB
[GOT Platform Library]		140 KB	200 KB
[GOT Function Expansion Library]		6724 KB	29620 KB
[GOT Function Expansion Library (Additional / MELSEC iQ-R / MELSEC iQ-L)]		5664 KB	4816 KB

(8) Extended function (GT25)

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Key Window Design Information]	When a basic-type or stylish-type screen design is used	1255 KB	2615 KB
	When a dark-tone-flat-type or light-tone-flat-type screen design is used	567 KB	2103 KB
[Base Screen Size Expansion]		40 KB	60 KB
[Standard Font]	[Japanese]	460 KB	1440 KB
	[Chinese(Simplified)]	320 KB	960 KB
	[Chinese(Traditional)]	500 KB	1300 KB

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	450 KB	800 KB
		[Japanese(Kanji)]	1150 KB	1980 KB
		[Chinese(Simplified)] (Character code: [GB2312])	600 KB	960 KB
		[Chinese(Simplified)] (Character code: [GBK])	1600 KB	2140 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2172 KB	2736 KB
		[Chinese(Traditional)]	1100 KB	1800 KB
		[Hangul]	300 KB	840 KB
	[Kaisho]	[Alphanumeric/Kana]	510 KB	928 KB
		[Japanese(Kanji)]	1200 KB	1853 KB
		[Chinese(Simplified)] (Character code: [GB2312])	570 KB	960KB
		[Chinese(Simplified)] (Character code: [GBK])	1780 KB	2340 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2432 KB	2756 KB
		[Chinese(Traditional)]	1400 KB	2070 KB
		[Hangul]	300 KB	870 KB
[Kana-Kanji/Pinyin Conversion]	When [Kana-Kanji] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		1001 KB	1800 KB
	When [Pinyin Simplified Characters] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		2128 KB	3245 KB
[Wireless LAN]			600 KB	512 KB
[SoftGOT-GOT Link Function]			40 KB	200 KB
[System Launcher]	[System Launcher (Basic)]		701 KB	2309 KB
	[System Launcher (Servo Network)]		330 KB	1530 KB
[iQSS Utility]			631 KB	1613 KB
[Network Drive]			883 KB	2565 KB
[Sequence Program Monitor]	[Sequence Program Monitor(Ladder)]		970 KB	2620 KB
	[Sequence Program Monitor(iQ-R/iQ-L Ladder)]		2390 KB	4590 KB
	[Sequence Program Monitor(iQ-F Ladder)]		2390 KB	4590 KB
	[Sequence Program Monitor(SFC)]		740 KB	1420 KB
[FX Ladder Monitor]			760 KB	760 KB
[Backup/Restoration]			320 KB	860 KB
[Gateway]	[Gateway(Server, Client)]		200 KB	500 KB
	[Gateway(Mail)]		128 KB	500 KB
	[Gateway(FTP Server)]		60 KB	400 KB
	[File Transfer]		40 KB	2100 KB
[Barcode]	[Bar Code (Serial)]		40 KB	100 KB
	[Bar Code (USB)]		40 KB	100 KB
[RFID]			40 KB	100 KB
[PC Remote Operation(Ethernet)]	[Graphics Setting] is set to [GOT Graphic Ver.2]		345 KB	6640 KB
	[Graphics Setting] is set to [GOT Graphic Ver.1]		200 KB	4440 KB
[VNC Server]			280 KB	5140 KB
[External I/O / Operation Panel]			80 KB	100 KB

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Report]		50 KB	100 KB
[Printer]	[Printer(PictBridge)]	260 KB	1110 KB
	[Printer(Serial)]	80 KB	200 KB
	[Printer(ESC/P-R)]	100 KB	3072 KB
	[Printer(PCL5)]	100 KB	3072 KB
[Sound Output]		100 KB	200 KB
[GOT Network Interaction]		100 KB	977 KB
[GOT Mobile Function]		4904 KB	13693 KB
[Device Data Transfer]		40 KB	100 KB
[Hard Copy PDF Output]		280 KB	20992 KB
[MES Interface]		512 KB	500 KB
[Device monitor]		400 KB	1180 KB
[Network monitor]		260 KB	340 KB
[Log Viewer]		1240 KB	3800 KB
[Intelligent module monitor]		460 KB	620 KB
[Servo amplifier monitor]		660 KB	680 KB
[Drive Recorder]		780 KB	2918 KB
[Servo amplifier graph]		860 KB	11410 KB
[R motion monitor]		600 KB	1500 KB
[Q motion monitor]		720 KB	660 KB
[CNC Monitor]		600 KB	1500 KB
[CNC Data I/O]		310 KB	880 KB
[CNC Machining Program Edit]		290 KB	738 KB
[CNC Monitor 2]		350 KB	2700 KB
[Motion Program Editor]		310 KB	760 KB
[Motion Program Input/Output]		810 KB	1110 KB
[Motion SFC Monitor]	[R Motion SFC Monitor]	836 KB	1424 KB
	[Q Motion SFC Monitor]	560 KB	1040 KB
[FX list editor]		580 KB	1080 KB
[CC-Link IE TSN/CC-Link IE Field Network diagnostics]		920 KB	2618 KB
[Vision Sensor Monitor]		1303 KB	31235 KB
[Recipe Operation]		112 KB	430 KB
[Recipe Display (Record List)]		60 KB	980 KB
[Operation log screen image]		105 KB	205 KB
[Operator Authentication]		620 KB	1020 KB
[File Manager]		210 KB	4405 KB
[File Print]		793 KB	20482 KB
[Document Display]	[Document Display (Document Converter)]	100 KB	4100 KB
	[Document Display (PDF)]	5120 KB	35840 KB
	[PDF Search/bookmark Function]	205 KB	825 KB
[MELSEC-L Troubleshooting Function]		320 KB	780 KB
[GOT Platform Library]		140 KB	200 KB
[GOT Function Expansion Library]		6724 KB	29620 KB
[GOT Function Expansion Library (Additional / MELSEC iQ-R / MELSEC iQ-L)]		5664 KB	4816 KB

(9) Extended function (GT23)

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Standard Font]	[Japanese]		287 KB	959 KB
	[Chinese(Simplified)]		307 KB	959 KB
	[Chinese(Traditional)]		486 KB	1286 KB
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	450 KB	800 KB
		[Japanese(Kanji)]	1150 KB	1980 KB
		[Chinese(Simplified)] (Character code: [GB2312])	600 KB	960 KB
		[Chinese(Simplified)] (Character code: [GBK])	1600 KB	2140 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2172 KB	2736 KB
		[Chinese(Traditional)]	1100 KB	1800 KB
		[Hangul]	300 KB	840 KB
	[Kaisho]	[Alphanumeric/Kana]	510 KB	928 KB
		[Japanese(Kanji)]	1200 KB	1853 KB
		[Chinese(Simplified)] (Character code: [GB2312])	570 KB	960KB
		[Chinese(Simplified)] (Character code: [GBK])	1780 KB	2340 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2432 KB	2756 KB
		[Chinese(Traditional)]	1400 KB	2070 KB
		[Hangul]	300 KB	870 KB
[System Launcher]			701 KB	2309 KB
[Backup/Restoration]			320 KB	840 KB
[Gateway]	[Gateway(FTP Server)]		60 KB	400 KB
	[File Transfer]		40 KB	400 KB
[Barcode]	[Bar Code (Serial)]		40 KB	100 KB
	[Bar Code (USB)]		40 KB	100 KB
[RFID]			20 KB	60 KB
[Report]			50 KB	100 KB
[Printer]	[Printer(Serial)]		80 KB	200 KB
	[Printer(ESC/P-R)]		100 KB	3072 KB
[GOT Network Interaction]			100 KB	977 KB
[Device Data Transfer]			40 KB	100 KB
[Device monitor]			400 KB	1180 KB
[FX list editor]			140 KB	340 KB
[Recipe Operation]			112 KB	430 KB
[Recipe Display (Record List)]			60 KB	980 KB
[Operation log screen image]			105 KB	205 KB
[Operator Authentication]			615 KB	1020 KB
[File Manager]			210 KB	4405 KB
[File Print]			793 KB	2869.2 KB
[GOT Platform Library]			140 KB	200 KB

(10)Extended function (GT21)

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Standard Font]	[Japanese]		0 KB	0 KB
	[Chinese(Simplified)]		0 KB	0 KB
	[Chinese(Traditional)]		0 KB	0 KB
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	0 KB	0 KB
		[Japanese(Kanji)]	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB2312])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GBK])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	0 KB	0 KB
		[Chinese(Traditional)]	0 KB	0 KB
		[Hangul]	0 KB	0 KB
	[Kaisho]	[Alphanumeric/Kana]	0 KB	0 KB
		[Japanese(Kanji)]	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB2312])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GBK])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	0 KB	0 KB
		[Chinese(Traditional)]	0 KB	0 KB
		[Hangul]	0 KB	0 KB
[Kana-Kanji/Pinyin Conversion]	When [Kana-Kanji] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		0 KB	0 KB
	When [Pinyin Simplified Characters] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		0 KB	0 KB
[VNC Server]			0 KB	0 KB

(11)Extended function (GS25)

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Key Window Design Information]	When a basic-type or stylish-type screen design is used	1255 KB	2615 KB
	When a dark-tone-flat-type or light-tone-flat-type screen design is used	567 KB	2103 KB
[Base Screen Size Expansion]		40 KB	60 KB
[Standard Font]	[Japanese]	460 KB	1440 KB
	[Chinese(Simplified)]	320 KB	960 KB
	[Chinese(Traditional)]	500 KB	1300 KB

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	450 KB	800 KB
		[Japanese(Kanji)]	1150 KB	1980 KB
		[Chinese(Simplified)] (Character code: [GB2312])	600 KB	960 KB
		[Chinese(Simplified)] (Character code: [GBK])	1600 KB	2140 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2172 KB	2736 KB
		[Chinese(Traditional)]	1100 KB	1800 KB
		[Hangul]	300 KB	840 KB
	[Kaisho]	[Alphanumeric/Kana]	510 KB	928 KB
		[Japanese(Kanji)]	1200 KB	1853 KB
		[Chinese(Simplified)] (Character code: [GB2312])	570 KB	960KB
		[Chinese(Simplified)] (Character code: [GBK])	1780 KB	2340 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	2432 KB	2756 KB
		[Chinese(Traditional)]	1400 KB	2070 KB
		[Hangul]	300 KB	870 KB
[Kana-Kanji/Pinyin Conversion]	When [Kana-Kanji] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		1001 KB	1800 KB
	When [Pinyin Simplified Characters] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		2128 KB	3245 KB
[Wireless LAN]			600 KB	512 KB
[SoftGOT-GOT Link Function]			40 KB	200 KB
[System Launcher]	[System Launcher (Basic)]		701 KB	2309 KB
	[System Launcher (Servo Network)]		330 KB	1530 KB
[iQSS Utility]			631 KB	1613 KB
[Network Drive]			883 KB	2565 KB
[Sequence Program Monitor]	[Sequence Program Monitor(Ladder)]		970 KB	2620 KB
	[Sequence Program Monitor(iQ-R/iQ-L Ladder)]		2390 KB	4590 KB
	[Sequence Program Monitor(iQ-F Ladder)]		2390 KB	4590 KB
	[Sequence Program Monitor(SFC)]		740 KB	1420 KB
[FX Ladder Monitor]			760 KB	760 KB
[Backup/Restoration]			320 KB	860 KB
[Gateway]	[Gateway(Server, Client)]		200 KB	500 KB
	[Gateway(Mail)]		128 KB	500 KB
	[Gateway(FTP Server)]		60 KB	400 KB
	[File Transfer]		40 KB	2100 KB
[Barcode]	[Bar Code (Serial)]		40 KB	100 KB
	[Bar Code (USB)]		40 KB	100 KB
[RFID]			40 KB	100 KB
[PC Remote Operation(Ethernet)]	[Graphics Setting] is set to [GOT Graphic Ver.2]		345 KB	6640 KB
	[Graphics Setting] is set to [GOT Graphic Ver.1]		200 KB	4440 KB
[VNC Server]			280 KB	5140 KB
[External I/O / Operation Panel]			80 KB	100 KB

Extended function		Data size in the user area	
		Built-in flash memory (ROM)	User memory (RAM)
[Report]		50 KB	100 KB
[Printer]	[Printer(PictBridge)]	260 KB	1110 KB
	[Printer(Serial)]	80 KB	200 KB
	[Printer(ESC/P-R)]	100 KB	3072 KB
	[Printer(PCL5)]	100 KB	3072 KB
[Sound Output]		100 KB	200 KB
[GOT Network Interaction]		100 KB	977 KB
[GOT Mobile Function]		4904 KB	13693 KB
[Device Data Transfer]		40 KB	100 KB
[Hard Copy PDF Output]		280 KB	20992 KB
[MES Interface]		512 KB	500 KB
[Device monitor]		400 KB	1180 KB
[Network monitor]		260 KB	340 KB
[Log Viewer]		1240 KB	3800 KB
[Intelligent module monitor]		460 KB	620 KB
[Servo amplifier monitor]		660 KB	680 KB
[Drive Recorder]		780 KB	2918 KB
[Servo amplifier graph]		860 KB	11410 KB
[R motion monitor]		600 KB	1500 KB
[Q motion monitor]		720 KB	660 KB
[CNC Monitor]		600 KB	1500 KB
[CNC Data I/O]		310 KB	880 KB
[CNC Machining Program Edit]		290 KB	738 KB
[CNC Monitor 2]		350 KB	2700 KB
[Motion Program Editor]		310 KB	760 KB
[Motion Program Input/Output]		810 KB	1110 KB
[Motion SFC Monitor]	[R Motion SFC Monitor]	836 KB	1424 KB
	[Q Motion SFC Monitor]	560 KB	1040 KB
[FX list editor]		580 KB	1080 KB
[CC-Link IE TSN/CC-Link IE Field Network diagnostics]		920 KB	2618 KB
[Vision Sensor Monitor]		1303 KB	31235 KB
[Recipe Operation]		112 KB	430 KB
[Recipe Display (Record List)]		60 KB	980 KB
[Operation log screen image]		105 KB	205 KB
[Operator Authentication]		620 KB	1020 KB
[File Manager]		210 KB	4405 KB
[File Print]		793 KB	20482 KB
[Document Display]	[Document Display (Document Converter)]	100 KB	4100 KB
	[Document Display (PDF)]	5120 KB	35840 KB
	[PDF Search/bookmark Function]	205 KB	825 KB
[MELSEC-L Troubleshooting Function]		320 KB	780 KB
[GOT Platform Library]		140 KB	200 KB
[GOT Function Expansion Library]		6724 KB	29620 KB
[GOT Function Expansion Library (Additional / MELSEC iQ-R / MELSEC iQ-L)]		5664 KB	4816 KB

(12)Extended function (GS21)

Extended function			Data size in the user area	
			Built-in flash memory (ROM)	User memory (RAM)
[Standard Font]	[Japanese]		0 KB	0 KB
	[Chinese(Simplified)]		0 KB	0 KB
	[Chinese(Traditional)]		0 KB	0 KB
[Outline Font]	[Gothic]	[Alphanumeric/Kana]	0 KB	0 KB
		[Japanese(Kanji)]	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB2312])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GBK])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	0 KB	0 KB
		[Chinese(Traditional)]	0 KB	0 KB
		[Hangul]	0 KB	0 KB
	[Kaisho]	[Alphanumeric/Kana]	0 KB	0 KB
		[Japanese(Kanji)]	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB2312])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GBK])	0 KB	0 KB
		[Chinese(Simplified)] (Character code: [GB18030-2022])	0 KB	0 KB
		[Chinese(Traditional)]	0 KB	0 KB
		[Hangul]	0 KB	0 KB
[Kana-Kanji/Pinyin Conversion]	When [Kana-Kanji] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		0 KB	0 KB
	When [Pinyin Simplified Characters] is selected in the [Environmental Setting] window ([Kana-Kanji/Pinyin Conversion])		0 KB	0 KB
[VNC Server]			0 KB	0 KB

■2 Data size of special data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The data size in the user area varies with the selection for [Language] in the [Application Selection] dialog.

➟(1) [Japanese]
(2) [English]

(1) [Japanese]

Special Data	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[Intelligent module monitor data]	13294KB	13294KB
[R motion monitor data]	292KB	292KB
[Q motion monitor data]	606KB	606KB
[Servo amplifier monitor data]	273KB	273KB

(2) [English]

Special Data	Data size in the user area	
	Built-in flash memory (ROM)	User memory (RAM)
[Intelligent module monitor data]	13761KB	10067KB
[R motion monitor data]	321KB	98KB
[Q motion monitor data]	639KB	552KB
[Servo amplifier monitor data]	273KB	196KB

12.11 Specifications of Resource Data

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟12.11.1 Common specifications of CSV files and Unicode text files
12.11.2 Size of the resource data file

12.11.1 Common specifications of CSV files and Unicode text files

Binary files created using the following functions can be viewed on a personal computer when the files are converted to CSV files or Unicode text files.

- User alarm observation
- System alarm observation
- Logging
- Recipe
- Operation log

The following shows the specifications of the file formats.

File format	Specifications
CSV format (*.CSV)	• Character codes: ASCII and Shift JIS • Delimiter: Comma (,) Before converting a data file containing any character other than the ASCII and Shift JIS code characters to a CSV file, turn on GS522.b2. Then, the file is converted to a file with an extension of CSV in the following specifications, and the characters are correctly displayed. • Character codes: Unicode • Delimiter: Tab ➟12.1.3 ■5 (60) Special Control During Specific Function Execution (GS522)
Unicode text format (*.TXT)	• Character codes: Unicode • Delimiter: Tab

12.11.2 Size of the resource data file

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Some functions of the GOT store the resource data into a data storage.
The following shows the expressions for calculating the size of the resource data to be stored into a data storage by each function.
The sizes determined by the expressions are approximate.
A determined size may be different from the actual size of the resource data.

➟■1 User alarm observation
■2 System Alarm Observation
■3 Logging
■4 Recipe
■5 Operation Log
■6 Hard copy
■7 MES interface function
■8 Label name resolution information

■1 User alarm observation

(1) Binary file (*.G2A)

(a) **Historical mode**

144 + (A × 2) + (18 × B) + (20 × C) bytes

- A: Number of characters of the alarm name
- B: Number of alarms
- C: Number of stored events

(b) **Cumulative mode (when [Display the same alarm occurring multiple times as another item] is deselected)**

144 + (A × 2) + (48 × B) bytes

- A: Number of characters of the alarm name
- B: Number of alarms

(c) **Cumulative mode (when [Display the same alarm occurring multiple times as another item] is selected)**

144 + (A × 2) + (26 × B) + (32 × C) bytes

- A: Number of characters of the alarm name
- B: Number of alarms
- C: Number of stored events

(2) CSV file

(a) **Historical mode**

422 + (A × 2) + (14 + B + C + D + (E × 2) + (F × 3) + G + H) × I byte

- A: Number of characters of the alarm name
- B: Number of digits of the upper comment No.
- C: Number of digits of the middle comment No.
- D: Number of digits of the basic alarm comment No.
- E: Average number of characters of comments
- F: Length of the date and time string
- G: Number of digits of the level
- H: Number of digits of the group
- I: Number of alarms

When counting the number of characters in an alarm name or the average number of characters in a comment, count a one-byte character as 0.5 character and a two-byte character as 1 character.

(b) **Cumulative mode**

457 + (A × 2) + (39 + B + C + D + (E × 2) + (F × 3) + G + H + I) × J bytes

- A: Number of characters of the alarm name
- B: Number of digits of the upper comment No.
- C: Number of digits of the middle comment No.
- D: Number of digits of the basic alarm comment No.
- E: Average number of characters of comments
- F: Length of the date and time string
- G: Number of digits of the level
- H: Number of digits of the group
- I: Number of digits of the frequency of alarm occurrences
- J: Number of alarms

When counting the number of characters in an alarm name or the average number of characters in a comment, count a one-byte character as 0.5 character and a two-byte character as 1 character.

(3) Unicode text file

Size of the CSV file × 2 bytes

■2 System Alarm Observation

(1) Binary file (*.G2A)

(a) **When [Get detailed alarm information] is deselected**

128 + (24 × A) bytes

- A: Number of stored events

(b) **When [Get detailed alarm information] is selected**

128 + (52 × A) bytes

- A: Number of stored events

(2) CSV file

447 + (20 + A + (B × 2) + C + D + E + F + G + H + I + (J × 2) + K) × L bytes

- A: Average number of digits of alarm numbers
- B: Average number of characters of comments
- C: Length of the data and time string
- D: Number of digits of the channel No.
- E: Number of characters of the network No., station No., and module No.
- F: Number of characters of the device name
- G: Number of digits of the screen No.
- H: Number of digits of the definition screen No.
- I: Number of digits of the object ID
- J: Number of characters of the function name
- K: Number of characters of the drive name
- L: Number of alarms

When counting the average number of characters in a comment or the number of characters in a function name, count a one-byte character as 0.5 character and a two-byte character as 1 character.

(3) Unicode text file

Size of the CSV file × 2 bytes

■3 Logging

(1) Binary file (*.G2L)

152 + A + B + D + E + F + G bytes

The following describes characters A to S used in the mathematical expressions.

Character	Description
A *1	2 + 2 × Number of characters used in [Logging Name]
B *1	C × Total device points set in each block in the [Device] tab
C *1	2 + 2 × Number of characters used in [Device Comment]
D	4 × Total device points set in each block in the [Device] tab
E	12 × Number of blocks
F	4 × Number of blocks
G	H × Number of logs per file
H	4 + J + K
J *1	2 + ((L × 2) + 7) / 8
K *1	L × 2
L	M + N + P + Q + R × 2 + S × 4
M	Total device points set in the blocks when the device type is as follows: [Bit]
N	Total device points set in the blocks when the device type is as follows: [Signed BIN8] or [Unsigned BIN8]
P	Total device points set in the blocks when the device type is as follows: [Signed BIN16], [Unsigned BIN16], or [BCD16]
Q	Total device points set in the blocks when the device type is as follows: [String]
R	Total device points set in the blocks when the device type is as follows: [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)]
S	Total device points set in the blocks when the device type is as follows: [Signed BIN64], [Unsigned BIN64], [BCD64], or [Real(64bit)]

*1 Rounded up to a multiple of 4.

(2) CSV file

215 + A + D × F bytes

The following describes characters A to F used in the mathematical expressions.

Character	Description
A	(B + 17) × C
B	Average number of characters of device comments
C	Total number of the devices set to the block
D	20 + (E + 1) × C
E	Number of display digits • Add 5 when the digits are displayed in real type (exponential expression). • Apply this number when the digits are displayed in real type (fixed decimal) and decimal places are 0. • Add the number of decimal places and 1 when the digits are displayed in real type (fixed type) and decimal places are 1 or higher.
F	Number of logs in the file

(3) Unicode text file

Size of the CSV file × 2 bytes

■4 Recipe

(1) Binary file (*.G2P)

216 + 16 × A + 4 × B + C + D × M bytes

The following describes characters A to M used in the mathematical expressions.

Character	Description
A	Value set for [Block Number] in the [Device] tab
B	Total device points set in each block in the [Device] tab
C *1	(2 + (2 × Number of characters)) × B
D *1	80 + E × 2
E	F + G + H + J + K × 2 + L × 4
F	Total device points set in the blocks when the device type is as follows: [Bit]
G	Total device points set in the blocks when the device type is as follows: [Signed BIN8] or [Unsigned BIN8]
H	Total device points set in the blocks when the device type is as follows: [Signed BIN16], [Unsigned BIN16], or [BCD16]
J	Total device points set in the blocks when the device type is as follows: [String]
K	Total device points set in the blocks when the device type is as follows: [Signed BIN32], [Unsigned BIN32], [BCD32], or [Real(32bit)]
L	Total device points set in the blocks when the device type is as follows: [Signed BIN64], [Unsigned BIN64], [BCD64], or [Real(64bit)]
M	Value set for [Record Number] in the [Device] tab

*1 Rounded up to a multiple of 4.

(2) CSV file

240 + A + B + H bytes

The following describes characters A to J used in the mathematical expressions.

Character	Description
A	Number of characters of the record name
B	(C + D + E + F) × (18 + G)
C	Number of bit devices
D	Number of word devices
E	Number of double-word devices
F	Number of blocks with the device type [Text]
G	Number of characters of the device comment
H	I × (25 + C × 2 + D × 7 + E × 12 + F × 2)
I	Number of records (when the recipe file format is CSV or Unicode text, regardless of the recipe settings: the number of records = 1)
J	Total number of words in devices (with the device type [Text])

(3) Unicode text file

Size of the CSV file × 2 bytes

■5 Operation Log

(1) Binary file (*.G2O)

64 + (N1 + N2 + ... + Nm) bytes

"N1 + N2 + ... + Nm" indicates the total size of each log.

The following table shows the size per log for each log type.

Log type	Size (byte)	Log type	Size (byte)
GOT startup	Max.88	Touch switch: Application switching	Max.256
GOT termination	12	Touch switch: Screen switching	Max.260
GOT simple restart	12	Touch switch: Station No. switching	Max.260
GOT project restart	12	Touch switch: Auto repeat start	Max.256
GOT restart by reset	12	Touch switch: Auto repeat end	Max.260
GOT offline mode transition	12	Touch switch: Screen gesture	Max.256
GOT background processing stop	12	Touch switch: Recipe operation import	Max.420
GOT background processing restart	12	Touch switch: Recipe operation export	Max.420
Application switching	16	Numerical input: Base device	Max.456
Application startup, exit	20	Numerical input: Option write device	Max.276
Clock setting (External device to GOT)	16	Numerical input: Option write completion device	Max.276
Clock setting (SNTP)	16	Text input	Max.1080
Clock setting (GS)	16	Text input: Option write completion device	Max.276
Time zone change	24	Alarm display (list, history): User alarm deletion	Max.256
Displayed system language	Max.48	Alarm display (list, history): Deletion of all the user alarms	Max.256
Screen switching	Max.84	Alarm display (list, history): System alarm deletion	Max.256
Station No. switching	16	Alarm display (list, history): Deletion of all the system alarms	Max.256
Switching between languages	16	Alarm display (list, history): System alarm reset	Max.256
Buffer memory unit No. switching	16	Alarm display (list, history): User alarm reset	Max.288
Security level change (Device value change)	16	Slider control	Max.336
SoftGOT-GOT link connection	16	Recipe display (record list): Record name change	Max.396
SoftGOT-GOT link disconnection	16	Recipe display (record list): Read	Max.328
SoftGOT-GOT link authorization transfer	20	Recipe display (record list): Write	Max.328
VNC server connection	16	Recipe display (record list): Deletion	Max.328
VNC server disconnection	16	Object script (trigger type [Key Code Input])	Max.280
VNC server authorization transfer	20	Operator authentication: Login successful	Max.36
Screen gesture	20	Operator authentication: Login/re-login failed	Max.36
System language switching	Max.72	Operator authentication: Logout	Max.36
Security level change (Password entry)	Max.40	Operator authentication: Automatic logout	Max.36
Clock function (changed in the utility)	Max.40	Operator authentication: Forced logout	Max.36
Time zone change (in the utility)	Max.48	Operator authentication: Operator switching successful	Max.36
GOT No. switching	Max.40	Operator authentication: Operator switching failed	Max.36
Touch switch: Bit set	Max.280	Operator authentication: Password changed	Max.36
Touch switch: Bit reset	Max.280	Operator authentication: Password change failed	Max.36
Touch switch: Bit alternate	Max.280	Operator authentication: Operator account lock	Max.32
Touch switch: Bit momentary	Max.280	Operator management: Started	Max.40
Touch switch: Word set	Max.288	Operator management: Start failed	Max.40

Log type	Size (byte)	Log type	Size (byte)
Operator management: End	Max.40	File print: Aborted (User)	Max.188
Operator management operation: Save	Max.36	File print: Complete	Max.164
Operator management operation: Undo	Max.36	File print: Aborted (Access error)	Max.164
Operator management operation: Import	Max.196	File print: Aborted (Printer error)	Max.164
Operator management operation: Export	Max.196	File print: Aborted (Timeout error)	Max.164
Operator management changed (function settings): Authentication type	Max.44	File print: Aborted (System)	Max.164
Operator management changed (function settings): Automatic logout	Max.44	Network drive connection	Max.208
Operator management changed (function settings): Password expiration date	Max.48	Network drive connection failed	Max.208
Operator management changed (function settings): External authentication ID	Max.48	GOT Mobile: Connection established	Max.295
Operator management changed (function settings): Authentication prohibited	Max.48	GOT Mobile: Trial connection established	Max.295
Operator management changed (function settings): Operator account lock	Max.44	GOT Mobile: Connection authentication failed	Max.295
Operator management changed (function settings): Password requirements	Max.48	GOT Mobile: Number of clients exceeded the upper limit	Max.295
Operator management changed (function settings): Password history	Max.44	GOT Mobile: Disconnection	20
Operator management changed (function settings): Sub administrator	Max.44	GOT Mobile: Forced disconnection (Control information)	20
Operator management changed (operator management): Addition of operator	Max.64	GOT Mobile: End of trial connection	20
Operator management changed (operator management): Deletion of operator	Max.64	GOT Mobile: Abnormal disconnection due to a communication error	20
Operator management changed (operator management): Editing of operator	Max.68	GOT Mobile: Virtual device allocation	48
Operator management (at startup): New file creation	Max.12	Authorization management: Obtained	20
Operator management (at startup): File corruption	Max.12	Authorization management: Released	20
Operator management (at startup): Corrupted file restoration	Max.40	Authorization use: Obtained	44
Operator management (at startup): Abnormal end	Max.40	Authorization use: Released	44
Functional operation security	Max.44	Authorization use: Failed to obtain	44
File print: Start	Max.188		

(2) CSV file

248 + (N1 + N2 + ... + Nm) bytes

"N1 + N2 + ... + Nm" indicates the total size of each log.

The following table shows the size per log for each log type.

Log type	Size (byte)	Log type	Size (byte)
GOT startup	154	Numerical input (Write completion device)	227
GOT termination	93	Text input: Option write completion device	588
GOT simple restart	103	Text input	152
GOT project restart	112	User alarm (Deletion)	174
GOT restart by reset	108	User alarm (Deletion of all the user alarms)	176
GOT offline mode transition	113	User alarm (Reset)	195
GOT background processing stop	116	System alarm (Deletion)	174
GOT background processing restart	118	System alarm (Deletion of all the system alarms)	176
Application switching	139	System alarm (Reset)	195
Application start	128	Slider control	151
Application termination	126	Recipe display (record list): Record name change	180
Time setting (External device)	182	Recipe display (record list): Read	161
Time setting (SNTP)	179	Recipe display (record list): Write	161
Time setting (GS)	176	Recipe display (record list): Deletion	168
Time zone change	125	Object script	218
System language switching (Device)	115	Operator authentication: Login	119
Screen switching	193	Operator authentication: Login failed	119
Station No. switching	129	Operator authentication: Logout	123
Switching between languages	103	Operator authentication: Automatic logout	128
Buffer memory unit No. switching	118	Operator authentication: Forced logout	128
Level change (Device)	111	Operator authentication: Operator switching successful	125
SoftGOT-GOT link	125	Operator authentication: Operator switching failed	127
VNC server connection	114	Operator authentication: Password changed	116
Screen gesture	114	Operator authentication: Password change failed	128
System language switching	171	Operator authentication: Operator account lock	117
Level change (Password)	167	Operator management: Started	162
Time change	224	Operator management: Start failed	167
GOT No. switching	169	Operator management: End	160
Touch switch (Bit)	205	Operator management operation: Save	160
Touch switch (Word)	247	Operator management operation: Undo	160
Special function switch	171	Operator management operation: Import	239
Go To Screen switch	195	Operator management operation: Export	226
Change station No. switch	193	Operator management changed (Function settings)	160
Touch switch (Auto repeat start)	193	Operator management changed (Operator management)	381
Touch switch (Auto repeat end)	198	Operator management (at startup)	182
Touch switch: Screen gesture	149	Functional operation security	182
Touch switch: Recipe operation import	243	File print	239
Touch switch: Recipe operation export	243	Network drive connection	181
Numerical input	228	GOT Mobile connection/disconnection	197
Numerical input (Write device)	221	Authorization management obtained/released	189

(3) Unicode text file

Size of the CSV file × 2 bytes

■6 Hard copy

(1) BMP file

The file size depends on the resolution of the GOT.

GOT resolution	Size (byte)
WXGA (1280×800)	3072054
XGA (1024 × 768)	2359350
SVGA (800 × 600)	1440054
WVGA (800×480)	1152054
VGA (640 × 480)	921654
QVGA (320 × 240)	230454
480 × 272 dots	391734
384 × 128 dots	147510
320 × 128 dots	122934

(2) JPEG file

The file size depends on the contents displayed on the GOT screen.

■7 MES interface function

File	Size
Execution log file	Max. 512 K bytes per file
Event log file of the job execution	Max. 1 M byte per file

■8 Label name resolution information

The following shows the size of the label name resolution file by channel.

56 + (A × 52) + (B × 98) + (C × 2) bytes

- A: Number of the monitored controllers per CPU No. by channel
- B: Total number of the labels by channel used on the GOT
- C: Total number of characters of the labels by channel used on the GOT

12.12 Specifications of the SRAM user area

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Some functions of the GOT use the SRAM user area.
For functions that use the SRAM user area and the size of data stored in the SRAM user area, refer to the following.

➥12.12.1 Functions that use the SRAM user area
12.12.2 Size of data stored in the SRAM user area

12.12.1 Functions that use the SRAM user area

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following functions save data to the SRAM user area.

- User alarm observation
- System alarm observation
- Logging function
- Recipe function
- Internal device retention

Applicable function	Number of settings	Size
User alarm observation	Max. 10	500 KB (total)
System alarm observation	Max. 1	
Logging function	Max. 20	
Recipe function	Max. 20	
Internal device retention	Max. 1	

12.12.2 Size of data stored in the SRAM user area

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

Some functions of the GOT use the SRAM user area.
The following shows the expressions for calculating the size of the SRAM user area used by each function.

➥■1 User alarm observation
■2 System Alarm Observation
■3 Logging
■4 Recipe
■5 Internal device retention

The expressions only determine the approximate sizes.
The actual sizes may differ.
Check the actual sizes in the following setting dialogs.

➥9.1.2 ■7 [User Alarm Observation] dialog
9.1.3 ■5 [System Alarm Observation] dialog
9.2.7 [Logging] dialog (traditional display)
9.3.7 [Recipe] dialog
5.2.12 ■3 [Internal Device Retention]

■1 User alarm observation

(1) Current alarm only

((256 + A) rounded up to a multiple of 64) × 2 bytes

- A: 16 × number of alarms

(2) Historical mode

((256 + A + B) rounded up to a multiple of 64) × 2 bytes

- A: 20 × number of stored events
- B: (2 × number of alarms) rounded up to a multiple of 4

(3) Cumulative mode (when [Display the same alarm occurring multiple times as another item] is

deselected)

((256 + A) rounded up to a multiple of 64) × 2 bytes

• A: 32 × number of alarms

(4) Cumulative mode (when [Display the same alarm occurring multiple times as another item] is selected)

((256 + A + B + C) rounded up to a multiple of 64) × 2 bytes

• A: (10 × number of alarms) rounded up to a multiple of 4

• B: 32 × number of stored events

• C: (2 × number of alarms) rounded up to a multiple of 4

■2 System Alarm Observation

(1) Current alarm only (when [Get detailed alarm information] is deselected)

((256 + A) rounded up to a multiple of 64) × 2 bytes

• A: (20 × number of stored events)

(2) Current alarm only (when [Get detailed alarm information] is selected)

((256 + A) rounded up to a multiple of 64) × 2 bytes

• A: (48 × number of stored events)

(3) Historical mode (when [Get detailed alarm information] is deselected)

((256 + A) rounded up to a multiple of 64) × 2 bytes

• A: (24 × number of stored events)

(4) Historical mode (when [Get detailed alarm information] is selected)

((256 + A) rounded up to a multiple of 64) × 2 bytes

• A: (52 × number of stored events)

(5) When [Record label/tag name at the time of alarm generation] is selected

(One of the results of (1) to (4)) + A × (number of stored events) bytes

• A: (2 + (number of characters to be recorded × 2)) rounded up to a multiple of 4

■3 Logging

(192 + (A × number of stored logs) + B) rounded up to a multiple of 64 bytes

• A: C + D

• B: (4 × number of blocks)

• C: (6 + E / 4) rounded up to a multiple of 4

• D: (E × 2) rounded up to a multiple of 4

• E: (Total number of logs (with the device types [Signed BIN32], [Unsigned BIN32], [BCD32], and [Real]) × 2) + (total number of logs (with the device types [Bit], [Signed BIN16], [Unsigned BIN16], [BCD16], and [String]))

■4 Recipe

256 + A + (B × E) bytes

• A: (16 × number of blocks)

• B: 80 + ((C + D) × 2)

• C: Total number of blocks (with the device types [Bit], [Signed BIN16], [Unsigned BIN16], [BCD16] and [String])

• D: Total number of blocks (with the device types [Signed BIN32], [Unsigned BIN32], [BCD32], and [Real]) × 2

• E: Number of records

■5 Internal device retention

(192 + A) × 2 bytes

• A: (44 + B + C) rounded up to a multiple of 64

• B: 32 + (2 × number of GOT data registers (GD))
If the number of GD devices is 0, apply 0 to B.

• C: 32 + 4 × ((E / 32) - (F / 32) + 1)
If the number of GB devices is 0, apply 0 to C.
In the result of (E / 32) and (F / 32), omit the numbers after the decimal point.

• E: F + G - 1

• F: Start device number of GOT bit registers (GB)

• G: Number of GOT bit registers (GB)

12.13 Compatibility with Conventional Products

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟12.13.1 Compatibility of projects
12.13.2 Specifications of the project conversion from GOT1000 to GOT2000
12.13.3 Specifications of the project conversion from GOT2000 to GOT2000
12.13.4 Data copy between drawing software

12.13.1 Compatibility of projects

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➟■1 Project that can be handled with GT Designer3
■2 Converting a project by changing the GOT type

■1 Project that can be handled with GT Designer3

The following shows each project format and the compatibility with GT Designer3.

Project format		Operation				
		Open	Save		Utilize other projects	
			GT Designer3 (GOT2000)	GT Designer3 (GOT1000)	GT Designer3 (GOT2000)	GT Designer3 (GOT1000)
GOT2000 project	Workspace format	○	○	×	○	×
	*.GTX	○	○	×	○	×
	*.GTXS	○	○	×	○	×
	*.G2	○	○*1	×	×	×
	*.GTCNV	○	×	×	×	×
GOT1000 project	Workspace format	○*2	×	○	×	○
	*.GTW	○*2	×	○	×	○
	*.G1 (Created with GT Designer3)	○*2	×	○*1	×	×
	*.GTE	○*2	×	×	×	○
	*.G1 (Created with GT Designer2)	○*2	×	×	×	×
GOT900 project	*.GTD	○*3	×	×	×	×

*1 This format is a project format for writing to the data storage.
This format cannot be saved with the [Project] menu.

*2 There are two alternatives: convert a project into the GOT2000 equivalent, or start GT Designer3 (GOT1000) to edit the project with keeping a GOT1000 project.

*3 Open the project after converting into the GOT1000 equivalent by using GT Designer3 (GOT1000).
To edit the project as a GOT900 project, use GT Designer2 Classic.
To convert the project into the GOT2000 equivalent, convert the project into the GOT1000 equivalent in advance.

■2 Converting a project by changing the GOT type

You can change the opened project to another GOT project by changing the GOT type.

➟5.1 Changing the GOT Type of the Project ([GOT Type Setting])

GT Designer3 is compatible with the following project conversion.

Project before conversion	Project after conversion	
	GOT2000 project	GOT1000 project
GOT2000 project	The project can be converted.	The project cannot be converted.
GOT1000 project	The project can be converted.	The project can be converted.

12.13.2 Specifications of the project conversion from GOT1000 to GOT2000

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the project settings after the GOT1000 project is converted into the GOT2000 project.

- Settings configured for both GOT1000 and GOT2000
  The settings are held.
- Settings configured only for GOT2000
  Default values are set.
  (For some settings, default values are not set.)
- Settings configured only for GOT1000
  The settings are deleted.
- Settings configured for both GOT1000 and GOT2000, but have difference
  The settings are changed according to the setting specifications of GOT2000.

Device settings are changed as follows.

- Device settings for devices within the device range that is compatible with the GOT model after the conversion are held.
  [??] is displayed for devices outside the device range for the GOT model after the conversion.
- When no network setting is configured for the GOT model after the conversion, the NW No. setting and the PLC station No. settings are deleted.
- All devices of all channels are converted as the devices of a controller set for CH1 after the conversion.

■1 Whole project

(1) Font

Before conversion (setting for GOT1000)	After conversion (setting for GOT2000)	Specifications of the conversion
[Font]	[Font]	• For converting the GOT type to GT27, GT25, GT23, GT SoftGOT2000, or GS25 [Stroke] is converted into [Outline Gothic]. • For converting the GOT type to GT2107-W or GS21-W-N [Stroke] is converted into [Outline Gothic]. • For converting the GOT type to GT2105-Q, GT2104-R, GT2104-P, GT2103-P, or GS21-W [Stroke] is converted into [16dot Standard].

(2) Drive name

Before conversion (setting for GOT1000)	After conversion (setting for GOT2000)	Specifications of the conversion
[Drive Name]	[Drive Name]	The drive name is converted as below. • [A:Standard Memory Card] is converted into [A:Standard SD Card]. • [B:Extended Memory Card] is converted into [B:USB Drive]. • [C:Built-in Flash Memory] is held. • [D:Built-in SRAM] is converted into [X:Current Drive]. For converting the GOT type to GT2107-W, GT2105-Q, GT2104-R, or GT2104-P, the setting is held. • [E:USB Memory] is converted into [E:USB Drive].

(3) Report screen

All the settings for the report screens are held.

■2 Screen

(1) Property of screens

Before conversion (setting for GOT1000)	After conversion (setting for GOT2000)	Specifications of the conversion
[Screen No.]	[Screen No.]	If [Display the screen of value stored in screen switching device +1] is enabled in [GOT Environmental Setting] ([Screen Switching/Windows]), all the screen numbers decrease by one after conversion. If the item is disabled, the setting is held after conversion.
[Front Layer Transparent]	[Front Layer Transparent Color]	The settings are held. For GT21 and GS21, the setting is deleted after conversion.
[Popup the display of advanced alarm]	[Display alarms as popups]	The settings are held.
[Specify the touch area]	-	The settings are deleted.
[Display alarm flow]	[Display alarms as popups]	The settings are held.
[Backlight]	[Backlight]	• For converting GT1020 or GT1030 to GT21-P The conversion result depends on the backlight color selected in [Type Setting]. When [Green/Red/Orange] is selected, [Green/White] is changed to [Green], and [Orange/Pink] is changed to [Orange]. When [White/Red/Pink] is selected, [Green/White] is changed to [White], and [Orange/Pink] is changed to [Pink]. Regardless of the selection, [Red] is held. • For converting any other than GT1020 and GT1030 to GT21-P The setting is changed to [White]. • For converting GOT1000 series to any other than GT21-P The settings are deleted.
[Blink Backlight]	[Blink Backlight]	• For converting GT1020 or GT1030 to GT21-P The settings are held. • For converting any other than GT1020 and GT1030 to GT21-P The setting is changed to [None]. • For converting GOT1000 series to any other than GT21-P The settings are deleted.
[Option Selection]	[Option Selection]	The settings are held. For GT23, GT21 (except GT2107-W), and GS21, the setting is deleted after conversion.

(2) Report setting

Before conversion (setting for GOT1000)	After conversion (setting for GOT2000)	Specifications of the conversion
-	[Printer Language]	[Japanese] is set.

■3 Common setting

(1) Script

Before conversion (setting for GOT1000)	After conversion (setting for GOT2000)	Specifications of the conversion
[Trigger Type]	[Trigger Type]	• [Ordinary] is converted into [Sampling] (Cycle time: [1] x 100 ms). • [ON] is converted into [ON Sampling] (Cycle time: [1] x 100 ms). • [OFF] is converted into [OFF Sampling] (Cycle time: [1] x 100 ms).

■4 Precautions

(1) HQ font setting for the comment display

When a GOT1000 project created with GT Designer2 is converted into a GOT2000 project, the HQ font setting may not be migrated.

For the details, refer to the following Technical News.

➟Precautions when Replacing GOT1000 Series with GOT2000 Series(GOT-A-0061)

12.13.3 Specifications of the project conversion from GOT2000 to GOT2000

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the project settings after the GOT2000 project is converted into another GOT2000 project.

- Settings configured for both the GOT model before the conversion and the one after the conversion
  The settings are held.
- Settings configured only for the GOT model after the conversion
  Default values are set.
- Settings configured only for the GOT model before the conversion
  The settings are deleted.
- Settings configured for both the GOT models before the conversion and after the conversion, but have difference
  The settings are changed according to the setting specifications of the GOT model after the conversion.

For the GOT models compatible with each function, refer to the following.

➟1.1.3 List of the supported models for each function

12.13.4 Data copy between drawing software

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

You can edit data among the drawing software, such as copying and pasting, by using multiple drawing software.

■1 When using GT Designer3 (GOT2000)

Copying and pasting data among other GT Designer3 (GOT2000)s are available.
Copying and pasting data between GT Designer3 (GOT2000) and GT Designer3 (GOT1000) are unavailable.

■2 When using GT Designer3 (GOT1000)

Copying and pasting data among other GT Designer3 (GOT1000)s are available.
Copying and pasting data between GT Designer3 (GOT1000) and GT Designer3 (GOT2000) are unavailable.

12.14 Data Compatibility between the Graphics Modes

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

➡12.14.1 Project conversion specifications when the graphics mode is changed to GOT Graphic Ver.2
12.14.2 Project conversion specifications when the graphics mode is changed to GOT Graphic Ver.1

12.14.1 Project conversion specifications when the graphics mode is changed to GOT Graphic Ver.2

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the current settings to be changed or deleted after the setting of [Graphics Setting] is changed to [GOT Graphic Ver.2] in the [Type Setting] dialog.
The items available only in the new graphics mode are set to their default.
The screen design will be the basic black after the graphic mode change.
To change the screen design, select your preference in the [Screen Design] dialog.

➡2.4.3 [Screen Design] dialog

■1 Screen

(1) Screen properties (Base screen, window screen, and mobile screen)

Item	Specifications after the graphics mode change
[Front Layer Transparent Color] (for base screens and window screens)	The setting of this item is deleted. Setting the transparent color for the front layer is not available.
[Background Color]	The setting of each item is migrated to the [Pattern] tab of the [Fill Effects] dialog. However, the following cases exist depending on the settings made before the graphics mode change. • If [None] has been selected for [Pattern], the settings of [Background Color], [Pattern], and [Pattern Color] are deleted. • If [8] has been selected for [Pattern], the settings of [Background Color] and [Pattern] are deleted and the setting of [Pattern Color] is migrated to [Background Color]. • If [37] has been selected for [Pattern], the settings of [Pattern] and [Pattern Color] are deleted and the setting of [Background Color] is migrated to [Background Color].
[Pattern]	
[Pattern color]	

■2 Common settings

(1) Type Setting

Item	Specifications after the graphics mode change
[Enable the graphics accelerator to smooth the screen gesture and document display operations]	The setting of this item is deleted. The graphics accelerator is not available.
[Enable the antialiasing to smooth jagged text edges] (outline fonts)	This item is nonexistent. Antialiasing is always enabled.
[Adjust object display order in GOT to the one in GT Designer3]	This item is nonexistent. The object stacking order adjustment is always enabled.

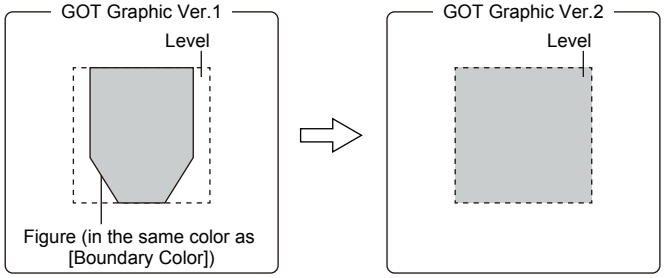
(2) Parts Setting

Item	Specifications after the graphics mode change
[Show overlapping areas of shapes in XOR when Display Mode of Parts Display is XOR]	The setting of this item is deleted. The XOR synthesis is not available.

■3 Figure

Item	Specifications after the graphics mode change
Paint	The setting of this item is deleted. The paint is not available.

■4 Object

Item	Specifications after the graphics mode change
Touch Switch	The setting of [Reverse Switch Area] is deleted. Inverting the colors in the touch switch area is not available.
Lamp Area	The setting of this item is deleted. The lamp area is not available.
Numerical display	[Display Mode] is nonexistent. The [Transparent] mode is applied.
Numerical input	
Comment display (bit)	[Display Mode] is nonexistent. The [Transparent] mode is applied.
Comment display (word)	
Bit Parts Display	[Display Mode] is nonexistent. The [Replace] mode is applied.
Word Parts Display	
Fixed Parts Display	
Parts movement (bit)	[Display Mode] is nonexistent. The [Movement] mode is applied.
Parts movement (word)	
Parts movement (fixed)	
Alarm Display (User)	[Text color on cursor display] is nonexistent. The [Reverse] mode is applied.
Alarm Display (System)	
Level object	The setting of [Boundary Color] is deleted. As the boundary color setting is invalid, the level display does not appear in the figure accordingly.  [Boundary Color] is valid. [Boundary Color] is invalid. To appropriately display the level object in GOT Graphic Ver.2, place a parts display on the level object. For the setting, refer to the following. ➟8.23.2 How to use the level object (GOT Graphic Ver.2)

12.14.2 Project conversion specifications when the graphics mode is changed to GOT Graphic Ver.1

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21

The following shows the current settings to be changed or deleted after the setting of [Graphics Setting] is changed to [GOT Graphic Ver.1] in the [Type Setting] dialog.
The items available only in the new graphics mode are set to their default.

■1 Screen

(1) Screen design

Item		Specifications after the graphics mode change
Design	Preset	If the selected design is available in GOT Graphic Ver.1, the design setting is migrated as-is. If the selected design is not available in GOT Graphic Ver.1, the design is changed to an available design.
	Custom	The settings available in GOT Graphic Ver.1 are migrated as-is. The settings unavailable in GOT Graphic Ver.1 are discarded.

(2) Screen properties (Base screen, window screen, and mobile screen)

Item	Specifications after the graphics mode change
When a solid color background is set	[Pattern] is set to [8]. The background color setting is migrated to [Background Color] and [Pattern Color].
When a gradient background is set	[Pattern] is set to [8]. The setting of [Color 1] is migrated to [Pattern Color]. The setting of [Color 2] is migrated to [Background Color]. The setting of [Variation] is deleted.
When a pattern background is set	The setting is migrated to the [Basic] tab of the [Screen Property] dialog.
[Transparency] (for window screens only)	The setting of this item is deleted.
[Screen Contour] (for window screens only)	The setting of this item is deleted.
[Radius] (for window screens only)	The setting of this item is deleted.

■2 Common settings

(1) Type Setting

Item	Specifications after the graphics mode change
[Expand base screen sizes]	The setting of this item is deleted. The expanded base screens are resized to the size of the GOT screen. For information on how the on-screen figures and objects are changed, refer to the following. ➥5.1.1 ■4 (3) How the expanded base screen data is converted (when disabling the base screen size expansion for the newly-selected GOT)
[Adjust object display order in GOT to the one in GT Designer3]	This item is deselected.

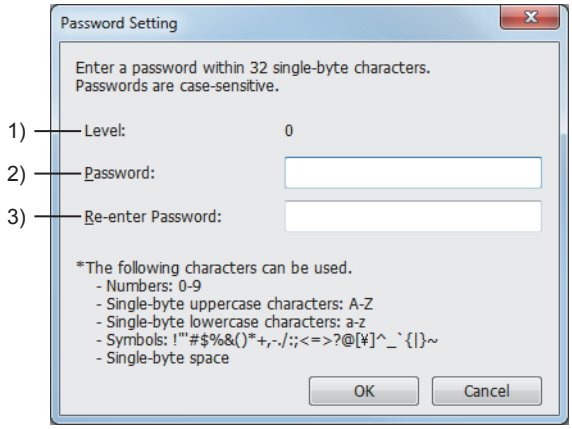
■3 Object

Item	Specifications after the graphics mode change
Parts Movement	When [Circle] is selected for [Move Way], the selection is changed to [Line].

12.15 Common Dialog

12.15.1 [Password Setting] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



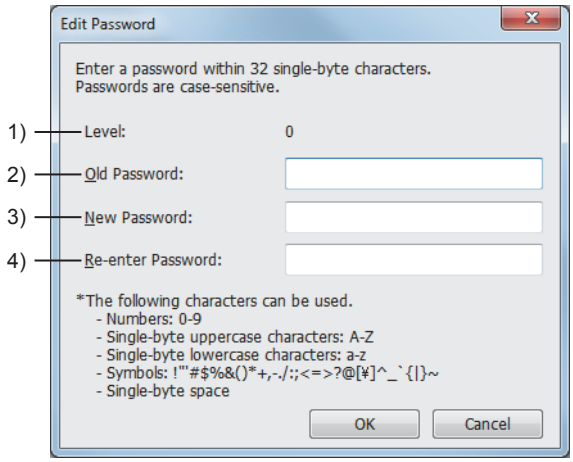
1) **[Level]**
Displays the security level for the password.
Displayed when a password is edited in the [Screen Security] tab.

2) **[Password]**
Set a password.

3) **[Re-enter Password]**
Input the password set in [Password] for the confirmation.

12.15.2 [Edit Password] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Level]**
Displays the security level for the password.
Displayed when a password is edited in the [Screen Security] tab.

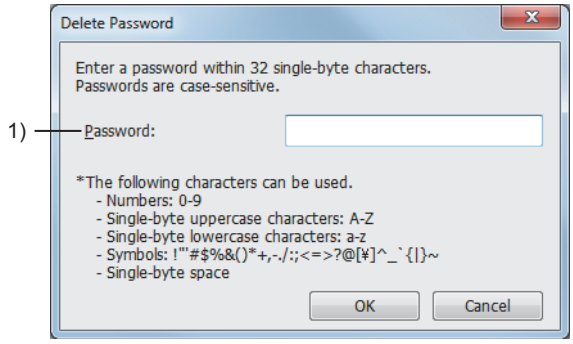
2) **[Old Password]**
Set the password currently set for the project.

3) **[New Password]**
Set a new password.

4) **[Re-enter Password]**
Input the password set in [New Password] for the confirmation.

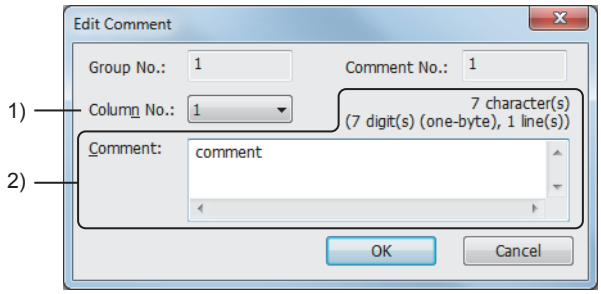
12.15.3 [Delete Password] dialog

GT27 GT25 GT23 GT21 SoftGOT2000 GS25 GS21



1) **[Password]**
Set the password currently set for the project.

12.15.4 [Edit Comment] dialog

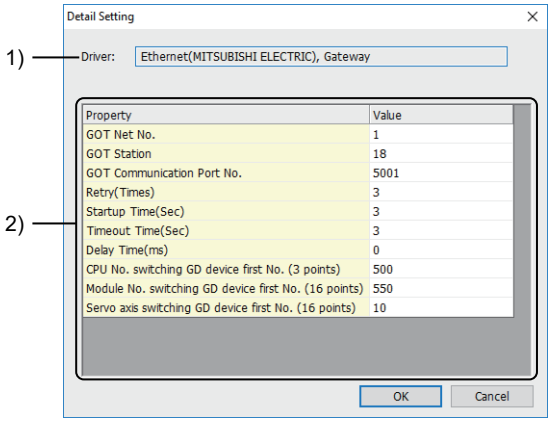


1) **[Column No.]**
Select the column No. of the comment to be edited.

2) **[Comment]**
Edit the comment in the comment group.
If an unregistered comment group No. or comment No. is displayed, create a new comment.
Up to 1024 characters can be set for the comment.
The number of characters, digits, and rows of the input comment are displayed on the upper right of the comment input field.

- Number of characters:
  A character is counted as one character.
  The line feed is counted as two characters.
- Number of digits:
  The number of digits of the row with the largest number of digits is displayed.
- Number of rows:
  The number of rows of the comment is displayed.
  Even though a line feed is inserted without characters, the line feed is counted as one row.

12.15.5 [Detail Setting] dialog



When the driver is set to [Ethernet(MITSUBISHI ELECTRIC), Gateway]

1) **[Driver]**
Displays the driver that is currently set.

2) **Detail Setting**

Setting items and setting ranges to be displayed vary depending on the driver to be used.

Item	Description
[Transmission Speed(BPS)]	Select the transmission speed.
[Data Bit]	Select the data length.
[Stop Bit]	Select the stop bit length.
[Parity]	Select the type for a parity check.
[Sum Check]	Select whether to perform a sum check.
[Sum Check Type]	Select the type for a sum check.
[Retry(Times)]	Set the number of retries to be performed when a communication error occurs.
	When no response is received after the retries, the communication times out.
[Startup Time(Sec)]	Set the time period from the GOT startup to the beginning of the communication with the PLC CPU.
[Timeout Time(Sec)]	Set the interval for communication to time out.
[Adapter Address]	Set the adapter address in the connected network.
[Host]	Set the host address in the connected network.
[Delay Time(ms)]	Set the send delay time to lower the load of the network and the connected PLC CPUs.
[GOT Station]	Set a station number of the host in the system configuration.
[Format]	Select the communication format.
[Interrupt Data Byte]	Select the number of bytes of the interrupt data.
[Station No. Selection]	Select whether to use a station number at the communication or not.
[Special Interrupt Code]	Select whether to have the special interrupt code output or not.
[Control method]	Set this item when XON or XOFF control is used.
[Message Format]	Select a message format.
[Communication data code]	Select a communication data code.
[32bit Storage]	Select an order for storing two words (32-bit data).
[Monitor Speed]	Set the monitor speed of the GOT.
[Negotiation Time(Sec)]	Set the time period that the GOT side communication setting is sent to the inverter.
[Initialization Wait Time(Sec)]	Set the wait time from when the communication setting is changed until when the communication starts.
[Automatic Negotiation]	Select whether to use the automatic negotiation.
[Function Code[0F]]	Select whether to use the function code [0F] or not.
[Function Code[10]]	Select whether to use the function code [10] or not.
[Read coil points]	Set the maximum number of read coils.
[Read input relay points]	Set the maximum number of read input relays.
[Read holding register points]	Set the maximum number of read holding registers.
[Read input register points]	Set the maximum number of read input registers.
[Write coil points]	Set the maximum number of write multiple coils.
[Write holding register points]	Set the maximum number of write multiple holding registers.
[Device read points(Points)]	Set the number of consecutive devices from which data is read in one communication.
[Device write points(Points)]	Set the number of consecutive devices to which data is written in one communication.
[Device read random points(Points)]	Set the number of separate devices from which data is read in one communication.
[Device write random points(Points)]	Set the number of separate devices to which data is written in one communication.
[Stage No.]	Set the number of extension base units.
[Slot No.]	Set the slot No.
[GOT Net No.]	Set the network No. of the GOT.
[GOT Station]	Set the GOT's station number.
[GOT Communication Port No.]	Set the port No. used by the GOT for the connection with the Ethernet module.
[Protocol]	Select a communication protocol.
[Interrupt Data Length]	Set the number of bytes of the interrupt data.

Item	Description
[Existence Confirmation]	Select whether to perform an existence confirmation.
[Existence Confirmation Cycle(Sec)]	Set the cycle to perform an existence confirmation.
[Network Type]	Select a network type.
[Network No.]	Set the network No.
[Station No.]	Set the GOT's station number.
[Group No.]	Group No.
[Mode]	Set a mode.
[Transmission Speed(Mbps)]	Select a transmission speed.
[Refresh Interval(Times)]	Set how many times is the block data assurance per station (refresh) performed for the send data and the receive data.
[Transmission Speed(Gbps)]	Select a transmission speed.
[Communication Speed]	Select a communication speed.
[Refresh Interval(ms)]	Set the interval for performing the block data assurance per station (refresh) for the send data and the receive data.
[Input for Error Station]	Select whether to clear or hold the error at an error occurrence.
[Transmission Rate]	Set the transmission speed and a mode of the GOT.
[Expanded Cyclic]	Select the cyclic counts expansion.
[Occupied Station]	Select the number of stations occupied by the GOT.
[Video Input Signal]	Select the video input signal
[Video Resolution]	Select the video resolution.
[IP Address]	Set the IP address of the multimedia unit.
[Subnet Mask]	Set the subnet mask.
[Default Gateway]	Set the default gateway.
[Connection CH No.]	Set the channel number used for the connection to the GOT (Extended computer).
[Transmission method]	Set the CC-Link transmission method.
[CPU No. switching GD device first No. (3 points)]	Set the start device number of the GOT data registers (GD) to specify CPU numbers.
[Module No. switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify module numbers.
[Servo axis switching GD device first No. (16 points)]	Set the start device number of the GOT data registers (GD) to specify an axis number.
[Output HOLD/CLEAR Setting]	Select whether the GOT (remote station) holds the device values received from and sent to the master station when the master station stops running.
[Destination module I/O number]	Specify a destination module I/O number to be returned from the GOT to the host station.

For the detail settings of peripheral devices including barcodes and RFIDs, refer to the following.

➟10.1.5 [Bar Code] dialog
➟10.2.5 [RFID] dialog
➟10.6.5 [Video/RGB Input] dialog
➟10.8.6 [Multimedia] dialog
➟10.11.8 [Printer] dialog

12.16 Open Source Software

12.16.1 PDFium

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12.17 Upgraded Additional Function List

➟12.17.1 Supported hardware
12.17.2 Supported controller
12.17.3 Functions of GT Designer3
12.17.4 Drawing Setting
12.17.5 GOT functions

This section explains functions added by upgraded GT Designer (GOT2000).
The following shows the version of the system application that GT Designer 3 of each version supplies.

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.100E	01.00.***	A	-	SH-081220ENG-A	September 2013
1.104J	01.01.***	C	-	SH-081220ENG-B	November 2013
1.108N	01.02.***	• GT27: D • GT23: D • GT21: B	D	SH-081220ENG-C	January 2014
1.109P	01.02.***	• GT27: D • GT23: D • GT21: B	D	SH-081220ENG-D	April 2014
1.110Q	01.02.***	• GT27: D • GT23: D • GT21: B	D		
1.111R	01.02.***	• GT27: D • GT23: D • GT21: C • GS21: C	D		
1.112S	• GT27: 01.03.*** • GT25: 01.03.*** • GT23: 01.03.*** • GT21: 01.02.*** • GS21: 01.02.***	• GT27: E • GT25: E • GT23: E • GT21: C • GS21: C	• GT27: E • GT25: B • GT23: D		
1.117X	• GT27: 01.04.*** • GT25: 01.04.*** • GT23: 01.04.*** • GT21: 01.03.*** • GS21: 01.03.***	• GT27: F • GT25: F • GT23: F • GT21: C • GS21: C	• GT27: F • GT25: F • GT23: D	SH-081220ENG-E	June 2014
1.118Y	• GT27: 01.05.*** • GT25: 01.05.*** • GT23: 01.05.*** • GT21: 01.04.*** • GS21: 01.04.***	• GT27: G • GT25: G • GT23: G • GT21: C • GS21: C	• GT27: F • GT25: G • GT23: D	SH-081220ENG-F	July 2014
1.119Z	01.05.***	• GT27: G • GT25: G • GT23: H • GT21: D • GS21: C	• GT27: F • GT25: G • GT23: D	SH-081220ENG-G	October 2014
1.122C	01.06.***	• GT27: J • GT25: J • GT23: J • GT21: E • GS21: C	H		

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.123D	01.07.***	• GT27: J • GT25: J • GT23: J • GT21: E • GS21: C	H		
1.124E	• GT27: 01.07.*** • GT25: 01.07.*** • GT23: 01.07.*** • GT21: 01.08.*** • GS21: 01.08.***	• GT27: K • GT25: K • GT23: K • GT21: F • GS21: C	H	SH-081220ENG-H	January 2015
1.126G	• GT27: 01.08.*** • GT25: 01.08.*** • GT23: 01.08.*** • GT21: 01.09.*** • GS21: 01.09.***	• GT27: L • GT25: L • GT23: L • GT21: F • GS21: C	J		
1.127H	01.09.***	• GT27: L • GT25: L • GT23: L • GT21: F • GS21: C	J		
1.128J	01.09.***	• GT27: M • GT25: L • GT23: L • GT21: F • GS21: C	J	SH-081220ENG-I	April 2015
1.130L	01.10.***	• GT27: N • GT25: N • GT23: N • GT21: G • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J		
1.131M	01.11.***	• GT27: P • GT25: P • GT23: N • GT21: G • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J	SH-081220ENG-J	May 2015
1.134Q	01.12.***	• GT27: P • GT25: Q • GT23: N • GT21: G • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J	SH-081220ENG-K	June 2015
1.136S	01.13.***	• GT27: R • GT25: R • GT23: R • GT21: G • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J	SH-081220ENG-L	July 2015
1.137T	• GT27: 01.13.*** • GT25: 01.13.*** • GT23: 01.13.*** • GT21: 01.14.*** • GS21: 01.14.***	• GT27: S • GT25: S • GT23: S • GT21: H • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J		
1.138U	• GT27: 01.13.*** • GT25: 01.13.*** • GT23: 01.13.*** • GT21: 01.14.*** • GS21: 01.14.***	• GT27: S • GT25: S • GT23: S • GT21: H • GS21: C	• GT27: J (GT2705-V: K) • GT25: K • GT23: J	SH-081220ENG-M	October 2015
1.144A	• GT27: 01.14.*** • GT25: 01.14.*** • GT23: 01.14.*** • GT21: 01.15.*** • GS21: 01.15.***	• GT27: T • GT25: T • GT23: T • GT21: J • GS21: C	• GT27: L • GT25: L • GT23: J		

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.145B	• GT27: 01.14.*** • GT25: 01.14.*** • GT23: 01.14.*** • GT21: 01.15.*** • GS21: 01.15.***	• GT27: T • GT25: T • GT23: T • GT21: J • GS21: C	• GT27: L • GT25: L • GT23: J	SH-081220ENG-N	December 2015
1.150G	• GT27: 01.15.*** • GT25: 01.15.*** • GT23: 01.15.*** • GT21: 01.16.*** • GS21: 01.16.***	• GT27: U • GT25: U • GT23: U • GT21: J • GS21: C	• GT27: M • GT25: M • GT23: J		
1.151H	• GT27: 01.15.*** • GT25: 01.15.*** • GT23: 01.15.*** • GT21: 01.17.*** • GS21: 01.17.***	• GT27: U • GT25: U • GT23: U • GT21: J • GS21: C	• GT27: M • GT25: M • GT23: J	SH-081220ENG-O	May 2016
1.152J	• GT27: 01.15.*** • GT25: 01.15.*** • GT23: 01.15.*** • GT21: 01.17.*** • GS21: 01.17.***	• GT27: V • GT25: V • GT23: V • GT21: J • GS21: C	• GT27: M • GT25: M • GT23: J		
1.153K	• GT27: 01.15.*** • GT25: 01.15.*** • GT23: 01.15.*** • GT21: 01.17.*** • GS21: 01.17.***	• GT27: V • GT25: V • GT23: V • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N		
1.155M	• GT27: 01.16.*** • GT25: 01.16.*** • GT23: 01.16.*** • GT21: 01.18.*** • GS21: 01.18.***	• GT27: X • GT25: X • GT23: X • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N		
1.156N	• GT27: 01.16.*** • GT25: 01.16.*** • GT23: 01.16.*** • GT21: 01.18.*** • GS21: 01.18.***	• GT27: Y • GT25: Y • GT23: X • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N	SH-081220ENG-P	August 2016
1.160S	• GT27: 01.17.*** • GT25: 01.17.*** • GT23: 01.17.*** • GT21: 01.19.*** • GS21: 01.19.***	• GT27: Z • GT25: Z • GT23: Z • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N		
1.165X	• GT27: 01.18.*** • GT25: 01.18.*** • GT23: 01.18.*** • GT21: 01.20.*** • GS21: 01.20.***	• GT27: AA • GT25: AA • GT23: AA • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N	SH-081220ENG-Q	October 2016
1.166Y	• GT27: 01.18.*** • GT25: 01.18.*** • GT23: 01.18.*** • GT21: 01.20.*** • GS21: 01.20.***	• GT27: AA • GT25: AA • GT23: AA • GT21: J • GS21: C	• GT27: N • GT25: N • GT23: N	SH-081220ENG-R	January 2017
1.170C	• GT27: 01.19.*** • GT25: 01.19.*** • GT23: 01.19.*** • GT21: 01.21.*** • GS21: 01.21.***	• GT27: AB • GT25: AB • GT23: AB • GT21: K • GS21: C	• GT27: P • GT25: P • GT23: N		
1.175H	• GT27: 01.20.*** • GT25: 01.20.*** • GT23: 01.20.*** • GT21: 01.22.*** • GS21: 01.22.***	• GT27: AC • GT25: AC • GT23: AC • GT21: K • GS21: C	• GT27: P • GT25-W: Q • GT25-S, GT25-V: P • GT23: N	SH-081220ENG-S	April 2017

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.178L	• GT27: 01.21.*** • GT25: 01.21.*** • GT23: 01.21.*** • GT21: 01.23.*** • GS21: 01.23.***	• GT27: AC • GT25: AC • GT23: AC • GT21: K • GS21: C	• GT27: P • GT25-W: Q • GT25-S, GT25-V: P • GT23: N	SH-081220ENG-T	June 2017
1.180N	• GT27: 01.22.*** • GT25: 01.22.*** • GT23: 01.22.*** • GT21: 01.24.*** • GS21: 01.24.***	• GT27: AD • GT25: AD • GT23: AC • GT21: K • GS21: C	• GT27: P (GT2705-V: R) • GT25-W: Q • GT25-S, GT25-V: R • GT23: N		
1.181P	• GT27: 01.22.*** • GT25: 01.22.*** • GT23: 01.22.*** • GT21: 01.24.*** • GS21: 01.24.***	• GT27: AD • GT25: AD • GT23: AD • GT21: K • GS21: C	• GT27: P (GT2705-V: R) • GT25-W: Q • GT25-S, GT25-V: R • GT23: N	SH-081220ENG-U	October 2017
1.185T	• GT27: 01.23.*** • GT25: 01.23.*** • GT23: 01.23.*** • GT21: 01.25.*** • GS21: 01.25.***	• GT27: AE • GT25: AE • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S, GT25-V: R • GT23: N		
1.190Y	• GT27: 01.24.*** • GT25: 01.24.*** • GT23: 01.24.*** • GT21: 01.26.*** • GS21: 01.26.***	• GT27: AE • GT25: AE • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S, GT25-V: R • GT23: N	SH-081220ENG-V	December 2017
1.195D	• GT27: 01.25.*** • GT25: 01.25.*** • GT23: 01.25.*** • GT21: 01.27.*** • GS21: 01.27.***	• GT27: AF • GT25: AF • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: T) • GT2506HS-V: R • GT2505HS-V: T • GT23: N	SH-081220ENG-W	April 2018

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.196E	• GT27: 01.25.*** • GT25: 01.25.*** • GT23: 01.25.*** • GT21: 01.27.*** • GS21: 01.27.***	• GT27: AG (GT2705-V: AF) • GT25: AF (GT2505-V: AG) • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N	SH-081220ENG-X	July 2018
1.197F	• GT27: 01.25.*** • GT25: 01.25.*** • GT23: 01.25.*** • GT21: 01.27.*** • GS21: 01.27.***	• GT27: AG (GT2705-V: AF) • GT25: AF (GT2505-V: AH) • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N		
1.198G	• GT27: 01.25.*** • GT25: 01.25.*** • GT23: 01.25.*** • GT21: 01.27.*** • GS21: 01.27.***	• GT27: AG (GT2705-V: AF) • GT25: AF (GT2505-V: AH) • GT23: AE • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N		
1.200J	• GT27: 01.26.*** • GT25: 01.26.*** • GT23: 01.26.*** • GT21: 01.28.*** • GS21: 01.28.***	• GT27: AJ • GT25: AJ • GT23: AJ • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N		
1.205P	• GT27: 01.27.*** • GT25: 01.27.*** • GT23: 01.27.*** • GT21: 01.29.*** • GS21: 01.29.***	• GT27: AK • GT25: AK • GT23: AK • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N	SH-081220ENG-Y	October 2018
1.206Q	• GT27: 01.27.*** • GT25: 01.27.*** • GT23: 01.27.*** • GT21: 01.29.*** • GS21: 01.29.***	• GT27: AK • GT25: AK • GT23: AK • GT21: K • GS21: C	• GT27: S (GT2705-V: R) • GT25-W: Q • GT25-S: R • GT25-V: R (GT2505-V: U) • GT2506HS-V: R • GT2505HS-V: U • GT23: N	SH-081220ENG-Z	January 2019
1.210U	• GT27: 01.28.*** • GT25: 01.28.*** • GT23: 01.28.*** • GT21: 01.30.*** • GS21: 01.30.***	• GT27: AL • GT25: AL • GT23: AL • GT21: K • GS21: C	• GT27: V • GT25: V • GT23: N		

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.211V	• GT27: 01.28.*** • GT25: 01.28.*** • GT23: 01.28.*** • GT21: 01.30.*** • GS21: 01.30.***	• GT27: AL • GT25: AL • GT23: AL • GT21: K • GS21: C	• GT27: V • GT25: V • GT23: N	SH-081220ENG-AA	April 2019
1.215Z	• GT27: 01.29.*** • GT25: 01.29.*** • GT23: 01.29.*** • GT21: 01.31.*** • GS21: 01.31.***	• GT27: AM • GT25: AM (GT2505-V: AL) • GT23: AL • GT21: L • GS21: C	• GT27: V • GT25: V • GT23: N		
1.217B	• GT27: 01.30.*** • GT25: 01.30.*** • GT23: 01.30.*** • GT21: 01.32.*** • GS21: 01.32.***	• GT27: AN • GT25: AN (GT2505-V: AL) • GT23: AL • GT21: L • GS21: C	• GT27: V • GT25: V • GT23: N	SH-081220ENG-AB	July 2019
1.220E	• GT27: 01.31.*** • GT25: 01.31.*** • GT23: 01.31.*** • GT21: 01.33.*** • GS21: 01.33.***	• GT27: AP • GT25: AP • GT23: AP • GT21: L • GS21: C	W		
1.225K	• GT27: 01.32.*** • GT25: 01.32.*** • GT23: 01.32.*** • GT21: 01.34.*** • GS21: 01.34.***	• GT27: AQ • GT25: AQ • GT23: AQ • GT21: L • GS21: C	• GT27: W • GT25: W (GT2505-V: X) • GT23: W	SH-081220ENG-AC	October 2019
1.230Q	• GT27: 01.33.*** • GT25: 01.33.*** • GT23: 01.33.*** • GT21: 01.35.*** • GS21: 01.35.***	• GT27: AR • GT25: AR • GT23: AR • GT21: L • GS21: C	• GT27: W • GT25: W (GT2505-V: X) • GT23: W	SH-081220ENG-AD	January 2020
1.231R	• GT27: 01.33.*** • GT25: 01.33.*** • GT23: 01.33.*** • GT21: 01.35.*** • GS21: 01.35.***	• GT27: AR • GT25: AR • GT23: AR • GT21: L • GS21: C	• GT27: W • GT25: W (GT2505-V: X) • GT23: W	SH-081220ENG-AE	April 2020
1.235V	• GT27: 01.34.*** • GT25: 01.34.*** • GT23: 01.34.*** • GT21: 01.36.*** • GS21: 01.36.***	• GT27: AS • GT25: AS • GT23: AS • GT21: M • GS21: C	Y		
1.236W	• GT27: 01.35.*** • GT25: 01.35.*** • GT23: 01.35.*** • GT21: 01.36.*** • GS21: 01.36.***	• GT27: AS • GT25: AS • GT23: AS • GT21: M • GS21: C	Y	SH-081220ENG-AF	May 2020
1.240A	• GT27: 01.36.*** • GT25: 01.36.*** • GT23: 01.36.*** • GT21: 01.37.*** • GS21: 01.37.***	• GT27: AT • GT25: AT • GT23: AT • GT21: M • GS21: C	Z	SH-081220ENG-AG	June 2020
1.241B	• GT27: 01.36.*** • GT25: 01.36.*** • GT23: 01.36.*** • GT21: 01.37.*** • GS21: 01.37.***	• GT27: AT • GT25: AT • GT23: AT • GT21: N • GS21: C	Z	SH-081220ENG-AH	October 2020
1.245F	• GT27: 01.37.*** • GT25: 01.37.*** • GT23: 01.37.*** • GT21: 01.38.*** • GS21: 01.38.***	• GT27: AU • GT25: AU • GT23: AU • GT21: N • GS21: C	AA		

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.250L	• GT27: 01.38.*** • GT25: 01.38.*** • GT23: 01.38.*** • GT21: 01.39.*** • GS21: 01.39.***	• GT27: AU • GT25: AU (GT25-W: AV) • GT23: AU • GT21: P • GS21: P (GS21-W: C)	AA	SH-081220ENG-AI	January 2021
1.255R	• GT27: 01.39.*** • GT25: 01.39.*** • GT23: 01.39.*** • GT21: 01.40.*** • GS21: 01.40.***	• GT27: AW • GT25: AW • GT23: AW • GT21: P • GS21: P (GS21-W: C)	• GT27: AB • GT25: AB • GT23: AA	SH-081220ENG-AJ	April 2021
1.260W	• GT27: 01.40.*** • GT25: 01.40.*** • GT23: 01.40.*** • GT21: 01.41.*** • GS21: 01.41.***	• GT27: AW • GT25: AW • GT23: AW • GT21: Q • GS21: Q (GS21-W: C)	• GT27: AB • GT25: AB • GT23: AA	SH-081220ENG-AK	July 2021
1.265B	01.42.***	• GT27: AW • GT25: AW • GT23: AW • GT21: Q • GS21: Q (GS21-W: C)	• GT27: AB • GT25: AB • GT23: AA	SH-081220ENG-AL	October 2021
1.267D	01.42.***	• GT27: AW • GT25: AW • GT23: AW • GT21: Q • GS21: Q (GS21-W: C)	• GT27: AB • GT25: AB • GT23: AA	SH-081220ENG-AM	January 2022
1.270G	01.43.***	• GT27: AX • GT25: AX • GT23: AX • GT21: Q • GS21: Q (GS21-W: C)	AC		
1.271H	• GT27: 01.43.*** (GT2705-V: 01.44.***) • GT25: 01.43.*** • GT23: 01.43.*** • GT21: 01.44.*** • GS21: 01.44.*** (GS21-W: 01.44.***)	• GT27: AX (GT2705-V: AY) • GT25: AX • GT23: AX • GT21: Q • GS21: Q (GS21-W: C)	AC	SH-081220ENG-AN	April 2022
1.275M	01.45.***				
1.280S	01.46.***	• GT27: AX (GT2705-V: AY) • GT25: AX • GT23: AX • GT21: Q • GS21: Q (GS21-W: C)	AC	SH-081220ENG-AP	July 2022
1.285X	01.47.***	• GT27: AX (GT2705-V: AY) • GT25: AX • GT23: AX • GT21: Q • GS21: Q (GS21-W: C)	AC	SH-081220ENG-AQ	October 2022
1.290C	01.48.***	• GT27: AZ • GT25: AZ • GT23: AZ • GT21: Q • GS21: Q (GS21-W: C)	AC	SH-081220ENG-AR	January 2023

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.295H	01.49.***	• GT27: AZ • GT25: AZ • GT23: AZ • GT21: Q • GS25: AZ • GS21: Q (GS21-W: C)	AD	SH-081220ENG-AS	April 2023
1.300N	01.50.***	• GT27: BA • GT25: BA • GT23: BA • GT21: Q • GS25: BA • GS21: Q (GS21-W: C)	AE	SH-081220ENG-AT	July 2023
1.302Q	01.51.***	• GT27: BA • GT25: BA • GT23: BA • GT21: R • GS25: BA • GS21: R (GS21-W: C)	AE	SH-081220ENG-AU	October 2023
1.305T	01.52.***	• GT27: BB • GT25: BB • GT23: BB • GT21: R • GS25: BB • GS21: R (GS21-W: C)			
1.310Y	01.53.***	• GT27: BB • GT25: BB • GT23: BB • GT21: R • GS25: BB • GS21: R (GS21-W: C)	AE	SH-081220ENG-AV	January 2024
1.315D	01.54.***	• GT27: BB • GT25: BB • GT23: BB • GT21: S • GS25: BB • GS21: S (GS21-W: C)	AE	SH-081220ENG-AW	April 2024
1.320J	01.55.***	• GT27: BB • GT25: BB • GT23: BB • GT21: T • GS25: BB • GS21: T (GS21-W: C)	AE	SH-081220ENG-AX	July 2024
1.325P	01.56.***	• GT27: BB • GT25: BB • GT23: BB • GT21: U • GS25: BB • GS21: U (GS21-W: C)	AE	SH-081220ENG-AY	October 2024
1.330U	01.57.***	• GT27: BB • GT25: BB • GT23: BB • GT21: U • GS25: BB • GS21: U (GS21-W: C)	AE	SH-081220ENG-AZ	January 2025

GT Designer3 version	System application version	BootOS version	CoreOS version	Version and revision date of this manual	
1.335Z	01.58.***	• GT27: BB • GT25: BB • GT23: BB • GT21: U • GS25: BB • GS21: U (GS21-W: C)	AE	SH-081220ENG-BA	April 2025
1.410C	01.60.***	• GT27: BB • GT25: BB • GT23: BB • GT21: U • GS25: BB • GS21: U (GS21-W: C)	AE	SH-081220ENG-BB	December 2025
1.412E	01.60.***	• GT27: BB • GT25: BB • GT23: BB • GT21: U • GS25: BB • GS21: U (GS21-W: C)	AE	SH-081220ENG-BC	April 2026

12.17.1 Supported hardware

Product name	Model	Applicable GT Designer3 version
GT27	GT2715-XTBA, GT2715-XTBD	1.112S
	GT2712-STBA, GT2712-STBD, GT2712-STWA, GT2712-STWD	1.100E
	GT2710-STBA, GT2710-STBD, GT2710-VTBA, GT2710-VTBD, GT2710-VTWA, GT2710-VTWD	1.100E
	GT2708-STBA, GT2708-STBD, GT2708-VTBA, GT2708-VTBD	1.100E
	GT2705-VTBD	1.130L
GT25	GT2512-STBA, GT2512-STBD	1.122C
	GT2512F-STNA, GT2512F-STND	1.150G
	GT2512-WXTBD, GT2512-WXTSD	1.250L
	GT2510-WXTBD, GT2510-WXTSD	1.175H
	GT2510-VTBA, GT2510-VTBD, GT2510-VTWA, GT2510-VTWD	1.112S
	GT2510F-VTNA, GT2510F-VTND	1.150G
	GT2508-VTBA, GT2508-VTBD, GT2508-VTWA, GT2508-VTWD	1.112S
	GT2508F-VTNA, GT2508F-VTND	1.150G
	GT2507-WTBD, GT2507-WTSD	1.175H
	GT2507T-WTSD	1.195D
	GT2505-VTBD	1.180N
	GT2506HS-VTBD	1.170C
	GT2505HS-VTBD	1.195D
GT23	GT2310-VNBA, GT2310-VNBD	1.100E
	GT2308-VNBA, GT2308-VNBD	1.100E
GT21	GT2107-WTBD, GT2107-WTSD	1.170C
	GT2105-QTBDS, GT2105-QMBDS	1.144A
	GT2104-RTBD	1.122C
	GT2104-PMBD, GT2104-PMBDS	1.131M
	GT2104-PMBDS2, GT2104-PMBLS	1.137T
	GT2103-PMBD, GT2103-PMBDS	1.112S
	GT2103-PMBDS2, GT2103-PMBLS	1.119Z
GS25	GS2512-WXTBD	1.295H
GS21	GS2110-WTBD-N, GS2107-WTBD-N	1.250L
	GS2110-WTBD, GS2107-WTBD	1.105K
GT SoftGOT2000	GT SoftGOT2000	1.100E
Bus connection unit	GT15-QBUS, GT15-QBUS2, GT15-75QBUSL, GT15-75QBUS2L	1.100E
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE	1.100E
MELSECNET/H communication unit	GT15-J71LP23-25, GT15-J71BR13	1.100E
CC-Link IE TSN communication unit	GT25-J71GN13-T2	1.217B BootOS: AN
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX	1.100E
CC-Link IE Field Network communication unit	GT15-J71GF13-T2	1.100E
CC-Link communication unit	GT16-J61BT13	1.100E
Wireless LAN communication unit	GT25-WLAN	1.108N BootOS: D

Product name	Model	Applicable GT Designer3 version
Serial multi-drop connection unit	GT01-RS4-M	1.100E
Field network adapter unit	GT25-FNADP	1.130L BootOS: N
Ethernet communication unit	GT25-J71E71-100	1.160S BootOS: Z
Connection conversion adapter	GT10-9PT5S	1.180N
RS-232/485 signal conversion adapter	GT14-9RS2T4-9P	1.180N
Printer unit	GT15-PRN	1.104J
Video/RGB input unit	GT27-V4R1-Z	1.100E
Video input unit	GT27-V4-Z	1.100E
RGB input unit	GT27-R2	1.130L BootOS: N
	GT27-R2-Z	1.100E
RGB output unit	GT27-ROUT	1.130L BootOS: N
	GT27-ROUT-Z	1.100E
Multimedia unit	GT27-MMR-Z	1.100E
Digital video output unit	GT27-VHOUT	1.205P BootOS: AK
Sound output unit	GT15-SOUT	1.100E
External I/O unit	GT15-DIO, GT15-DIOR	1.100E
SD card unit	GT21-03SDCD	1.112S
Connector conversion box	GT16H-CNB-42S	1.170C
	GT16H-CNB-37S, GT11H-CNB-37S	1.195D

12.17.2 Supported controller

For the controller supported by each communication driver, refer to the following.

➟12.2 Correspondence between the setting of [Controller Type] and the controller used

■1 Mitsubishi equipment

➟(1) Serial(MELSEC)(formerly Q/L/QnA/A CPU, QJ71C24, LJ71C24)
(2) Serial(MELSEC)(formerly MELSEC-Q/L/QnA)
(3) AJ71QC24, MELDAS C6*
(4) AJ71C24/UC24
(5) MELSEC-FX
(6) MELSEC-WS
(7) CC-Link(G4)
(8) MELSERVO-J4,J3,J2S/M,JE(formerly MELSERVO-J4,J3,J2S/M)
(9) Multidrop (Slave)
(10) FREQROL 500/700/800,SENSORLESS SERVO
(11) FREQROL 800
(12) FREQROL(Batch monitor)
(13) Laser Displacement Sensor MH11
(14) Ethernet(MITSUBISHI ELECTRIC), Gateway (formerly Ethernet (MELSEC), Q17nNC, CRnD-700, Gateway)
(15) Ethernet(FX),Gateway
(16) Ethernet(MELSERVO), Gateway
(17) Ethernet(FREQROL), Gateway
(18) Ethernet(FREQROL(Batch monitor)), Gateway
(19) Bus A/QnA
(20) Bus Q
(21) MELSECNET/H
(22) CC-Link IE TSN
(23) CC-Link IE Controller Network
(24) CC-Link IE Field Network
(25) CC-Link Ver.2(ID)

For the controllers compatible with GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(1) Serial(MELSEC)(formerly Q/L/QnA/A CPU, QJ71C24, LJ71C24)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.04.***	• The driver name has been changed. (Unified with MELSEC-Q/L/QnA.) • The connection to RCPU is supported. • The global label is supported.	
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	• The connection to MELSEC iQ-F is supported. • The connection to the Motion CPU (MELSEC iQ-R series) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.10.***	• The connection to RnPCPU is supported. • The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.12.***	The connection to RnENCPU is supported.	
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	• The connection to RnSFCPU is supported. • The connection to R64MTCPU is supported. • The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.15.*** GT21, GS21: 01.16.***	The connection to Q26DHCCPU-LS is supported.	
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	The connection to CNC C80 is supported.	
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The redundant system using RCPU is supported.	
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.20.*** GT21, GS21: 01.22.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.21.*** GT21, GS21: 01.23.***	The connection to CR800-R is supported.	
GT27, GT25, GT23: 01.24.*** GT21, GS21: 01.26.***	The connection to R00CPU, R01CPU, or R02CPU is supported.	
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
GT27, GT25, GT23: 01.26.*** GT21, GS21: 01.28.***	• The connection to SIL2 Process CPU is supported. • The connection to FR-E700-NE through a PLC CPU is supported. • Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
GT27, GT25, GT23: 01.27.*** GT21, GS21: 01.29.***	The connection to CR800-Q is supported.	
GT27, GT25, GT23: 01.31.*** GT21, GS21: 01.33.***	The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
GT27, GT25, GT23: 01.32.*** GT21, GS21: 01.34.***	The connection to FX5UJ is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported.	
GT27, GT25, GT23: 01.37.*** GT21, GS21: 01.38.***	Monitoring BL or BLS when connecting with FX5U or FX5UC is supported.	
01.43.***	• The connection to R102WCPU-W is supported. • The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.45.***	The connection to FX5S is supported.	

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(2) Serial(MELSEC)(formerly MELSEC-Q/L/QnA)

Version of communication driver	Added and edited function	Supported models
01.02.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.04.***	The driver name has been changed. (Unified with Q/L/QnA/A CPU, QJ71C24, LJ71C24)	

(3) AJ71QC24, MELDAS C6*

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(4) AJ71C24/UC24

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(5) MELSEC-FX

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.02.***	The connection to FX3GE is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(6) MELSEC-WS

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.05.*** GT21, GS21: 01.04.***	The connection to WS0-CPU3 is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(7) CC-Link(G4)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.15.*** GT21, GS21: 01.16.***	The connection to Q26DHCCPU-LS is supported.	
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.20.*** GT21, GS21: 01.22.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.43.***	The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	

(8) MELSERVO-J4,J3,J2S/M,JE(formerly MELSERVO-J4,J3,J2S/M)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.02.***	The connection to the MELSERVO-JE series is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.06.***	The connection to MR-J4-*A-RJ is supported.	
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	The connection to MR-J4-*A-RJ using the indexer positioning operation is supported.	

(9) Multidrop (Slave)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
Models other than GT21: 01.15.*** GT21: 01.16.***	The connection to Q26DHCCPU-LS is supported.	

(10)FREQROL 500/700/800,SENSORLESS SERVO

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.02.***	The connection to the FR-800 series or the sensorless servo is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	The connection to FR-B (A700 specification) or FR-B3 (A700 specification) is supported.	
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection to FR-A800 Plus, FR-B (A800 specification), or FR-B3 (A800 specification) is supported.	
GT27, GT25, GT23: 01.18.*** GT21, GS21: 01.20.***	The connection to FR-F800-E is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN or FR-E800 is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800 is supported.	

(11)FREQROL 800

Version of communication driver	Added and edited function	Supported models
01.02.***	The connection to the FR-800 series (Automatic connection and the use of the PLC function) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
01.10.***	The connection to the FR-800 series (Automatic connection and the use of the PLC function) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	The connection to FR-A800-E is supported.	
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection to FR-A800 Plus, FR-B (A800 specification), or FR-B3 (A800 specification) is supported.	
GT27, GT25, GT23: 01.18.*** GT21, GS21: 01.20.***	The connection to FR-F800-E is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN or FR-E800 is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800 is supported.	

(12)FREQROL(Batch monitor)

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.27.*** GT21, GS21: 01.29.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.31.*** GT21, GS21: 01.33.***	The connection to FR-A800 Plus (CRN and R2R) is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN or FR-E800 is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800 is supported.	

(13)Laser Displacement Sensor MH11

Version of communication driver	Added and edited function	Supported models
01.20.***	The connection to MH11CTMF-N, MH11CTMF-NNA, MH11CTMF-P, and MH11CTMF-PNA is supported. (Only available to GT2104-PMBDS2)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(14)Ethernet(MITSUBISHI ELECTRIC), Gateway (formerly Ethernet (MELSEC), Q17nNC, CRnD-700, Gateway)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.04.*** GT21, GS21: 01.03.***	• The connection to RCPU is supported. • The global label is supported.	
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	• The connection to MELSEC iQ-F is supported. • The connection to the Motion CPU (MELSEC iQ-R series) is supported.	
01.10.***	• The connection to RnPCPU is supported. • The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.12.***	The connection to RnENCPU is supported.	
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	• The connection to RnSFCPU is supported. • The connection to R64MTCPU is supported. • The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.15.*** GT21, GS21: 01.16.***	The connection to Q26DHCCPU-LS is supported.	
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	The connection to CNC C80 is supported.	
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	• The redundant system using RCPU is supported. • The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.20.*** GT21, GS21: 01.22.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
GT27, GT25, GT23: 01.20.*** GT21, GS21: 01.22.***	• The connection to CR800-D is supported. • The connection to CR800-R is supported.	
GT27, GT25, GT23: 01.22.*** GT21, GS21: 01.24.***	• The driver name has been changed.	
GT27, GT25, GT23: 01.24.*** GT21, GS21: 01.26.***	The connection to R00CPU, R01CPU, or R02CPU is supported.	
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	• The connection to MELIPC is supported. • The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
GT27, GT25, GT23: 01.26.*** GT21, GS21: 01.28.***	• The connection to SIL2 Process CPU is supported. • The connection to FR-E700-NE through a PLC CPU is supported. • Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
GT27, GT25, GT23: 01.27.*** GT21, GS21: 01.29.***	The connection to CR800-Q is supported.	
GT27, GT25, GT23: 01.31.*** GT21, GS21: 01.33.***	• The connection to the master station on a CC-Link IE TSN network is supported. • The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
GT27, GT25, GT23: 01.32.*** GT21, GS21: 01.34.***	The connection to FX5UJ is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	• The connection to LHCPU is supported. • The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
GT27, GT25, GT23: 01.34.*** GT21, GS21: 01.36.***	The connection to Motion module is supported. (GT27, GT25, GT23)	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	• The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported. • The connection to MR-J5-G(-RJ), MR-J5W2-G, or MR-J5W3-G through a Motion module is supported.	
GT27, GT25, GT23: 01.37.*** GT21, GS21: 01.38.***	• Monitoring BL or BLS when connecting with FX5U or FX5UC is supported. • The connection to MR-JET-G through a Motion module is supported.	
GT27, GT25, GT23: 01.40.*** GT21, GS21: 01.41.***	• The connection to the Motion module (RD78G□) through the C Controller module (MELSEC iQ-R series) is supported. • The connection to the RnPCPU and C Controller module (MELSEC iQ-R series) using the CC-Link IE TSN master/local module (RJ71GN11-T2) or the Motion module (RD78G□) is supported.	
01.42.***	• The connection to FX5U or FX5UC through a Motion module (FX5-□SSC-G) is supported. • The connection to MR-J5-G(-RJ), MR-J5W2-G, MR-J5W3-G or MR-JET-G through a Motion module (FX5-□SSC-G) is supported.	

Version of communication driver	Added and edited function	Supported models
01.43.***	• The connection to R102WCPU-W is supported. • The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported. • The connection to MR-J5D-G through a Motion module (FX5-□SSC-G or RD78G□) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.45.***	• The connection to MR-J5-G(-RJ), MR-J5W2-G, MR-J5W3-G, or MR-JET-G through the CC-Link IE TSN master/local module (RJ71GN11-T2) is supported. • The connection to FX5S is supported..	
01.46.***	The connection to RnCPU or RnENCPU through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported.	
01.47.***	The connection to MR-J5-B through a Motion controller (RnMTCPU) or a Motion module (RD77MS) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	• The connection to MELSEC MX Controllers (MX-R and MX-F Models) is supported. • The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(15)Ethernet(FX),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	

(16)Ethernet(MELSERVO), Gateway

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.23.*** GT21, GS21: 01.25.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.40.*** GT21, GS21: 01.41.***	The connection to MR-J5-□G(-RJ), MR-J5W-□G, and MR-JET-□G is supported	
01.43.***	The connection to MR-J5D-G is supported.	

(17)Ethernet(FREQROL), Gateway

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.31.*** GT21, GS21: 01.33.***	The connection to FR-A800 Plus (CRN and R2R) is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN or FR-E800-E is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800-E is supported.	

(18)Ethernet(FREQROL(Batch monitor)), Gateway

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.26.*** GT21, GS21: 01.28.***	The connection to FR-E700-NE is supported.	
GT27, GT25, GT23: 01.31.*** GT21, GS21: 01.33.***	The connection to FR-A800 Plus (CRN and R2R) is supported.	
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	The connection to FR-A800-GN or FR-E800-E is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FR-A800 Plus (AWH and LC) is supported.	
GT27, GT25, GT23: 01.58.*** GT21, GS21: 01.57.***	The connection to FR-D800-E is supported.	

(19)Bus A/QnA

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(20)Bus Q

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.14.***	The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
01.15.***	The connection to Q26DHCCPU-LS is supported.	
01.19.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
01.20.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.25.***	The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
01.26.***	The connection to FR-E700-NE is supported.	
01.27.***	The connection to CR800-Q is supported.	
01.31.***	The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
01.33.***	The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
01.36.***	The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported.	
01.43.***	The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.58.***	The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(21)MELSECNET/H

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.14.***	The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
01.15.***	The connection to Q26DHCCPU-LS is supported.	
01.19.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
01.20.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.25.***	The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
01.26.***	Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
01.27.***	The connection to CR800-Q is supported.	
01.31.***	The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
01.33.***	The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
01.36.***	The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported.	
01.43.***	The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.58.***	The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(22)CC-Link IE TSN

Version of communication driver	Added and edited function	Supported models
01.30.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.32.***	• Transient transmission is supported. • The connection to MR-J4-B(-RJ) is supported.	
01.33.***	• The connection to FR-A800, FR-A800-GN, FR-F800, or FR-E800-E is supported. • The connection to a Mitsubishi Electric inverter through a PLC CPU is supported.	
01.36.***	The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported.	
01.37.***	• Monitoring BL or BLS when connecting with FX5U or FX5UC is supported. • Ring connection is supported. • The connection to R08SFCPU, R16SFCPU, R32SFCPU, or R120SFCPU is supported.	
01.40.***	The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.43.***	The connection to R102WCPU-W is supported.	
01.46.***	• The connection to RnCPU, RnENCPU, or RnSFCPU through the CC-Link IE TSN Motion module (RD78G(H)) is supported. • The connection to RnCPU or RnENCPU through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported.	
01.47.***	The connection to MR-J5(W)-□B(-RJ) through a Motion controller or a Simple Motion module is supported.	
01.49.***	• The connection to FR-A800 Plus (GF and E-R2R) through the CC-Link IE TSN Motion module (RD78G(H)) is supported. • The connection to FR-A800 Plus (GF and E-R2R) through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported. • The connection to MR-JET-G through the CC-Link IE TSN Plus master/local module (RJ71GN11-EIP) is supported.	
01.58.***	• The connection to MELSEC MX Controllers (MX-R and MX-F Models) is supported. • The connection to FR-D800-E is supported. • The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(23)CC-Link IE Controller Network

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.04.***	The connection to RCPU is supported.	
01.10.***	• The connection to RnPCPU is supported. • The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.12.***	The connection to RnENCPU is supported.	
01.14.***	• The connection to RnSFCPU is supported. • The connection to R64MTCPU is supported. • The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
01.15.***	The connection to Q26DHCCPU-LS is supported.	
01.16.***	The connection to CNC C80 is supported.	
01.17.***	The redundant system using RCPU is supported.	
01.19.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
01.20.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.21.***	The connection to CR800-R is supported.	
01.25.***	The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
01.26.***	• The connection to SIL2 Process CPU is supported. • The connection to FR-E700-NE through a PLC CPU is supported. • Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
01.27.***	The connection to CR800-Q is supported.	
01.31.***	The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
01.33.***	The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
01.36.***	The connection to FR-A800 Plus (AWH and LC) through a PLC CPU is supported.	
01.43.***	• The connection to R102WCPU-W is supported. • The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.58.***	• The connection to MELSEC MX Controllers (MX-R and MX-F Models) is supported. • The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(24)CC-Link IE Field Network

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.04.***	The connection to RCPU is supported.	
01.10.***	• The connection to RnPCPU is supported. • The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.12.***	The connection to RnENCPU is supported.	
01.14.***	• The connection to RnSFCPU is supported. • The connection to R64MTCPU is supported. • The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
01.15.***	The connection to Q26DHCCPU-LS is supported.	
01.16.***	The connection to CNC C80 is supported.	
01.17.***	• The connection to MELSEC iQ-F series is supported. • The redundant system using RCPU is supported.	
01.19.***	The connection to MR-J4-GF(-RJ) through a motion controller or a simple motion module is supported.	
01.20.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.21.***	The connection to CR800-R is supported.	
01.25.***	• The connection to MELIPC is supported. • The connection to FR-A800, FR-A800-E, FR-F800, FR-F800-E, or FR-A800-GF through a PLC CPU is supported.	
01.26.***	• The connection to SIL2 Process CPU is supported. • The connection to FR-E700-NE through a PLC CPU is supported. • Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
01.27.***	The connection to CR800-Q is supported.	
01.31.***	The connection to FR-A800 Plus (CRN and R2R) through a PLC CPU is supported.	
01.32.***	The connection to FX5UJ is supported.	
01.33.***	The connection to FR-A800-GN, FR-E800, or FR-E800-E through a PLC CPU is supported.	
01.36.***	The connection to FR-A800-LC through a PLC CPU is supported.	
01.37.***	Monitoring BL or BLS when connecting with FX5U or FX5UC is supported.	
01.43.***	The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.58.***	• The connection to MELSEC MX Controllers (MX-R and MX-F Models) is supported. • The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

(25)CC-Link Ver.2(ID)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	The connection to Q24DHCCPU-VG is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.04.***	The connection to RCPU is supported.	
01.10.***	• The connection to RnPCPU is supported. • The connection to the C Controller module (MELSEC iQ-R series) is supported.	
01.12.***	The connection to RnENCPU is supported.	
01.14.***	• The connection to RnSFCPU is supported. • The connection to R64MTCPU is supported. • The connection to MR-J4(W)-*B(-RJ) or MR-JE-*B through a motion controller or a simple motion module is supported.	
01.15.***	The connection to Q26DHCCPU-LS is supported.	
01.16.***	The connection to CNC C80 is supported.	
01.17.***	The redundant system using RCPU is supported.	
01.20.***	The connection to MR-JE-*BF through a motion controller or a simple motion module is supported.	
01.21.***	The connection to CR800-R is supported.	
01.26.***	• The connection to SIL2 Process CPU is supported. • The connection to FR-E700-NE through a PLC CPU is supported. • Automatically switching the monitoring target while the GOT is monitoring the equipment on a different network through the Redundant CPU on a relay station is supported.	
01.27.***	The connection to CR800-Q is supported.	
01.32.***	The connection to FX5UJ is supported.	
01.43.***	• The connection to R102WCPU-W is supported. • The connection to MR-J5(W)-□B(-RJ) through a Motion controller (Q17nDSCPU) or a Simple Motion module (QD77MS) is supported.	
01.58.***	• The connection to MELSEC MX Controllers (MX-R and MX-F Models) is supported. • The connection to FR-D800 or FR-D800-E through a PLC CPU is supported.	

■2 Non-Mitsubishi products

➟(1) IAI X-SEL
(2) IAI robocylinder
(3) AZBIL SDC/DMC
(4) AZBIL DMC50
(5) OMRON SYSMAC
(6) Ethernet(OMRON),Gateway
(7) Ethernet(OMRON NJ/NX), Gateway
(8) OMRON THERMAC/INPANEL NEO
(9) OMRON Digital Temperature Controller
(10) Serial(KEYENCE)(formerly KEYENCE KV-700/1000)
(11) Ethernet(KEYENCE),Gateway
(12) KOYO KOSTAC/DL
(13) JTEKT TOYOPUC-PC
(14) SHARP JW
(15) SHINKO TECHNOS CONTROLLER
(16) CHINO MODBUS device(formerly CHINO Controllers (MODBUS)))
(17) TOSHIBA PROSEC T/V
(18) Ethernet(TOSHIBA nv), Gateway
(19) SHIBAURA MACHINE TCmini(formerly TOSHIBA MACHINE TCmini)
(20) Panasonic MINAS A4
(21) Panasonic MINAS A5
(22) PANASONIC MEWNET-FP
(23) PANASONIC MEWTOCOL-7
(24) Ethernet(HITACHI IES), Gateway
(25) HITACHI IES HIDIC H(formerly HITACHI HIDIC H)
(26) HITACHI IES HIDIC H(Protocol2)(formerly HITACHI HIDIC H (Protocol2))
(27) Ethernet(HITACHI), Gateway
(28) HITACHI S10mini/S10V
(29) Hirata HNC
(30) FUJI Temperature Controller/Digital Controller(formerly FUJI PXR/PXG/PXH)
(31) FUJI MICREX-F
(32) FUJI MICREX-SX SPH
(33) Ethernet(FUJI),Gateway
(34) Muratec MPC
(35) Muratec MCR
(36) YASKAWA GL
(37) YASKAWA CP9200 (H)
(38) YASKAWA CP9300MS (MC compatible)
(39) YASKAWA MP2000/MP900/CP9200SH
(40) Ethernet(YASKAWA),Gateway
(41) Ethernet(YASKAWA MP3000), Gateway
(42) Ethernet(YASKAWA High Speed Ethernet Server), Gateway
(43) YOKOGAWA FA500/FA-M3/STARDOM
(44) YOKOGAWA GREEN/UT100/UT2000/UTAdvanced
(45) Ethernet(YOKOGAWA),Gateway
(46) RKC SR Mini HG (MODBUS)
(47) AB SLC500 AB 1:N connection
(48) AB MicroLogix
(49) Ethernet(AB MicroLogix), Gateway
(50) AB Control/CompactLogix
(51) Ethernet(AB), Gateway
(52) Ethernet(AB Tag), Gateway
(53) GE (SNP-X)
(54) Ethernet(LS Industrial Systems XGK), Gateway
(55) LS Industrial Systems MASTER-K
(56) MEI Nexgenie
(57) SICK Flexi Soft
(58) SIEMENS S7-300/400
(59) SIEMENS S7-200

(60) Ethernet(SIEMENS S7),Gateway
(61) Ethernet(SIEMENS OP),Gateway
(62) Ethernet(CC-Link IE Field Network Basic)
(63) Ethernet(SLMP), Gateway
(64) MODBUS/RTU Master(formerly MODBUS/RTU)
(65) MODBUS/TCP Master, Gateway(formerly MODBUS/TCP, Gateway)
(66) MODBUS/RTU Slave
(67) MODBUS/TCP Slave, Gateway
(68) DeviceNet
(69) PROFIBUS DP
(70) Computer
(71) Ethernet(MICROCOMPUTER)

For the controllers compatible with GT SoftGOT2000, refer to the following.

➟GT SoftGOT2000 Version1 Operating Manual

(1) IAI X-SEL

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.56.***	The connection to RSEL is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(2) IAI robocylinder

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.33.*** GT21, GS21: 01.35.***	• The connection to a CB type controller (PCON-CB, PCON-CFB, ACON-CB, or SCON-CB) is supported. • The connection to the ELECYLINDER EC series is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The driver name has been changed.	
GT27, GT25, GT23: 01.40.*** GT21, GS21: 01.41.***	The connection to the RCON series is supported.	

(3) AZBIL SDC/DMC

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(4) AZBIL DMC50

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.02.***	The connection to AHC2001 is supported.	
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(5) OMRON SYSMAC

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to CP2E-E, CP2E-S, or CP2E-N is supported.	

(6) Ethernet(OMRON),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
01.06.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to CP2E-N is supported.	

(7) Ethernet(OMRON NJ/NX), Gateway

Version of communication driver	Added and edited function	Supported models
01.20.***	The connection to the NJ series (NJ501-□□□□, NJ301-□□□□, and NJ101-□□□□) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.22.***	The connection using the CJ series EtherNet/IP unit (CJ1W-EIP21) is supported.	
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	• The driver name has been changed. • The connection to the NX series (NX1P2-□□□□□□□) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.48.***	The driver name has been changed.	
01.56.***	The connection to the NX series (NX502-□□□□) is supported.	
01.60.***	The connection using the CJ series EtherNet/IP unit (CJ1W-EIP21S) is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(8) OMRON THERMAC/INPANEL NEO

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.15.*** GT21, GS21: 01.16.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(9) OMRON Digital Temperature Controller

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The connection to the THERMAC NEO series (E5AN-H, E5CN-H, E5EN-H, E5CN-HT, E5AN-HT, and E5EN-HT), E5□C series, and THERMAC R series is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	The connection to the E5□D series is supported.	

(10)Serial(KEYENCE)(formerly KEYENCE KV-700/1000)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	• The driver name has been changed. • The connection to the KV-7000 series is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to the KV-8000 series is supported.	

(11)Ethernet(KEYENCE),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The connection to the KV-7000 series is supported.	
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to the KV-8000 series is supported.	

(12)KOYO KOSTAC/DL

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(13)JTEKT TOYOPUC-PC

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(14)SHARP JW

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(15)SHINKO TECHNOS CONTROLLER

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(16)CHINO MODBUS device(formerly CHINO Controllers (MODBUS)))

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.39.***	The driver name has been changed.	

(17)TOSHIBA PROSEC T/V

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(18)Ethernet(TOSHIBA nv), Gateway

Version of communication driver	Added and edited function	Supported models
01.12.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(19)SHIBAURA MACHINE TCmini(formerly TOSHIBA MACHINE TCmini)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.06.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.36.***	The driver name has been changed.	

(20)Panasonic MINAS A4

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(21)Panasonic MINAS A5

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(22)PANASONIC MEWNET-FP

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.36.*** GT21, GS21: 01.37.***	The connection to FP0H is supported.	
GT27, GT25, GT23: 01.40.*** GT21, GS21: 01.41.***	The connection to FP-XH is supported.	

(23)PANASONIC MEWTOCOL-7

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(24)Ethernet(HITACHI IES), Gateway

Version of communication driver	Added and edited function	Supported models
01.39.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(25)HITACHI IES HIDIC H(formerly HITACHI HIDIC H)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.39.***	The driver name has been changed.	

(26)HITACHI IES HIDIC H(Protocol2)(formerly HITACHI HIDIC H (Protocol2))

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.39.***	The driver name has been changed.	

(27)Ethernet(HITACHI), Gateway

Version of communication driver	Added and edited function	Supported models
01.37.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.39.***	The connection to the S10VE series is supported.	

(28)HITACHI S10mini/S10V

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

Version of communication driver	Added and edited function	Supported models
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(29)Hirata HNC

Version of communication driver	Added and edited function	Supported models
01.20.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(30)FUJI Temperature Controller/Digital Controller(formerly FUJI PXR/PXG/PXH)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.23.*** GT21, GS21: 01.25.***	• The driver name has been changed. • The connection to the following temperature controllers is supported: PXF series (PXF4, PXF5, and PXF9) and PUM series (PUMA and PUMB).	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(31)FUJI MICREX-F

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(32)FUJI MICREX-SX SPH

Version of communication driver	Added and edited function	Supported models
01.09.***	The connection to MICREX-SX is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(33)Ethernet(FUJI),Gateway

Version of communication driver	Added and edited function	Supported models
01.09.***	The connection to MICREX-SX is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(34)Muratec MPC

Version of communication driver	Added and edited function	Supported models
01.23.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(35)Muratec MCR

Version of communication driver	Added and edited function	Supported models
01.23.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(36)YASKAWA GL

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(37)YASKAWA CP9200 (H)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(38)YASKAWA CP9300MS (MC compatible)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(39)YASKAWA MP2000/MP900/CP9200SH

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(40)Ethernet(YASKAWA),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	

(41)Ethernet(YASKAWA MP3000), Gateway

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.14.*** GT21, GS21: 01.15.***	The connection to YASKAWA MP3000 series is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	

(42)Ethernet(YASKAWA High Speed Ethernet Server), Gateway

Version of communication driver	Added and edited function	Supported models
01.42.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.46.***	The connection to the YRC1000micro is supported.	

(43)YOKOGAWA FA500/FA-M3/STARDOM

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.06.***	The FA-M3 series supports the multiple CPU system.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(44)YOKOGAWA GREEN/UT100/UT2000/UTAdvanced

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(45)Ethernet(YOKOGAWA),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.06.***	The FA-M3 series supports the multiple CPU system.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.17.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	

(46)RKC SR Mini HG (MODBUS)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.25.***	The connection to the SRJ series (J-TI-A/B) is supported.	
01.36.***	The connection to the PZ series (PZ400/PZ900) and GZ series (GZ400/GZ900) is supported.	

(47)AB SLC500 AB 1:N connection

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.10.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(48)AB MicroLogix

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.10.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(49)Ethernet(AB MicroLogix), Gateway

Version of communication driver	Added and edited function	Supported models
01.26.**	The connection to the AB MicroLogix series via EtherNet/IP is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.48.***	The driver name has been changed.	

(50)AB Control/CompactLogix

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(51)Ethernet(AB), Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.16.*** GT21, GS21: 01.18.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
01.48.***	The driver name has been changed.	

(52)Ethernet(AB Tag), Gateway

Version of communication driver	Added and edited function	Supported models
01.05.***	The AB native tag is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.17.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
01.45.***	Bit-specified word devices of DINT, REAL, and UDINT data types are supported.	
01.48.***	The driver name has been changed.	

(53)GE (SNP-X)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(54)Ethernet(LS Industrial Systems XGK), Gateway

Version of communication driver	Added and edited function	Supported models
01.42.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(55)LS Industrial Systems MASTER-K

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.10.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(56)MEI Nexgenie

Version of communication driver	Added and edited function	Supported models
01.06.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(57)SICK Flexi Soft

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.05.*** GT21, GS21: 01.04.***	The connection to FX3-CPU320002 is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(58)SIEMENS S7-300/400

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.05.*** GT21, GS21: 01.04.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(59)SIEMENS S7-200

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	The connection to the SIMATIC S7-200 SMART series and the SIMATIC S7-200 CN series is supported. (GT21)	

(60)Ethernet(SIEMENS S7),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.17.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	

(61)Ethernet(SIEMENS OP),Gateway

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.12.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.25.*** GT21, GS21: 01.27.***	The connection to the SIMATIC S7-200 SMART series and the SIMATIC S7-200 CN series is supported. (GT21)	
GT27, GT25, GT23: 01.39.*** GT21, GS21: 01.40.***	• The connection to the SIMATIC S7-1500 series is supported. • The connection to the SIMATIC S7-200 CN series is supported. (GT27, GT25, and GT23)	

(62)Ethernet(CC-Link IE Field Network Basic)

Version of communication driver	Added and edited function	Supported models
01.18.***	The CC-Link IE Field Network Basic connection is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.20.*** GT21, GS21: 01.22.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(63)Ethernet(SLMP), Gateway

Version of communication driver	Added and edited function	Supported models
01.12.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.15.*** GT21, GS21: 01.16.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.31.*** GT21, GS21:01.33.***	The connection to the master station on a CC-Link IE TSN network is supported.	

(64)MODBUS/RTU Master(formerly MODBUS/RTU)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The driver name has been changed.	

(65)MODBUS/TCP Master, Gateway(formerly MODBUS/TCP, Gateway)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.08.*** GT21, GS21: 01.09.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.17.*** GT21, GS21: 01.19.***	The connection using the GOT Ethernet communication unit is supported. (GT27 and GT25 only)	
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The driver name has been changed.	
GT27, GT25, GT23: 01.26.*** GT21, GS21: 01.28.***	The connection to multiple controllers with unit ID 255 is supported.	

(66)MODBUS/RTU Slave

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The MODBUS/RTU slave connection is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(67)MODBUS/TCP Slave, Gateway

Version of communication driver	Added and edited function	Supported models
GT27, GT25, GT23: 01.19.*** GT21, GS21: 01.21.***	The MODBUS/TCP slave connection is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(68)DeviceNet

Version of communication driver	Added and edited function	Supported models
01.10.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.16.***	The HMS communication module is supported. (Product name: ABCC-M40-DEV, article number: AB6909-C)	

(69)PROFIBUS DP

Version of communication driver	Added and edited function	Supported models
01.10.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.16.***	The HMS communication module is supported. (Product name: ABCC-M40-DPV1, article number: AB6910-C)	

(70)Computer

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.03.*** GT21, GS21: 01.02.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

(71)Ethernet(MICROCOMPUTER)

Version of communication driver	Added and edited function	Supported models
01.00.***	- (first edition)	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.03.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
01.12.***	-	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000
GT27, GT25, GT23: 01.26.***	Specifying a destination module I/O number to be returned from the GOT to the host station is supported.	GT27 GT25 GT23 GT21 GS25 GS21 SoftGOT2000

12.17.3 Functions of GT Designer3

■1 Functions for the project

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
The interaction with iQ Works is supported.	1.104J
Project format "*.GTCNV" has been added.	1.108N
Registering device comments or device definitions as a comment group is supported.	
Importing global labels is supported.	1.117X
Importing AB native tags is supported.	1.118Y
Verifying the items set in each screen (screen property, object, or others) is supported.	
Labels (GT Designer3) are supported.	1.122C
Assigning a security key is supported.	
Global labels created with MT Developer2 is supported.	1.123D
The system label Ver.2 is supported.	
Printing label group data is supported.	1.126G
String-type system labels are supported.	1.144A
Importing labels created on GX Works3, GX Works2, or MT Developer2 as labels (GT Designer3) is supported.	
Array-type labels (GT Designer3) are supported.	
Copying data from a cell in the [Label Group] window to one in Excel (and vice versa) is supported.	
Outputting the MELSOFT iQ AppPortal information file is supported.	1.155M
The bit specification of word devices for system labels or labels (GT Designer3) is supported.	1.170C
System labels Ver.1 and Ver.2 of the Unicode string type are supported.	1.175H
Global labels of the string type or Unicode string type are supported.	
String-type AB native tags are supported.	
Importing OMRON NJ tags is supported.	
Applying the offset setting to OMRON NJ tags is supported.	1.185T
Importing global labels from a GX Works3 project is supported.	1.195D
Registering the labels (GT Designer3) created from profile (CSP+) data is supported.	
Importing OPC UA tags is supported.	1.215Z
The double-precision real number system labels are supported.	1.235V
The double-precision real number global labels are supported.	
The global labels of Motion Control Setting Function are supported.	
The 8-bit or 64-bit labels (GT Designer3) are supported.	
The 8-bit or 64-bit OMRON NJ tags are supported.	

■2 Functions for editing the screen, figure, and object

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
• The objects support registering the characters (text type [Text]) for a comment group and making the registered comment be automatically referred. • For the following figures, the setting items have been divided into tabs. Line, freeform line, rectangle, polygon, circle, and piping	1.112S
The copy direction setting is supported for the consecutive copy.	1.130L
Reading 24-bit PNG files is supported.	1.155M
Anchoring a figure or object to align figures and objects is supported.	1.170C
Editing objects with fixed shape frame widths is supported.	1.175H

Added and edited function	Version corresponding with GT Designer3
Customizing screen designs is supported.	1.215Z
Expanding the base screen size is supported.	1.225K
Incrementing the comment group number, comment number, user ID, and move destination ID using the consecutive copy function are supported.	1.235V
Copying a base screen or window screen to a mobile screen is supported.	1.265B

■3 Functions for the search and replacement

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
• Device list, text list Report screens have been added as a search target. • Batch edit Report screens have been added as a batch edit target.	1.104J
Importing and exporting the device batch edit data are supported.	1.108N
Setting the display type in the device batch edit is supported.	1.126G
Displaying the data browser from the [Search/Replace] menu is supported.	1.130L
Listing the OMRON NJ tags in the device list is supported.	1.175H
OMRON NJ tags have been added as a batch edit target.	
The unit numbers and axis numbers have been targeted for the batch edit.	1.185T
Searching the whole project at a batch edit is supported.	
Searching the specified scripts at a batch edit of channel numbers is supported.	
Searching the scripts of a script parts object at a batch edit is supported.	1.195D
The device search is supported.	1.205P
Listing OPC UA tags in the device list is supported.	1.215Z
OPC UA tags have been added as a batch edit target.	
The device search supports exporting the search result data.	
8-bit and 64-bit devices have been added as search targets.	1.235V
Listing 8-bit or 64-bit devices in the device list are supported.	
8-bit and 64-bit devices have been added as a device batch edit.	
[IP Address List] window is supported.	
Displaying a comment (character string) on the data browser is supported.	1.260W

■4 Functions for the display

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
Switching the states of the object displayed on the screen editor is supported.	1.108N
The [Verify Result] window is supported.	1.118Y
The display language switching is supported.	1.122C
The buttons to expand and collapse all attribute items have been added to the property sheet.	1.134Q
Displaying guidelines for a table figure is supported.	1.144A
Displaying guidelines for enlarging or reducing an object is supported.	
[25%] and [Whole Screen] have been added to specify the zoom magnification.	1.165X
Displaying the scroll bar areas for editing the expanded base screens is supported.	1.225K
[IP Address List] window is supported.	1.235V

■5 Functions for communication with GOT

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E

Added and edited function	Version corresponding with GT Designer3
The communication between the GOT and a personal computer by the wireless LAN function is supported.	1.108N
Installing CoreOS with a data storage is supported.	
The communication between the GOT and a personal computer via an RCPU is supported.	1.118Y
Writing resource data is supported.	1.165X
The [CSP+ for iQSS Data Write] command has been moved from the [Tools] menu.	
Writing, reading, and verifying data through the Ethernet extended port or Ethernet standard port 2 of the GOT are supported.	1.175H
Writing package data to multiple GOTs in one go is supported.	1.185T

■6 Functions for the window display

Added and edited function	Version corresponding with GT Designer3
Displaying errors recorded in the GOT and their causes and corrective actions is supported.	1.130L
The GOT internal device monitor is supported.	1.175H

■7 Tools and option

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
The simulation function supports MT Simulator2.	1.108N
Restructuring the project data when saving the project is supported.	1.112S
Writing iQSS profile data is supported.	1.126G
The simulation function supports GT2705-V.	1.130L
The simulation function supports referring to resource data.	
The simulation function supports GT2104-P.	1.131M
The simulation function supports GT2105-Q.	1.144A
Simulating the connection to RnSFCPU is supported.	
Simulating the connection to R64MTCPU is supported.	
The [iQSS Profile Data Write] command in the menu is renamed with [CSP+ for iQSS Data Write].	1.150G
The [CSP+ for iQSS Data Write] command has been moved to the [Communication] menu.	1.165X
Disabling IME to specify a device is supported.	
The simulation function supports GT2107-W.	1.170C
The simulation function supports using a keyboard in the simulation of GT21.	
The simulation function supports importing or exporting a free registration list of the device monitor function.	
The simulation function supports GT25-W.	1.175H
The simulation function supports global labels when GX Simulator3 is connected.	1.190H
Specifying CPU numbers and module numbers with devices is supported.	1.215Z
Retaining GOT internal device data at intervals is supported.	
The device monitor of the simulation function supports monitoring of 8-bit and 64-bit devices.	1.235V
The GOT offline monitor is supported.	1.236W
The simulation function supports GT2512-WX and GS21-W-N.	1.250L
Respectively displaying the sizes of GT SoftGOT2000 screen data and project data stored in the storage memory (ROM) and in the operation memory (RAM) is supported.	1.280S

■8 Functions for the window display

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E

■9 Help

Added and edited function	Version corresponding with GT Designer3
- (first edition)	1.100E
Displaying Help with e-Manual Viewer is supported.	1.155M

■10 Others

Added and edited function	Version corresponding with GT Designer3
GT Designer3 is compatible with Windows8.1.	1.108N
The input assist supports the system label.	
The input assist supports the device definitions for FR-A800, FR-A700, FR-F700, FR-F700P, FR-F700PJ, FR-E700, and sensorless servo.	1.112S
The input assist supports the global label.	1.117X
The input assist supports the device definitions for FR-F800.	
The input assist supports the AB native tag.	1.118Y
The input assist supports the label (GT Designer3).	1.122C
Support for GT Designer3 running on Windows XP Service Pack2 and Windows 2000 has ended.	
Narrowing the search scope of the sample projects by category is supported when a screen is created by utilizing existing data.	1.130L
GT Designer3 is compatible with Windows 10.	1.155M
GT Designer3 is compatible with the Italian version of Windows OSs.	1.165X
The input assist supports the bit specification of word devices for system labels or labels (GT Designer3).	1.170C
The GOT Ethernet setting has been added to the new project wizard.	1.175H
The input assist supports the OMRON NJ tag.	
Editing a sound file by using speech synthesis is supported.	
The graphics setting has been added to the new project wizard.	1.185T
The usability of the screen utilization has been improved.	
Utilizing an add-on project is supported.	1.205P
The input assist supports OPC UA tags.	1.215Z
Specifying CPU numbers and module numbers with devices is supported.	
The input assist supports the device definitions for FR-A800 Plus (CRN and R2R).	1.225K
Notifying a change in the global labels is supported.	
MELSEC iQ-L supports the global label.	1.230Q
The input assist supports the device definitions for MELSEC iQ-L and FR-E800 series.	
Support for GT Designer3 running on Windows XP and Windows Vista has ended.	1.235V
GT Designer3 is compatible with Windows 11.	1.275M
Support for GT Designer3 running on Windows 8.1, Windows 8, and Windows 7 has ended.	1.295H
GT Designer3 no longer supports Windows 10.	1.410C

12.17.4 Drawing Setting

■1 Functions for the edit and settings of the screen

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
Report function • Settings for the report screen are added.	• Standard system application • Report • Printer (PictBridge) • Printer (Serial)	01.01.***	1.104J
GOT type setting • GT27**-X, GT25**-V, and GT2103-P have been added as a GOT type. • The setup direction setting has been added. • The backlight color setting for GT21 has been added. • The graphics accelerator setting has been added.	Standard system application • Standard system application • Graphic Acceleration Driver (only for using the graphics accelerator)	01.03.***	1.112S
	CoreOS (only for using the graphics accelerator)	E	
Base screen and window screen • The setting range of the screen number has been changed. (0 to 32767)	Standard system application	01.03.***	1.112S
GOT type setting • The vertical installation setting for GT27, GT25, and GT23 is supported.	Standard system application	01.04.***	1.117X
GOT type setting • GT25**-S and GT2104-R have been added as a GOT type.	Standard system application	01.06.***	1.122C
Report function • The maximum number of settable report screens has been changed to 32. • The maximum number of settable data collection times has been changed to 1000. • The maximum number of settable repeat times has been changed to 999. • The footer is supported. (Not applicable to GT21) • The alarm print is supported. (Not applicable to GT21) • The text print is supported. (Not applicable to GT21)	• Standard system application • Report	01.10.***	1.130L
GOT type setting • GT2705-V has been added as a GOT type. • Switching between the Simplified Chinese character codes used for the outline font is supported. • A setting to use the easily-distinguishable font for the numeral zero and the capital letter I is supported.	• Standard system application • Standard Font • Outline Font (Gothic) (Chinese(Simplified)) • Outline Font (Kaisho) (Chinese(Simplified))	01.10.***	1.130L
GOT type setting • GT2104-P has been added as a GOT type.	Standard system application	01.11.***	1.131M
Report function • GT21 supports the footer. • GT21 supports the alarm print. • GT21 supports the text print.	• Standard system application • Report	01.12.***	1.134Q
Superimpose window • A setting to close a target window upon switching base screens has been added.	Standard system application	01.12.***	1.134Q
GOT type setting • GT2105-Q has been added as a GOT type.	Standard system application	01.14.***	1.144A
GOT Mobile function • The mobile screen setting has been added.	• Standard system application • GOT Mobile Setting	01.14.***	1.144A
	CoreOS	L	
GOT type setting • GT2107-W has been added as a GOT type. • Selecting a typeface for the outline font is supported. (Only available to GT2107-W)	Standard system application	01.19.***	1.170C
GOT type setting • GT25**-WX and GT25**-W have been added as a GOT type.	Standard system application	01.20.***	1.175H

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
GOT type setting • The graphics setting has been added.	Standard system application	01.23.***	1.185T
The screen design setting has been added.	Standard system application	01.23.***	1.185T
Report function • The report screen setting dialog has been revamped. • The operation log has been added as an output target. • The file output settings are supported. • The page header and page footer settings are supported.	• Standard system application • Report	01.26.***	1.200J
GOT Mobile function • The setting range of the mobile screen size has been extended.	• Standard system application • GOT Mobile Setting	01.26.***	1.200J
Report function • Saving report files into the network drive is supported.	• Standard system application • Report	01.27.***	1.205P
Customizing screen designs is supported.	Standard system application	01.29.***	1.215Z
GOT type setting • Setting the base screen size expansion is supported.	Base Screen Size Expansion	01.32.***	1.225K
Report function • The maximum number of settable report screens has been changed to 99.	Report	01.32.***	1.225K
Report function • Outputting a report from a Brightek's serial printer is supported. (GT21, GS21)	• Standard system application • Report	01.36.***	1.235V
GOT type setting • GS21**-W-N has been added as a GOT type. • Selecting a typeface for the outline font is supported. (Only available to GS21-W-N)	Standard system application	01.39.***	1.250L
Report function • Process notification device settings have been added.	• Standard system application • Report	01.43.***	1.270G

■2 Functions for the common setting

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
Hard copy • Settings for the printer output (PictBridge and serial) are added.	• Standard system application • Printer (PictBridge) • Printer (Serial)	01.01.***	1.104J
KANA-KANJI Conversion • Settings for the Kana-kanji conversion function are added to the GOT environmental settings.	• Standard system application • KANA-KANJI Conversion	01.01.***	1.104J
Wireless LAN function • The wireless LAN setting is added to the GOT setup. • Settings for the wireless LAN are added to the I/F communication setting. • Settings for the wireless LAN are added to the gateway function connection setting. • Settings for the wireless LAN are added to the GOT setting list.	• Standard system application • Wireless LAN • Gateway (server and client) • Gateway (mail) • Gateway (FTP server) • Gateway (FTP client)	01.02.***	1.108N
	BootOS	D	
Comment group • Switching the comment number notations (between decimal and hexadecimal) is supported.	Standard system application	01.02.***	1.108N
User alarm observation • The setting range for the alarm observation cycle has been changed to 0.1 second to 3600 seconds. (GT27 and GT SoftGOT2000)	Standard system application	01.02.***	1.108N
MES interface function • The MES interface function settings have been added.	• Standard system application • MES Interface	01.02.***	1.108N
	BootOS	D	

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Screen switching/windows (GOT environmental setting) • The setting to specify the screen number of the window screen to be hidden has been added. • The setting to enable screen switching by device while the screen is being touched has been added.	Standard system application	01.03.***	1.112S
System information (GOT environmental setting) • The backlight color selection for 3-color control has been added.	Standard system application	01.03.***	1.112S
Brightness adjustment mode • The brightness adjustment mode setting has been added to the GOT setup.	Standard system application	01.03.***	1.112S
	BootOS	E	
POWER LED shutoff • The POWER LED setting has been added to the GOT setup.	Standard system application	01.03.***	1.112S
System alarm observation • Recording global label names is supported.	Standard system application	01.04.***	1.117X
Script • The global label is supported.	Standard system application	01.04.***	1.117X
Backup/restoration • GT21 supports this function.	• Standard system application • Backup/restoration	01.05.***	1.118Y
System alarm observation • Recording AB native tag names is supported.	Standard system application	01.05.***	1.118Y
Script • The AB native tag is supported.	Standard system application	01.05.***	1.118Y
Script • Labels (GT Designer3) are supported.	Standard system application	01.06.***	1.122C
Controller setting • The buffer memory unit No. switching is supported.	Standard system application	01.06.***	1.122C
IP filter function • The IP filter settings have been added to the controller setting. • The IP filter settings have been added to the connection settings for the gateway function.	Standard system application	01.06.***	1.122C
	CoreOS	H	
System launcher • The system launcher setting has been added to the GOT setup.	• Standard system application • System launcher	01.08.***	1.126G
iQSS utility • The iQSS utility setting has been added to the GOT setup.	• Standard system application • iQSS utility	01.08.***	1.126G
User alarm observation • Unicode has been added as a character code.	Standard system application	01.08.***	1.126G
Logging • Unicode has been added as a character code.	Standard system application	01.08.***	1.126G
Recipe • Unicode has been added as a character code.	Standard system application	01.08.***	1.126G
Script • The following file operation functions are supported. file_getfolderlist, file_unilineread, #pragma use_character_code unicode • The following string operation functions are supported. str_uniscanf, str_uniprintf, str_unistrlen, str_unistrmid, str_lc2uni, str_uni2lc	Standard system application	01.08.***	1.126G
I/F communication setting • Assigning a channel number ranging from 5 to 8 to the standard I/F-1 is supported.	Standard system application	01.08.***	1.126G
Video/RGB input • A setting to use GT27-R2 is supported.	• Standard system application • Video/RGB (Object)	01.10.***	1.130L
	BootOS	N	
User alarm observation • Printing alarm details is supported. (Not applicable to GT21)	Standard system application	01.10.***	1.130L

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Operation log (GOT environmental setting) • A setting to log the previous device value with each touch switch operation has been added.	Standard system application	01.12.***	1.134Q
Comment group • Collectively copying, cutting, and pasting multiple cells are supported.	Standard system application	01.12.***	1.134Q
Script • Setting the execution cycle time in units of 100 ms is supported.	Standard system application	01.12.***	1.134Q
Operation log (GOT environmental setting) • The GOT network interaction function and the GOT Mobile function have been added as the operation log target. • A setting to log operations performed on a GOT Mobile function client has been added.	Standard system application	01.14.***	1.144A
Wireless LAN function • The access point mode has been added as an operation mode.	• Standard system application • Wireless LAN	01.14.***	1.144A
	BootOS	D	
System alarm observation • A setting to monitor errors of a GOT Mobile function client has been added.	Standard system application	01.14.***	1.144A
Controller setting • The setting range of the port number has been changed in the Ethernet setting for the MODBUS/TCP connection (1 to 65535).	Standard system application	01.14.***	1.144A
GOT network interaction function • The GOT network interaction function setting has been added.	• Standard system application • GOT Network Interaction	01.14.***	1.144A
GOT Mobile function • The GOT Mobile function setting has been added.	• Standard system application • GOT Mobile Setting	01.14.***	1.144A
	CoreOS	L	
Logging • The setting dialog has been revamped.	Standard system application	01.15.***	1.150G
Screen switching/windows (GOT environmental setting) • The setting to specify the stacking order of overlap windows has been added. • The setting to disable the touch operation on the window screen that is behind an overlap window has been added.	Standard system application	01.16.***	1.155M
Controller setting • The menu name [Q Redundant] has been changed to [MELSEC Redundant].	Standard system application	01.17.***	1.160S
GOT Mobile function • The ANDON setting has been added.	Standard system application	01.17.***	1.160S
Comment group • Setting Windows fonts is supported.	Standard system application	01.18.***	1.165X
GOT Mobile function • The historical data list display, statistics bar graph, statistics pie graph, scatter graph, and graphical meter are supported.	• Standard system application • GOT Mobile Setting	01.18.***	1.165X
User alarm observation • Setting the device to change the status of an alarm to "Checked" is supported. • Setting the device to notify that the status of an alarm has been changed to "Checked" is supported.	Standard system application	01.19.***	1.170C
Operation log (GOT environmental setting) • The setting to log operations performed on a numerical input or a text input has been added.	Standard system application	01.20.***	1.175H
GOT internal device monitor of the GOT diagnostics function (GOT setup) • The setting to enable the GOT internal device monitor has been added.	Standard system application	01.20.***	1.175H

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
VNC server (GOT setup) • This function is supported by GT2107-W.	• Standard system application • VNC server	01.20.***	1.175H
System launcher (GOT setup) • The setting to display the servo network configuration has been added.	• Standard system application • System Launcher (Basic) • System Launcher (Servo Network)	01.20.***	1.175H
Ethernet interface setting (GOT Ethernet setting) • The IP address settings have been moved to the [GOT IP Address Setting] tab. • The default gateway and other common settings have been moved to the [GOT Ethernet Common Setting] tab. • The IP filter settings have been moved to the [IP Filter Setting] tab.	Standard system application	01.20.***	1.175H
Controller setting • The IP filter settings have been moved to the [GOT Ethernet Setting] window.	Standard system application	01.20.***	1.175H
Barcode (Peripheral setting) • The USB barcode settings have been added.	• Standard system application • Bar Code (USB)	01.20.***	1.175H
I/F communication setting • The Ethernet interface settings have been moved to the [GOT Ethernet Setting] window.	Standard system application	01.20.***	1.175H
Trigger action • Selecting the sound output in the action setting is supported. • Playing the sound files specified in the playlist is supported.	Standard system application	01.20.***	1.175H
Time action • The setting range of the sound file number has been changed to 1 to 500.	Standard system application	01.20.***	1.175H
Hard copy • The setting to use the image file output and the printer output is supported.	Standard system application	01.20.***	1.175H
Script • The OMRON NJ tag is supported.	Standard system application	01.20.***	1.175H
GOT Mobile function • The setting to clear the values of the GOT Mobile devices (VGD and VGB) for the target client upon connection is supported.	• Standard system application • GOT Mobile Setting	01.20.***	1.175H
Sound output function • The maximum number of sound files has been expanded to 500 files. • Settings to play, stop, and mute the sound are supported. • [Message], [Sound Effect], and [Melody] have been added as a sound type.	• Standard system application • Sound Output	01.20.***	1.175H
Sound output function • The WAV file format conversion is supported. • Setting [File No.] in the [Create New Sound File] or [Edit Sound File] dialog is supported.	• Standard system application • Sound Output	01.22.***	1.180N
Operation log (GOT environmental setting) • The operator management has been added as the operation log target.	Standard system application	01.23.***	1.185T
Script • The project script has been added as the screen-related setting to be utilized automatically at the screen utilization.	Standard system application	01.23.***	1.185T
GOT Mobile function • The hard copy function is supported.	• Standard system application • GOT Mobile Setting	01.23.***	1.185T
Recipe • Saving recipe data to the SRAM user area is supported. • The date format setting has been moved to the [Basic] tab.	• Standard system application	01.24.***	1.190Y
Logging • Enabling the SRAM power-failure backup function for a maximum of 20 logging settings is supported.	• Standard system application	01.24.***	1.190Y

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
IP filter function • GT21 supports this function.	Standard system application	01.25.***	1.195D
Comment group • Displaying comments from a comment text file is supported.	Standard system application	01.25.***	1.195D
GOT Mobile function • File manipulations are supported.	• Standard system application • GOT Mobile Setting	01.25.***	1.195D
Controller setting • The channel setting window has been revamped.	Standard system application	01.26.***	1.200J
Operation log (GOT environmental setting) • The file print has been added as an operation log target. • The object operation name settings are supported. • Setting an item to be output using the report function is supported.	Standard system application	01.26.***	1.200J
Barcode (Peripheral setting) • Specifying values as the header or terminator is supported.	• Standard system application • Bar Code (Serial)	01.26.***	1.200J
RFID (Peripheral setting) • Specifying values as the header or terminator is supported.	• Standard system application • RFID	01.26.***	1.200J
Printer (Peripheral setting) • The Ethernet printer setting is supported.	• Standard system application • Printer (ESC/P-R)	01.26.***	1.200J
	BootOS	AJ	
Hard copy • The Ethernet printer setting is supported.	Standard system application	01.26.***	1.200J
	BootOS	AJ	
Network drive • The network drive settings have been added to the GOT setup.	• Standard system application • Network Drive	01.27.***	1.205P
	CoreOS	L	
	BootOS	AK	
Logging • Saving logging files into the network drive is supported.	Standard system application	01.27.***	1.205P
Hard copy • Saving image files into the network drive is supported.	Standard system application	01.27.***	1.205P
Controller setting • [Ethernet Controller Setting] has been renamed to [Connected Ethernet Controller Setting].	-	-	1.210U
Printer (Peripheral setting) • The Ethernet printer setting (PCL5) is supported.	• Standard system application • Printer(PCL5)	01.29.***	1.215Z
Hard copy • The Ethernet printer setting (PCL5) is supported.	Standard system application	01.29.***	1.215Z
Multi-channel • Channel No. 1 to 4 settings are supported for GT SoftGOT2000.	Standard system application	01.29.***	1.215Z
Operation log (GOT environmental setting) • Recording the operator name with the character string stored in the device is supported.	Standard system application	01.32.***	1.225K
8-bit and 64-bit devices are supported.	-	-	1.235V
Controller setting • Displaying the controller and IP address in the tree view when the Ethernet connection is used.	-	-	1.235V
Script • The global labels of Motion Control Setting Function are supported.	Standard system application	01.34.***	1.235V
Operation log (GOT environmental setting) • GT2107-W supports this function.	Standard system application	01.38.***	1.245F
Controller setting • GS21-W-N supports the multidrop (slave) connection.	• Standard system application • Multidrop(Slave)	01.39.***	1.250L

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Operation log (GOT environmental setting) • GS21-W-N supports this function.	Standard system application	01.39.***	1.250L
VNC server (GOT setup) • GS21-W-N supports this function.	• Standard system application • VNC Server	01.39.***	1.250L
Screen switching/windows (GOT environmental setting) • The setting to output an overlap window via HDMI/RGB has been added.	Standard system application	01.39.***	1.255R
GOT network interaction function • The model selection for the master GOT is supported.	• Standard system application • GOT Network Interaction	01.42.***	1.265B
Mail send function • Setting a DNS server is supported. • Specifying an SMTP server and POP3 server with the host name is supported.	• Standard system application • Gateway (mail)	01.43.***	1.270G
User alarm observation • Outputting alarms (when checked) using the report function is supported.	• Standard system application • Report	01.43.***	1.270G
Kana-Kanji/Pinyin conversion • Entering Simplified Chinese characters using Pinyin conversion is supported.	• Standard system application • Kana-Kanji/Pinyin conversion	01.46.***	1.280S
Hard copy • Outputting PDF format files is supported. • Specifying an output target screen is supported. • Outputting multiple screen images is supported.	• Standard system application • Hard copy PDF output function	01.47.***	1.285X
Backup/restoration • GT SoftGOT2000 (Multiple channels) is supported.	• Standard system application • Backup/restoration	01.47.***	1.285X

■3 Functions for the edit and settings of the figure

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
Line, freeform line, rectangle, polygon, circle, and piping • The setting items have been divided into tabs.	Standard system application	01.03.***	1.112S
Text • Registering text to a comment group and converting the text figure to a simple comment display object are supported.	Standard system application	01.04.***	1.117X
Figure • Changing the coordinates of a grouping of figures on the property sheet or toolbar is supported.	Standard system application	01.12.***	1.134Q
Figure • Independently editing each figure of a grouping is supported.	Standard system application	01.14.***	1.144A
Table • The table setting has been added.	Standard system application	01.14.***	1.144A
Figure • The maximum number of characters for a figure name has been changed to 100.	Standard system application	01.23.***	1.185T

■4 Functions for the edit and settings of the object

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
Text input • Settings for the KANA-KANJI conversion are added.	• Standard system application • KANA-KANJI Conversion	01.01.***	1.104J
Print object • Settings for the numerical print, bit comment print, and word comment print are added.	• Standard system application • Report	01.01.***	1.104J

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Object • Selecting the ON display or OFF display is available for displaying and hiding the object.	Standard system application	01.02.***	1.108N
Key code switch • The setting not to specify the character code is supported.	Standard system application	01.02.***	1.108N
Slider • The slider settings have been added.	Standard system application	01.02.***	1.108N
Special function switch • The R motion monitor is supported. • The CNC monitor is supported. • The CNC data I/O is supported. • The CNC machining program edit is supported. • The recipe operation is supported.	Standard system application	01.04.***	1.117X
Key code switch • The key code (FFBFh) for displaying the first alarm is supported.	Standard system application	01.04.***	1.117X
Alarm display (user), Alarm display (system) • Indirectly specifying the display start row is supported. • The setting ranges for the numbers of the displayed rows and digits have been expanded. • Setting items of [Flow all] and [Flow the selected row] have been added. • Externally outputting the alarm status and the number of displayed alarms is supported.	Standard system application	01.04.***	1.117X
Logging • The string has been added as a device type.	Standard system application	01.06.***	1.122C
Historical data list • The string has been added as a device type.	Standard system application	01.06.***	1.122C
Panelmeter • The beginning angle and end angle settings have been added. • The triangle and the inverted triangle have been added as a needle shape. • Specifying the distance from the meter center to the drawing start position of the needle is supported.	Standard system application	01.06.***	1.122C
Special function switch • The system launcher is supported. • The iQSS utility is supported.	Standard system application	01.08.***	1.126G
Key code switch • Unicode has been added as a character code.	Standard system application	01.08.***	1.126G
Text display, text input • Unicode has been added as a character code.	Standard system application	01.08.***	1.126G
Slider • GT21 supports this function.	Standard system application	01.08.***	1.126G
Document display • The setting range of the document ID has been expanded. (1 to 32767) • Specifying the document ID by setting a device is supported.	Standard system application	01.08.***	1.126G
Key code switch • The key code (FFBAh) for starting the sequence program monitor (R ladder) from the alarm display (user) is supported.	Standard system application	01.09.***	1.127H
Special function switch • The motion program editor is supported. • The motion program I/O is supported.	Standard system application	01.10.***	1.130L
Print object • Settings for the text print have been added. (Not applicable to GT21)	• Standard system application • Report	01.10.***	1.130L
Video/RGB display object • Settings for the video/RGB display object have been added.	• Standard system application • Video/RGB (Object)	01.10.***	1.130L
	BootOS	N	

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Object • Changing the coordinates of a grouping of objects on the property sheet or toolbar is supported.	Standard system application	01.12.***	1.134Q
Object • Independently editing each object of a grouping is supported.	Standard system application	01.14.***	1.144A
Hyperlink • The hyperlink setting has been added.	Standard system application	01.14.***	1.144A
Special function switch • The file management function is supported.	Standard system application	01.15.***	1.150G
Text display, text input • HQ fonts have been added.	Standard system application	01.15.***	1.150G
Special function switch • The CNC monitor 2 is supported. • The drive recorder is supported. • The recipe data operation is supported.	Standard system application	01.16.***	1.155M
Recipe Display (Record List) • The settings for the recipe display (record list) have been added.	Standard system application	01.16.***	1.155M
Graphical Meter • The graphical meter settings have been added.	Standard system application	01.16.***	1.155M
Special function switch • The CC-Link IE Field Network diagnostics is supported.	Standard system application	01.18.***	1.165X
Switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Bit Switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Word Switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Go To Screen Switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Change Station No. Switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Key window display switch • Setting the offset device for the lamp function is supported.	Standard system application	01.19.***	1.170C
Switch • The sound output has been added to the switch action setting.	Standard system application	01.20.***	1.175H
Special function switch • The output destination setting for the hard copy is supported.	Standard system application	01.20.***	1.175H
Text input • The write completion device setting is supported.	Standard system application	01.20.***	1.175H
Document display • The setting to display a PDF file as-is is supported.	• Standard system application • Document Display (PDF)	01.20.***	1.175H
Object • The maximum number of characters for an object name has been changed to 100.	Standard system application	01.23.***	1.185T
Numerical display, numerical input • Indirect specification of the number of decimal places is supported.	Standard system application	01.23.***	1.185T
Document display • The search and bookmark functions for PDF files are supported.	• Standard system application • PDF Search/bookmark Function	01.23.***	1.185T

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Special function switch • The servo amplifier graph is supported.	Standard system application	01.25.***	1.195D
Script parts • The script parts object settings have been added.	Standard system application	01.25.***	1.195D
Recipe Display (Record List) • GT21 supports this function.	Standard system application	01.25.***	1.195D
Special function switch • The file print is supported.	Standard system application	01.26.***	1.200J
Alarm display (user) • Placing key code switches together with this object is supported.	Standard system application	01.27.***	1.205P
Alarm display (system) • Placing key code switches together with this object is supported.	Standard system application	01.27.***	1.205P
Document display • Selecting a drive to store documents is supported.	• Document Display (Document Converter) • Document Display (PDF)	01.28.***	1.210U
Document display • The setting to display a page by searching for a keyword is supported.	Document Display (PDF)	01.28.***	1.210U
Slider • The setting range of [Knob Width], [Knob Height], [Bar Width], and [Bar Height] of the object on a base screen has been extended.	Standard system application	01.32.***	1.225K
Special function switch • The R motion SFC monitor is supported.	Standard system application	01.33.***	1.230Q
8-bit and 64-bit devices are supported.	-	-	1.235V
Special function switch • The vision sensor monitor is supported.	• Standard system application • Vision Sensor Monitor	01.34.***	1.235V
Special function switch • GT2107-W supports the operation log information. • Drive recorder supports the settings through a Motion module (CC-Link IE TSN).	Standard system application	01.37.***	1.245F
Parts display • Image files (automatic update) have been added as a parts type.	Standard system application	01.37.***	1.245F
Parts movement • [Circle] has been added as a movement method.	Standard system application	01.37.***	1.245F
Special function switch • GS21-W-N supports the operation log information.	Standard system application	01.39.***	1.250L
Special function switch • The sequence program monitor (iQ-F ladder) is supported.	Standard system application	01.39.***	1.255R
Key code switch • The key code (FFC3h) for starting the sequence program monitor (iQ-F ladder) is supported.	Standard system application	01.39.***	1.255R
Special function switch • The servo amplifier graph supports the settings through a Motion module (CC-Link IE TSN).	Standard system application	01.40.***	1.260W
Special function switch • GT SoftGOT2000 supports the system launcher, drive recorder, and servo amplifier graph. • The CC-Link IE TSN/CC-Link IE Field Network diagnostics is supported.	Standard system application	01.42.***	1.265B
Text input • Entering Simplified Chinese characters using Pinyin conversion is supported.	• Standard system application • Kana-Kanji/Pinyin conversion	01.46.***	1.280S
Special function switch • GT SoftGOT2000 (Multiple channels) supports the backup/restoration.	• Standard system application • Backup/restoration	01.47.***	1.285X

12.17.5 GOT functions

■1 Basic functions

(1) Utility function

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
The wireless LAN setting is added.	• Standard system application • Wireless LAN	01.02.***	1.108N
	BootOS	D	
The license management for the MES interface function is supported.	BootOS	D	1.108N
The brightness adjustment mode setting has been added.	Standard system application	01.03.***	1.112S
	BootOS	E	
The POWER LED setting has been added.	Standard system application	01.03.***	1.112S
• The operation button has been added to the operation log list screen. • Displaying the operation log screen in a reduced size is supported.	Standard system application	01.03.***	1.112S
The R motion monitor is supported.	• Standard system application • R motion monitor	01.04.***	1.117X
The CNC monitor is supported.	• Standard system application • CNC Monitor	01.04.***	1.117X
The CNC data I/O is supported.	• Standard system application • CNC Data I/O	01.04.***	1.117X
The CNC machining program edit is supported.	• Standard system application • CNC Manufacturing Program Editor	01.04.***	1.117X
The recipe operation is supported.	Standard system application	01.04.***	1.117X
Deleting the label name resolution file is supported.	Standard system application	01.04.***	1.117X
GT21 supports the backup/restoration.	• Standard system application • Backup/restoration	01.05.***	1.118Y
The IP filter setting is supported.	Standard system application	01.06.***	1.122C
	CoreOS	H	
The system launcher setting is supported.	• Standard system application • System launcher	01.08.***	1.126G
The iQSS utility setting is supported.	• Standard system application • iQSS utility	01.08.***	1.126G
The motion program editor is supported.	• Standard system application • Motion Program Editor	01.10.***	1.130L
The motion program I/O is supported.	• Standard system application • Motion Program Input/Output	01.10.***	1.130L
Displaying information on the station connected to the GOT (wireless LAN access point) is supported.	• Standard system application • Wireless LAN	01.14.***	1.144A
	BootOS	T	
The license management for the GOT Mobile function is supported.	• Standard system application • GOT Mobile Setting	01.14.***	1.144A
	CoreOS	L	
The GOT Mobile information is supported.	Standard system application	01.15.***	1.150G
The file manager is supported.	• Standard system application • File Manager	01.15.***	1.150G
The CNC monitor 2 is supported.	• Standard system application • CNC Monitor 2	01.16.***	1.155M
The drive recorder is supported.	• Standard system application • Drive Recorder	01.16.***	1.155M

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
The ANDON connection is supported.	• Standard system application • GOT Mobile Setting	01.17.***	1.160S
The CC-Link IE Field Network diagnostics is supported.	• Standard system application • CC-Link IE Field Network diagnostics	01.18.***	1.165X
The system launcher (servo network) is supported.	• Standard system application • System Launcher (Basic) • System Launcher (Servo Network)	01.20.***	1.175H
The GOT Mobile function supports the file manager.	• Standard system application • GOT Mobile Setting	01.20.***	1.175H
The SRAM management function supports recipe data.	• Standard system application	01.24.***	1.190Y
The servo amplifier graph is supported.	• Standard system application • Servo amplifier graph	01.25.***	1.195D
GT21 supports the IP filter settings.	Standard system application	01.25.***	1.195D
The GOT Mobile function supports file manipulations.	• Standard system application • GOT Mobile Setting	01.25.***	1.195D
The GOT Mobile function supports disconnecting the clients by operating the GOT.	• Standard system application • GOT Mobile Setting	01.26.***	1.200J
The file print is supported.	• Standard system application • File Print	01.26.***	1.200J
The network drive settings are supported.	• Standard system application • Network Drive	01.27.***	1.205P
	CoreOS	L	
	BootOS	AK	
File print • Printing a report file in the network drive is supported.	• Standard system application • File Print	01.27.***	1.205P
File manager • Manipulating the folders and files in the network drive is supported.	• Standard system application • File Manager	01.27.***	1.205P
The SRAM management function supports displaying information on the data saved by the internal device retention function.	Standard system application	01.29.***	1.215Z
GT2107-W supports the operation log information window.	Standard system application	01.38.***	1.245F
GS21-W-N supports the VNC server screen.	• Standard system application • VNC Server	01.39.***	1.250L
GS21-W-N supports the license management screen.	Standard system application	01.39.***	1.250L
GS21-W-N supports the operation log information screen.	Standard system application	01.39.***	1.250L
The CC-Link IE TSN diagnostics is supported.	Standard system application	01.42.***	1.265B
GT SoftGOT2000 supports [ANDON connection] and [GOT Mobile information].	Standard system application	01.42.***	1.265B
GT SoftGOT2000 (Multiple channels) supports the backup/restoration.	• Standard system application • Backup/restoration	01.47.***	1.285X

(2) Project function

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
The screen gesture function supports the key code (FF91h) for performing the full scale display (100%).	Standard system application	01.01.***	1.104J
The screen gesture function supports the graphics accelerator.	• Standard system application • Graphic Acceleration Driver	01.03.***	1.112S
	CoreOS	E	
Screen switching while the screen is being touched is supported.	Standard system application	01.03.***	1.112S

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Automatically creating a recipe file (*.G2P) by converting an advanced recipe file (*.G1P) is supported.	Standard system application	01.03.***	1.112S
Assigning a security key is supported.	Standard system application	01.06.***	1.122C
	BootOS	J	
Specifying the unit of the drive free space is supported.	Standard system application	01.17.***	1.160S
The recipe special control is supported.	Standard system application	01.17.***	1.160S
The comment group supports Windows fonts.	Standard system application	01.18.***	1.165X
The operator authentication supports the following settings. • Password requirements • Password expiration prenotification • Password change notification at the next login • Enabling or disabling an operator account	• Standard system application • Operator Authentication	01.20.***	1.175H
The operator authentication supports the sub administrator setting.	• Standard system application • Operator Authentication	01.23.***	1.185T
A setting to display or hide the title bar of a user-created key window is supported.	• Standard system application • Key Window Design Information	01.23.***	1.185T
The operation log function supports recording file print operations.	• Standard system application	01.26.***	1.200J
The hard copy function supports Ethernet printers.	• Standard system application	01.26.***	1.200J
	BootOS	AJ	
Operator authentication • The operator authentication with a USB device is supported.	• Standard system application • Operator Authentication	01.27.***	1.205P
The hard copy function supports Ethernet printers (PCL5).	Standard system application	01.29.***	1.215Z
The operation log function supports recording the operator name substituted by a character string stored in the device.	Standard system application	01.32.***	1.225K
Operator authentication • Saving the password history (up to 5 passwords) set for the operator authentication is supported.	• Standard system application • Operator Authentication	01.34.***	1.235V
Operation log • Recording the change in the password for operator authentication is supported. • Recording the vision sensor monitor at startup is supported.	Standard system application	01.34.***	1.235V
GT2107-W supports the operation log function.	Standard system application	01.38.***	1.245F
GS21-W-N supports the VNC server function.	• Standard system application • VNC Server	01.39.***	1.250L
GS21-W-N supports the operation log function.	Standard system application	01.39.***	1.250L
Standard key windows that support KANA-KANJI conversion are supported.	Standard system application	01.45.***	1.275M
Hard copy • Outputting PDF format files is supported. • Specifying an output target screen is supported. • Outputting multiple screen images is supported.	• Standard system application • Hard copy PDF output function	01.47.***	1.285X
Switching to secure mode for security keys is supported.	Standard system application	01.49.***	1.295H
	BootOS	AD	

(3) Figures and objects

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard system application	01.00.***	1.100E
The KANA-KANJI conversion for the text input is supported.	• Standard system application • KANA-KANJI Conversion	01.01.***	1.104J
Printing reports is supported.	• Standard system application • Report	01.01.***	1.104J
The slider is supported.	Standard system application	01.02.***	1.108N
Line, freeform line, rectangle, polygon, circle, and piping support the display/hide control.	Standard system application	01.03.***	1.112S
The objects on the key window support the following fonts. • [6x8dot] • [12dot Standard] • [Outline Kaisho] • [Outline Gothic]	Standard system application	01.03.***	1.112S
The document display function supports the graphics accelerator.	• Standard system application • Graphic Acceleration Driver	01.03.***	1.112S
	CoreOS	E	
GT21 supports the slider.	Standard system application	01.08.***	1.126G
The text print is supported. (Not applicable to GT21)	Standard system application	01.10.***	1.130L
GT21 supports the text print.	Standard system application	01.12.***	1.134Q
The table is supported.	Standard system application	01.14.***	1.144A
The hyperlink is supported.	Standard system application	01.14.***	1.144A
GT21 supports the graphical meter.	Standard system application	01.18.***	1.165X
The document display supports the display of a PDF file without conversion to JPEG format.	• Standard system application • Document Display (PDF)	01.20.***	1.175H
Making the background of a logo text transparent is supported.	Standard system application	01.25.***	1.195D
The parts display supports automatic updates of image files used as the parts.	Standard system application	01.37.***	1.245F
The parts movement supports movement in a circular direction.	Standard system application	01.37.***	1.245F
GT SoftGOT2000 supports the hyperlink.	Standard system application	01.42.***	1.265B

(4) Standard font

Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
- (first edition)	Standard font • Japanese • Chinese (Simplified) • Chinese (Traditional)	01.00.***	1.100E
- (first edition)	True Type numerical font	01.00.***	1.100E
The easily-distinguishable font for the numeral zero and the capital letter I is supported.	Standard font • Japanese • Chinese (Simplified) • Chinese (Traditional)	01.10.***	1.130L
Character code GB18030-2022 for Simplified Chinese is supported.	Standard font • Chinese (Simplified)	01.54.***	1.315D

■2 Extended function

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Base screen size expansion	Creating a base screen larger than the GOT screen is supported.	Base Screen Size Expansion	01.32.***	1.225K
Graphics accelerator	The function to smooth the operations of the screen gesture function and the document display function is supported.	Graphic Acceleration Driver	01.03.***	1.112S
		CoreOS	E	
Standard font	- (first edition)	Standard font • Japanese • Chinese (Simplified) • Chinese (Traditional)	01.00.***	1.100E
	Character code GB18030-2022 for Simplified Chinese is supported.	Standard font • Chinese (Simplified)	01.54.***	1.315D
Outline font (Gothic)	- (first edition)	Gothic • Alphanumeric characters /KANA • Japanese (Kanji) • Chinese (Simplified) • Chinese (Traditional) • Hangul	01.00.***	1.100E
	Character code GBK for Simplified Chinese is supported.	Gothic • Chinese (Simplified)	01.10.***	1.130L
	Character code GB18030-2022 for Simplified Chinese is supported.	Gothic • Chinese (Simplified)	01.50.***	1.300N
	GT21 and GS21 support character code GB18030-2022 for Simplified Chinese.	Gothic • Chinese (Simplified)	01.51.***	1.302Q
Outline font (Square style)	- (first edition)	Kaisho • Alphanumeric characters /KANA • Japanese (Kanji) • Chinese (Simplified) • Chinese (Traditional) • Hangul	01.00.***	1.100E
	Character code GBK for Simplified Chinese is supported.	Kaisho • Chinese (Simplified)	01.10.***	1.130L
	Character code GB18030-2022 for Simplified Chinese is supported.	Kaisho • Chinese (Simplified)	01.50.***	1.300N
	GT21 and GS21 support character code GB18030-2022 for Simplified Chinese.	Kaisho • Chinese (Simplified)	01.51.***	1.302Q
SoftGOT-GOT Link Function	- (first edition)	SoftGOT-GOT Link Function	01.00.***	1.100E
	Under the authorization control of the GOT network interaction function, connecting multiple GT SoftGOT2000 modules to one GOT is supported.	SoftGOT-GOT Link Function	01.14.***	1.144A
	• Synchronization of the built-in memory (SRAM) is supported. • Selecting the timing to synchronize the resource data is supported.	SoftGOT-GOT Link Function	01.33.***	1.230Q
	Selecting the timing to synchronize the project data is supported.	SoftGOT-GOT Link Function	01.36.***	1.240A

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
System launcher	The system launcher is supported.	System Launcher	01.08.***	1.126G
	Starting the drive recorder is supported.	System Launcher	01.16.***	1.155M
	Starting the sequence program monitor (R ladder), the R motion monitor, and the CNC monitor 2 is supported.	System Launcher	01.19.***	1.170C
	Starting the system launcher (servo network) is supported.	System Launcher	01.20.***	1.175H
	CR800-R(R16RTCPU) is supported.	System Launcher	01.21.***	1.178L
	Starting the servo amplifier graph is supported.	System Launcher	01.25.***	1.195D
	• CR800-Q(Q172DSRCPU) is supported. • Displaying the product information list and outputting product information to files are supported.	System Launcher	01.27.***	1.205P
	• The CC-Link IE TSN connection is supported. • RnPSFCPU is supported.	System Launcher	01.32.***	1.225K
	The CC-Link IE TSN connection is supported.	System Launcher (Servo Network)		
	GT SoftGOT2000 (Multiple channels) is supported.	-	-	1.265B
iQSS utility	The iQSS utility is supported.	iQSS Utility	01.08.***	1.126G
	RCPU is supported.	iQSS Utility	01.20.***	1.175H
	Profile data has been added.	iQSS Utility	01.32.***	1.225K
	FX5U, FX5UC, and FX5UJ are supported.	iQSS Utility	01.45.***	1.275M
Kana-Kanji/Pinyin conversion function (formerly, KANA KANJI conversion function)	KANA-KANJI conversion function is supported.	KANA-KANJI Conversion	01.01.***	1.104J
	The Pinyin conversion function is supported.	Kana-Kanji/Pinyin Conversion	01.46.***	1.280S
Wireless LAN function	Wireless LAN function is supported.	Wireless LAN	01.02.***	1.108N
		BootOS	D	
	The operation mode to make the GOT operate as a wireless LAN access point is supported.	Wireless LAN	01.14.***	1.144A
		BootOS	D	
Sequence program monitor (ladder)	- (first edition)	Sequence Program Monitor • Sequence program monitor (Common)	01.00.***	1.100E
		GOT Platform Library	01.00.***	1.100E
		GOT Function Expansion Library	01.00.***	1.100E

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Sequence program monitor (iQ-R/iQ-L ladder) (formerly sequence program monitor (iQ-R ladder))	The sequence program monitor (R ladder) is supported.	Sequence Program Monitor • Sequence Program Monitor(R Ladder)	01.09.***	1.127H
		GOT Platform Library	01.09.***	1.127H
		GOT Function Expansion Library	01.09.***	1.127H
		GOT Function Expansion Library (Additional/MELSEC iQ-R)	01.09.***	1.127H
	Editing programs with the sequence program monitor (R ladder) is supported.	Sequence Program Monitor • Sequence Program Monitor(R Ladder)	01.18.***	1.165X
		GOT Platform Library	01.18.***	1.165X
		GOT Function Expansion Library	01.18.***	1.165X
		GOT Function Expansion Library (Additional/MELSEC iQ-R)	01.18.***	1.165X
	The function name has been changed to the sequence program monitor (iQ-R ladder).	Sequence Program Monitor • Sequence Program Monitor(iQ-R Ladder)	01.23.***	1.185T
	• The function name has been changed to the sequence program monitor (iQ-R/iQ-L ladder) • LHCPU is supported.	Sequence Program Monitor • Sequence Program Monitor (iQ-R/iQ-L Ladder)	01.36.***	1.240A
	Displaying a program that uses a macro type function block that is not protected by the block password is supported.	Sequence Program Monitor • Sequence Program Monitor (iQ-R/iQ-L Ladder)	01.42.***	1.265B
Sequence program monitor (SFC)	- (first edition)	Sequence Program Monitor • Sequence program monitor (SFC)	01.00.***	1.100E
		GOT Platform Library	01.00.***	1.100E
		GOT Function Expansion Library	01.00.***	1.100E
Sequence program monitor (iQ-F ladder)	- (first edition)	Sequence Program Monitor • Sequence program monitor (iQ-F ladder)	01.39.***	1.255R
		GOT Platform Library	01.39.***	1.255R
		GOT Function Expansion Library	01.39.***	1.255R
		GOT Function Expansion Library (Additional/MELSEC iQ-F)	01.39.***	1.255R
FX Ladder Monitor Function	- (first edition)	FX Ladder Monitor Function	01.00.***	1.100E

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Backup/restoration	- (first edition)	Backup/Restoration	01.00.***	1.100E
	The backup/restoration for RCPU and CNC C70 is supported.	Backup/Restoration	01.04.***	1.117X
	• The backup/restoration for the Motion CPU (MELSEC iQ-R series) is supported. • GT21 supports the backup/restoration.	Backup/Restoration	01.05.***	1.118Y
	Retaining the file registers of a PLC at restoration is supported.	Backup/Restoration	01.08.***	1.126G
	The backup/restoration for R64MTCPU is supported.	Backup/Restoration	01.20.***	1.175H
	The backup/restoration for CR800-R(R16RTCPU) and CR800-D is supported.	Backup/Restoration	01.21.***	1.178L
	The backup/restoration for MELSEC iQ-F is supported.	Backup/Restoration	01.23.***	1.185T
	• CR800-Q(Q172DSRCPU) is supported. • The connection to an inverter or servo amplifier through a QCPU or LCPU is supported.	Backup/Restoration	01.27.***	1.205P
	When the RCPU No.1 does not support this function, the backup/restoration for the RCPU No.2 or later will be supported.	Backup/Restoration	01.42.***	1.265B
	GT SoftGOT2000 (Multiple channels) is supported.	Backup/Restoration	01.47.***	1.285X
Gateway (Server and client function)	- (first edition)	Gateway • Gateway (Server, Client)	01.00.***	1.100E
	GT SoftGOT2000 supports the server function.	Gateway • Gateway (Server, Client)	01.39.***	1.255R
	GENESIS64 is added to the software that can be used as a client	Gateway • Gateway (Server, Client)	01.42.***	1.265B
Gateway (Mail send function)	- (first edition)	Gateway • Getaway Server (Mail)	01.00.***	1.100E
	The SMTP server authentication is supported.	Gateway • Getaway Server (Mail)	01.18.***	1.165X
	The SMTP server authentication through a password of 129 or more characters is supported.	Gateway • Getaway Server (Mail)	01.18.***	
		BootOS	AA	
	DNS servers are supported.	Gateway • Getaway Server (Mail)	01.43.***	1.270G
		BootOS	AX	
FTP server function(Gateway)	- (first edition)	Gateway • Gateway (FTP Server)	01.00.***	1.100E
	GT21 supports this function.	-	01.14.***	1.144A
	The number of connectable FTP clients has been changed to 4.	Gateway • Gateway (FTP Server)	01.25.***	1.195D
Gateway (File Transfer (FTP Client)function)	- (first edition)	Gateway • Gateway (FTP Client)	01.00.***	1.100E
	Access to the FTP server function of a MITSUBISHI PLC is supported.	Gateway • Gateway (FTP Client)	01.08.***	1.126G
	GT21 supports this function.	-	01.14.***	1.144A
	The function name has been changed to the file transfer function (FTP transfer).	File Transfer	01.16.***	1.155M
	The maximum number of connectable FTP servers has been changed to 64.	File Transfer	01.23.***	1.185T

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Barcode	- (first edition)	Barcode	01.00.***	1.100E
	Connection via the standard RS422/485 interface is supported.	Barcode	01.08.***	1.126G
	The system application name has been changed.	Bar Code (Serial) (formerly Barcode)	01.20.***	1.175H
	The barcode function supports data entry from a USB barcode reader.	Bar Code (USB)	01.20.***	1.175H
	Specifying values as the header or terminator is supported.	Bar Code (Serial)	01.26.***	1.200J
RFID	- (first edition)	RFID	01.00.***	1.100E
	Connection via the standard RS422/485 interface is supported.	RFID	01.08.***	1.126G
	Specifying values as the header or terminator is supported.	RFID	01.26.***	1.200J
PC Remote Operation function (Serial)	- (first edition)	PC Remote Operation (Serial)	01.00.***	1.100E
	Remote Personal Computer Operation Driver (TSC-DD) is supported.	PC Remote Operation (Serial)	01.02.***	1.108N
	The video/RGB display object is supported.	PC Remote Operation (Serial)	01.10.***	1.130L
		BootOS	N	
	Remote Personal Computer Operation Driver (DMT-DD) is supported.	PC Remote Operation (Serial)	01.26.***	1.200J
PC Remote Operation function (Ethernet)	- (first edition)	PC Remote Operation (Ethernet)	01.00.***	1.100E
	• GOT Graphic Ver.2 is supported. • The full screen mode is supported.	PC Remote Operation (Ethernet)	01.32.***	1.225K
VNC Server function	- (first edition)	VNC server	01.00.***	1.100E
	The authorization control of the GOT network interaction function is supported.	VNC server	01.14.***	1.144A
	The VNC server function is supported by GT2107-W.	VNC server	01.20.***	1.175H
	GS21-W-N supports the VNC server function.	VNC server	01.39.***	1.250L
Video Display function	- (first edition)	Video/Multimedia • Video/RGB	01.00.***	1.100E
RGB Display function	- (first edition)	Video/Multimedia • Video/RGB	01.00.***	1.100E
Multimedia function	- (first edition)	Video/Multimedia • Multimedia	01.00.***	1.100E
External I/O function / Operation Panel function	- (first edition)	External I/O	01.00.***	1.100E
	The operation panel function is supported.	External I/O / Operation Panel	01.02.***	1.108N
Report function	• The file output is supported. • Outputting the operation log is supported.	Report function	01.26.***	1.200J
	Ethernet printers are supported.	Report function	01.26.***	
		BootOS	AJ	
	Ethernet printers (PCL5) are supported.	Report function	01.29.***	1.215Z
		BootOS	AM	
	• Outputting alarms (when checked) is supported. • The process notification device is supported.	Report function	01.43.***	1.270G
Sound Output function	- (first edition)	Sound Output.	01.00.***	1.100E

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
GOT network interaction function	The GOT network interaction function is supported.	GOT Network Interaction	01.14.***	1.144A
	Obtaining the authorization of the GOT network interaction function together with that of the VNC server function is supported.	GOT Network Interaction	01.19.***	1.170C
	The configuration with GT SoftGOT2000 as the master GOT is supported.	-	-	1.265B
GOT Mobile function	The GOT Mobile function is supported.	GOT Mobile Setting	01.14.***	1.144A
		CoreOS	L	
	The disconnect screen is supported.	GOT Mobile Setting	01.32.***	1.225K
	The configuration with GT SoftGOT2000 as the server is supported.	-	-	1.265B
	Displaying an overlap window or superimpose window is supported.	GOT Mobile Setting	01.46.***	1.280S
Device Data Transfer	- (first edition)	Device Data Transfer	01.00.***	1.100E
Device monitor	- (first edition)	Device monitor	01.00.***	1.100E
		GOT Platform Library	01.00.***	1.100E
	RCPU is supported.	Device monitor	01.12.***	1.134Q
		GOT Platform Library	01.12.***	1.134Q
	RnSFCPU is supported.	Device monitor	01.14.***	1.144A
		GOT Platform Library	01.14.***	1.144A
	CR800-R(R16RTCPU) and CR800-D are supported.	Device monitor	01.21.***	1.178L
		GOT Platform Library	01.21.***	1.178L
	FX5UC is supported.	Device monitor	01.27.***	1.215Z
		GOT Platform Library	01.29.***	1.215Z
	• LHCPU is supported. • The Motion CPU (MELSEC iQ-R series) is supported.	Device monitor	01.36.***	1.240A
		GOT Platform Library	01.36.***	1.240A
	When connected with the RCPU, LHCPU, MELSEC iQ-F, Motion CPU (MELSEC iQ-R series), robot controller (MELSEC iQ-R series), or CNC C80, displaying the device comments is supported.	Device monitor	01.42.***	1.265B
		GOT Platform Library	01.42.***	1.265B
Network monitor	- (first edition)	Network monitor	01.00.***	1.100E
	RCPU is supported.	Network monitor	01.04.***	1.117X
	• The CC-Link IE TSN connection is supported. • RnPCPU and RnPSFCPU are supported.	Network monitor	01.32.***	1.225K
Log Viewer	- (first edition)	Log Viewer	01.00.***	1.100E
	BOX data logger is supported.	Log Viewer	01.01.***	1.104J
	RCPU is supported.	Log Viewer	01.04.***	1.117X
	CNC C70 is supported.	Log Viewer	01.12.***	1.134Q
	MELSEC iQ-F is supported.	Log Viewer	01.23.***	1.185T
	LHCPU is supported.	Log Viewer	01.36.***	1.240A
	RnSFCPU is supported.	Log Viewer	01.40.***	1.260W

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Intelligent module monitor	- (first edition)	Intelligent module monitor	01.00.***	1.100E
	RCPU is supported.	Intelligent module monitor	01.04.***	1.117X
	Q26DHCCPU-LS is supported.	Intelligent module monitor	01.15.***	1.150G
	RJ72GF15-T2, RD77GF, and RD77MS are supported.	Intelligent module monitor	01.17.***	1.160S
	CR800-R(R16RTCPU) is supported.	Intelligent module monitor	01.21.***	1.178L
	• The CC-Link IE TSN connection is supported. • RnPCPU and RnPSFCPU are supported.	Intelligent module monitor	01.32.***	1.225K
Servo amplifier monitor	- (first edition)	Servo amplifier monitor	01.00.***	1.100E
R motion monitor	The R motion monitor is supported.	R motion monitor	01.04.***	1.117X
	Transition to the system launcher is supported.	R motion monitor	01.19.***	1.170C
	The CC-Link IE TSN connection is supported.	R motion monitor	01.32.***	1.225K
Q motion monitor	- (first edition)	Q motion monitor	01.00.***	1.100E
	Q26DHCCPU-LS is supported.	Q motion monitor	01.15.***	1.150G
CNC monitor	The CNC monitor is supported.	CNC Monitor	01.04.***	1.117X
CNC data I/O	The CNC data I/O is supported.	CNC Data I/O	01.04.***	1.117X
		GOT Platform Library	01.04.***	1.117X
CNC machining program edit	The CNC machining program edit is supported.	CNC Manufacturing Program Editor	01.04.***	1.117X
		GOT Platform Library	01.04.***	1.117X
Motion program editor	The motion program editor is supported.	Motion Program Editor	01.10.***	1.130L
	RnMTCPU is supported.	Motion Program Editor	01.23.***	1.185T
	GT2510-WX supports the motion program editor.	Motion Program Editor	01.33.***	1.230Q
	GT2512-WX supports the motion program editor.	Motion Program Editor	01.39.***	1.250L
Motion program I/O	The motion program I/O is supported.	Motion Program Input/Output	01.10.***	1.130L
	RnMTCPU is supported.	Motion Program Input/Output	01.23.***	1.185T
	GT2510-WX supports the motion program I/O.	Motion Program Input/Output	01.33.***	1.230Q
	GT2512-WX supports the motion program I/O.	Motion Program Input/Output	01.39.***	1.250L
FX list editor	- (first edition)	List editor for FX	01.00.***	1.100E
File manager	The file manager is supported.	File Manager	01.15.***	1.150G
File print	The file print is supported.	File print	01.26.***	1.200J
Document Display	- (first edition)	Document Display	01.00.***	1.100E
	The system application name has been changed.	Document Display (Document Converter) (formerly Document Display)	01.20.***	1.175H
	Displaying a PDF file as-is is supported.	Document Display (PDF)	01.20.***	1.175H
	The search and bookmark functions for PDF files are supported.	PDF Search/bookmark Function	01.23.***	1.185T
	Selecting a drive to store documents is supported.	Document Display (Document Converter)	01.28.***	1.210U
		Document Display (PDF)	01.28.***	1.210U
	Displaying a page by searching for a keyword is supported.	Document Display (PDF)	01.28.***	1.210U
Video/RGB display object	The video/RGB display object is supported.	Video/RGB (Object)	01.10.***	1.130L
		BootOS	N	
File transfer function (GOT internal transfer)	The file transfer function (GOT internal transfer) is supported.	File Transfer	01.16.***	1.155M

Item	Added and edited function	Version of application/BootOS		Version corresponding with GT Designer3
Drive recorder	The drive recorder is supported.	Drive Recorder	01.16.***	1.155M
	MELSERVO-JE-*B is supported.	Drive Recorder	01.17.***	1.160S
	MR-J4-GF(-RJ) is supported.	Drive Recorder	01.23.***	1.185T
	Displaying waveform data by type is supported.	Drive Recorder	01.28.***	1.210U
	The CC-Link IE TSN connection is supported.	Drive Recorder	01.32.***	1.225K
	MR-J5-G(-RJ), MR-J5W□-G, and MR-JET-G are supported.	Drive Recorder	01.37.***	1.245F
	GT SoftGOT2000 (Multiple channels) is supported.	-	-	1.265B
	MR-J5-B and MR-J5D-G are supported.	Drive Recorder	01.47.***	1.285X
CNC monitor 2	The CNC monitor 2 is supported.	CNC Monitor 2	01.16.***	1.155M
	GT27-V and GT25-V support the CNC monitor 2.	CNC Monitor 2	01.18.***	1.165X
	• GT2505-V and GT2505HS-V support the CNC monitor 2. • GT27-X supports QWERTY keyboards.	CNC Monitor 2	01.27.***	1.205P
Recipe display (record list)	The recipe display (record list) is supported.	Recipe Display (Record List)	01.16.***	1.155M
CC-Link IE Field Network diagnostics	The CC-Link IE Field Network diagnostics is supported.	CC-Link IE Field Network diagnostics	01.18.***	1.165X
Servo amplifier graph	The servo amplifier graph is supported.	Servo amplifier graph	01.25.***	1.195D
	Displaying waveform data by type is supported.	Servo amplifier graph	01.28.***	1.210U
	The CC-Link IE TSN connection is supported.	Servo amplifier graph	01.32.***	1.225K
	Displaying the axis name of the Motion module is supported.	Servo amplifier graph	01.40.***	1.260W
	GT SoftGOT2000 (Multiple channels) is supported.	-	-	1.265B
R motion SFC monitor	The R motion SFC monitor is supported.	R motion SFC monitor	01.33.***	1.230Q
Vision Sensor Monitor	The vision sensor monitor is supported.	Vision Sensor Monitor	01.34.***	1.235V
	• Editing the graphic parameters is supported. • Displaying the total determination results is supported. • The hard copy function is supported.	Vision Sensor Monitor	01.42.***	1.265B
	• Multi-connection is supported. • Video image rotation is supported.	Vision Sensor Monitor	01.45.***	1.275M

Warranty

Please check the following product warranty details before using this product.

■1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.
However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion.
Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

(1) Gratis Warranty Term

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.
Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months.
The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

(2) Gratis Warranty Range

(a) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expense.
The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.

(b) The range shall be limited to normal use within the usage state, usage methods, and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(c) Even within the gratis warranty term, repairs shall be charged in the following cases.
- Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
- Failure caused by unapproved modifications, etc., to the product by the user.
- When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
- Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
- Replacing consumable parts such as a battery, backlight, and fuse.
- Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
- Failure caused by reasons that could not be predicted by scientific technology standards at the time of shipment from Mitsubishi.
- Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

■2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued.
Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Mitsubishi shall not accept a request for product supply (including spare parts) after production is discontinued.

■3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center.
Note that the repair conditions at each FA Center may differ.

■4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.

(2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.

(3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.

(4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

■5. Changes in product specifications

The specifications given in the catalogs, manuals, or technical documents are subject to change without prior notice.

■6. Product application

(1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc.
Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service shall be excluded from the graphic operation terminal applications.
In addition, applications in which human life or property could be greatly affected, such as in aircraft, medical, railway applications, incineration and fuel devices, manned transportation equipment, recreation and amusement devices, safety devices, shall also be excluded from the graphic operation terminal.
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